

Public Financial Management in Latin America

The Key to Efficiency and Transparency

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Contents

| | |
|---|-----------|
| Foreword | ix |
| Preface | xi |
| Acknowledgements..... | xiii |
| Contributors | xvii |
| Latin American Treasury Forum..... | xix |
| List of Abbreviations..... | xxi |
| | |
| Chapter 1: Public Financial Management in Latin America: | |
| The Key to Efficiency and Transparency | 1 |
| Overview of Public Financial Management Reforms in Latin America..... | 1 |
| PFM and Macro-Fiscal Affairs..... | 4 |
| PFM and its Efficiency..... | 4 |
| PFM and Public Resource Management..... | 10 |
| PFM and Transparency..... | 15 |
| Structure of this Publication | 16 |
| Conclusions | 20 |
| References | 23 |
| | |
| Chapter 2: Treasury Management Efficiency Indicators | 25 |
| Introduction..... | 25 |
| FOTEGAL: Role, Objectives, and Challenges | 27 |
| Operational Plan and International Cooperation..... | 28 |
| Results and Challenges..... | 29 |
| A Theoretical Framework for the Creation of Treasury Indicators | 30 |
| Indicator for Institutional Scope..... | 31 |
| Revenue Indicators..... | 32 |

| | |
|--|----|
| Expenditure Indicators | 33 |
| TSA Profitability Indicator and Cash Balance Management..... | 34 |
| Available Treasury Management Indicators..... | 34 |
| PEFA Indicators..... | 36 |
| Current Open Budget Indicators..... | 44 |
| FOTEGAL Treasury Management Indicators | 47 |
| Experiences of Countries Applying Performance Management Indicators | 52 |
| Essential Cash Management Indicators..... | 57 |
| Conclusions | 60 |
| Annexes..... | 66 |
| Annex I: Treasury Management Survey for Treasurers in Latin America, 2015 | 66 |
| Annex II: Results of Applying the Performance Indicators: The Case of Uruguay | 71 |
| References | 74 |

| | |
|---|-----------|
| Chapter 3: Cash and Debt Management: Interaction, Coordination, and Integration..... | 77 |
| Introduction..... | 77 |
| Organization of Cash and Debt Management Functions | 78 |
| Cash Management Functions | 78 |
| Debt Management Functions | 82 |
| Cash and Debt Management Interaction..... | 86 |
| The Importance of Coordination..... | 86 |
| Meeting the Coordination Requirements | 88 |
| Organizational Structures | 90 |
| Integrated Cash and Debt Management Unit..... | 90 |
| Separate Cash and Debt Management Functions | 94 |
| International Experience..... | 98 |
| Functions and Organizational Structures in Latin American Countries..... | 101 |
| Distribution of Functions..... | 102 |
| Organizational Structure | 109 |
| Coordination Arrangements..... | 109 |
| Frequency of Issuance of Tbills and Tbonds | 113 |
| Publication of Reports and Systems for Recording Transactions | 117 |
| Advantages and Disadvantages of Integration | 123 |
| References | 127 |

| | |
|--|------------|
| Chapter 4: The Treasury Single Account in Latin America: An Essential Tool for Efficient Treasury Management..... | 129 |
| Introduction | 129 |
| Characteristics of an Efficient TSA..... | 131 |
| The TSA Conceptual Model..... | 134 |
| Legal Basis for the TSA..... | 135 |
| Other Aspects of the TSA Design..... | 139 |
| Fungibility of Resources | 151 |
| Operational Aspects: Revenue Collection, Payments, Account Reconciliation, and Accounting Register | 157 |
| Accounting Records | 167 |
| Active Treasury Management..... | 170 |
| Conclusions and Recommendations..... | 175 |
| Annex I: Brazil: Pioneer of an Efficient Implementation of the TSA..... | 178 |
| References | 181 |
| | |
| Chapter 5: Public Accounting and Fiscal Credibility..... | 183 |
| Introduction..... | 183 |
| Accrual-Based Accounting as a Tool for Improving Fiscal Credibility | 184 |
| Key Conceptual Differences between Cash and Accruals..... | 186 |
| Links between Accruals and International Accounting Standards..... | 189 |
| Advantages and Disadvantages of Switching to Accrual-Based Accounting..... | 193 |
| Public Accounting in Latin America | 195 |
| Accounting Reforms in Latin America | 198 |
| Alternative Methods to Assess Progress..... | 201 |
| Challenges | 204 |
| Case Studies: Accounting Reforms in Chile, Brazil, Costa Rica, and Peru | 204 |
| Best Use of Public Accounting: Full Accruals and its Implications for Treasurers and Senior Finance Staff..... | 214 |
| Organizing for Reform: Key Actors and Participants..... | 215 |
| Implementation Process and Timeframe..... | 218 |
| Design and Delivery of Strategies for a Transition to Accruals..... | 218 |
| Rollout across the Public Sector | 220 |
| Capturing Additional Classes of Assets and Liabilities..... | 222 |
| Implications for Budgetary, Treasury, and Financial Control Systems | 225 |
| Accounting and Other Financial Information Systems..... | 230 |

| | |
|---|-----|
| Classification of Accounting Transactions | 231 |
| Conclusions | 233 |
| References | 235 |

Chapter 6: Finding the Costs of Public Services: The Experience of the State of São Paulo in Implementing a Cost System 237

| | |
|---|-----|
| Introduction | 237 |
| Cost Accounting and Analysis..... | 239 |
| Fundamental Cost Concepts | 239 |
| Concepts for Costing Goods and Services..... | 240 |
| Cost Concepts for Planning and Budgeting | 241 |
| Cost Concepts for Performance Evaluation and Control..... | 242 |
| Conclusion | 244 |
| International Experiences..... | 244 |
| Developing Countries..... | 245 |
| Developed Countries..... | 247 |
| Raising Awareness..... | 247 |
| Costing Services and Activities; Setting Standards | 248 |
| Activity-Based Costing and Accrual Budgeting..... | 249 |
| Design for the São Paulo Cost System Project..... | 250 |
| Selection of Pilot Departments..... | 252 |
| Understanding the Production of Services | 252 |
| Construction of Service Profiles..... | 253 |
| Developing Prototype Cost Accounting Modules..... | 253 |
| Cost Manual..... | 255 |
| Preparation and Analysis of Cost Reports..... | 255 |
| Implementation of the São Paulo Cost System Project | 257 |
| Developing Consensus on Project Scope..... | 257 |
| Using Existing Corporate Systems..... | 258 |
| Project Structure and Support of Technical Assistance..... | 259 |
| Relationship of the Cost System with the Program Budgeting System..... | 259 |
| Four Pilot Case Studies | 263 |
| Field Work and Identification of Cost Centers and Services..... | 264 |
| Analytical Work to Support the Development of the Cost System.... | 267 |
| Proof of Concept by the IT System..... | 267 |
| Cost Reports and Cost Analysis..... | 271 |
| Conclusions | 274 |
| References | 279 |



| | |
|--|------------|
| Chapter 7: Integrated Financial Management Information Systems in Latin America: Strategic Aspects and Challenges | 281 |
| Introduction..... | 281 |
| Public Financial Management and Integrated Financial Management Information Systems..... | 282 |
| IFMIS as Instruments of Public Financial Management..... | 282 |
| Main Characteristics of IFMIS..... | 285 |
| Integrated Financial Management Information Systems in Latin America..... | 287 |
| Origin, Evolution, Opportunities, and Challenges | 287 |
| IFMIS Currently in Operation..... | 290 |
| Implementation and Upgrades | 294 |
| Key Aspects to Consider when Implementing or Upgrading an IFMIS | 300 |
| Political Economy | 300 |
| Project Management and Leadership..... | 303 |
| Alternatives at the Programming and Development Stages..... | 303 |
| Budgeting, Accounting, and Treasury Management: Levels of Integration..... | 308 |
| IFMIS Support of a Single Treasury Account..... | 309 |
| Prioritizing Project Development Efforts..... | 310 |
| Importance of the Testing Stage | 311 |
| Guarantee Period and Maintenance Strategy..... | 314 |
| A Change Management Strategy | 315 |
| Conclusions and Challenges..... | 316 |
| References | 319 |
| Chapter 8: Public Procurement in Latin America..... | 323 |
| Introduction..... | 323 |
| Impact of Procurement on Public Financial Management..... | 324 |
| Transformation of Public Sector Procurement | 326 |
| Public Sector Procurement in Latin America..... | 331 |
| Legal and Regulatory Framework..... | 333 |
| Institutional Architecture | 336 |
| Public Procurement: A Tool to Promote Social, Economic, and Environmental Policies..... | 356 |
| Civil Society Oversight | 362 |
| Conclusions | 365 |
| References | 369 |

Foreword

Over the last two decades, in an effort to promote fiscal stability and sustainable development, countries in Latin America have implemented substantive reforms to strengthen public financial management (PFM) systems and generate reliable financial information. These reforms have enhanced the quality of macro-fiscal management in the region and contributed to the improved economic performance observed throughout the 2000s. As the recent economic crisis demonstrated, however, there is room for further improvement, as well as a need to increase the resilience of PFM systems.

The Inter-American Development Bank (IDB) and the International Monetary Fund (IMF) have provided substantial technical assistance to many Latin American countries with regard to PFM issues, particularly in the last two decades—including project finance, training, and capacity-building—and have helped countries to implement PFM reforms. This book documents part of their experience in terms of such reforms, including their accomplishments, setbacks, and pending challenges. The areas covered include treasury single accounts, PFM performance indicators, integrated financial management information systems, government accounting, treasury and debt management, public procurement, and cost accounting. These areas have been selected not only to bridge the gap in corresponding literature but also, given that most countries have developed initiatives to improve these areas, because they are essential to second-generation reforms.

Each chapter reflects the perspective of IDB and IMF experts in terms of the design and implementation of PFM reforms in the region. This book also benefits from the lessons drawn from effective practices, extensive research, and the sharing of cross-country experiences through multiple modalities, in particular, the Latin American Treasury Forum (Foro de Tesorerías

Gubernamentales de América Latina (FOTEGAL)) and the Latin American Government Accounting Forum (Foro de Contadurías Gubernamentales de América Latina (FOCAL)), both of which the IDB and IMF helped to establish and continue to support. This publication is a valuable information source and an inspiration for researchers and policymakers who seek to understand or wish to implement similar reforms.

At present, macro-fiscal policy faces significant regional challenges. Fiscal risks associated with contingent liabilities related to social security; public pensions; public-private partnerships; natural disasters; subnational government finances; volatile revenues, particularly in natural resource rich countries; and modest growth in developed countries must be made transparent through the sharing of PFM information. While there may be considerable heterogeneity across Latin American countries, there are widespread efforts toward fiscal discipline and sustainable levels of public debt, as well as concern regarding these risks in the medium and long term.

In response to this scenario, most countries in the region have embarked on reforms to improve their financial management performance indicators; better integrate cash and debt management; further improve liquidity management through more efficient treasury single accounts; apply international public sector accounting standards; implement public sector cost management; further integrate financial management information systems; and incorporate more transparent and efficient public procurement. The objectives of these reforms are to allocate and use public financial resources more efficiently, effectively, and transparently; measure and manage fiscal risks; and improve the formulation of fiscal and public management policies, based on reliable, comprehensive, and timely financial information.

Together, the IDB and the IMF remain committed to assist the countries of Latin America with the design and implementation of efficient PFM systems to strengthen their institutions. We hope that this book will contribute to this endeavor.

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Preface

Public financial management (PFM) in Latin America has undergone a significant transformation over the past years, driven in part by a need for fiscal sustainability and transparency. Efforts to modernize include strengthening institutions by upgrading regulatory frameworks; streamlining procedures; and implementing more sophisticated models, as well as information and communications technology (ICT). As the chapters in this book highlight, modernizing the various areas of PFM has produced varying results across countries in the region relating to cash and debt management, treasury single accounts (TSA), public sector accounting standards, integrated financial management information systems (IFMIS), and public procurement.

To increase operational efficiency and ensure a consistent policy stance, countries have begun to improve the coordination of their cash and debt management functions. In the cases of Brazil, Colombia, and Peru, for example, these functions have been integrated into a single unit. Furthermore, nearly all countries in the region established a TSA to integrate and manage their respective public financial resources more efficiently. Countries are also implementing second-generation reforms, such as the adoption of international public sector accounting standards to increase the credibility of financial information. To improve the availability and quality of budgetary, treasury, and accounting data, all governments implemented IFMIS. Lastly, to increase competition, generate value for money and achieve greater transparency, governments have developed electronic procurement systems and have strengthened procurement agencies, as in the cases of Chile, Brazil, Ecuador, Mexico, and Paraguay.

While these advances are considered remarkable, countries in Latin America remain conscious of the fact that there are important challenges yet to overcome with regard to modernizing their PFM. In some cases, reforms have

been ill-designed, lacked traction, or have stalled due to unfavorable institutional and political economy circumstances. Furthermore, the region still lacks quantitative indicators to measure and monitor the efficiency of cash management, and effective public service cost systems remain in their infancy.

Despite international success in creating integrated cash and debt management units, the region has room to increase coordination or unify these functions under a single command. Limited coverage and political resistance have imposed obstacles in the face of a more comprehensive TSA, thus limiting efficient management of government cash liquidity. The need to further upgrade ICT systems and capacitate government accountants explains in part why countries, to date, have only implemented a subset of international accounting standards. Furthermore, budgeting for results, cost systems and accrual accounting reforms pose challenges to the design and integration of IFMIS in the region. Lastly, excessive procedural formality, as opposed to an emphasis on economy and efficiency, has posed a challenge to the increased development of procurement systems.

These reforms and associated challenges matter, in any event, since they are part of the comprehensive effort of governments to meet the demands of citizens for better public services and more solid and transparent fiscal institutions. Governments must allocate and use public resources more efficiently if they wish to succeed in tackling the increasingly complex and uncertain global environment. PFM is the key to achieving these goals.

The work of the IDB's Institutions for Development Department focuses on assisting governments to strengthen public sector institutions so that they can achieve these goals. The Department's specialists have provided valuable advice and technical assistance to many Latin American countries over the past few decades with a goal to modernizing their PFM.

The IDB's Fiscal and Municipal Management Division, in close collaboration with the IMF's Fiscal Affairs Department, has produced this book as a key contribution to countries in their efforts to promote greater efficiency, effectiveness, and transparency in public spending. I am confident that this publication, based on good practices and empirical evidence, will help significantly to overcome the challenges that countries in the region still face in their efforts to implement PFM systems that will promote a sound use of public resources and efficient macroeconomic management.

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The IDB and IMF are grateful for the collaboration, input, and time provided by the Treasurers of the 16 Member Countries of the Latin American Treasury Forum (Foro de Tesorerías Gubernamentales de América Latina (FOTEGAL)), especially the organization's President, Adriana Arosteguiberry. The annual surveys that relate to treasury management—which track the improvements made to treasury administration across the region—have been an important source of information for this book.

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Finally, the authors are thankful for the guidance, ideas, and support received from Vicente Fretes Cibils and Gustavo García (IDB) and Marco Cangiano (IMF). Without their contributions, this book would not have been possible.

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Latin American Treasury Forum

The Latin American Treasury Forum (Foro de Tesorerías Gubernamentales de América Latina (FOTEGAL)) was created in 2010 by 16 countries with the support of the Inter-American Development Bank, International Monetary Fund, and World Bank.¹ Its organization is based on a declaration prepared during an international treasury management seminar in Lima, Peru that took place from April 15 to 16, 2010.

The rationale for FOTEGAL emanates from the need to have a forum to discuss how national treasuries can use financial resources more effectively and efficiently in the face of today's economic and social dynamics. These objectives require an overhaul of the financial management approaches adopted by the national treasuries to meet their financial obligations on time and ensure that they provide efficient financial support to public institutions.

FOTEGAL provides a permanent space for debate and sharing of knowledge and experiences. Its annual seminars form a venue to discuss the development of instruments to improve financial policies in relation to the roles and responsibilities of national treasuries. Topics include the management of the treasury single account (TSA); cash management and planning; coordination of debt and cash management; relationship between treasury and

¹ The founding 16 countries are Argentina, Bolivia, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. Brazil was accepted in August 2015, and is in the process of becoming a formal member.

public accounting functions; roles and responsibilities of treasuries and central banks; payment and collection processing improvements; financial and operational risk management; management of trust funds and other financial instruments; and the institutional and legal framework for treasury operations.

Various studies and technical notes have been prepared by request of the treasurers, with topics including the implementation of the TSA in Latin America, modern cash management approaches, and the results of an annual survey showing the most important developments of treasury management in the region. Further details about the forum are available at www.fotegal.org.



List of Abbreviations

| | |
|----------|--|
| ABC | Activity-based costing |
| ALC | Asset and Liability Committee |
| ALM | Asset and liability management |
| ASSE | State Health Service Administration (Administración de los Servicios de Salud del Estado), Uruguay |
| BCB | Central Bank of Bolivia (Banco Central de Bolivia) |
| BCN | Central Bank of Nicaragua (Banco Central de Nicaragua) |
| BCRP | Central Bank of Peru (Banco Central de Reserva del Perú) |
| BNA | Bank of the Nation (Banco de la Nación), Argentina |
| CAFTA-DR | Central American-Dominican Republic Free Trade Agreement |
| ALC | Asset and Liability Committee |
| CC | Cash Committee |
| CCAF | Financial Management Coordination Committee (Comisión de |
| CCC | Cash Coordination Committee |
| CDM | Cash and debt management |
| CGR | Contraloría General de la República (Chile) |
| CIPFA | Chartered Institute of Public Finance and Accountancy |
| CoA | Chart of accounts |
| CONAC | National Council of Accounting Harmonization (Consejo Nacional de Armonización Contable) |
| CPI | Corruption Perception Index |
| CSO | Civil society organization |
| DIPRES | Budget Directorate (Dirección de Presupuesto de Chile) |
| DMFAS | Debt Management and Financial Analysis System |
| DMO | Debt Management Office |
| DMS | Debt Management Strategy |

| | |
|---------|--|
| DNCP | National Directorate for Public Procurement (Dirección Nacional de Contrataciones Públicas), Paraguay |
| EONIA | Euro Overnight Index Average |
| EPT | Expert project team |
| ERP | Enterprise Resource Planning |
| ETA | Electronic transfer account |
| EU | European Union |
| EUR | Euro |
| FASAB | Federal Accounting Standards Advisory Board |
| FEES | Economic and Social Stabilization Fund (Fondo de Estabilización Económica y Social), Chile |
| FEIF | Federal Entities Revenue Stabilization Fund (Fondo de Estabilización de los Ingresos de las Entidades Federativas), Mexico |
| FEIP | Petroleum Revenue Stabilization Fund (Fondo de Estabilización de Ingresos Petroleros), Mexico |
| FIPE | Institute of Economic Research Foundation (Fundação Instituto de Pesquisas Economicas) |
| FOCAL | Latin American Government Accounting Forum |
| FOTEGAL | Latin American Treasury Forum |
| FRP | Pension Reserve Fund (Fondo de Reserva de Pensiones), Chile |
| GAO | General Accounting Office |
| GDP | Gross domestic product |
| GFOA | Government Finance Officers Association |
| GFS | Government Finance Statistics Manual |
| GPA | Agreement on Government Procurement |
| GPP | Green Public Procurement |
| GRPS | Government resource planning system |
| ICT | Information and communications technology |
| IDB | Inter-American Development Bank |
| IFAC | International Federation of Accountants |
| IFMIS | Integrated financial management information systems |
| IFRS | International Financial Reporting Standards |
| IMF | International Monetary Fund |
| INEGI | National Institute of Statistics and Geography (Instituto Nacional de Estadísticas y Geografía), Mexico |
| IPSAS | International Public Sector Accounting Standards |



| | |
|--------------|---|
| IPSASB | International Public Sector Accounting Standards Board |
| IT | Information technology |
| JFMIP | Joint Financial Management Improvement Program |
| KLOC | Thousands of lines of code |
| LAC | Latin America and the Caribbean |
| MAPS | Methodology for Assessing Procurement Systems |
| MoF | Ministry of Finance |
| OBI | Open Budget Index |
| OECD | Organization for Economic Cooperation and Development |
| OGP | Open Government Partnership |
| OMB | Office of Management and Budget |
| ONP | Contribution to Funds of the Office of Pension Normalization (Contribuciones a Fondos de la Oficina de Normalización Previsional), Peru |
| OSCE | Regulatory Agency for State Contracts (Organismo Supervisor de las Contrataciones del Estado), Peru |
| OSM | Observatório Social de Maringa |
| PEFA | Public Expenditure and Financial Accountability |
| PFM | Public financial management |
| PIPP | Integrated Planning and Budget Process (Sistema del Proceso Integral de Programación y Presupuesto), Mexico |
| POC | Proof of Concept |
| PPA | Multiyear Plan (Plano Plurianual) |
| PRM | Public resource management |
| PRODESP | State of Sao Paulo IT Company (Empresa de Processamento de Dados do Estado de São Paulo) |
| PROFIP | Productive Institutional Strengthening of Provincial Fiscal Management, Phase II (Programa de Fortalecimiento Etapa), Argentina |
| PROFISCO | Management Support and Fiscal Integration Program (Programa de Apoyo a la Gestión e Integración de los Fiscos), Brazil |
| PSCS | Public Service Cost System |
| RBB | Results-based budget |
| RCB | Bank Account Registration System (Sistema de Registro de Cuentas Bancarias), Mexico |
| Repo | Repurchase agreement |
| reverse repo | Reverse repurchase agreement |

| | |
|---------|---|
| RTGS | Real Time Gross Settlement |
| SAFI | Integrated Financial Administration System (Sistema de Administración Financiera Integrado), El Salvador |
| SAMI | Integrated Municipal Administration System (Sistema de Administración Municipal Integrado), Honduras |
| SAP | Department of Penitentiary Administration (Secretaria de Administração Penitenciária) |
| SEE | Department of Education (Secretaria da Educação) |
| SEFAZ | Department of Finance (Secretaria da Fazenda) |
| SERCOP | National Service for Public Contracts (Servicio Nacional de Contrataciones Públicas), Ecuador |
| SERPRO | Public data-processing company (Serviço Federal de Processamento de Dados), Brazil |
| SGP | Department of Public Management (Secretaria de Gestão Pública) |
| SIAFEM | Government Financial Management Information System (Sistema Integrado de Administração Financeira dos Estados e Municípios) |
| SIAFF | Federal Integrated Financial Management System (Sistema Integral de Administración Financiera Federal), Mexico |
| SIAFI | Integrated Financial Management System (Sistema Integrado de Administração Financeira do Governo Federal), Brazil |
| SIAP | Budget Administration System (Sistema de Información de Administración Presupuestaria), Chile |
| SICOFFE | Integrated Federal Fund Accounting System (Sistema Integral de Contabilidad de Fondos Federales), Mexico |
| SICOM | Federal Treasury Debt Compensation System (Sistema de Compensación de Adeudos de la Tesorería de la Federación), Mexico |
| SICOP | Accounting and Budget System (Sistema de Contabilidad y Presupuesto), Mexico |
| SIDIF | Integrated Financial Management System (Sistema Integrado de Administración Financiera), Argentina |
| SIGEF | Integrated Financial Management System (Sistema Integrado de Gestión Financiera), Dominican Republic |
| SIGEO | Budget Execution Financial Management System (Sistema de Informações Gerencias da Execução Orçamentária) |
| SIGFE | State Financial Management Information System (Sistema de Información para la Gestión Financiera del Estado), Chile |

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| SIGMA | Integrated Management and Administrative Modernization System (Sistema Integrado de Gestión y Modernización Administrativa), Bolivia |
| SII | Integrated Information System (Sistema Integral de Información de los Ingresos y Gastos Públicos), Mexico |
| SIIF | Integrated Financial Information System (Sistema Integrado de Información Financiera), Colombia and Uruguay |
| SIMPA | Information Management System of PPA (Sistema de Monitoramento de Programas e Ações do PPA) |
| SIOPI | Integrated Planning and Budget System (Sistema Integrado de Planejamento e Orçamento), Brazil |
| SLTI | Secretary of Logistics and Information Technology (Secretaria de Logística e Tecnologia da Informação), Brazil |
| SME | Small- and medium-sized enterprise |
| SPDR | Department of Planning and Regional Development (Secretaria de Planejamento e Desenvolvimento Regional) |
| SPG | Department of Planning and Management (Secretaria de Planejamento e Gestão) |
| SPP | Sustainable public procurement |
| SS | Department of Health (Secretaria da Saúde) |
| STN | National Treasury Secretariat (Secretaría del Tesoro Nacional), Brazil |
| TA | Technical assistance |
| Tbills | Treasury bills |
| Tbonds | Treasury bonds |
| TESOFE | Federal Treasury of Mexico (Tesorería de la Federación de México) |
| TSA | Treasury single account |
| UNCITRAL | United Nations Commission on International Trade Law |
| UNCTAD | United Nations Conference on Trade and Development |
| UNLP | National University of La Plata (Universidad Nacional de La Plata), Argentina |
| WTO | World Trade Organization |

Public Financial Management in Latin America: The Key to Efficiency and Transparency

Carlos Pimenta and Mario Pessoa

OVERVIEW OF PUBLIC FINANCIAL MANAGEMENT REFORMS IN LATIN AMERICA

Public financial management (PFM) plays a key role in the sound allocation and use of public resources and macroeconomic management. This is why PFM modernization can have a substantive impact on the effectiveness, efficiency, and transparency of public spending. The call to upgrade institutional, functional, and technological frameworks of PFM systems in Latin American countries has been significant as governments seek to achieve greater coverage, reliability, and timeliness of financial information. There is also pressure to streamline procedures and implement more sophisticated business models and technologies in national treasuries, debt management offices, accounting departments, and budget and procurement agencies.

The demand for modernization has been particularly strong in Latin American countries, as authorities pursue fiscal sustainability in a challenging international economic environment. At the same time, they are responding to increasing demands for transparency and facing tighter fiscal conditions.

This book intends to contribute to the discussion by providing an overview of good practices, as well as the experiences of some countries—with special attention to Latin America—that have implemented PFM reforms in cash and debt management (CDM), government accounting, procurement, and financial

management information systems. The book does not cover other PFM areas that include budgeting and planning processes and their interactions; performance-oriented budgeting; public investment systems; Medium-term Expenditure Frameworks (MTEF); or risk analysis. Although these areas have been covered in many other publications, further research is needed to understand how Latin American countries have performed on those issues. The focus of this book, in particular, reflects the findings of the technical dialogue and technical assistance of the Inter-American Development Bank (IDB) and the International Monetary Fund (IMF) with regard to Latin America, representing some of the priorities determined by the countries in the region.

The IDB and IMF have collaborated to support the exchange of experiences of, and dissemination of good practices by, PFM practitioners, particularly in terms of treasury management and public accounting. In addition, since its inception in 2010, the Latin American Treasury Forum (Foro de Tesorerías Gubernamentales de América Latina (FOTEGAL)) has become the primary forum on treasury management in the region, prompting and facilitating discussions on the key topics and challenges that the region faces. These discussions take place through annual seminars, workshops, studies, and training.

FOTEGAL is composed of 16 national treasuries in the countries of Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, and Uruguay.¹ The recently created Latin American Government Accounting Forum (Foro de Contadores Gubernamentales de América Latina (FOCAL)) is expected to produce a similar impact with regard to government accounting, influenced significantly by a new wave of reforms relating to the implementation of accrual and cost accounting.

One remarkable trend in the region is the use of information and communication technology (ICT) to facilitate the management of large amounts of financial information. Some of the recent reforms would not be possible without the support of sophisticated integrated financial management information systems (IFMIS). This is reflected in the implementation of comprehensive treasury single accounts (TSAs), electronic systems supporting the procurement and acquisition of goods and services, consolidation and integration of financial management systems, implementation of public sector cost systems, and preparation of consolidated financial statements on an accrual basis.

¹ Brazil has participated in some events, although it is not a formal member.

Although extensive progress on those PFM issues in the region has been made in recent decades, there still remain many challenges to overcome. IFMIS are in the process of modernization aimed at greater functional integration; TSAs—as defined by Fainboim and Pattanayak (per references list) (2010)—have expanded, but coverage remains incomplete (even in relation to central government), and accrual accounting has yet to progress. Public procurement is fundamental to sound public resource management (PRM) and it has achieved great progress in the region during the past two decades; however, there is room for improvement. Cost accounting—also essential for best PRM practices—is still in its infancy and it depends on information that is not fully available. In this regard, it is important to engage decision makers with an appetite to go beyond traditional financial information.

Strong demand for efficiency and economy in the management of financial resources continues. The development of treasury indicators is vital to measure and communicate results simply and directly. This also has a bearing on the close agency coordination of CDM functions to achieve substantive financial impact, resource savings, and transparency.

The above issues are discussed in this book to influence PFM reforms and to contribute to the improved delivery of goods and services by governments. Sound PFM systems are intended to provide the preconditions for the efficient performance of public expenditure. The Latin American experience is unique, since it involves a substantive number of middle-income and emerging market economies that have similar institutional and legal traditions that derive from European countries, such as Spain, Portugal, and France. This experience can be useful for other regions that currently face similar challenges.

Four main pillars of PFM are discussed in this book. The first pillar represents the relationship between PFM and macro-fiscal affairs in general, and it includes fiscal and macroeconomic management, monetary policy, development planning, and other macro-fiscal aspects. The second pillar concerns the improvement of the efficiency and performance of PFM systems, covering the characteristics that relate to the organizational structures, methods and strategies, information systems, and indicators that measure PFM efficiency. The third pillar relates to PFM and PRM, including the use of financial information to improve decision making in the public sector, which contributes to greater efficiency in resource management, and generates value for money in public expenditure. The fourth and last pillar involves PFM and transparency, taking into consideration the quality, timeliness, availability, and public access to financial information.

PFM AND MACRO-FISCAL AFFAIRS

Within the first pillar of PFM, this publication highlights the relevance of PFM to generate information that is conducive to good fiscal and macroeconomic management. As Allen, Hemming, and Potter (2014) mention, “although the objectives of PFM overlap with the goals of fiscal policy, PFM and fiscal policy are not the same. PFM has more focus on expenditure rather than on taxation and is concerned with achieving aggregate fiscal discipline and efficient government spending, while the goals of fiscal policy are to achieve macroeconomic stability and sustainable economic growth.”

In this context, the concept of PFM, which is discussed here, adopts a comprehensive and overall definition that covers a set of administrative elements, tools, and management systems. These are designed to produce information, processes, and rules that support macro-fiscal policy decisions and to provide the instruments for the implementation of these decisions.

Regarding the legal and regulatory PFM frameworks in Latin American countries, considerable improvement has been attained during the last two decades, although difficulties have been experienced in linking development strategies and plans to medium-term fiscal planning frameworks, as well as budget plans to current in-year appropriation and execution (USAID, 2014). Furthermore, increasing the quality of macro-fiscal management is essential to improve fiscal planning and forecasting capacities.

In terms of monetary policy, the treasury—understood to be the unit responsible for CDM—must communicate and coordinate with the central bank, given the macroeconomic relevance of the volume of resources controlled. As emphasized by Cangiano, Curristine, and Lazare (2013), one of the key objectives of PFM is to maintain a sustainable fiscal position. These macro issues impact economic development and its measurement.

The relationship between PFM and fiscal affairs is not the prime subject for analysis in this publication. Rather, it is a component of the general framework that relates to its importance in macro-fiscal and economic management.

PFM AND ITS EFFICIENCY

A more in-depth discussion is made of the efficiency of PFM—the second pillar—through the identification of common trends and opportunities that can strengthen these systems in Latin America. These include aspects that relate

to organizational arrangements, methods and strategies, information systems, and PFM performance indicators.

The book dedicates special attention to the organization and coordination between treasury and debt management functions in terms of the organizational arrangements that structure PFM administration. The traditional objective of government cash management, in general, is to ensure that cash is available to execute the budget efficiently and to meet government obligations when they fall due. Modern cash management, however, has other objectives: cost-effectiveness, risk management, and support to other financial policies. It has been stated that a TSA is a prerequisite for efficient cash management. Most countries in the region have developed, or are in the process of developing, a TSA. By pooling financial resources, millions of dollars can be saved per year, given that centralization of cash liquidity reduces the need to issue treasury bills to finance short-term cash requirements. It also provides the opportunity to invest cash surpluses.

Among the key functions of cash management are the monitoring of cash inflows and outflows, access to cash, development of cash flow forecasting, and entry into the financial market. Government cash management is also related to the coordination between treasuries and central banks in terms of analyses and the management of financial risk (liquidity, credit, and operational). Furthermore, the core function of debt management is to ensure that the financing needs and payment obligations of government are met at the lowest cost in the short, medium, and long terms, consistent with prudent risk levels. Many countries associate a secondary objective to the development of the domestic financial market.

The importance of close coordination between debt and cash management is self-evident. In the first place, to finance the gross borrowing requisites of government, debt management strategies (DMS) need to be developed to enable the selection of the most adequate financial instruments that will minimize cost and risk. Simultaneously, the financial market should be developed as a means to provide stability and a measure of certainty. Good practices dictate that such choices are made by way of medium-term DMS that are supported by debt sustainability analyses, taking into account the appetite and volatility of the market, as well as interest and exchange rate predictions. Cost considerations are relevant, among other criteria, since the development of a consistent yield curve will, in turn, develop the market. Specialists within the treasuries should develop these processes.

On the expenditure side, it is essential to comprehend the significant yearly, monthly, and weekly fluctuations that impact payment flows. Most

countries in Latin America have developed quarterly, monthly, and intra-monthly cash flow forecasts with sufficient precision to experience small variations in relation to effective payments, but some continue to operate under severe cash constraints with the need to ration cash, impose budget restrictions, and, ultimately, accumulate expenditure arrears.

Cash flow forecasting at the national and subnational levels tends to be incomplete in many Latin American countries. Opportunities to strengthen cash flow management include expanding the coverage of TSAs, improving its interoperability with debt and financial management systems, and strengthening cash flow forecasting at the national and subnational levels to improve the predictability of funds.

There are only three countries in Latin America that operate under an integrated debt and cash management model: Brazil, Colombia, and Peru. The other 14 countries have different arrangements, whereby the functions are distributed among the treasury office, debt management unit, central bank, and—sometimes—the budget office. There are advantages to integrated units, although there are some constraints, such as the lack, in some cases, of a professional cadre of staff, the fact that remuneration sometimes is noncompetitive, and the need for training, all of which prevent the implementation of a modern debt management unit, as exists in many advanced economies.

In some respects, the functions of debt and cash management perform well in Latin America, despite the various organizational structures in place. The historical tradition of separate units prevails at the expense of a more integrated approach. Whether or not the potential advantages of integration are recognized, reform is challenged by the need to change current legislation and administrative practices. The transition from a separate to an integrated structure takes time and the process can be more complicated than originally foreseen by ministries of finance.

Taking into account the countries that maintain separate units, those that are more effective tend to have better coordination mechanisms and superior integrated accounting and financial information systems. Nevertheless, while countries improve their CDM processes and the domestic financial markets develop, the separation of functions appears to be more disadvantageous than advantageous.

The most important instrument in Latin America that is discussed, in terms of key PFM methods and strategies, is the TSA. This is viewed as an essential tool to efficiently manage cash.

Establishing a TSA is a fundamental step toward modernization of treasury management. There is much empirical evidence to suggest that a TSA

can save significant resources by avoiding unnecessary short-term borrowing or by pooling liquidity to facilitate cash management. Moreover, a TSA allows the treasury to shift from concentrating primarily on the payment of obligations (traditional passive behavior) to become more cash management-oriented (active behavior), leading to such actions as investing in the financial market and maintaining minimum liquidity to allow for timely payments. For example, the Treasurer of Guatemala reported savings in 2014 of Q\$42 million (US\$6 million, or 1.5 percent of interest paid on domestic debt). This was predominantly attributed to the consolidation of central government resources in the TSA. Other countries have experienced similar savings.

Three countries in the region now include the entire central government within their TSA (Argentina, Brazil, and Costa Rica). Brazil, along with Costa Rica, Ecuador, and Mexico, have incorporated their pension funds and have absorbed their external resources into this account. The remuneration of the TSA has yet to be established and, at present, most treasuries maintain their deposits at the central bank although few, in fact, are remunerated.

Most reforms aim to ensure that the TSA has comprehensive coverage to enable active investment and an adequate remuneration of balances, thus reducing the number of bank accounts and maintaining them at zero balance; automating bank reconciliation; and improving the integration of financial and accounting systems. In the case of Latin American countries, specifically, it is important to recognize that most of the advances that relate to the consolidation of the TSA were made possible due to significant enhancements of IFMIS.

Regarding PFM Information Systems, IFMIS is the key instrument to better integrate PFM functions. All countries in Latin America have implemented IFMIS, and these are continuously being upgraded in the region, which represents the largest regional concentration of IFMIS projects in the world over the past 30 years.

An IFMIS is an information system that is used in the public sector to computerize and automate key aspects of financial management, such as budgeting, treasury functions, accounting, and debt management. In general, an IFMIS promotes a single registry of revenues and expenditures from a significant number of units in the public sector in a more integrated and efficient way in relation to PFM processes. It also generates relevant in-year fiscal reports and annual financial statements.

The IFMIS that are in place in Latin American countries vary in the degree of integration in terms of key PFM functions. The chapter that discusses this topic presents the main characteristics, evolution, current status, and level of

IFMIS development in the region. It also includes the conceptual aspects and capabilities of the systems, development strategies, latest upgrading trends, and challenges to implementation. After more than two decades, several countries have modernized or implemented new IFMIS. Some incentives are the result of better information technologies to enable easier connectivity, offer greater storage and data usage, have faster communication platforms, and incorporate more efficient and reliable software.

By successfully implementing or enhancing an IFMIS, it should generate timely, relevant, and reliable financial information, as well as contribute to achieving fiscal discipline, efficiency in the allocation of resources, operational effectiveness, and fiscal transparency. The chapter closes with a few success stories and general recommendations for the modernization of the IFMIS, which include aspects of project management, integration of its main functions, and technological and functional definitions of the ICT system, as well as the prioritization of activities during the various stages of development and implementation.

The adoption of IFMIS in Latin America initially took place in the 1980s and 1990s, when the region suffered fiscal crises and during which time ICT took hold, among other factors. IFMIS, in general, currently operate in Latin America and cover four principal areas: budget, treasury, accounting, and public debt. In addition, IFMIS in some countries interact with other systems of PRM (e.g., those that relate to public investment, asset management, payroll, procurement, tax administration, and project management). Therefore, it is important to define the scope and functionality of the system, given that there is no uniformity.

On a technological level, most IFMIS in the region are the result of custom-tailored software, primarily from in-house development, which may offer more than one version with subsequent updates. During the last decade, the development of systems using Web-based technology has grown as a consequence of an expanded Internet.

Despite the widespread development of IFMIS in Latin America, not all outcomes or upgraded projects have generated adequate information to strengthen fiscal transparency and accountability within a specific framework to promote fiscal solvency. The inadequacies in IFMIS implementation and operation constitute a loss of opportunity to strengthen these and, therefore, directly impact the effectiveness of fiscal policy and fiscal risk management.

International organizations have supported the implementation and shaping of IFMIS in Latin America since the 1990s. These projects, in general, aim to

increase the institutional capacity of governments to control all phases of public spending transparently, integrally, and efficiently. In most cases, they include upgrading or creating IFMIS, which requires the allocation of significant financial and human resources for a long period of time—at least four to five years.²

There are many strategic aspects that relate to the successful development and implementation of an IFMIS in the case of Latin America. These include the political economy of an IFMIS project; a conceptual model, as well as governance and management of the project; definition of the development strategy; strengthening of budgetary management, financial, and accounting functions, including level of integration; implementation of a TSA as one of the core modules; prioritization of activities in project development; significance of the testing phase; warranty period and systems maintenance strategy; and change management strategy.

The main challenges that face IFMIS modernization include the updating of the chart of public accounts and defining to what extent the modifications will impact the data structure and processes. In addition, it is necessary to establish the optimal level of integration between IFMIS and the budget, in terms of a results framework, and to what extent IFMIS contributes to the generation of public service cost information.

One of the most important issues in the region is the need for more quantitative and results-based indicators to measure PFM productivity. This relates to the measurement of PFM performance.

This publication attempts to identify a set of comprehensive and quantitative indicators to demonstrate whether treasurers are adding to the benefits of resource pooling in the TSA, reducing financial and operational costs, improving efficiency, and streamlining controls. In terms of resource pooling, alone, indicators suggest that to increase the coverage of the TSA and to speed the transfer of resources to the treasury, the time it takes to collect revenues can be reduced and the control to open bank accounts can be increased, thus improving the liquidity in the TSA.

With regard to reducing financial and operational costs, relevant indicators measure the cost of collecting revenues and making payments through

² The most remarkable exception is Brazil, which implemented an IFMIS in 1987 in only one year. Very strong political will and the existence of a public data-processing company, SERPRO (Serviço Federal de Processamento de Dados), enabled the successful and quick implementation. Continuous upgrading of the system has resulted in the availability of consolidated financial information for the budgetary process of the central government and a very comprehensive TSA—both at the forefront of the region.

the banking system. In terms of efficiency, these indicators establish the average time it takes to collect revenues and pay expenditures, as well as determine the accuracy of cash flow forecasting. Another indicator quantifies the accumulation of payment arrears to minimize their accumulation. Finally, this book discusses a proposed mechanism to prevent late payments by charging interest that is accrued as of 30 days from invoice date.

PFM AND PUBLIC RESOURCE MANAGEMENT

The third pillar of PFM, which relates to supporting PRM, is an important component in public management reform. It includes the use of financial information to improve decision making in the public sector, thus contributing to greater efficiency of resource management and generating value for money in public expenditure.

Regarding the capacity of PFM systems to support the allocation of resources in the public sector, the innovation of calculating public service costs is rarely available in Latin America. In general, cost information is obtained at the aggregated institutional and programmatic level, but not at the level of internal government providers of basic public service cost centers (e.g., schools, hospitals, and penitentiaries). This scenario also applies to the cost of per capita public services (e.g., primary education for a student, patient treatment in hospital, or maintaining a prisoner in jail).

International experience has shown that the implementation of cost systems in the public sector can be very complex, based on the kind of solutions proposed. An example is the activity-based cost system, which is very expensive and difficult to maintain, and the use of cost information to budget allocation is very limited. The challenge has been to use cost information as part of the budgetary allocation process and financial decision making in the public sector.

There have been few positive experiences in relation to public sector cost systems in Latin America. An example is that of the State of São Paulo (Brazil),³ which linked the activities of the MTEF (multiyear plan) with the services provided by cost centers. The rationale behind this approach is to give the cost system a usefulness that goes beyond the usual approach that benefits control over management. The government of São Paulo has invested

³ The State of São Paulo is the most developed state in Brazil. Its economy is larger than most of the countries in Latin America.

in developing results-based management, in which cost information is considered essential.

The objective of this project is to improve the budget allocation of resources to generate savings and efficiency, and better inform the public about the cost of public services. The case of São Paulo was supported by IMF technical assistance over a period of more than three years. Despite the fact that the exercise has not yet been totally completed, this experience is a valuable asset to the discussion relating to some of the innovations in the approach taken.

Another innovation in the case of the State of São Paulo is to define, from inception, the public services to be costed and establish the cost centers responsible for the provision of such services. Apart from adding specific knowledge on the manner in which public services are structured and delivered, this approach has been seen to increase the commitment of the authorities and the usefulness of cost information, given that the relevant reports tend to incorporate the expectations of the main users, that is, cost center managers, and the population served by them.

Finally, and as a result of the experience, a organization strategy has been adopted that includes the creation of a dedicated unit to manage the project and serve as a reference for the development of the system. Also adopted is a common approach that can be extended to the entire government of São Paulo; that is, using all systems and gathering available information prior to the development of any ICT system, as well as garnering an extensive range of research information and documentation relating to the experience. In this respect, the case of São Paulo goes beyond what has been developed by the government of Brazil, which calculates cost at the budgetary institutional and programmatic level only (Machado and Holanda, 2010).

The project undertaken by the State of São Paulo is a relevant example for other national and subnational governments, considering the size of the state and the complexity of its public services. The main lessons learned are (i) to ensure that the scope of the project is simple and realistic; (ii) to use available systems and information as much as possible before new developments are undertaken; (iii) to use pilot projects to review current circumstances and familiarize financial analysts with cost concepts; (iv) to identify multiple users and uses of the cost information, such as program evaluation, financial control, budgeting, and performance; (v) to adopt a proof of concept phase to test the ICT solution before fully developing the ICT system; (vi) to invest time in understanding the needs of the main stakeholders and communicate in a language that is familiar to them; (vii) to create, upfront,

a good structure to manage the cost project, prepare manuals, and investigate and document the local experience; and (viii) to implement the project in stages that takes in consideration the political cycle.

Cost accounting and analysis are important to improve budgeting and resource allocation decisions and to support PRM, in general. They could contribute to enhancing government performance on the basis of economy and efficiency. Spending budgets are basically the aggregation of costs to produce goods and services in certain quantities. Government officials are urged to make resource allocations on a rational basis, by comparing alternatives. These alternatives need to be identified and analyzed among other examples that relate to the general need for cost information in government.

The contribution to cost accounting and greater PRM efficiency by IFMIS currently operating in Latin America is limited, based on its capabilities and functionalities. The IFMIS in place mainly support public budgeting, accounting, and financial management, applying a single registry of administrative actions of collecting and spending. This allows for more integration between the processes of public budget, accounting, and treasury and debt management, and it generates standardized financial statements.

Procurement and additional resource planning systems are complementary to the financial management capacity of IFMIS, as well as other links to the payroll. These are valuable to improve PRM.⁴ Some information systems that include modules of payroll, procurement, and other resource planning functions that are beyond the traditional financial management functions of budget, accounting, treasury and public debt, are known as Enterprise Resource Planning (ERP). ERP is an information system that includes a series of integrated applications, enabling an organization to manage its entire business and finance it in an integrated way, including purchasing and human resource management activities. Some authors commonly refer to an ERP that is customized for public sector use as a government resource planning system (GRPS) (Pimenta and Farias, 2012).

The use of a single GRPS is more common at the subnational level or in a single entity and it is difficult to implement to cover an entire country. The most common strategy at the national level in Latin America is to integrate or interoperate other databases with an IFMIS (e.g., to better integrate decentralized payroll management systems to improve adherence to budgeted human resource planning and expenditure).

⁴ Payroll and total public expenditure in human resources are important issues that are pending with regard to PFM in Latin America.



Public procurement is an essential tool for PRM in terms of generating value for money in public expenditure, and it is one of the most important areas of PFM. This book highlights the significant progress made by Latin American countries over the last two decades as they pay close attention to electronic procurement.

Public procurement in Latin America accounts for an average of 10 to 15 percent of gross domestic product. It is also the government activity that is most vulnerable to waste and corruption due to its complexity, size of financial flows, lack of transparency of some decisions, and close interaction between the public and private sectors.

Procurement is also an important component of public administration. Firstly, public procurement systems can facilitate spending along budget commitments, facilitate reliable and efficient resource flows and transactions, enhance accountability, and generate critical information to support prudent fiscal decision making.

ICT has been the main driver behind the reform of public procurement systems in Latin America. To increase transparency, competition (savings), and efficiency in public tendering processes, the majority of Latin American countries have developed e-procurement systems that disclose critical procurement information and provide tools to support transactional procurement. Data from the Organization for Economic Co-operation and Development (OECD) and the IDB shows that out of a list of 10 services provided, those of Latin American countries are considered to be more comprehensive, on average, than those of OECD countries (OECD and IDB, 2014).⁵ Data also show that countries in Latin America disclose, on average, a higher proportion of procurement information at the central government level than do OECD countries. E-procurement systems have also helped to consolidate data on government expenditure and results.

Advances in public procurement can also be attributed to the creation in many Latin American countries of specialized procurement regulatory agencies—some with institutional and financial autonomy. These agencies harmonize and standardize regulations across procuring entities, oversee the development, performance, and maintenance of e-procurement systems and information portals, provide technical capacity training and, in some cases, mitigate disputes.

⁵ The Organisation for Economic Co-operation and Development has 34 founding member countries. It was established in 1961 to stimulate economic progress and world trade.

Lawyers and legal experts historically have carried out procurement regulations within the region. As a result, procedural formality and compliance took precedence over economic efficiency or commercial objectives. The links between budget and procurement plans, therefore, are weak and budgetary law and financial management procedures are generally inadequate to meet procurement needs.

To improve PRM, budget planning, cash forecasting, budget allocation and procurement systems need to work in parallel. As such, the integration of e-procurement systems with other PFM systems, such as IFMIS and TSA, is critical. In many Latin American countries, however, public procurement systems are minimally integrated with PFM systems, and there is poor linkage between budget preparation, procurement planning, and execution systems. For instance, procurement systems usually do not consolidate the information relating to the contract compliance of major expenditures with budgetary systems, nor are they linked to cash management systems. The challenges of greater integration or interoperability of these systems, however, can be attributed to reasons of an institutional and political nature, as well as poor planning, as opposed to complications related to ICT.

While many countries in the region have adopted some anticorruption measures, procurement frameworks and electronic government procurement systems, nevertheless, have proved insufficient by themselves to avoid corruption, mismanagement, and waste of resources—demonstrated by the large number of related scandals in the region. Despite the fact that sanctions are usually included in such frameworks, in practice, few countries enforce them. To address this, it is essential that Latin American nations identify the businesses that have been or are engaged in corrupt practices, barring them from future bids. To do this will necessitate the improvement of other relevant systems, such as internal and external control systems and internal audits. Efforts also should be made to understand how the laws and regulations in place are able to be circumvented and how current control and sanctions mechanisms operate in practice.

To a limited extent, procurement policies in the region assist small- and medium-sized enterprises and women-owned businesses, as well as protect the environment. The use of public procurement as a tool to promote economic, social, and environmental policies, however—while respecting the fundamental principles of procurement (efficiency, value for money, and transparency)—remains a challenge in most Latin American countries.



PFM AND TRANSPARENCY

The fourth and last pillar relates to PFM and transparency and it synthesizes the main topics covered by this book (e.g., quality, timeliness, and public access to financial information). Access to information ensures financial accountability, although incentives and rules—in particular, the principles and standards of accounting and auditing—are critical elements, as well (Schick, 2013).

With regard to the quality of financial information, the recent reform in Latin American countries of public accounting for accruals and improved public sector asset and liability registries are essential to transparency. This move has demonstrated the relevance that inclusive identification, measurement, and publication have on government revenues, expenditures, assets and obligations.

The recent global financial crisis has exposed the weaknesses inherent of most financial information systems that were unable to produce critical information on long-term obligations and contingent liabilities. Contingent liabilities, as an example, are associated to pensions and social benefits and public-private partnership (PPP) contracts. Other instances are contingent responsibilities that relate to judicial demands against the public sector, potential impact of natural disasters, and other fiscal risks that are poorly identified and/or justified.

To respond to these challenges, countries in Latin America are implementing new accounting methods that are aligned with international accounting standards. The approach is considered prudent and realistic and is in parallel to the speed and extent of the reforms. An approach that has been adopted by Chile consists of five stages: (i) gap analysis to identify how far current accounting practices are from the international standards; (ii) development of a strategy to implement the reforms; (iii) adaptation of the accounting standards; (iv) development of guidelines and timeframes; and (v) implementation of the reforms.

This publication describes the public accounting experience and strategies adopted by Brazil, Chile, Costa Rica, and Colombia. These are particularly useful, since they showcase how countries have defined a pathway toward accounting reform in central government, some of which will take at least eight years to complete at national level. This gradual approach demonstrates the need for more realism—rather than discouragement—at the time it takes to adopt or adapt the public accounting standards, develop the necessary ICT systems, and improve the capacity of a significant number of government accounting professionals who are not familiar with the standards.

To date, no country in the region has yet completed the transition, which now stands at an average of eight to 12 years to totally complete. This does not mean, however, that results already have not been—or will not be—achieved until then. The reforms significantly impact the quality of information; coverage of main stock and flows; substantive investment in ICT systems; capacity building; and improved, more frequent, and transparent reports.

The availability and extent of PFM information varies across Latin America. Some countries provide comprehensive and public information concerning budget plans and execution, while others provide limited access to it.

Challenges remain to reduce expenditure management, procurement, and payroll corruption. It is essential that there is more transparency and that the design of internal control frameworks is improved, particularly in countries that are lagging in terms of access to information. While this book does not offer an in depth analysis of audit practices and public control, it does include numerous considerations that relate to the issue of transparency.

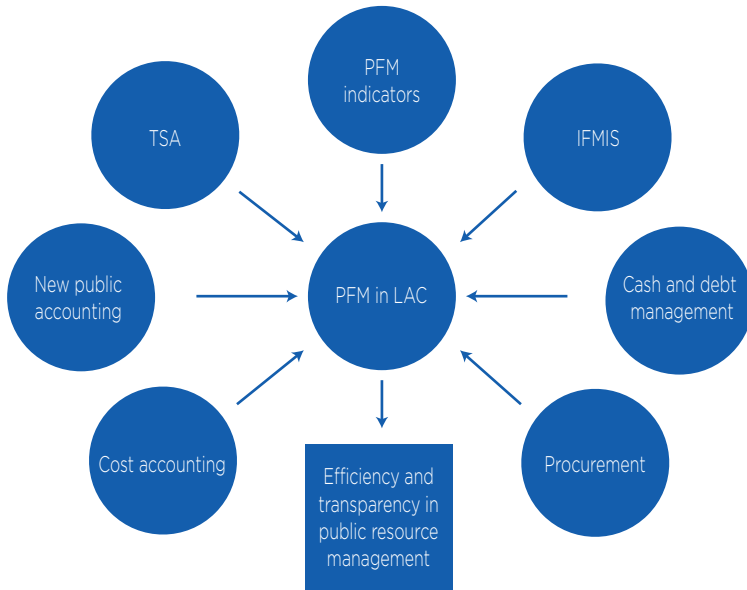
Concerning transparency in public procurement, the data from the OECD Methodology for Assessing Procurement Systems (MAPS) shows that some countries in Latin America currently have anti-corruption measures in place, albeit limited, to preserve the integrity of their procurement systems.

The degree of the participation of civil society organizations (CSO) in Latin America to monitor government finances is disproportionate and is generally inadequate across countries. CSOs face obstacles in the form of legal mandates and technical deficiencies. Progress in some countries has been observed, however, which is encouraging.

STRUCTURE OF THIS PUBLICATION

This book comprises eight chapters, each with a similar structure. Each chapter begins with a discussion of advanced approaches to PFM in terms of conceptual models; this is followed by a description of the current status of a sample of Latin American countries, and concludes with an examination of good practices, conclusions, recommendations, and the identification of areas that require further investigation.

The selection of areas is based on the impact that some PFM reforms have had in Latin America in the last two decades. While there are other PFM reforms that have been implemented, the ones discussed here have specifically impacted a large number of countries. This has provided a rich pool of

FIGURE 1.1 RELEVANT PFM COMPONENTS CONSIDERED IN THIS BOOK

Source: Authors' elaboration.

empirical evidence and sufficient information to examine the challenges and successes of implementation. An exception to the regional approach, however, is contained in Chapter 6, which relates to the cost system that is being developed in the State of São Paulo, Brazil. This experience will inspire other states and countries to consider the cost of public sector services, for which there are limited international experiences and results.

In the first chapter, the authors have presented an overview of the book, outlining the principle components of PFM, which are examined in the following chapters. These components hinge on the four key dimensions that include the (i) relationship between PFM and macro-fiscal affairs; (ii) efficiency of PFM systems; (iii) contribution of PFM to PRM; and (iv) impact of PFM on transparency and accountability.

As previously mentioned, the relationship of PFM to fiscal affairs is not the main subject for analysis in this book; rather, it is part of a general framework to understand the importance of PFM on macro-fiscal and economic management. Chapters 2, 3, 4, and 7 directly relate to efficiency in PFM, including the indicators with which this efficiency in treasury management can be measured; organizational arrangements for CDM; methods and strategies

in the use of a TSA; and the support of ICT to integrate the main PFM functions by using IFMIS. With regard to PFM supporting PRM, Chapter 6 details the experience of cost systems in the public sector, while Chapter 8 analyzes the progress of procurement management in Latin America. Finally, Chapter 5 explores the impact of PFM on transparency and accountability, analyzing the role that modern public accounting has in relation to them.

Chapter 2 provides a description by Marco Varea and Adriana Arosteiguiberry on the origins of FOTEGAL, as well as a discussion on an issue that has been on the agenda of almost all annual seminars: the demand by treasurers for a definition of a set of quantitative efficiency indicators for treasuries to easily measure performance results that can be easily communicated and understood by a nonspecialized audience.

The authors offer a synopsis of the main treasury indicators that are currently available, such as Public Expenditure and Financial Accountability (PEFA), Open Budget Index, and the survey developed by FOTEGAL. They conclude that despite the richness of those indicators, they do not completely address the situations that are considered most relevant to treasury managers in the public sector. The authors also propose benchmarks for certain targets. This chapter is an important contribution, since there is insufficient literature to provide a comprehensive overview of the main treasury management indicators.

In Chapter 3, Mario Pessoa, Mike Williams, and Israel Fainboim identify the main cash management and debt management functions of a typical Ministry of Finance; explain the importance of their interaction and coordination; and describe how this can be best achieved under varying institutional structures. The chapter assesses the situation in 17 Latin American countries, based on the CDM functions discussed in an initial section. It concludes by discussing the benefits and challenges of adopting an integrated structure that encompasses CDM functions in a single unit. This chapter also mentions the coordination mechanisms that are required in case the units are maintained separately.

In Chapter 4, Israel Fainboim, Adrian Vargas, and Claudiano Albuquerque discuss the basic characteristics of TSAs and present the relevant status of 17 Latin American countries. TSAs have been a recurrent topic in the discussions organized by FOTEGAL due to their relevance. There is an evident effort by treasurers in the region to establish very comprehensive TSAs. Many legal and institutional framework reforms have been implemented and are accompanied by a significant investment in system and information technology.



In Chapter 5, Joseph Cavanagh and Almudena Fernandez discuss the main challenges to implement accrual accounting in the public sector, and they examine some countries that have already undergone reform. There is, as yet, no Latin American country that has fully implemented accrual accounting in line with international accounting standards, but many have accounting regimes that include a variety of those elements (e.g., recognition of a financial event as it occurs and not when it is paid; consolidation of financial statements with financial and nonfinancial information; registration and valuation of physical assets; depreciation of fixed assets and medium- and long-term financial liabilities, to name a few).

Furthermore, there are many elements that should be incorporated in financial statements (e.g., long-term impact of pension funds; liabilities derived from PPP contracts; incorporation of natural resource assets; provisions that are relevant to contingent liabilities; and adoption of valuation of assets based on fair value methodology, among others). As the only international standards available, the International Public Sector Accounting Standards have been the basis for reform, adopted or adapted gradually by countries, depending on their local circumstances.

Chapter 6 includes a description by James Chan and Mario Pessoa of the implementation of a public service cost system in the State of São Paulo, Brazil. Implementing cost systems worldwide has been a challenge, given that there is limited experience and a lack of appropriate incentives. Few countries have implemented cost systems that go beyond the usual budget coverage of institutions and programs. The government of São Paulo, however, has gone a step further in defining cost centers that are the main providers of public services and it has designed a cost system that uses available financial systems and information.

The first section of Chapter 6 explains the main cost concepts and describes the experience of the United States and the federal government of Brazil. The second section presents the recommended approach, which was ultimately executed in São Paulo, while it emphasizes the use of direct cost; adjustments made to the use of available financial information; use of pilot projects to test the concepts and viability of the approach; extensive applied research to the pilot cases; and a separate phase of ICT development that applied a proof-of-concept approach prior to the development of the ICT system.

In Chapter 7, Gerardo Uña and Carlos Pimenta review the evolution and key characteristics of IFMIS that are currently in operation in Latin American countries, as well as the strategies for their upgrade and the aspects of

political economy; conceptual model; project management; ICT programming approach; integration of the main functions of budget management, public accounting, and treasury management; definition of ICT architecture and maintenance strategy; among other issues. The chapter analyzes recent trends across the strategies adopted to modernize IFMIS in the region, and it identifies issues to be considered in the management of these processes.

Finally, Chapter 8 provides an assessment by Carlos Pimenta and Natalia Rezaí relating to the significant progress in public procurement across Latin American countries in the past two decades in comparison to OECD countries, including their regulatory agencies, technological frameworks, and new instruments (e.g., electronic reverse auctions, framework agreements, e-catalogs, and Web procurement portals). The chapter argues the case that public procurement in Latin American countries has advanced as a result of these agencies and ICT developments. It also explores some aspects of savings as a consequence of the adoption of these new instruments.

Initially, a conceptual analysis is presented of the design, goals, and functions of procurement, the relationship between procurement and PFM systems, and the importance of appropriate PRM, based on the main principles of procurement: efficiency, transparency and value for money. Subsequently, a review of some of the factors that have contributed to the recent transformation of public procurement is offered (e.g., ICT tools, the effects of commercial integration and liberalization, and the creation of specialized procurement agencies). The chapter then explores the current situation of public procurement systems in Latin America, including their legal and regulatory frameworks, institutional architecture, and their contribution to public policy, based on standardized assessment methodologies. Finally, the chapter puts forward a series of policy recommendations that take into consideration the challenges that region still faces.

CONCLUSIONS

The book recognizes the relevant progress of key PFM institutions in Latin American countries over the last 20 years. It also identifies remaining challenges in critical areas while, at the same time, describes good practices to benefit countries.

At the macro-fiscal level, good PFM in Latin America is a precondition for effective macroeconomic management and sustainable economic development. Financial information, processes, and rules are essential to support



macro-fiscal policy decisions and to provide instruments to apply these decisions, promote fiscal discipline, and ensure efficient government spending.

At the same time, the efficiency of PFM systems is essential to improve PRM. Efficiency should generate value for money on public expenditure, as well as improve fiscal transparency.

The efficiency of PFM in Latin American countries has been enhanced during the last few years, although there are still many challenges to overcome with regard to improving organizational structures, legal frameworks, methods, strategies, and information systems. One key element is the absence of more indicators to measure PFM efficiency as a means to improve performance. To address this, the book discusses treasury indicators in some detail.

From an analysis of more than 100 countries, using the PEFA methodology (more focused on process compliance), Matt Andrews (2013) indicates that many countries seek only to “appear” that they have reformed PFM, while adopting a set of short-term signals—often unsustainable in the long term, since these actions were not aligned to the context of each country. Ultimately, these signals do not represent a realistic solution or mind set. Andrews refers to this phenomenon as “institutional isomorphism,” using the concept of isomorphism in the biological sciences, where some animals depend on “appearance” vis-à-vis others to protect themselves in the wild. Similarly, it is common that some governments wish to “appear” as if they have adopted international good practices in terms of PFM so they can gain financial credibility in the short term. An important aspect discussed in this book is the use of quantitative and results-based indicators to measure PFM efficiency, thus providing an evaluation of the real efforts of PFM reform in Latin America.

With regard to the support of PFM to improve PRM and the budget and resource allocation decisions in the public sector, the key dimension that is absent in Latin America is public sector cost accounting. Cost accounting can support the evaluation of government performance on the basis of economy and effectiveness; it can contribute to greater efficiency of PRM and promote value for money in public expenditures. The experience of São Paulo in calculating the cost of public services is an innovation in this area. There are other important issues, such as efficient public investment management and the effective integration of medium-term fiscal frameworks that define realistic and predictable budget envelopes to line ministries and programs.

PFM can also contribute to transparency in terms of quality, timeliness, and public access to financial information. This relationship highlights the relevance

of inclusive identification, measurement and disclosure of government revenues, expenditures, assets and obligations. It also draws special attention to the need for new public accounting methods that embrace international standards; accruals; and more efficient and comprehensive public sector asset and liability registries. It is critical that CSOs complement public transparency by overseeing government procurement, finances, and results.

There is further work to be done, and it would be relevant to expand knowledge related to the specific PFM challenges that are at the forefront of decentralization in the Latin American region. Since the share of current expenditures in subnational governments is relatively high and continues to rise in many Latin American countries, a better understanding of these obstacles in the face of various levels of subnational governments, as well as the dissemination of relevant good practices, would contribute significantly to fiscal responsibility and sustainability.

Countries such as Bolivia, Chile, and Mexico want to expand fiscal decentralization, providing more power and capacity to subnational governments to extend goods and services to the wider population and increase public investment in infrastructure and possibly increase local taxation. It would be important, therefore, to assess the capacity of subnational governments to absorb the devolved responsibilities and maintain necessary fiscal discipline. Recent lessons from the European fiscal crisis have shown that subnational governments can be significantly prone to fiscal risk. As a consequence, central governments have a responsibility to share systems and practices and to provide capacity building and training to these entities. Unquestionably, the experience gleaned by central governments from practices of good CDM, procurement, accounting, and IFMIS systems will be very useful.

In considering past and present efforts to reform PFM in Latin American countries, this publication recognizes that there is a long way to go before complete and comprehensive integration of PFM functions within each country in the region are in place. There are, however, many positive experiences that have been drawn and good practices to learn from. In essence, countries in Latin America should establish a solid strategy to embody all PFM functionalities pragmatically and with a feasible approach, taking into consideration the local political economy context. This book intends to assist in overcoming the challenge with respect to PFM reform in Latin American countries.



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Treasury Management Efficiency Indicators

Marco Varea and Adriana Arosteguiberry

INTRODUCTION

Treasury management is one of the areas of public financial management (PFM) that has most improved over the last 20 years at the international level, when measured in terms of incorporating new practices and expanding the use of information technology. These efforts have been widely supported by technical assistance projects provided by international organizations (Dener, Watkins, and Dorotinsky, 2011). A specific set of performance indicators that adequately addresses the different aspects of good treasury management, however, has yet to be developed. This chapter, therefore, discusses and proposes a set of indicators for this area.

The fact that treasury systems have attracted increasing attention is due to a number of reasons: necessity, as this is the area in which the budget is effectively executed; operability of payment systems, which is crucial and must be accurate and reliable; use of technology and more advanced methods now available in the financial system; and improving efficiency, since integrated financial management information systems (IFMIS) enable the budget, accounting, and financial systems to become integrated.

Technological innovation in public financial resource management has meant that these resources can be handled with greater efficiency. The situation has evolved from decentralized resource management with low levels

of monitoring and balance sheet consolidation toward the implementation of tools and processes that centralize the government's financial resources in the treasury single account (TSA).¹

To measure this effort more efficiently, several treasury management performance indicators have been developed that address the institutional aspects such as the level of TSA scope, operational costs, or opportunity to centralize resources to generate financial benefits and take advantage of increased liquidity. One of the most relevant indicators refers to the fact that the treasury must avoid accumulating either payment arrears or large idle balances. At least for developing countries, this indicator would reveal that cash management is close to an optimal level and that expenditure flows are efficiently covered.

Performance indicators relating to institutional capacity have also been developed with regard to the processes of TSA implementation, as the latter has become the benchmark for the development of treasury systems. Efficiency gains are being sought at the inter- and intra-institutional level, but using indicators to measure this is still a work in progress.

This chapter aims to identify and analyze the treasury performance indicators currently available in the specialized literature and in the Latin American Treasury Forum (FOTEGAL) surveys. The objective is to develop a set of quantitative indicators to measure national treasury management efficiency. The first section describes the role and the objectives of FOTEGAL in building a common agenda for the treasuries of Latin America within the framework of public financial management reform. The region's treasurers, with the support of international organizations, established the forum with a view to promote the exchange of information and facilitate technical discussions, knowledge management, and dissemination of treasury management best practices. The Forum undertakes an annual survey, as an opportunity to analyze progress and address the challenges of treasury management.

The second section suggests a set of 10 basic indicators to evaluate treasury management. This is based on assessing the efficiency of cash flow forecasting, followed by measuring how the resources collected (excluding revenue from taxation) and the payments made by the TSA are managed, as well as the effects on liquidity outcomes. When proved positive, profits

¹ Throughout the text, the term TSA refers exclusively to the treasury account, in contrast to other nomenclatures used in certain countries, in which the treasury account might be defined as the Fiscal Single Account, which differs from the Taxation Single Account and the Treasury Single Account found in Uruguay, among other examples.

can be used for active financial investment; when proved negative, the lack of short-term liquidity must be financed to avoid payment delays. The model also proposes cost indicators (the cost of collecting and processing payments), an indicator for liquidity, and an indicator for cash flow forecasting efficiency (real expenditure over planned expenditure).

The third section contains an analysis of the indicators found in the international public financial management evaluation methodologies, principally Public Expenditure and Financial Accountability (PEFA) and the Open Budget Index (OBI). This section also describes certain indicators extracted from the FOTEGAL surveys. The purpose of this comparison is to verify whether the proposed indicators may already be available in other evaluation systems.

Finally, based on the model of indicators proposed in the first section, after reviewing the existing ones and specific examples of their use in Chile, France, and Mexico, a recommendation is made of a set of 10 cash management performance indicators.

FOTEGAL: ROLE, OBJECTIVES, AND CHALLENGES

In April 2010, the first international seminar on treasury management was held in Lima, Peru, promoted by the Peruvian Treasury with the support of the Inter-American Development Bank (IDB), International Monetary Fund (IMF), and World Bank.² This seminar provided the reference framework that enabled Latin American treasurers to coordinate and organize a forum—with a corporate identity—in which to promote the exchange of experiences and knowledge relating to national treasury issues.

In 2011, FOTEGAL was formally established at the Latin American Seminar on Public Treasury Management (Seminario Latinoamericano de Gestión de Tesorerías Públicas), held in Mexico. Treasurers from 16 Latin American countries subscribed to the FOTEGAL Operational Guidelines: Argentina, Bolivia, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay.³ Since then, the Forum has promoted the exchange of learning and

² The Forum has also received financial support from the governments of Japan and Switzerland, which has enabled the invitation to seminars to be extended to international experts.

³ Since the Forum was established, Brazil has participated by delivering presentations at various seminars and joining the treasury management courses. Up until now, however, despite being invited, neither Brazil nor Venezuela has formerly joined FOTEGAL.

knowledge to improve treasury management, with annual meetings and other training events held for the following purposes:

- Exchange of knowledge and updates that involve treasuries from other regions
- Establishment and dissemination of best international practices for optimal income and expenditure management, formulation of cash flow forecasts, and issues relating to operational matters such as account reconciliation, electronic payments, arrears management, business continuity plans, legal framework, and optimal liquidity management, among others
- Drafting and dissemination of studies and surveys on subjects of general interest

The Forum also aims to continue with its other stated objectives, such as building a website with up-to-date information on each country's treasury; facilitating meetings and virtual conferences; and establishing alliances with other national, regional/international organizations, universities, and civil society groups to improve the formulation, execution, and evaluation of national treasury management practices.

Operational Plan and International Cooperation

Each year, FOTEGAL nominates an Executive Board made up of a President, an Executive Secretary, and a Technical Committee comprised of two of the Forum's most recent previous presidents. The Technical Committee's mission is essentially to advise the President on technical aspects.

With regard to training events, the alliance with international organizations—with the support of host countries—has been crucial.⁴ With regard to knowledge management, a virtual library specializing in treasury-related subjects has been established in response to the demand of treasurers.⁵ The support received from international organizations has significantly enriched the quality and the depth of discussions as they represent a primary source of comparative cross-country comparative studies, and offer training courses

⁴ Training courses and relevant documentation are available at <http://www.fotegal.org/eventos/>.

⁵ Available at <http://www.fotegal.org/biblioteca-virtual/>.



in which treasurers can share the knowledge and experience acquired during their interventions in their respective countries.

Finally, the surveys have been undertaken to track the evolution of specific practices and topics. These are presented to the treasurers on an annual basis and represent a valuable tool for evaluating the progress made by each country's treasury. The studies apply the results of the FOTEGAL surveys, providing the basis for formulating some of the indicators discussed in Section 4.

Results and Challenges

The results of the efforts of FOTEGAL are summed up as follows:

- Five annual seminars (chronologically in Peru, Mexico, Colombia, Guatemala, and Uruguay) and knowledge disseminated among more than 300 civil servants from Latin American treasuries. (The 2015 seminar is scheduled to take place in the Dominican Republic.)
- Six treasury management and public finance courses, attended by more than 240 treasury technical staff.
- An operational website: www.fotegal.org.
- Strategic alliances with Mexico's Public Sector Treasury Group (Grupo de Tesoreros del Sector Público A.C. de Mexico) (www.gtsp.mx) and the Latin American Group for Public Administration (Grupo Latinoamericano de Administración Pública), which is a regional entity of the International Institute of Administrative Sciences (www.iias-iiisa.org), aiming to promote the exchange of learning and update knowledge, among others.
- South-South cooperation, which involves the exchange of learning, best practices, and knowledge transfer.
- Diffusion of international experiences from countries such as Australia, Brazil, France, Netherlands, the United Kingdom, and the United States, among others.
- Preparation of technical notes and other knowledge documents.

The themes discussed have included TSA management and scope, including management and revenue collection; electronic transfer payments; cash forecasting; identification of temporary cash surpluses or shortfalls; financial instruments for short-term needs; investment alternatives for short-term financial surpluses; floating debt and payments in arrears; management

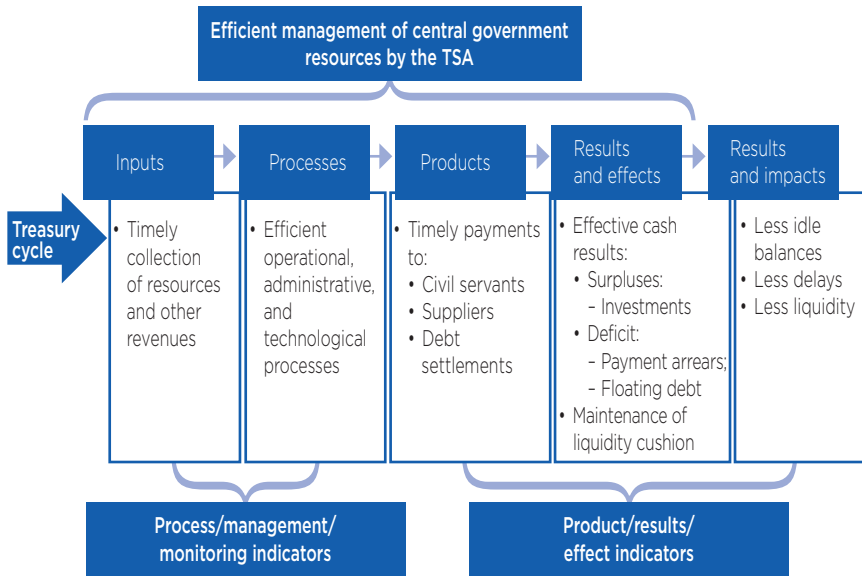
of special and sovereign funds; and asset and liability management (ALM), among others. One of the themes that has most interested seminar participants and provoked lively discussion is how to identify suitable treasury management performance indicators. From the outset, treasurers have been in favor of identifying indicators that are relevant, easy to measure, and are comparable over time to show how practices in the region evolve, and that other treasuries should recognize these as the benchmarks for sound financial management.

A THEORETICAL FRAMEWORK FOR THE CREATION OF TREASURY INDICATORS

The national treasury represents a process of complex financial transactions that are subject to legal restrictions from which a private sector treasury is exempt; it also has a different scope and various objectives. Private sector treasury indicators are unsuitable, therefore, in terms of evaluating a public sector treasury. Cash management at the national treasury means managing financial intermediation processes, whereby the treasury represents modern financial management and goes beyond its traditional role as paymaster of the state or a mere cash register. In general, the national treasury is one of the most important financial entities in a country, given the volume of resources it manages annually and the importance of its operations.

Treasury processes impact three areas: financial, accounting, and budgetary. The financial aspect has an impact on the TSA; the accounting aspect is responsible for the entries in the accounting ledgers and the financial statements; and the budgetary aspect executes the budget allocations supported by detailed financial planning. Furthermore, the financial aspect also affects the relationship between the central bank and the financial markets.⁶ Figure 2.1 synthesizes the main elements of the treasury cycle, with the indicators most relevant to each stage.

⁶ Details are available at <http://forotgn.mecon.gov.ar/sistematgn/sistes0.pdf>; Law No. 28693, National Treasury System of Peru (Sistema de Tesorería Nacional del Perú), available at https://www.mef.gob.pe/index.php?option=com_docman&Itemid=101706&lang=es; or the system in Costa Rica, available at <http://www.hacienda.go.cr/contenido/12467-tesoreria-nacional-de-la-republica>.

FIGURE 2.1 TREASURY CYCLE AND PERFORMANCE INDICATORS

Source: Authors' elaboration.

The IMF's *Government Finance Statistics Manual 2014* defines the scope of central government, general government, the nonfinancial public sector, and the public sector (IMF, 2014: 19–20). This chapter adopts the same nomenclatures. Treasuries are equally defined in the financial management laws of most countries as being the governing bodies of governmental resources with the capacity to design, regulate, and issue guidelines to be followed by all entities that administer public resources. As such, the principle of efficiency requires that the national treasury wield control over the totality of these resources, although a combination of factors often prevents this from occurring, such as (i) financial management laws that differ in scope (e.g., affecting only the central government); (ii) laws that provide financial autonomy to state powers, primarily the legislature and the judiciary; (iii) territorial organization laws that guarantee levels of autonomy and independence in financial management for provinces, states, regions, and municipalities.

Indicator for Institutional Scope

An essential premise for making satisfactory comparisons depends on precisely identifying the extent of the scope of TSA; in other words, exactly

which financial revenues and expenditures and financial assets and liabilities are the sole responsibility of the national treasury. Once these are established, the exercise consist of calculating how far the TSA's range might be extended. Scope most commonly covers central government institutions, although this can vary among countries; for example, not all state institutions are covered in all countries. It is not unusual for the legislative powers and other institutions, such as the courts, to resist joining the TSA. These are followed by the autonomous and decentralized institutions of the central government, nonfinancial public enterprises, subnational governments, and the social security agency. One of the principal difficulties is achieving uniform interpretation with regard to the extent of scope. To make cross-country comparisons, this chapter adopts central government institutions as a minimum standard of scope, as shown in Table 2.1 in Columns A and B.

Revenue Indicators

With regard to administrative and financial aspects, for any government treasurer the optimal scenario is that the revenue deposited in the TSA is the sum of all government resources. Most treasuries in Latin American countries, however, mainly collect revenues from taxation. With regard to operating revenues collected by public services (of the central government) and other decentralized public institutions (e.g., state universities, social security, and local governments), these are collected directly by the relevant institutions and, in various countries, are not deposited in the TSA.

TABLE 2.1 INSTITUTIONAL SCOPE OF THE TREASURY SINGLE ACCOUNT

| State institutions (central government) | | Central government (autonomous and decentralized institutions) |
|--|--|--|
| (A) | (B) | (C) |
| <ul style="list-style-type: none"> • Presidency of the Republic • All ministries • Public Ministry (District Attorney, Attorney General) • Court of Audit or Comptroller's Office. • Civil service or civil registry • Office of the Ombudsman | <ul style="list-style-type: none"> • Legislative branch • Judicial branch • Electoral Commission • Courts • National councils | <ul style="list-style-type: none"> • Social security • National hospitals • Decentralized institutions /agencies ascribed to different ministries • Public universities • Public funds • Transfers to subnational governments (states, departments, provinces, municipalities) • External resources |

Source: Authors' elaboration.



To establish a basis for evaluating TSA revenue collection, therefore, it may be possible for the TSA to capture and control the resources of those institutions with significant financial dependence on central government resources (initially, the institutions listed in Columns A and B of Table 2.1, progressively adding those listed in Column C).

The following four indicators are proposed to measure scope, efficiency, economy, and the use of technology for revenue collection:

- Amount of revenue collected by the treasury by way of the TSA/total executed budget (includes revenues received from central government nonbusiness agencies), expressed as a percentage;
- Time taken to transfer revenue to the treasury (in days) from the collecting banks or tax collection offices to the TSA (in days);
- Revenue collection charges paid to banks by the treasury (monetary units); and
- Share of electronic revenue collection (as a percentage).

Expenditure Indicators

Given the treasury's increased responsibility in terms of financial ALM, the traditional concept of treasurers as mere paymasters of the state has become obsolete. The indicators should reflect the efficiency gains made by the treasury from centralizing government payments, consolidating the management of all institutional resources, maintaining ownership—and ability to do so—while guaranteeing levels of operational decentralization and management autonomy.

Government payments should be made on the basis of a well-structured cash forecast and financial plan. In this case, more rigorous processes and higher transaction costs are required with regard to check payments, electronic transfers, direct debits, and transfers between TSA subaccounts. Five essential indicators relating to the management of payments are proposed: (i) payment efficiency with regard to the cash plan, (ii) efficiency of the TSA, (iii) time it takes to make payments, (iv) cost of the processes, and (v) use of electronic media. The indicator metrics are as follows:

- Total expenditure/planned expenditure, on a monthly basis, in the cash plan (percentage of the average over 12 months);

- Total government payments made by the treasury each month by way of the TSA/Total monthly central government payments, using any other account (as a percentage);
- Time taken by TSA to make payments to the ultimate beneficiary (in days);
- Transaction costs by payment (in monetary units); and
- Share of payments made electronically (as a percentage of the total).

TSA Profitability Indicator and Cash Balance Management

The average profitability of TSA balances—in other words, the interest from financial investments—should be quantified. As a comparative parameter, the central bank's prime rate can be applied as a base value; remuneration will depend on the financial market conditions in each country.

- The TSA remuneration rate (as annual percentage rate).

In the event that a year ends with substantial expenditure payment arrears, the balance, itself, is a sufficient indicator that there is a need for measures to reduce arrears and define a strategy of progressive elimination.

- Size of the floating debt relative to total payments made during the reference period (as a percentage).

AVAILABLE TREASURY MANAGEMENT INDICATORS

The literature reviewed for this study has revealed little evidence of the existence of national treasury performance indicators that would enable all the processes identified in the previous section to be evaluated.

An assessment of a national treasury should measure two main areas: financial efficiency and institutional efficiency. The former relates to the efficiency of the handling of government resources (i.e., cash management); the latter refers to whether an institution has the necessary human capital, technological resources, internal processes, and infrastructure to fulfill its functions.

A review of the literature of the last 20 years shows that there are certain treasury indicators that incorporate (i) traditional treasury indicators, using private sector criteria that are not discussed in this chapter; (ii) indicators

from methodologies developed for evaluating the budget process and PEFA, among which there are specific treasury indicators; (iii) the OBI; (iv) a survey-based TSA toolkit, developed by the World Bank; and (v) the surveys conducted annually by FOTEGAL among LAC countries.⁷

Over time, private sector management techniques have been applied to the public sector, such as the ALM methodology. This is fundamentally related to risk management (e.g., interest rates, exchange rates, and credit risk).

Indicators from evaluation methodologies, such as PEFA, which are used for drafting reports on overall performance in PFM, can provide a useful reference point. The OBI provides a further reference.⁸ The FOTEGAL surveys were designed to help identify a wider range of indicators that are relevant to the treasury cycle.

Furthermore, very little literature has been found that refers specifically to treasury management—compared, for example, with literature relating to budget issues—in Latin America, although there is more general literature that excludes a regional focus. There are various World Bank publications, such as Hashim and Moon's (2004) treasury diagnostic toolkit, which is based on a questionnaire comprising three parts: legal and organizational framework; extent of treasury scope; and system functionality.⁹

The World Bank's TSA toolkit helps to diagnose the state of a country's treasury and, while extensive and detailed, it has only been applied to one Latin America country (Dener, 2014). It includes 65 questions grouped into five categories: the legal and regulatory framework for TSA operations (11 questions); TSA procedures and interbank systems (25 questions); capacity and competencies (7 questions); information security controls (14 questions); and oversight mechanisms (8 questions).¹⁰ This toolkit contains elements to improve a treasury's institutional capacity, such as undertaking a reform plan.

⁷ There is also the ISO-9001 quality certification rating for public sector revenue collection and payment processes. One example is provided by the Treasury of El Salvador (Tesorería de El Salvador) (for revenues), and another by the Treasury of the Federation of Mexico (Tesorería de la Federación de México), available at <http://eleconomista.com.mx/finanzas-publicas/2012/02/28/tesofe-logra-certificacion-calidad-iso-9001>.

⁸ Available at www.pefa.org and www.obl.org.

⁹ Available at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2004/02/02/000090341_20040202093914/Rendered/PDF/277130PAPER0WBWPOno019.pdf.

¹⁰ This uses a simple rating scale of 0 to 4 for all questions; the total rating is converted into a percentage (0 to 100) as an indication of the country's performance in terms of the TSA and expenditure payment systems.

In the LAC region, it has been applied solely in the Dominican Republic. The following section provides details of the indicators that have been identified, which are pertinent to national treasury management evaluation.

PEFA Indicators

The 28 PEFA indicators are comprised of the average of the scores attained in each dimension or minimum requirement. The indicators of most interest for treasuries are PI-4, PI-15, PI-16, PI-17, and PI-20. PI-4 pertains to the treasury in all its dimensions; PI-15 has two dimensions that evaluate the revenue side of the treasury; PI-16 indicates the quality of information with regard to government institutions that execute budget resources; and PI-17 indicates the treasury's capacity to record and manage cash balances to meet payment commitments. Only the first dimension of indicator PI-20 is relevant, as it relates to the effectiveness of internal expenditure controls.

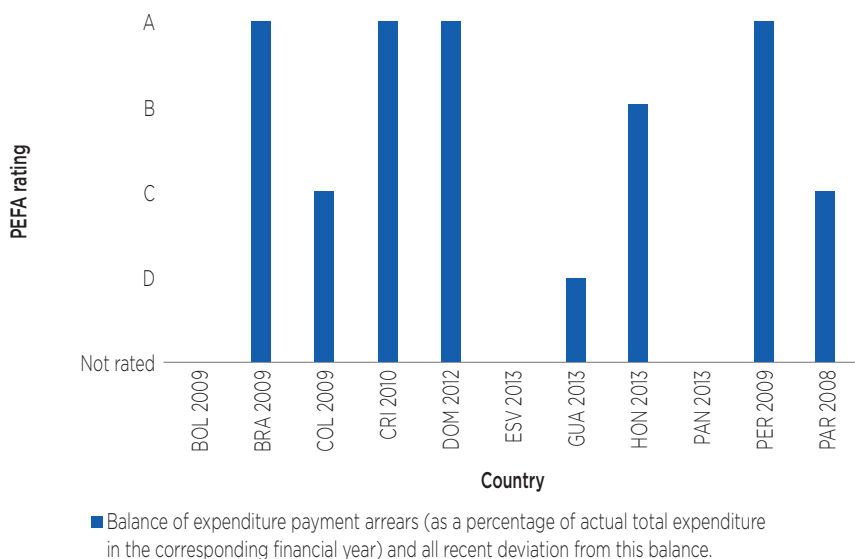
In January 2015, following a public consultation process, PEFA published its amended evaluation methodology. The information presented in this section, however, is based on the previous methodology, which included 28 indicators with their respective dimensions or minimum requirements, since only the evaluations that were conducted using the earlier methodology are available.

PEFA Indicator PI-4: Stock of expenditure payment arrears by country

Performance indicator PI-4 refers to payment arrears. PEFA describes this as a nontransparent form of payment. This indicator has two dimensions, which are stock of expenditure payment arrears (as a percentage of the total real expenditure from the corresponding financial year) and all recent deviations in that balance; and the availability of data for monitoring payment arrears. The first dimension is presented as quantitative data, while the second is an indicator of institutional capacity. The situation of 11 Latin American countries with respect to PI-4 is shown in Figure 2.2.¹¹

On a scale of A to D, with A being the optimal position, it can be inferred in general terms—without comparing with other regions—that this region's

¹¹ The most recent PEFA's were used from Bolivia (2009), Brazil (2009), Colombia (2009), Costa Rica (2010), the Dominican Republic (2012), El Salvador (2013), Guatemala (2013), Honduras (2013), Panama (2013), Paraguay (2011), and Peru (2009). The FOTEGAL countries not included in the sample have either not been evaluated or have not authorized the dissemination of their evaluation results.

FIGURE 2.2 PI-4: STOCK OF EXPENDITURE PAYMENT ARREARS BY COUNTRY

Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

situation is good or optimal in more than half of the sample countries. Only one country reported arrears of more than 10 percent of total expenditure. This indicator uses year-end data or data from the close of the latest financial year.¹²

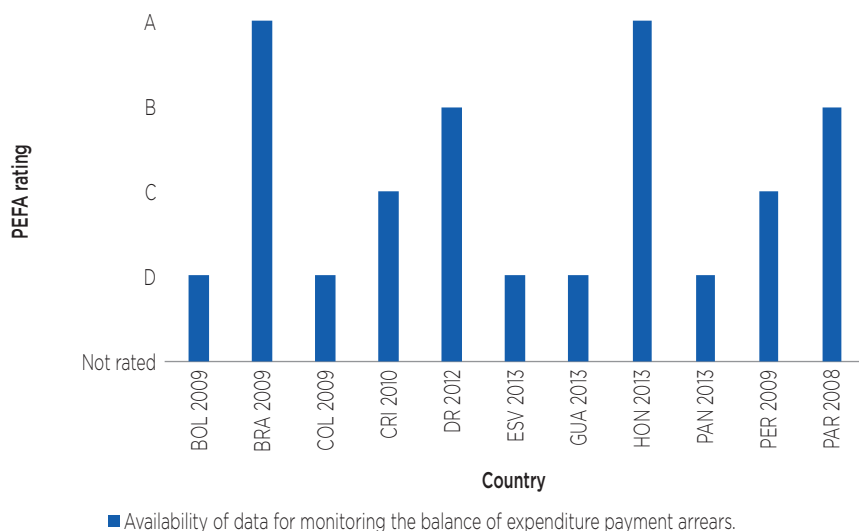
While this is considered a good result, it would be more useful to measure the treasury's capacity to permanently manage payment arrears and that it guarantees that no more than 2 percent of planned expenditure accumulates from one period to the next. The figure of 2 percent represents the benchmark that is given an A rating in the PEFA evaluation.

PEFA ID-15: Effectiveness of tax payment collection

Indicator PI-15 determines the effectiveness of tax collection, but only the last two of its three dimensions are relevant here. These are:

- PI-15 (second dimension) effectiveness of the transfer of tax revenue to the treasury by the tax revenue administration; and

¹² Due to the limitations of the sample and owing to the heterogeneity of the data on each country and the disparities in the dates of country surveys, only the most recent evaluation is used in those countries where more than one assessment has been undertaken.

FIGURE 2.3 PI-4: AVAILABILITY OF DATA FOR MONITORING THE STOCK OF EXPENDITURE PAYMENT ARREARS BY COUNTRY

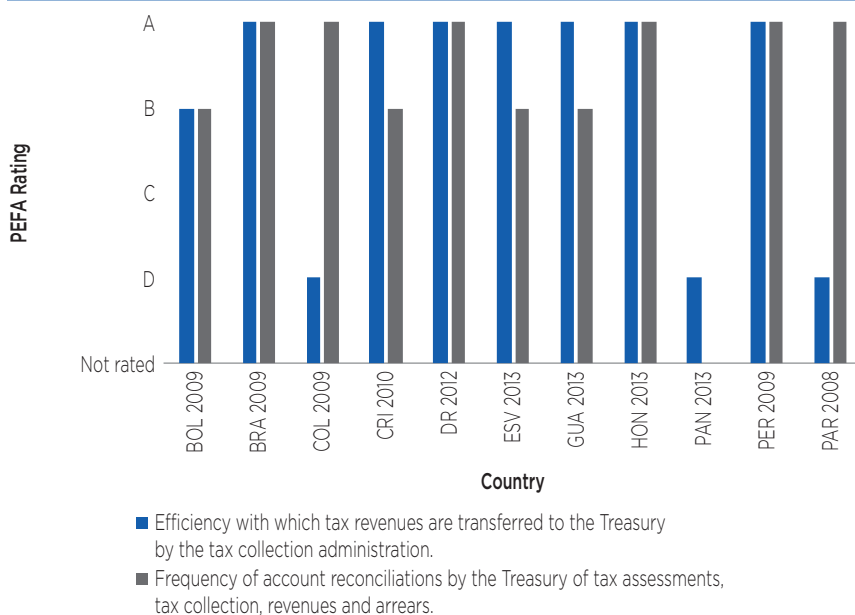
Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

- PI-15 (third dimension) frequency of complete account reconciliations between tax assessments, collections, arrears records, and receipts by the treasury.

This indicator is pertinent since it explains how prompt transfer of tax revenues to the treasury is essential to ensure that revenue collected is available for committed expenditures. An integrated financial management information system helps taxpayers to pay their resources directly into either commercial bank accounts or public treasury accounts.

Figure 2.4 shows that the information from the two dimensions that have a direct bearing on treasury management reveals a situation that is close to optimal in Brazil, the Dominican Republic, Honduras, and Peru. This is due to the fact that, according to the minimum requirements, all tax revenue is paid directly into accounts controlled by the treasury or transfers are made to the treasury on a daily basis.

This situation differs from that observed in the FOTEGAL surveys, where only two countries (Colombia and Guatemala) take more than four days to transfer resources from the tax authority to the treasury; ten countries

FIGURE 2.4 PI-15: EFFECTIVENESS OF TAX PAYMENT COLLECTION

Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

(Argentina, Chile, Costa Rica, the Dominican Republic (20 percent), Ecuador, El Salvador, Honduras, Mexico, Panama, and Peru) take three days or less, and five countries (Bolivia, Costa Rica (80 percent), Mexico, Paraguay, and Uruguay) transfer tax revenues on the same day they are collected (this point is analyzed in detail in the following section). The limitation of this indicator is particular to the subjectivity of the evaluation, as these are processes over which the treasury has no control and which lack reference values. Generally speaking, the most common practice in the region appears to be that various tax revenues are collected and transferred to the treasury accounts on the same day.

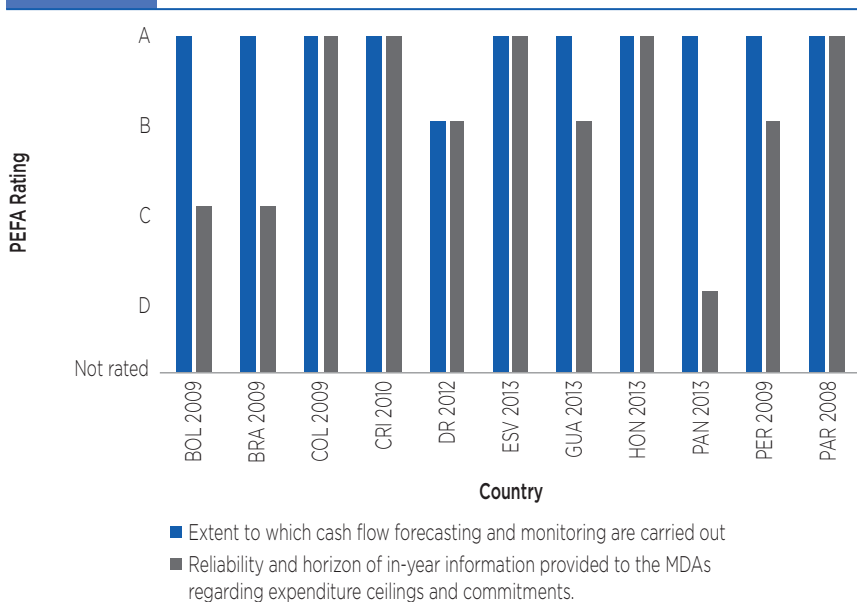
In general, accounts reconciliation, tax assessments, tax collection, payment of arrears, and transfer of tax revenues to the treasury are carried out at least every three months. These scores reflect satisfactory performance levels for Brazil, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Peru. There is a trend toward greater automation of accounts reconciliation as the IFMIS seeks to communicate with banking systems.

PEFA PI-16: Predictability in the availability of funds for commitment of expenditures

PEFA defines indicator PI-16 as the level of credibility of treasury data regarding the availability of funds for the line ministries, departments, and agencies (MDAs) that execute administrative budget programs with resources provided from the central government budget. This indicator evaluates three dimensions, which are the extent to which cash flows are foreseen and monitored; the reliability and outlook of in-year information provided to MDAs regarding expenditure ceilings and commitments; and the frequency and transparency of the amendments to budget allocations, which are decided at a higher level than ministries, departments, and agencies management.

Figure 2.5 shows that the dimensions that reflect the certainty of resource availability and cash flow monitoring are consistently high, and that all the countries that were evaluated scored the highest rating (A) with the exception of the Dominican Republic, which achieved a B (PEFA, 2012). This subindicator is associated with cash flow forecasting and the information is consistent with the results of the FOTEGAL surveys (see the following section).

FIGURE 2.5 PI-16: EXTENT TO WHICH CASH FLOWS ARE FORECAST AND MONITORED



Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

The procedure for transferring resources from the treasuries to the line ministries also received an A rating in five countries. These were Colombia, Costa Rica, El Salvador, Honduras, and Paraguay.

PEFA PI-17: Recording and management of cash balances, debt, and guarantees

This indicator relates to recording and managing cash balances, debt, and guarantees. There are three dimensions to this indicator: quality of debt data recording and reporting; the extent of the consolidation of government cash balance; and systems for contracting loans and providing guarantees. The pertinent dimension here is the consolidation of government cash balance.

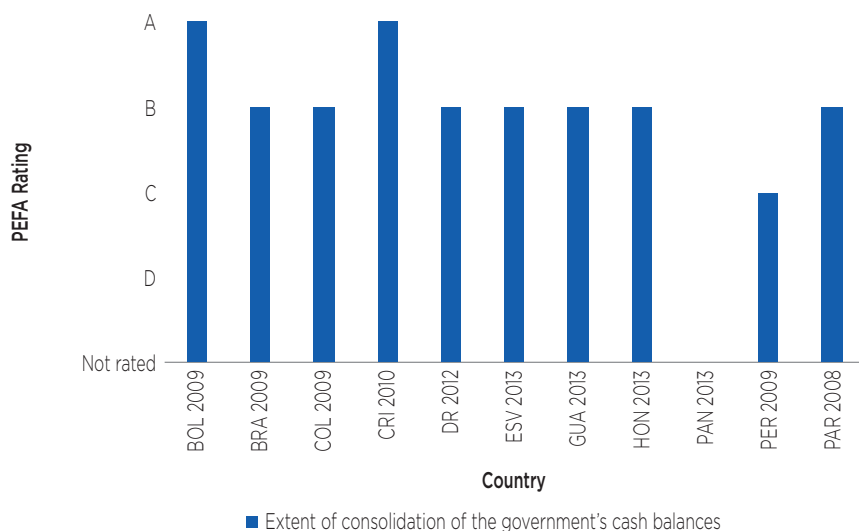
The information yielded by this indicator has various connotations. If viewed from only a treasury perspective, the second dimension regarding cash management for debt payment provides the relevant information. As previously mentioned, however, given the current trend toward integrating the treasury and the debt office, all dimensions are essential, since the operational management of both areas is combined (Williams, 2010; Gardner and Olden, 2013).

PEFA states that:

“An important requirement for avoiding unnecessary borrowing and interest costs is that cash balances in all government bank accounts are identified and consolidated (including those for extra-budgetary funds and government controlled project accounts). Calculation and consolidation of bank accounts are facilitated where a TSA exists or where all accounts are centralized.”

According to minimum requirements, the government’s capacity to manage its cash balance depends on the majority of balances being accounted for and consolidated at least weekly, although certain extra-budgetary funds may not be reconciled. Despite the fact that certain countries in the region have regulatory frameworks—organic budget and financial management laws—that prevent them from managing extra-budgetary resources, they have developed mechanisms for doing so. This is true of El Salvador and Trinidad and Tobago.

According to the evaluations, only Bolivia and Costa Rica score an A rating in the subindicator, “Extent of consolidation of the government’s cash balances,” which may be comparable to the TSA indicator (Figure 2.6). This subindicator emphasizes the time taken to consolidate balances, although it would be more useful for monitoring and policy purposes if its analysis

FIGURE 2.6 PI-17: RECORDING AND MANAGEMENT OF CASH BALANCES, DEBT, AND GUARANTEES

Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

concentrated on institutional scope. In fact, in Uruguay, it was the use of this subindicator that revealed the number of accounts that remained outside of the national TSA, given that its analysis centered on the quantity of unconsolidated accounts and funds, rather than on the time taken for fiscal consolidation.

PEFA PI-20: Effectiveness of the Internal Controls over Nonsalary Expenditure

The first requirement regarding meeting expenditure commitments relates to liquidity management and the credibility of the treasury. PEFA defines this indicator as follows:

An effective internal control system is effective when it satisfies the following requirements: (i) it is relevant (i.e., based on an assessment of risks and the controls required to manage the risks); (ii) it incorporates a comprehensive and cost effective set of controls (which addresses compliance with procurement rules and other expenditure processes, prevention and detection of mistakes and fraud, safeguarding of information and assets, and quality and timeliness of accounting and reporting); (iii) it is widely understood

and complied with; and (iv) it is circumvented only for genuine emergency reasons. Evidence of the effectiveness of the internal control system should come from government financial controllers, regular internal and external audits, or other surveys carried out by management. One type of information could be error or rejection rates in routine financial procedures. Other indicators in this set cover controls in debt management, payroll management, and management of advances. This indicator, therefore, only covers the control of expenditure commitments and payment for goods and services, casual labor wages, and discretionary staff allowances. The effectiveness of expenditure commitment controls is singled out as a separate dimension of this indicator due to the importance of such controls to ensure that the government's payment obligations remain within the projected cash availability limits, thereby avoiding the creation of expenditure arrears (ref. indicator PI-4).

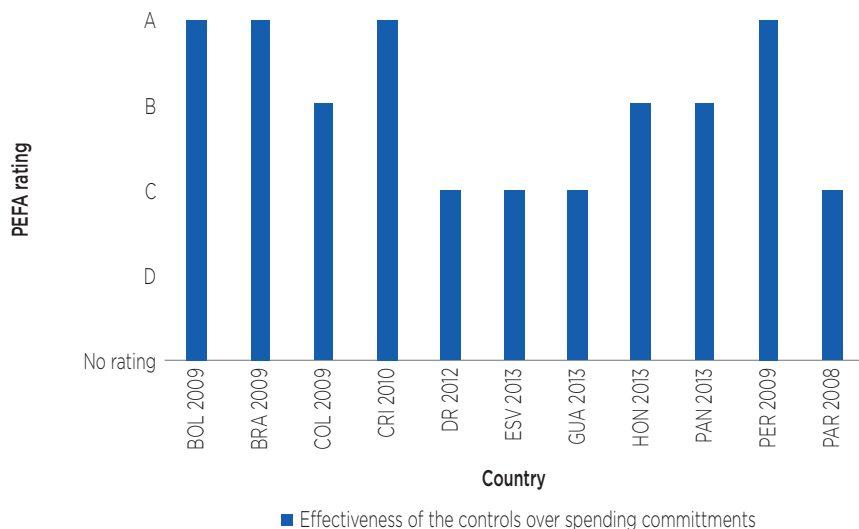
The overall indicator is not relevant here, nor are the other two requirements, as these are monitoring indicators that relate to auditing. Analysis of this second requirement shows that the region has monitoring mechanisms for avoiding nonapproved expenditure. This is in line with the financial management reforms implemented over the last 20 years, establishing that for the line ministries to be able to approve a new item of expenditure, the latter must be accompanied by a certificate of availability of funds and, in macro terms, with the respective fiscal space. This ensures that the respective financing backs new items of expenditures.

The Dominican Republic, El Salvador, Guatemala, and Paraguay received C ratings (Figure 2.7). This is due to the fact that the control procedures they apply to expenditure commitments are only partially effective.

The advantage of using the second requirement of PI-20 is its capacity to prevent arrears. Although this monitoring indicator has an operational aspect, avoiding the accumulation of unpaid bills can be achieved by *ex ante* controls, instead of *ex post* cash controls, once the transactions have been finalized.

Flynn and Pessoa (2014) point out:

“Commitment controls based on expenditure ceilings or cash limits reconcile cash resources with commitments, thereby ensuring that spending units are able to enter into contracts or other obligations only if sufficient unencumbered balances are available—or are likely to be available—at the time of payment. Empirical evidence shows a strong relationship between the accumulation of arrears and the lack of proper commitment controls.”

FIGURE 2.7 PI-20: EFFECTIVENESS OF INTERNAL CONTROLS FOR NONSALARY EXPENDITURE

Source: Authors' elaboration, based on data from PEFA (www.pefa.org).

Current Open Budget Indicators

The OBI survey is comprised of five sections. These are Section 1: Availability of budget documents; Section 2: Executive's budget proposal; Section 3: Budget process; Section 4: Strength of the Legislature; and Section 5: Citizens' budget and public engagement in the budget process.¹³ This survey aims to analyze the quantity of information available at each phase to measure the degree of budgetary transparency, participation, and scrutiny in each country.

The OBI indicators concentrate on information quality and dissemination at each stage of the budget cycle. Indicators 35 and 41 relate to extra-budgetary funds and arrears, respectively, during the budget presentation process. Indicator 86 relates to year-end extra-budgetary funds, while Indicator 104 addresses rules on discretion and management of surplus liquidity.

Table 2.2 sums up the indicators from the OBI surveys that involve treasury-related processes and include the averages from 14 countries. The OBI

¹³ Available at http://internationalbudget.org/wp-content/uploads/OBS2012-Questionnaire-FINAL_ES1.pdf

TABLE 2.2 OPEN BUDGET INDICATORS FROM 14 LATIN AMERICAN COUNTRIES

| Section | Indicator/ question | Definition | Country average (*) |
|--|------------------------|--|---------------------------|
| Section 2: The Executive's budget proposal | 35 | Does the Executive's budget proposal or any supporting budget documentation present information on extra-budgetary funds for at least the budget year? | D |
| | 41 | Does the Executive's budget proposal or any supporting budget documentation present information on expenditure arrears for at least the budget year? | D |
| Section 3: Budget process | 86 | (110). Does the year-end report present the actual outcome for extra-budgetary funds? | D |
| Section 4: Strength of the Legislature | 104 | 104 (New). What legal restrictions are in place that limit the Executive's freedom to spend at its discretion any additional revenues that are collected unexpectedly during budget execution? | B |

Source: Authors' elaborations; available at <http://survey.internationalbudget.org/>.

Note: The sample of countries excludes Panama, Paraguay, and Uruguay, since the OBI has not published data on these countries. The OBI scale is from A to D.

methodology, however, formulates questions without identifying the institutional responsibility. This means that there is a set of questions that, depending on the institutional structure and architecture, might be the responsibility of combined management. This is true of indicators 11, 12, 16, and 17 (public debt); indicator 36 (intergovernmental transfers); indicator 37 (transfers to state enterprises); indicator 42 (contingent liabilities); and indicator 45 (fiscal expenditure projections for at least one budget year).¹⁴

A country-level analysis of each of the OBI's treasury data indicators reveals that the information available on the use of extra-budgetary funds is low for the presentation of the pre-budget statement (Indicator 35), as well as in the year-end report (Indicator 86). The only countries that report this

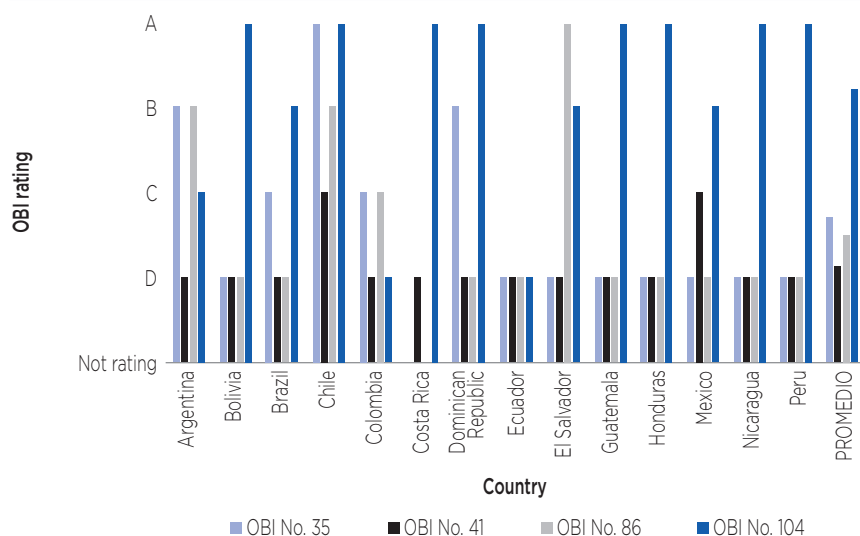
¹⁴ Additionally, the OBI uses the indicator data to make projections for the following survey period. The most recent survey dates from 2012 and the tool, available at <http://survey.internationalbudget.org/>, includes a calculator for the following period—in this case for 2014—although it seems to present the same results, save for a few exceptions.

information from the outset are Argentina, Brazil, Chile, Colombia, and the Dominican Republic. This does not mean, however, that these funds do not exist. As previously mentioned, institutions in various countries have developed mechanisms for managing extra-budgetary resources; for example, by collecting local taxes and service charges which generate extra-budgetary revenues that are not transferred to the national treasury.

The information regarding expenditure arrears (Indicator 41) in the pre-budget statement is also insufficient, except for Chile and Mexico. This question is important because when this information is included in the outline budget, it may alert the government that additional financing is required to cover these arrears, thereby mitigating a potential financial risk. A low score for the rest of the countries might suggest a need to strengthen fiscal transparency. Argentina, Chile, Colombia, and El Salvador are, according to Indicator 86, the countries that record the real result of the extra-budgetary funds in their year-end reports; in most budget and financial management legislation, the use of this type of funds is forbidden (Figure 2.8).

Finally, Indicator 104 refers to the validity of legal restrictions on whether the Executive can spend, at its discretion, the surpluses available during the

FIGURE 2.8 OPEN BUDGET INDICATORS 35, 41, 86, AND 104 FOR 14 COUNTRIES IN LATIN AMERICA



Source: Authors' elaboration based on data from <http://survey.internationalbudget.org/>.

budget execution phase. This indicator is relevant to treasury management, since the absence of this kind of regulation may create incentives that do not necessarily correspond to the macroeconomic planning at year's inception, which includes fixed goals.

While this indicator may not have a direct relationship with cash management outcomes in the financial year, it does form part of the rules for budget management and financial planning and, as a part of these rules—as Lienert and Fainboim (2010) point out—it is vital to ensure that the goals of efficient financial management are achieved, which include optimal treasury and debt management.¹⁵

The scores for this indicator are high—considerably higher than the other three—suggesting that this information exists and is reported in 11 of the 14 sample countries. One possible explanation relates to the scope of evaluation of each indicator; in other words, Indicators 35, 41, and 86 only evaluate whether the information exists and then its quality. In contrast, Indicator 104 only addresses the validity of the legal restrictions on the Executive's power to spend revenue surpluses at its discretion during the execution of the budget; this is simply of a binary nature.

Having identified the indicators used by international methodologies, the following section identifies a set of indicators that relate to the revenue and payment cycle. National treasuries may use these to monitor financial management and institutional capacity, in particular, with regard to TSA implementation processes.

FOTEGAL Treasury Management Indicators

In 2011, FOTEGAL launched a country-by-country survey covering institutional and cash flow management aspects. The survey has been improved upon each year in terms of its content and scope. What began in 2011 as a survey containing 52 questions with the participation of 10 countries had expanded by 2014 to one with 27 questions, answered by all 16 member countries. According to the components of the survey, progress on various

¹⁵ Lienert and Fainboim (2010) indicate that the other four goals of the budgetary system are to (i) achieve short-term macrofiscal stability and medium-term fiscal sustainability; (ii) enhance the allocation of budget resources; (iii) improve the efficiency of spending, equating to providing goods and services more efficiently; and (iv) improve the quality of budgetary information presented to Parliament and to the public.

fronts has been made with regard to national treasury management and institutional capacity in the region.

Implementation of the TSA is one of the main issues covered by the survey. Among the other most important areas are cash flow outlook, revenue collection and payments, arrears management and investment performance, and implementation of best practices in risk management. The 2015 survey is presented in the Annex as an example.

Implementation of the TSA

Table 2.3 reflects the percentage of entities that still manage resources outside of the TSA. If France is taken as an example of best practices—a country in which all central government payments are centralized into a single account—there is clearly room for improvement throughout the region.

A pending debate exists over whether the TSA should centralize local government payments into unitary systems. In federal countries, various competencies are assumed by local government, including the self-management of resources, making centralization virtually unfeasible.

In unitary governments, original laws on decentralization and administrative autonomy have provided these entities the capacity to manage the resources transferred from the central government. Following financial management law reform and the advance of IFMIS and TSA implementation, central administrations have begun to regain the power to manage these resources. For example, in seven countries (Bolivia, Brazil, Chile, Colombia, El Salvador, Guatemala, and Honduras), social security resources are now managed within the TSA.

In 2014, the results of the surveys regarding the extent of TSA management reveal the following situation: 9 countries (Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Paraguay, Peru, and Uruguay) include transfers to local governments (although they exclude the final execution of these resources); 9 countries (Bolivia, Brazil, Chile, Colombia, Ecuador, El Salvador, Guatemala, Peru, and Uruguay) include the execution of the judicial branch budget; 11 countries (Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Paraguay, Peru, and Uruguay) include legislature resource spending; 8 countries (Brazil, Chile, the Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, and Peru) include the expenditure of university funds.

Apart from the French example in which, since 2010, 6,948 subaccounts are managed by a TSA held at the Bank of France, the Australian model

TABLE 2.3 **MANAGEMENT OF CENTRAL GOVERNMENT RESOURCES BEYOND THE TREASURY SINGLE ACCOUNT**

| Country | Entities not included in the TSA |
|--------------------|--|
| Argentina | Social security, healthcare, the judicial and legislative branches, universities, trust funds |
| Bolivia | Healthcare management agencies, departmental and municipal governments, public universities |
| Brazil | Ministry of Defense pension fund |
| Chile | Third parties: entities with their own operating revenues |
| Colombia | Universities and autonomous entities |
| Costa Rica | Social security, healthcare, Judiciary, universities |
| Dominican Republic | Transfers to decentralized institutions (including social security and universities) and town councils, Congress, Attorney General, Judiciary, General Electoral Commission, Court of Audit, Constitutional Court, Ombudsman |
| Ecuador | Social security, local governments, public financial agencies |
| El Salvador | Public enterprises, institutions with own budget |
| Guatemala | Autonomous and decentralized agencies |
| Honduras | Public universities, judicial and legislative branches, public ministries; Supreme Audit Institution; TSE; social security; Presidency, water board |
| Mexico | Autonomous public organizations, the National Institute of Statistics and Geography, social security, federal agencies, judicial and legislative branches |
| Nicaragua | Municipalities; social security; decentralized agencies; judicial and legislative branches, electoral commission; universities; autonomous agencies |
| Panama | TSA currently in process of implementation |
| Paraguay | Decentralized agencies, social security, Judiciary, national universities |
| Peru | Social security, trust funds, donations, internal and external loans for projects, local government's own revenue |
| Uruguay | Social security |

Source: Authors' elaboration; FOTEGAL Survey 2014 and presentation by Fainboim and Varea (2014).

is also worth mentioning, whereby appropriation and cash management is part of the central budget management system. Furthermore, in the United States, revenue collection and payments are conducted by way of the electronic transfer account (ETA), which is managed by the Bureau of Fiscal Services, the agency responsible for making payments to individuals, businesses, and federal government agencies. The ETA is equivalent to the TSA

in Latin America and follows the same objectives,¹⁶ while the payment-integration initiative of the Single Euro Payments Area in The Netherlands (also a TSA equivalent) acts in a similar vein.

The results of managing the average TSA cash balances should also be considered. In general terms, while the aim is to reduce balances to a minimum to enable risk management in case of unforeseen deviations—thus avoiding unnecessary borrowing (or overdraft) and maintaining stable liquidity levels—TSA balances increased in Latin America in some cases. This can mainly be explained by the fact that while the TSA extended its scope, there are as yet few options to invest the surpluses.

Cash flow planning and review

Cash flow forecasting has evolved in various countries, in parallel to the incorporation of techniques and information capable of projecting cash flows with greater accuracy. In 2012, 8 countries drafted annual plans and quarterly plans, whereas in 2014 this number had risen to 15 of the 16 countries. Moreover, 14 countries had prepared monthly plans on a daily basis, a recommended practice followed in advanced countries (Lienert, 2009). A best practice includes the preparation of rolling quarterly plans, updated on a monthly basis. To date, only 8 countries do so (Argentina, Bolivia, Costa Rica, the Dominican Republic, Honduras, Mexico, Nicaragua, and Panama).

The model of the cash plan that is most commonly applied in Latin American countries is based on daily and monthly updates, also recognized as a best practice by Gardner and Olden (2013), who maintain that “often the basis is a daily projection over the nearest month, weekly for the following two months and monthly for the rest of the fiscal year.” The scope of planning, incorporation of new technologies, and greater coordination efforts, particularly with regard to tax administration agencies—and even the inclusion of complex techniques such as Monte Carlo simulations and econometric models—are some of the factors that have encouraged better cash flow forecasting over the last three years.

¹⁶ France’s plan is available at http://www.aft.gouv.fr/rubriques/_119.html; Australia <http://www.finance.gov.au/cbms/>; United States, http://www.fiscal.treasury.gov/fsprograms/fs_payments.htm; Netherlands; http://www.dsta.nl/english/Subjects/Payment_systems. Pattanayak and Fainboim (2011) include the United Kingdom, Sweden, and New Zealand.

Tax revenue collection and payment indicators

In most countries, cash flow forecasting is carried out using a Microsoft Excel spreadsheet; few countries have developed cash systems that interface with IFMIS. The FOTEGAL surveys reveal that the use of information and communications technology (ICT) has led to various improvements in tax revenue collection and of payments.

On the revenue side, there is noticeable encouragement for the use of electronic transfers for tax revenue collection in preference to payment by cash, check, or credit card. In contrast, certain countries have been unable to reduce the number of days that the tax resources are withheld by banks before transfer to the treasury. Resources are retained from one to three days by tax revenue collection agencies in 70 percent of countries. This revenue transfer takes four days or less in all except two countries.

Table 2.4 summarizes the situation of FOTEGAL member countries with regard to the three elements that determine the speed and effectiveness with which revenues are deposited at the treasury and their associated costs.

With the progressive integration of ICT in electronic collection and payment processes, the trend in interbank compensation systems is to reduce the ordinary accounts held in commercial banks; however, until this situation is optimized, there are various mechanisms attributable to the financial

TABLE 2.4 CONDITIONS FOR THE TRANSFER OF TAX REVENUE TO THE TREASURY

| Condition | Period (days) | Country |
|---|------------------------------|---|
| Number of days that tax revenues are retained by the banks. | 0 days | Bolivia, Costa Rica (80 percent), Mexico, Paraguay, and Uruguay |
| | Between 1 and 3 days | Argentina, Brazil, Chile, Costa Rica (20 percent), Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, and Peru |
| | Between 4 and 5 days | Guatemala |
| | ≥5 days | Colombia |
| Recent reduction in number of days withheld. | No reduction | Bolivia, Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, and Paraguay |
| | 1 day | Dominican Republic, El Salvador, and Peru |
| Treasury remit to negotiate terms of remuneration for banking services. | YES. Has negotiating remit. | Bolivia, Brazil, Chile, Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, and Uruguay |
| | NO. Lacks negotiating remit. | Colombia, Dominican Republic, Ecuador, Guatemala, Panama, Paraguay, and Peru |

Source: Authors' elaboration; FOTEGAL Survey 2014 and presentation by Fainboim and Varea (2014).

system in terms of revenue transfer or intermediation. The three models are an explicit fee as a percentage of the revenue, days of float (nontransparent), and transaction charges.

The most common remuneration model is fee-for-service, practiced in 12 of the 16 countries and yet to be implemented in Brazil, Chile, Colombia, and Costa Rica. Four countries (Guatemala, Honduras, Panama, and Uruguay) use all three remuneration models. Brazil combines two remuneration models, given that the banks receive a percentage of the revenue and also profit from several days of float. In Colombia, the banks can retain resources for five or more days before transferring to the TSA. It is essential to note that the units responsible for tax collection also intervene in this process.

With regard to electronic payments, the quality of the information is questionable and few countries have disaggregated data regarding the payment method for each type of expenditure. A total of 13 countries (Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Peru, and Uruguay) record electronic payment rates of between 90 and 100 percent of expenditure. The operability of ICT in the payments system has substantially improved in response to demands from payment beneficiaries (demand for electronic transfers).

Financing the deficit and investing the surplus

As there is no standard model of an optimal cash balance, the treasurer is obliged to cover liquidity needs by identifying the so-called liquidity cushion, which is temporary savings that is set aside against a potential period of liquidity shortage. Nine countries (Argentina, Bolivia, Colombia, Costa Rica, Mexico, Nicaragua, Panama, Peru, and Uruguay) use various mechanisms to build up a liquidity cushion (e.g., projection of historical data calculated and observed from the cash-flow planning process; cash management models based on the available accounts; and liquidity analysis). For more details regarding the situation in each country, see Chapter 4.

Experiences of Countries Applying Performance Management Indicators

The French Treasury (Agence France Trésor), which manages the TSA in France, calculates three account management indicators, the results of which are incorporated into its reports to Parliament.¹⁷

¹⁷ Available at http://www.aft.gouv.fr/rubriques/objectives_188.html.

TABLE 2.5 RESULTS OF APPLYING OBJECTIVE 1 INDICATORS: INVEST TEMPORARY STATE CASH SURPLUSES FOR THE BEST RETURN

| | Unit | 2011 Real | 2012 Real | 2013 APP |
|--|---------|-------------------------|-------------------------|------------------------|
| Interest earned on deposit transactions (cash loans) with primary dealers | | EONIA +0.064 | EONIA +0.085 | EONIA |
| Interest earned on repo transactions with primary dealers (cash loans collateralized by government securities) | Percent | Swap EONIA -0.089 | Swap EONIA -0.089 | Swap EONIA -0.02 |

Source: French Treasury. Available at http://www.aft.gouv.fr/rubriques/average-end-of-day-balance_189.html#.

- Objective 1: Optimizing the return on temporary cash surpluses. This is calculated as a differential between the performance of cash deposits and the Euro Overnight Index Average (EONIA) benchmark; an objective is subsequently established for that differential.
- Objective 2: Optimizing the end-of-day TSA balance of the Bank of France according to market conditions. This is calculated by the percentage of days in which the final end-of-day TSA balance reaches certain levels (between EUR 70 million and EUR 80 million or between EUR 290 million and EUR 310 million) and the TSA can enter the market when borrowing costs are low.
- Objective 3: Advance notice to the Treasury of transactions posted to the TSA. This corresponds to the percentage of financial transactions of more than EUR 1 million notified before 16:00 hours on the previous day. This is a prior notification requirement for local governments, which was extended in 2007 to include national public agencies.

Published results indicate that in all cases, the objectives were achieved—in some cases, beyond the maximum level, as in the case of Objectives 2 and 3. Using the indicators has led to three concrete outcomes: improving the financial returns on temporary investments, based on a defined benchmark (Table 2.5);¹⁸ optimizing the TSA balances (based on prior notification of high payments); and establishing a strategy that minimizes costs in the financial market.

Objective 2 relates to the optimization of the end-of-day TSA balance at the Bank of France according to market conditions. The French Treasury

¹⁸ Source: French Treasury. Available at <http://www.aft.gouv.fr/documents/%7BC3BAF1F0-F068-4305-821D-B8B2BF4F9AF6%7D/publication/attachments/23912.pdf>.

TABLE 2.6 RESULTS OF USING OBJECTIVE 3 INDICATORS: ADVANCE NOTICE FROM TREASURY CORRESPONDENTS OF TRANSACTIONS POSTED TO THE TREASURY'S ACCOUNT

| | 2011 % | Goal 2012 % | Real 2012 % |
|--|--------|-------------|-------------|
| Percentage of local authority financial transactions in excess of EUR 1 million posted to the Treasury's account notified in advance | 95 | 95 | 97 |
| Percentage of national public body financial transactions above EUR 1 million posted to the Treasury's account notified in advance | 98 | 95 | 97 |

Source: French Treasury. Available at http://www.aft.gouv.fr/rubriques/average-end-of-day-balance_189.html#.

entered the market for loans throughout 2013 when the financial costs were at their lowest.

In the case of Objective 3 (Table 2.6), which exceeded the goal set for 2012, the Treasury was not only able to access relevant information about the quantity of large payments due, but it was also able to set aside the necessary resources to meet the payments with the required punctuality.

In Latin America, the Chilean and Mexican treasuries use defined performance indicators. Chile uses nine efficiency/product indicators, which are published annually. Among the most significant are (i) average monthly TSA balance in Chilean pesos; (ii) average monthly balance in the state bank current account in U.S. dollars; (iii) annual average of the percentage of payments made by electronic means by all treasuries; (iv) annual average percentage of tax returns (Operación Renta) completed electronically; (v) annual percentage of payments electronically received by the general treasury; (vi) average evaluation of citizen satisfaction; and (vii), (viii), and (ix) as indicators of debt recovery through judicial recovery proceedings from small, medium, and large debtors.¹⁹

Chile's Budget Directorate (Dirección de Presupuesto de Chile (DIPRES)) publishes the full results of all its products. Two indicators are used to exemplify the results of using the indicators; one that relates to electronic payments by the national treasury and another to the average TSA balance—in local and foreign currency—which is known in Chile as the Fiscal Single Account.

The electronic payment indicator is calculated by taking the numerator to be the sum of the percentages of payments made by electronic

¹⁹ Available at http://www.dipres.gob.cl/595/articles-112624_doc_pdf.pdf.

TABLE 2.7 PERFORMANCE INDICATORS FOR ELECTRONIC MEDIA, TREASURY OF CHILE

| Indicator | Calculus formula | Real | Real by | Estimated | Goal |
|---|--|------|-----------|-----------|-------|
| | | 2012 | June 2013 | 2013 | 2014 |
| Annual average of the percentages of payments made by electronic means by all of country treasuries | (Sum of the percentages of payments made electronically by the Treasury in Year <i>t</i> /total number of treasuries in Year <i>t</i>). | 0.8% | 84.1% | 83.4% | 82.2% |
| Annual average percentage of tax returns (Operación Renta) completed electronically | (Number of electronic transactions completed for total number of Operación Renta made in Year <i>t</i>)*100. | 73% | 82% | 76% | 76% |
| Annual percentage of payments that the general treasury received electronically | (Amount of payments received in all the General Treasury accounts via electronic means paid in the Year <i>t</i> / total quantity of payments received in General Treasury accounts for the Year <i>t</i>)*100. | 64% | 78.5% | 64% | 57% |

Source: Budget Directorate of Chile (Dirección de Presupuesto del Ministerio de Hacienda de Chile), available at http://www.dipres.gob.cl/595/articles-112624_doc_pdf.pdf.

deposit transfer by each treasury, while the denominator is the total number of treasuries included in the calculus. This indicator seeks to automate processes in the treasuries and, in terms of cash management, makes the payment of salaries and payments to suppliers more efficient (Table 2.7).

With regard to average TSA balances, these indicators measure the averages of the daily available balances in Chilean pesos and U.S. dollars, respectively, that remain uninvested in the Fiscal Single Account (Cuenta Única Fiscal). The aim of the indicator is that once the trading desks are closed, the available balance should be as low as possible, so that the surplus can be invested in various financial instruments. As DIPRES states, “the set goal is proposed as a maximum ceiling and, therefore, the management approach is to invest the maximum resources profitably and minimize the available balance

TABLE 2.8 PERFORMANCE INDICATORS FOR AVERAGE TREASURY SINGLE ACCOUNT CASH BALANCES, TREASURY OF CHILE

| Indicator | Calculus formula | Real 2012 | Real in June 2013 | Estimated 2013 | Goal 2014 |
|---|--|-------------------|-------------------|--------------------|-------------------|
| Average monthly balance of the Fiscal Single Account (in CHP) | (Sum of the average monthly balances available in the Fiscal Single Account in the Year <i>t</i> /Number of months in the period evaluated in the Year <i>t</i>). | CH\$2.484 million | CH\$2.600 million | CHP\$5.965 million | CH\$1.500 million |
| Average monthly balance of the State Bank Account N° 506-5 (in millions of USD) | (Sum of monthly balances in the State Bank Account N° 506-5/Number of months in the period evaluated). | US\$7,082 | US\$6,558 | US\$7,276 | US\$10,000 |

Source: Budget Directorate of Chile (Dirección de Presupuesto del Ministerio de Hacienda de Chile), available at http://www.dipres.gob.cl/595/articles-112624_doc_pdf.pdf.

Note: The monthly average values corresponding to the current account balance of the State Bank (in millions of US dollars).

that remains uninvested when the market closes by taking into account the revenues received and payments made on a daily basis” (Table 2.8).

The Federal Treasury of Mexico (Tesorería de la Federación de Mexico (TESOFE)), as part of its governmental management for results program, has created a matrix of indicators for results. This contains institutional process indicators, as well as two for cash management: the percentage of federal government revenue captured by the TSA; and the percentage of payments made on time.²⁰

TESOFE also has a matrix of indicators for 16 processes, which is part of its ISO 9001:2008 Quality Certificate. The indicators are associated with each one of the Treasury departments, which include the Under-Treasury of Operations (Subtesorería de Operación) with nine processes; Under-Treasury of Accounting and Operational Control (Subtesorería de Contabilidad and Control Operativo) with two processes; Funds and Securities Oversight

²⁰ Available at <http://www.transparenciapresupuestaria.gob.mx/en/PTP/SED>. The TESOFE cash management indicators are confidential; the only ones published are those included in the matrix indicators for results. Monitoring of the results obtained by these indicators can be viewed at <http://www.sistemas.hacienda.gob.mx/ptpsed/datosPrograma.do?ciclo=2014&r=6&ip=E&p=003&msd=4>.

Unit (Unidad de Vigilancia de Fondos y Valores) with one process; Directorate-General of Legal Affairs (Dirección General de Asuntos Jurídicos) with three processes; and Administrative Coordination Unit (Coordinación Administrativa) with one process.

Apart from the experience of France, where the results of applying the indicators underpin investment decisions and resource funding, the indicators are only used for monitoring and control purposes. Furthermore, in France, the information is presented to Parliament.

Essential Cash Management Indicators

PEFA indicators are essential since they provide for significant country scope and, in some cases, there have been reevaluations; that is, evolution over time can be tracked. There are PEFA indicators for 14 LAC countries from the total of 26, albeit from different years, which hamper cross-country comparison. In the absence of a more specific previous diagnostic, a PEFA treasury evaluation can be undertaken if certain dimensions of its indicators are reorganized to obtain—albeit with limitations—an estimation of a treasury's situation. Table 2.9 synthesizes this practical approach and explains what these PEFA dimensions measure.

The FOTEGAL survey is more detailed and constitutes a benchmark by which to address the treasury processes that align the incentives, which encourage efficient cash management. According to the FOTEGAL survey, the indicators used by Chile, France, and Mexico are those that best approach the concept of measuring cash management performance quantitatively.

Therefore, although some of the indicators used by these countries respond to the needs identified in Section 2, they need further additions to cover the entire cash cycle. The set of indicators is neither designed to cover all of the liquidity management processes nor to include all necessary indicators; however, they at least include the basic and essential treasury performance indicators.

A set of 20 quantitative indicators was applied to FOTEGAL member countries to evaluate their financial management and, although the proposed indicators were clearly relevant, several needed adjustment to make them comparable and to ensure they reflected specific elements such as the level of development and institutional capacity of Latin American treasuries, validity of IFMIS, and the practice and custom of using indicators for decision making.

Regarding the cash management cycle, several countries use at least one type of indicator, as in the case of cash forecasting (Mexico); measuring

TABLE 2.9 REORGANIZED PEFA INDICATORS AND DIMENSIONS

| Stage of the cash cycle | Methodology and indicator (or dimension) | Explains cash management | Explains institutional capacity |
|-------------------------------|--|--------------------------|---------------------------------|
| Cash flow forecasting | PEFA 16-First dimension: Stock and monitoring of expenditure payment arrears. | X | X |
| Cash revenues | PEFA 15-Second dimension: Effectiveness of the transfer of tax revenue to the treasury by the tax revenue administration. | | X |
| Cash expenditures | PEFA 16-Second dimension: Reliability and scope of in-year information provided to MDAs regarding spending ceilings and commitments. | X | |
| | PEFA 20-First dimension: Effectiveness of internal controls for nonsalary expenditure. | X | X |
| Consolidation of balances | PEFA 17-Second dimension: Extent of consolidation of the government's cash balance. | | X |
| Cash balances (arrears) | PEFA 4-First dimension: (Stock of expenditure payment arrears/Total public expenditure)*100. | X | |
| Others: monitoring of arrears | PEFA 4-Second dimension: Availability of data for monitoring payment arrears. | | X |

Source: Authors' elaboration.

revenues and expenditures electronically (Chile); performance of the investments of TSA balances or, in the case of deficits, resulting financial costs; and, in the event of recurrent deficit, monitoring the accumulation of arrears (France). There are areas, however, in which—beyond previously mentioned institutional considerations—it was obvious that some relevant, yet undefined, indicators should be included. In addition, it should be also included the capacity to measure the cash flows and payments made by the TSA should also be included, along with the TSA's scrutiny in institutional terms to clearly define its effective scope²¹ and the revenue collection and payment efficiency in terms of days taken for collection and days taken for payment).

²¹ The application of indicators that relate to the TSA shows that treasuries have different criteria concerning the measurement of TSA coverage of central government entities.

TABLE 2.10 CASH MANAGEMENT INDICATORS

| Strategic phase or stage to which the indicator corresponds | How the indicator is calculated | Objective of the indicator |
|--|---|--|
| Cash flow forecasting | Expenditure paid monthly/ expenditure planned monthly (as a percentage). For this indicator to also cover budget execution, a further subindicator might be one in which the denominator is the budget executed monthly (data that can be obtained from the IFMAS). | <ul style="list-style-type: none"> • Evaluate the quality of the cash plan in relation to the forecast. • Prevent either cash deficits or surpluses. • Budget execution monitoring. |
| Revenue collection | Amount of revenues captured by the treasury through the treasury single account (TSA)/total amount of revenues received through any account (as a percentage). | <ul style="list-style-type: none"> • Contribute to centralizing payments by the TSA. |
| | Amount of monthly revenues paid by the treasury by electronic means/total amount of monthly revenues paid by the treasury (as a percentage). | <ul style="list-style-type: none"> • Collect revenues in the quickest way possible and in a timely manner. • Eliminate manual processes that increase transaction costs. |
| | Time taken to make revenue transfers to the treasury (in days). | |
| Execution of payments | Amount of government payments that the treasury executes through the TSA/amount of government payments made through any account (as a percentage). | <ul style="list-style-type: none"> • Gain greater control over government expenditure through the TSA. • Improve accounting. |
| | Amount of monthly payments by the treasury by electronic means/ total amount of monthly payments by the treasury (as a percentage). | <ul style="list-style-type: none"> • Better opportunities and benefits for payment beneficiaries. • Reduce the number of days that beneficiaries have to wait to receive payments. |
| | Time taken by the treasury to make payments to the beneficiary (in days). | <ul style="list-style-type: none"> • Make payments faster and more reliably. |
| TSA scope | Total of institutions in the TSA/total central government institutions (as a percentage). | <ul style="list-style-type: none"> • Optimize the TSA's management role to centralize state resources. • Raise awareness of the cash flow of government institutions. |

(continued on next page)

TABLE 2.10 CASH MANAGEMENT INDICATORS *(continued)*

| Strategic phase or stage to which the indicator corresponds | How the indicator is calculated | Objective of the indicator |
|--|--|--|
| Remuneration of TSA surplus investments | TSA remuneration rate (as a percentage). | <ul style="list-style-type: none"> Obtain a return for the opportunity cost of government capital. The central bank prime rate can be used as a reference, although this yield can be significantly limited by the size of the market and prudent management. |
| Arrears | Balance of arrears. ^a The result of the first Dimension of PEFA PI-4 can be used. | <ul style="list-style-type: none"> Monitor and establish a policy that minimizes the accumulation of arrears. |

Source: Authors' elaboration.

^a Alternatively, the amount of costs engendered by arrears can be measured as a percentage of total expenditure. As this indicator implies, if the information relating to budget execution is available, the balance of the floating debt at the end of the financial year can be included.

Based on the above, Table 2.10 defines the 10 basic indicators that are required to evaluate cash management efficiency.

Regular use of this set of indicators should form part of a treasury reform process, leading to modern cash management that affects “government operations, finance and balance sheets, the central bank, and commercial banks” (Pessoa and Williams, 2012). For example, decisions on the time it takes for transfers to be made to and from the treasury impact the relationship between the treasury and the central bank, as well as their relationship with commercial banks. Ultimately, a reduction in idle balances to the benefit of the treasury should be sought. Table 2.11, therefore, may be a useful tool to inform decision making.

CONCLUSIONS

FOTEGAL, with the support of international development organizations, has become a source of South-South cooperation and has built up significant expertise in the field of treasury management. The FOTEGAL annual surveys provide information for cross-country comparison and for use in PFM studies; the data, however, needs to be systematized by differentiating

TABLE 2.11 DEFINITION OF BENCHMARKS TO ACHIEVE BY APPLYING TREASURY MANAGEMENT INDICATORS

| Indicator | Benchmark | Short-Term Action: Decision |
|---|---|--|
| 1 Monthly effective total expenditure in relation to monthly planned expenditure (as a percentage) | The objective could be to not exceed a 5 percent deviation between planned and executed expenditure, and ensure deviations do not accumulate. | <ul style="list-style-type: none"> • If the deviation is positive by more than 5 percent, invest the treasury single account (TSA) cash balances. • If the deviation is negative by more than 5 percent, secure financing at the lowest cost. • Ensure that the negative deviation does not accumulate month-on-month to avoid the risk of a accumulation of arrears. |
| 2 Revenues captured by the treasury via the TSA in relation to the total central government revenues (as a percentage) | The TSA's objective should be to concentrate 100 percent of central government revenues in the TSA. | <ul style="list-style-type: none"> • Compare with the payments indicator to measure the liquidity cushion (difference between the percentages). • If the payments percentage is higher, define a strategy to increase it, by identifying the revenues of institutions not included in the TSA. • If the revenue and payment percentages match, measures need not be taken, but there has to be a monitoring system to prevent inequality. |
| 3 Monthly revenues received by the treasury by electronic means in relation to the monthly total revenues (as a percentage) | The goal should be to ensure that 100 percent of all revenues are received electronically. | <ul style="list-style-type: none"> • Progressively minimize and eliminate manual payment mechanisms (checks and cash). • Compare with the payments indicator to measure the liquidity cushion (difference between the percentages). • If the percentage is inferior, define a policy and, thereafter, a strategy to increase it (e.g., reaching an agreement with suppliers and providing the necessary technology). |
| 4 Time spent in completing transfers of revenue from the collecting banks to the TSA (in days) | The objective should be to complete all transfers on the same day. ^a | <ul style="list-style-type: none"> • Negotiate same-day transfers with the revenue collecting banks. • Use the existing interbank transfer methods. • Develop the integrated financial management information system (IFMIS) to enable same-day payment.^b |

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TABLE 2.11 DEFINITION OF BENCHMARKS TO ACHIEVE BY APPLYING TREASURY MANAGEMENT INDICATORS *(continued)*

| | Indicator | Benchmark | Short-Term Action: Decision |
|---|---|--|--|
| 5 | Central government payments that the treasury executes through the TSA in relation to total central government payments (as a percentage) | The goal should be to complete all (100 percent) payments via the TSA. | <ul style="list-style-type: none"> • Compare with the revenue indicator to measure the liquidity cushion (difference of the percentages). • If the revenue and payment percentages match, measures need not be taken. |
| 6 | Payments made by the treasury by electronic means in relation to the total payments each month made by the treasury (as a percentage) | The goal should be to complete all (100 percent) payments electronically. | <ul style="list-style-type: none"> • Compare with the revenue indicator to measure the liquidity cushion (difference between the percentages). • If the percentage is lower, define a strategy to implement it. |
| 7 | Time taken in making payments from the treasury to the beneficiary (in days) | The objective should be to make same-day payments. | <ul style="list-style-type: none"> • Negotiate with the paying banks to make same-day transfers. • Use the available interbank transfer methods. • Develop the IFMIS to enable same-day transfers to be made. |
| 8 | Proportion of central government institutions in the TSA in relation to the total number of central government institutions (as a percentage) | The goal is to have 100 percent of central government entities covered by the TSA. | <ul style="list-style-type: none"> • Define a policy for the institutions and resources that should be included in and managed by the TSA. • Define a strategy and an action plan to progressively include other institutions and monitor progress. |
| 9 | Financial performance of the investment of TSA cash balances in comparison with market rates (This can be measured by the rate differential (or spread); in nominal value represent the investment outcomes; as a percentage of the investments.) | The goal could be to receive remuneration equal to the central bank prime rate. | <ul style="list-style-type: none"> • Define the risk parameters for security, liquidity, and profitability. • Define and implement an investment policy for surplus cash balances—including the defined risk parameters, which enables achievement of the benchmark. |

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TABLE 2.11 DEFINITION OF BENCHMARKS TO ACHIEVE BY APPLYING TREASURY MANAGEMENT INDICATORS *(continued)*

| 10 | Indicator | Benchmark | Short-Term Action: Decision |
|----|--|--|--|
| | The arrears balance (*) Percentage of payments in arrears in relation to the total payments made over the financial year | PEFA defines “A” as the accumulation of arrears of less than 2 percent of total expenditure. | <ul style="list-style-type: none"> • Define the rule that establishes when a payment is delayed. The international practice is 30 days from the invoice issue date. • Establish a priority payment policy. • Establish monitoring and control of arrears.^c • Define the rule regarding payment of interest from the first day of arrears. |

Source: Authors' elaboration.

^a Having a higher number of payment days than the number of days of revenue days may be an element of a policy that aims to maintain a liquidity cushion, although this can have repercussions in monetary policy and the speed in which investments are executed.

^b The IFMIS is a tool that would help to address various issues of the treasury, ranging from cash flow forecasts, TSA scrutiny, and TSA interoperability with payment and debt management (USAID, 2014).

^c Annex 1 of Flynn and Pessoa (2014) should also be taken into consideration. This is a matrix of actions to be taken in the immediate term (throughout the year), the short term (from one to three years), and the medium term in the areas of legality, budget credibility, government accountability, financial transparency and reporting, internal controls, and the financial information system. Also, in the same document, Annex 2 is worth consulting, as it provides a sample of the countries that adopted measures to reduce the accumulation of arrears.

questions regarding indicators that relate to institutional capacity and cash management.

Three groups of indicators have been analyzed, namely, PEFA, OBI, and those from the FOTEGAL survey. PEFA indicators are useful because they have already been applied to a significant number of countries, enabling good comparisons between different practices. PEFA and OBI indicators have a similar scope, as they adopt an approach based on structural gaps, regulatory compliance, and processes (Andrews, 2013). The FOTEGAL indicators are broader in scope and updated annually. A combination of indicators from all three methodologies provides a broad view of the institutional capacity of the treasury.

This study distinguishes the indicators of institutional processes, which are qualitative in nature, from the results and efficiency indicators of cash management, which are quantitative. The former indirectly affect liquidity management, whereas the latter can have direct repercussions on cash balances.

Among the countries analyzed, there are few noticeable differences in terms of cash management, but wider gaps appear when it comes to TSA implementation and scope and the treatment of arrears. In fact, payment arrears have garnered significant attention in the recent literature. Flynn and Pessoa (2014) describe, in detail, the factors that cause treasuries to delay their obligations and explain the economic impacts that chronic accumulation of arrears can have. Apart from the six causes previously stated (reduced economic growth, positioning by rent seekers, undermined trust in fiscal policy, second-round fiscal costs, higher service provision costs, higher interest rates, and reduced or interrupted service provision), an additional cause can be added that threatens governability. Chronic and excessive accumulation of payments in arrears can lead to increased or spiraling public expenditure. If the new borrowing levels undermine the capacity to pay and there is a high risk of default, this creates the risk of ungovernability and repudiation of new contracts (Bulow and Rogoff, 1989).

Payment arrears have to be managed, but they are also the result of a previous chain of operational policies, strategies, instruments, and mechanisms that make budget execution by the treasury viable (Radev and Khemani, 2009). Budget management has effects on cash management and the two processes must not be isolated. By linking the budget to cash forecasting, the latter becomes a strategic management tool for generating credibility when it comes to executing the budget.

By taking the use of performance indicators in France, Chile, and Mexico into consideration, together with ALM; the elements suggested by Lienert (2009) for modernizing cash management; and the conditions needed to develop applicable indicators, it can be concluded that the 10 indicators in Table 2.10 are pertinent to the cash cycle. They could be extremely useful for introducing incentives to improve management. The indicators are partial and are intended to include only an essential part of the indicators.

The results of regularly applying these 10 indicators can provide the basis for making operational and institutional coordination decisions. The aim of these decisions should be to enhance the speed of budget execution. Six indicators (three relating to revenue collection and three to payments) form the basis for operational decisions that tend to increase resource availability and provide better control of cash flows. Two indicators (relating to planning and TSA scrutiny) seek to improve institutional coordination to make budget execution more efficient. The cash forecast deviation indicator allows the treasury



to improve the quality of revenue and expenditure projections and to anticipate funding needs, thereby controlling financial planning risks. The TSA indicators, by way of efficient institutional coordination, can gain more information about the central government resources managed by the treasury. The remaining two indicators that pertain to managing positive and negative balances serve as a support for decision making on strategic investment or, in its absence, short-term borrowing.

The pilot application of these 10 indicators demonstrates the complexity of obtaining comparable cross-country results. This implies that all treasuries should apply the indicators in a homogeneous way, using identical criteria.

Table 2.11 provides benchmarks to enable treasuries to begin using the indicators. It also suggests actions to help improve their performance in the short term.

ANNEXES

ANNEX I
TREASURY MANAGEMENT SURVEY FOR TREASURERS IN
LATIN AMERICA, 2015 (*)

CASH PLANS

1. What kind of cash forecasts does the Treasury prepare? Number the pertinent options—in order of priority, where 1 is the most significant—that relate to the plan that is used most:
 - Annual cash forecasts updated monthly ()
 - Quarterly forecasts updated monthly ()
 - Quarterly forecasts reviewed on a daily basis ()
 - Monthly forecasts reviewed on a daily basis ()
 - Other(s): _____

2. How frequently are the cash flows included in the forecasts prepared by the Treasury and those mentioned in the previous section reviewed and updated? Mark all corresponding options:
 - Daily () for the (monthly, quarterly) forecasts
 - Weekly () for the (monthly, quarterly) forecasts
 - Monthly () for the (annual) forecasts
 - Other: _____

Indicate whether the cash flow forecast updates are undertaken on a rolling basis.

 - Reviewed on a rolling basis ()
 - Reviewed on a nonrolling basis ()

3. Is an *ex post* reconciliation of the accuracy of the cash forecasts included in the plans (i.e., comparison of the forecasts contained in the plans and the real cash flows)?
 - Yes (). If so, how frequently? _____
For example, monthly forecast reconciliation compared to the real cash flows.
 - No (). If so, please explain the reasons: _____

4. Indicate whether or not there have been changes that have affected cash flow forecasting in the last three years, listing the most influential changes in order of priority, where 1 is the most significant:
 - () Technological innovations
 - () Adoption of a small system (or module) for forecasts
 - () Use of SharePoint for forecasting
 - () Changes in the planning horizon
 - () Frequency of the updates
 - () Changes in forecasting methods
 - () Others, please specify _____

5. Expenditure each month/Planned expenditure payments each month in 2014, for each month of the year.

6. Expenditure each month/Expenditure budgeted each month in 2014, for each month of the year.

(continued on next page)



(continued)

LIQUIDITY CUSHION AND STRUCTURAL CASH SURPLUSES

7. Does the Treasury set the liquidity cushion or reserve that it maintains for short-term cash management purposes?
- No ()
 - Yes (). If so, what methodology is used to identify this reserve? Please describe in detail, taking as much space as necessary. _____
-
8. Does the Treasury identify structural surpluses? How does it quantify them? Where are these structural surpluses invested? Please indicate, in order of priority, where 1 is the most significant:
- () Central banks
 - () Commercial banks
 - () Development banks
 - () Other intermediaries
 - () Local and/or international capital markets
 - () They have been used to create a stabilization fund, whose resources must be invested in _____
-
9. Does the Treasury identify cash shortfalls (or necessities); in other words, the cash that may be needed to finance temporary or occasional needs?
- No (). Please explain why not. _____
-
- Yes (). If so, which methodology is used to identify these shortfalls? _____
-
10. The occasional liquidity shortfalls (or needs) are financed by:
- Treasury bills (T-Bills) ()
 - Short-term central bank loans () or from the public bank with custody of the treasury single account (TSA) ()
 - Short-term loans from commercial banks ()
 - Other ()

FLOATING DEBT

11. With respect to the floating debt, is there a legal definition of arrears?
- No ()
 - Yes () _____ (indicate the number and article of the relevant law and quote it).

What was the total floating debt at the end of each year, in 2013 and 2014? _____

What was its average life in months in December 2014? _____
 Are reports submitted regarding its situation? _____ (indicate regularity).
 Is priority expenditure stipulated by law or in other regulations? _____

SINGLE TREASURY ACCOUNT

12. Has the legal framework and/or the rules that regulate the TSA changed in the last year?
- No ()
 - Yes () _____ (indicate the new rules and describe the changes).

(continued on next page)

(continued)

13. How many bank accounts holding public resources are outside the treasury control at the central bank and in the commercial banks? *Please identify the entities and resources whose accounts remain outside of the TSA, drawing a distinction between ministries, devolved, decentralized, and autonomous entities (also desegregating the Judicial and Legislative branches, the universities and others), regional governments, local governments, the ownership equity of each one of the six types of agency mentioned, social security, resources from external borrowing, donations, and others (please specify).*
-
14. If TSA scrutiny has increased over the last 12 months, please indicate what additional resources and/or agencies were included in the TSA during this period.
-
-
15. Are zero-balance accounts used as part of the TSA structure? For revenue collection? For decentralized payments?
- Yes ()
 - No ()
 - Comments: _____
-

ELECTRONIC PAYMENTS

16. Does the Treasury use real time gross settlement (RTGS) or automated clearing house (ACH) to make its payments? If so, for which kind of payments does it use each system? If not, please explain why.
-
-
17. a) Of the total of payroll payments made by the Treasury (current expenditure), what percentage are electronic?
In numbers: _____
In value: _____
- b) Total amount of payments made by the TSA/Total amount of central government payments in 2014. _____

REVENUE COLLECTION BY THE TREASURY

18. Does the Treasury collect the independent revenues of the following subsectors?:
- i) Ministries () ;
 - ii) Devolved entities () ;
 - iii) Decentralized, nonbusiness entities () ;
 - iv) Autonomous entities, such as universities, but excluding the Judicial and Legislative branches () ;
 - v) Legislative Branch () ;
 - vi) Judicial Branch () ;
 - vii) Electoral organs () ;
 - viii) Subnational governments () .
- In the cases in which these resources are not collected by the Treasury, please estimate how much of total revenue they represented in each case in 2014.
-
19. How many days are fiscal revenues retained by banks before transfer to the Treasury (state whether these are reciprocity days or due to other motives (technological, accounting, legal)?)
-
-

(continued on next page)

20. Has the number of reciprocity days been reduced (or eliminated) over the last 12 months? If there is no reciprocal arrangement, has the time taken to transfer funds to the TSA from the moment of collection been reduced? By how many days? How?

21. Amount of revenue transferred to the Treasury each month by electronic means/
Total amount of revenue each month transferred to the Treasury

FINANCIAL INVESTMENTS

22. Does the Treasury have a policy, rule, or strategy regarding short-term investments?

- No () _____
- Yes () _____ (please indicate whether it is published, in which case attach to the questionnaire, or unpublished). _____

23. If the Treasury does make short-term investments, which of the following instruments does it use? Please indicate the order of priority, where 1 is the most significant:

- () Commercial bank certificates of deposit, or other commercial bank securities
- () Commercial papers, or other nonbanking private sector titles
- () Remunerated deposits at the central bank
- () Commercial banks fixed term deposits
- () Certificates of deposit or fixed term deposits at the public commercial bank that hold custody of the TSA
- () Central bank securities
- () Reverse repurchase agreements (repos)

24. Have the Treasury's options for short-term investments improved over the last 12 months? Please explain. _____

25. Does the treasury receive remuneration for its deposits at the central bank that holds the TSA? If the TSA is held at a commercial public bank, does it receive remuneration for its deposits there?

- Yes (). If so, how is this remuneration calculated? _____
- No (). If so, explain the motives: _____

26. If the TSA is held at a commercial public bank, is this bank subject to any restrictions regarding its assets and liabilities operation?

- Yes () Please describe the restrictions.
- No ()

SHORT-TERM FINANCIAL NEEDS

FINANCIAL INSTRUMENTS

27. Occasional liquidity shortages (or needs) are financed by:
Please indicate in order of priority (where 1 is the most significant, followed by 2, and so on).

- () Treasury securities
- () Short-term central bank loans
- () Short-term commercial bank loans: public () private ()
- () Short-term public commercial bank loans from the bank holding the TSA
- () Others

(continued on next page)

*(continued)***Special Purpose Fund and Sovereign Fund Management**

28. Has the Treasury taken control of managing or administering special funds (royalty, maintenance, guarantee, education, security, all other specific purpose funds (SPFs), etc.)?

- Yes (). Please specify and report the approximate percentage of total resources managed by the Treasury. _____

- No (). Please specify and report the approximate percentage of total resources managed by the Treasury. _____

29. Are these special funds (mentioned in the previous question) managed or administered integrally, or in combination with other government resources, or individually (separately) without a cash unit? Please specify.

Can resources from these funds be loaned to the Treasury?

- Yes (). Explain whether all resources can be loaned, or whether some funds are prevented from being included in lending resources (and identify the latter). _____

- No (). If these funds are not jointly managed or cannot be loaned to the government, how has the Treasury addressed the challenge of administering them? _____

30. If your country has set up sovereign funds (which include stabilization and savings funds), please specify and mention who administers each one of them and in which securities they invest (or are obliged to invest) each one of their resources.

- () Yes _____

- () No _____

(*) Includes the quantitative indicators proposed in this chapter.

ANNEX II

RESULTS OF APPLYING THE PERFORMANCE INDICATORS: THE CASE OF URUGUAY

The table below shows the indicators for the pilot case applied to Uruguay. These yielded the following results:

PERFORMANCE INDICATORS FOR THE TREASURY OF URUGUAY, 2014

| | Indicator | Uruguay |
|-------------------------------|---|--------------------|
| Cash forecasting | Expenditure each month/Planned expenditure each month (by December 2014). | 99.14% |
| Income indicators | Amount of revenue captured by the Treasury through the treasury single account (TSA)/ Total amount of revenues received through any account (by December 2014) (Only direct central government administration). | 100% |
| | Amount of revenue transferred electronically to the Treasury/Total amount of all revenues transferred to the Treasury (by December 2014). | 95.19 % |
| | Time taken to make revenue transfers to the Treasury (in days). | 0 days |
| Expenditure indicators | Amount of government payments executed by the Treasury each month through the TSA/ Amount of government payments executed by the Treasury each month via any other account (by December 2014). | 100% |
| | Amount of payments made electronically each month by the Treasury/Total amount of payments made each month by the Treasury (by December 2014). | 99.67% |
| | Time taken to make payments from the Treasury to the beneficiary (in days). | 0 days |
| TSA scope | Total number of institutions included in the TSA/ Total number of central government institutions covered by the TSA. | 100% |
| TSA profitability indicator | Interest savings - IS = TSA balance* IR (from year 2014) IR = interest rate for domestic debt bond placements and lines of credit (if these are used). | 830,680,827 (UY\$) |
| Payments in arrears indicator | Arrears balance/Unexecuted budget (by December 2014). | No arrears |

Source: Treasury of Uruguay, 2015.

The pilot application of the set of indicators for improving cash management in Uruguay has yielded the following observations:

Cash forecasting shows strength, in general, although there is one particular aspect that could be improved.

- The deviation of real payments from planned expenditure is below 1 percent, which suggests there is sufficient technical capacity for drafting expenditure and revenue projections and ensuring financial planning quality and stability in the variables (which should be reliable to enable projections). There is also consistency between approved budget loans and financial planning.
- The observed link to budget execution is an area that needs further strengthening; the Treasury controls cash flows, in accordance with its financial planning, on a weekly, monthly, and quarterly basis. At year-end, it also drafts a report giving an account of the financial year. The process remains incomplete, however, with regard to linking the monthly cash plan execution results with the planned monthly budget execution.

There is room for improvement in terms of increasing TSA revenue coverage:

- Of all government collecting accounts, only a third channel resources through the TSA (100 percent of the indicator refers to revenue managed directly by the Treasury). One far-reaching alternative may be to convert collecting accounts into zero-balance accounts; in other words, transfer all resources to the TSA at the close of each day.
- Increase the use of electronic media to increase TSA revenue capture. There is margin to progressively reduce manual payments (e.g., payments by check or standing payment orders) and to encourage the culture of Internet banking.

The Treasury of Uruguay's revenues are comprised of taxes (tax office, customs excise, casinos, and import tariffs), services (lotteries), interests (financial placements), contributions from public sector enterprises, and the utilities of the central bank. Less than 4 percent of the items paid by the central bank are not processed electronically.



On the expenditure side, it appears that 99.7 percent of Treasury payments are carried out electronically. Beneficiaries, however, receive the transfer on the same day that the Treasury emits the order to pay.

When income indicators and expenditures are compared, electronic revenue collection is inferior to the level of electronic payments. This implies that there is a negative margin with little room to improve liquidity.

The times needed to execute revenue transfers and payments coincide. In other words, the number of days required for revenue transfer is equal to the number of days required for payments.

As with the coverage of all institutions in the TSA, the indicator appears to yield 100 percent. This interpretation depends on the number of central government institutions that are considered as included in the TSA.

Uruguay does not have a history of accumulating payment arrears. The results of this particular indicator, therefore, are not applicable.

Independently of the size and liquidity of the financial market in Uruguay, there is room for the Treasury to improve in: i) the unification of the TSA and ii) the development of a strategy to invest the surpluses of the TSA with safety, liquidity, and profitability, seeking returns with a defined margin over the central bank's prime rate. This would open the path toward a more active cash management.

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Cash and Debt Management: Interaction, Coordination, and Integration

Mario Pessoa, Israel Fainboim, and Mike Williams

INTRODUCTION

This chapter identifies the main cash and debt management (CDM) functions of a ministry of finance (MoF), explains the importance of interaction and coordination between them, and sets out how this can be best achieved under various institutional structures. Although the chapter discusses the CDM items in combination, it approaches the interactions primarily from the perspective of cash management and the wider treasury. It does not discuss debt management policies in detail, which would require a more extensive literature (Bangura, Kitabire, and Powell, 2000; Shah, 2007).¹ The chapter also offers a number of country examples, describes how cash and debt units are organized in Latin America, and discusses the usefulness that integration has on both functions in one unit.

International experience has favored more recently the structuring of both functions in one unit because of efficiency, both in developing a consistent policy stance and operationally. It appears, however, that the integrated structure is particularly useful when there is a certain level of market

¹ There are other examples at http://treasury.worldbank.org/bdm/htm/resource_publications.html.

development and when the CDM functions are active and well developed. In any case, a good coordination mechanism is essential.

This chapter is organized in three sections. The first discusses the organization of CDM, the second provides international experience with particular focus on Latin America, and the final discusses the advantages and disadvantages of the integration model. There is a tradition in Latin America of the treasury and debt management functions being separate. It is recognized, however, that an integrated unit can be more efficient when a more active management is envisaged and if there is a good level of market development.

The chapter emphasizes the importance of coordination mechanisms to improve the efficiency, transparency, and value for money of cash and debt operations. The experience regarding cash and debt committees in Latin America is described as a mechanism that favors coordination.

Performance of CDM in institutions throughout the region is assessed. This includes the annual borrowing plan preparation; treasury single account (TSA) management and monitoring; cash surplus investment; cash flow forecast preparation; treasury bond (Tbonds) and treasury bill (Tbills) issuances, as well as corresponding auction calendars; risk management and analysis; market and investor relationships; and accounting and statistical report preparation. Although most of these functions are performed by the CDM offices in the region, active cash management is not prevalent in many countries. This may explain why only three countries (Brazil, Colombia, and Peru) have adopted integrated offices, given that financial markets that are less developed and have less active cash management do not require integration between the two functions.

Throughout this chapter, DMO (debt management office) is used specifically to refer to a semi-autonomous debt management function, often with cash management integrated with it, whereas DMU (debt management unit) is used more generically or where the function is more closely integrated with the rest of the ministry, although it may still have operational or managerial responsibilities delegated to it.

ORGANIZATION OF CASH AND DEBT MANAGEMENT FUNCTIONS

Cash Management Functions

The overriding objective in all countries with regard to government cash management is to ensure that cash is available to execute the budget efficiently

and to meet government obligations when they fall due. Modern cash management, however, has other objectives (Lienert, 2009; Williams, 2010).

- **Cost-effectiveness:** Borrowing only when needed, to minimize government financing costs; and maximizing any returns on surplus idle cash.
- **Risk management:** Protecting government short-term assets, for example, by insisting on collateral when cash is invested, and ensuring that there are always sufficient avenues open to secure short-term financing when required.
- **Support other financial policies:** Debt management, monetary operations, and financial market development.

These objectives generate a range of functions, which go beyond those of the traditional treasury's mostly passive role in monitoring cash balances and maintaining a cash buffer to handle volatility and unanticipated outflows. The traditional treasury tended to restrict expenditures or delay bill payments, when necessary, to avoid overdraft or unacceptably expensive borrowing. This has been the reason why cash management in the past often has been considered simply as an extension of the budget execution function. Modern cash management, however, requires planning to ensure the smoothing of daily and weekly cash flows through active borrowing and lending in money markets, as well as having the appropriate tools to cope with financial market volatility. Cutting planned expenditure as a result of a lack of cash equates to cash rationing. Effective cash management avoids the need for cash rationing.

It is important to emphasize in this context that the investment of surplus cash is not only an added value; it is an intrinsic part of modern cash management. Cash flow smoothing implies the investment of surpluses; and smoothing generates benefits by way of a lower cash buffer as a result of reduced cash volatility, which also facilitates monetary policy operations. Well managed, an investment will be—in itself—cost effective and thus reduce the net debt interest bill.

The development of a TSA, including the consolidation of all government cash balances into a single bank account, is the first prerequisite for efficient cash management. Most countries, including those of low income, have a TSA in place—or, at least, have implemented policies and processes to build the TSA, although it may still take time to complete. Such is the premise of this publication. Cash management functions look beyond the TSA and revolve around three main activities:

1. Monitoring and accessing government cash and related short-term assets
 - Identification of assets that are within the scope of cash management. This relates mostly to ensuring that the TSA is complete and is fully accessible, although there may be other assets that are available in certain circumstances. These may include those assets that are held in fiscal stabilization funds or other reserve funds.
 - Arrangements that are in place to allow the cash manager to monitor TSA balances in as close to real time as possible.
 - Integration of policy understandings into the cash management function that determines where temporary surplus assets will be placed; and maintenance of a cash buffer.
2. Cash flow forecasting
 - Net cash flow forecasting of at least three months in anticipation to be made across the TSA. The timing of future peaks and troughs should be predicted to enable decision making with regard to borrowing and lending maturities. It also provides cash managers—and, hence, the spending units—with sufficient time to plan and execute budget changes in the face of potential emerging problems. This implies alerting the budget unit and others involved to assess their priorities, determining in a timely way the appropriation authorities to be withheld, and informing spending units. Giving some notice of these actions is preferable to simply imposing arrears upon suppliers. In any event, the cash manager should not be involved in deciding which suppliers should not be paid at any given period.
 - Daily, weekly, or monthly forecasting of flows, depending on the cash manager's targets and/or capability.
 - Networking and exchange of information with spending units, revenue administrations, and those responsible for the execution of the budget to enable successful forecasting.
3. Financial market interaction
 - Identification of options to manage, cost-effectively, government cash flow deficits and surpluses. The core of these is likely to be the issuance of T-bills and the use of repurchase (repo) and reverse repurchase (reverse repo) agreements. The options may also include bank borrowing and deposits in the central bank or commercial banks. For deposits and other investments, credit quality and liquidity are crucial; there should be no risk to principal; and

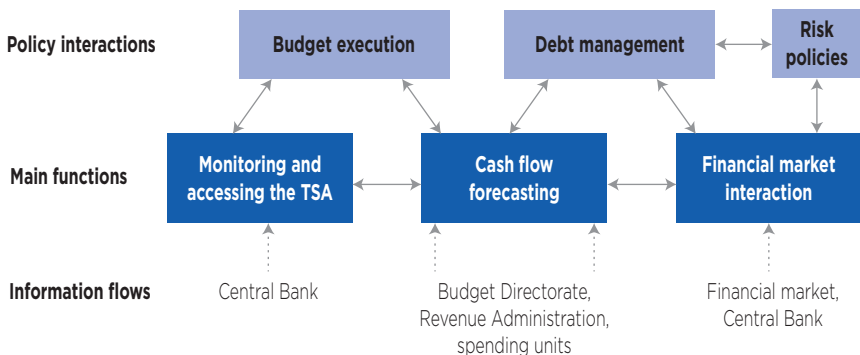
buffers, in particular, should be held in highly liquid form (including, for example, term deposits that can be withdrawn with penalty). The maturity of investments also should be geared toward the cash flow profile, so that they mature on days when cash is likely to be required, thus smoothing the net cash flow.

- Very short-term arrangements in place to meet unanticipated cash flow deficits. These safety nets often include overdraft facilities with the central bank or commercial banks.
- Development of short-term borrowing and investment plans and their execution in an effective and low-risk manner. This may also extend to the management of a transaction throughout its lifecycle.
- Associated liaison with the central bank and market participants.

These functions and interactions are summarized in Figure 3.1.

There are many supporting operations that are associated with these core functions. These include databases to maintain cash flow forecasts, for financial transactions, and for accounting purposes. Information sharing and coordination are crucial with revenue-collecting agencies and spending ministries, as well as for those relevant offices within the MoF. Coordination with debt management is self-evident—and is further discussed below—and equally essential is coordination with the central bank. This involves the flow of information, especially with regard to real-time information on the incoming and outgoing flows of the TSA (assuming that it is held by the central bank and that information is also essential for other accounts held there). Furthermore, there should be clarity with regard to the respective

FIGURE 3.1 MAIN CASH MANAGEMENT FUNCTIONS AND INTERACTIONS



Source: Authors' elaboration.

responsibilities and operational interaction in money markets, as well as to the services offered (e.g., as a banker or fiscal agent) by the central bank (Pessoa and Williams, 2012).

The importance of the risk assessment and management responsibilities of the cash manager are often underestimated. They include the following:

- **Liquidity risk:** Ensuring that liquid funds are available and avoiding overdrafts or expensive emergency facilities.
- **Funding risk:** Securing the ability to raise funds at market yields, when required.
- **Forecasting risk:** Making decisions on the basis of imperfect estimates of the borrowing requirement, or with insufficient information of the volatility, or lumpiness of underlying cash flows.

The risk assessment and management responsibilities of the cash manager also include the more familiar risks:

- **Market risk:** Associated with the management of cash balances.
- **Credit risk:** Relating to investment counterparties.
- **Operational risk:** Associated with transactions, payments, and accounts.

Debt Management Functions

The core function of debt management is widely acknowledged. The objective of most countries is similar to the following: “The main objective of public debt management is to ensure that the government’s financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk” (IMF and World Bank, 2003). Many countries will add a secondary objective that relates to domestic financial market development.

The key roles of debt managers in achieving this objective are to establish and execute a strategy to manage government debt, to raise required funding amounts, and to achieve their cost and risk objectives. It is essential for debt managers to process the transactions and manage associated data, as well as achieve other government goals. Although domestic market development may be a common secondary objective, the skills of debt managers can be put to use in other policy areas, such as managing other government assets and liabilities, including contingent liabilities.



Debt management functions, therefore, fall within three main categories:²

1. Financial market interaction; in particular, the execution of transactions and negotiations with other creditors:
 - Implementing the annual borrowing plan, including related transactions (e.g., derivatives), and contribution to the design of that plan. Transactions may be in domestic or foreign markets, and may involve securities or loans and credits; they also may include guarantees and on-lending of external loans to, for example, state-owned enterprises.
 - Maintaining regular contact with market participants—domestic and, in many cases, external. This includes lenders (private and public), investors and primary dealers, and other market intermediaries. There may need to be understandings with the central bank, either in relation to money or debt market development, or to avoid operational clashes.
2. Debt management strategy (DMS) design:³
 - Design of strategy options and their presentation to policy-makers who will ultimately approve a strategy, based on the government's trade-off between cost and risk.
 - Associated analytical tools. Models for the analysis of cost and risk trade-offs, assessment of macroeconomic and financial market data, and monitoring of risk indicators.
 - Development of the recommended annual borrowing plan to operationalize the medium-term strategy.
 - Monitoring and reporting on performance against the strategy and its implementation, and reporting on risk indicators and other targets.

² These categories broadly equate to the familiar front-, middle-, and back-office functions that are characteristic of many DMUs. The relevant organizational issues are discussed in more detail below.

³ The development of a DMS and related debt management policies are not further discussed in this publication. A DMS is a potentially complex undertaking, at least for those countries sufficiently developed to have access to a range of financing options. For guidance, see IMF & World Bank (2009). There is substantial supporting literature, some of which has been brought together by the World Bank, at http://treasury.worldbank.org/bdm/htm/resource_publications.html (in particular, the “Cost-Risk Modeling” and “Debt Management Strategy” tabs).

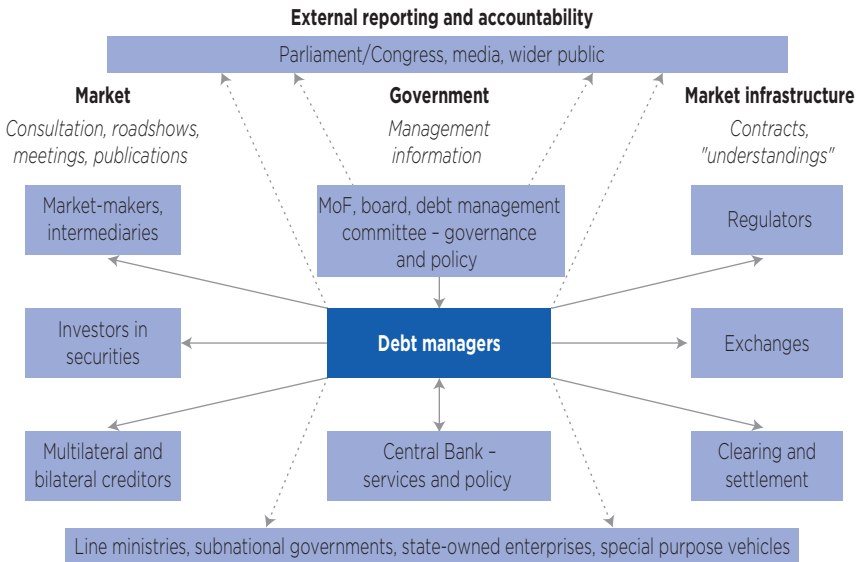
3. Transactions processing and recording:⁴
 - Transactions registration, confirmation, and settlement, as well as associated documentation.
 - Debt servicing, maintenance, and reconciliation of debt transactions.
 - Database management and statistical reporting.
 - Monitoring guarantees and the repayment of on-lending.

Debt managers will often perform other functions, although they may be shared with others in the MoF. These may include:

- **Financial reporting:** Includes financial transactions undertaken and the financial and risk characteristics of the debt portfolio. These reports are required for reasons of transparency and accountability, auditing, and policymaking. They may be internal or external, and for the market stakeholders, Parliament or Congress, or the wider public.
- **Risk monitoring and compliance:** Debt managers will face a similar range of risks as do cash managers, although often with greater exposure, given the sums involved and the greater impact of poor decisions or process failures. Risk analysis, especially of market risk, is at the heart of DMS, and the management of operational risk (including maintaining business continuity and disaster recovery plans) is particularly relevant.
- **Stakeholder relationship management:** As is already clear, debt managers interact with a range of stakeholders. Debt managers, in turn, must develop stakeholder relations policies and a communications strategy. A summary of the contacts are included in Figure 3.2.
- **Policy and advisory services:** This function may encompass a wide range of activities, with examples that include advice on domestic debt market development; analysis of public-private partnership proposals; development of policies; and analytical tools to handle contingent liabilities, manage financial assets (other than purely cash), authorize borrowing by subnational entities or state-owned enterprises, buy currency (or hedge currency risks) for other ministries, and manage contractual claims on government.

⁴ This function is common to debt and cash managers. It tends, however, to play a greater role among debt management activities; in practice, the debt management database and related processes may serve both functions, even where they are institutionally separate.

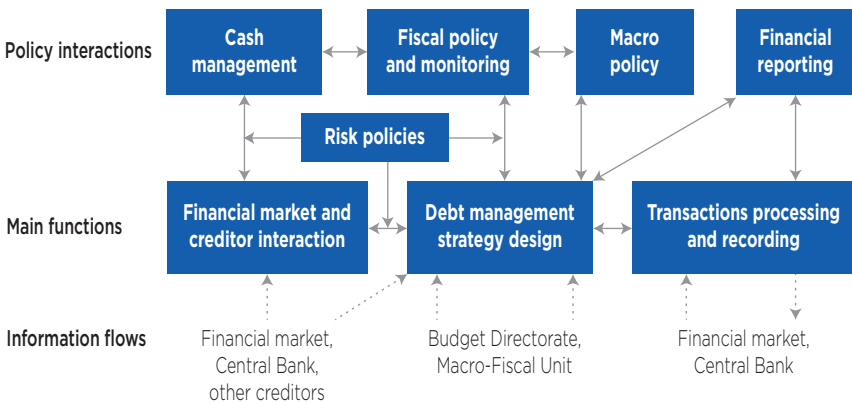
FIGURE 3.2 STAKEHOLDER RELATIONSHIPS OF DEBT MANAGERS



Source: Authors' elaboration.

These functions and interactions are summarized in Figure 3.3. The format is similar to Figure 3.1 above; and the links between cash and debt management, and the common importance of interaction with the financial markets and of risk management, are apparent.

FIGURE 3.3 MAIN DEBT MANAGEMENT FUNCTIONS AND INTERACTIONS



Source: Authors' elaboration.

CASH AND DEBT MANAGEMENT INTERACTION

The Importance of Coordination

The importance of close coordination between CDM functions is self-evident.⁵ In the first place, financing the gross borrowing requirement of government requires choices between instruments: internal or external, short- or long-term, fixed-rate or floating-rate, retail or wholesale, and so on. In particular, these choices will have direct implications on the mix of shorter-term and longer-term instruments; that is, between Tbills and Tbonds.⁶ Good practice dictates that these choices are made in the context of the medium-term DMS, but they must also take account of market appetite, market volatility, and interest rate prospects. Price considerations are summarized by the yield curve which extends across the full range of maturities, often with anomalies between different market segments, not least between the money and debt markets (below or above one year to maturity, respectively), which have to be well understood by the issuer.

From the supply perspective, government financing choices are made in the context of the profile of financing flows. Most countries have marked quarterly, monthly, and intra-monthly cash flow patterns associated with the timing of tax receipts, payment of wages or salaries, transfers to subnational units, and so on. The pattern may be exacerbated by the in-year timing of debt redemptions. If there is an underdeveloped money market, this pattern has to be reflected in the pattern of Tbond issuance, which also has to be geared to Tbond redemptions.

All these considerations require close interaction between the functions and a common understanding of the market and agreed issuance choices. On a day-to-day basis, there will be further coordination requirements, including:

⁵ Many of the arguments in this subsection are spelled out at greater length in Williams (2010).

⁶ Note that Tbills are part of government debt, whether they are issued for cash management or debt management purposes and whoever is responsible for their issuance. As stressed below, it is strongly advisable to have one source of issuance and one point of contact with the market; in any event, within the ministry, there should be an integrated oversight of the debt stock as a whole.



- Linkage of issuance dates with redemption dates to maximize the opportunities for investors to rollover into a new issue.
- Maturity dates, selected to avoid weeks and, especially, days of heavy cash outflow (e.g., salary payments) and, indeed, to target days of cash inflow (the due date for tax payments).
- Mitigation by debt managers of cash management problems that potentially arise when large Tbonds come to maturity. Debt redemptions tend to be concentrated on only a few days of the year, particularly when successive tranches of Tbonds have been issued to build up their volume sufficiently to support a liquid secondary market. In these circumstances, liability management operations run by the debt manager; for example, debt buy-backs (reverse auctions or bilateral purchases) or Tbond exchanges (switch auctions and conversions) can have the effect of smoothing the redemptions or pushing them forward in time to the benefit of the cash manager.

The potential strain between CDM objectives over whether to issue Tbonds or Tbills when faced with an imminent cash shortage is lessened as the scope for active cash management develops. Debt managers prefer to issue Tbonds with a stable and predictable pattern. Regular issuance reduces market uncertainty and investors can better plan ahead. With a liquid money market, the timing of Tbond sales can be separated from the profile of the government's net cash flow. It is left to Tbills and other money market instruments to deal with short-term fluctuations. That, in turn, greatly improves the transparency and efficiency of debt management.

As this interaction with the market develops, the coordination of CDM functions becomes especially important. It ensures that the government presents a consistent face to the market. Where two parts of government are interacting with the market, there are risks of giving conflicting signals, adding to uncertainty and potentially distorting the money market. Those staff who directly interact with the market and manage transactions need to build a relationship with individual intermediaries, whether they are selling Tbonds or Tbills, borrowing or investing in the repo or other money markets, or intervening for wider reasons. They may also need to intervene in the money market for debt management reasons, for example to lend Tbonds to unwind a blockage in the repo market, or in the debt market for cash management reasons, as noted above. That requires a single point of contact across a range of CDM operations.

Meeting the Coordination Requirements

The potential institutional structures are outlined below. The requirements outlined above, however, suggest a number of areas where interaction is important.

- **Preparation of DMS:** The preferred portfolio structure may need to take account of cash management requirements; for example, for a sufficiently large stock of Tbills to secure sufficient liquidity, allowing cash managers some flexibility in their issuance to accommodate cash flow volatility. In other cases, there may be a need to build a cash buffer. Where domestic market development is an objective, many reform priorities will be common to both debt and money markets. These may include stimulating competition between intermediaries or the development of the repo market (which generates a demand for Tbonds as collateral and provides more options to cash managers).
- **Preparation of annual financing plan:** As well as the factors noted above, this has to take account of the in-year profile of cash flows. The timing of debt redemptions or major payments may be particularly relevant. If the debt manager wishes to frontload issuance for prudential reasons, cash managers may be responsible for cost-effectively managing any cash surpluses that arise.
- **Monthly or quarterly issuance plan:** Debt managers properly want to announce their issuance plans in advance in the interests of transparency, predictability, and to reduce market uncertainty. Cash managers, on the other hand, want to retain some flexibility to respond to unanticipated cash flows. The trade-off may take the form of a Tbill issuance program that is less specific than the Tbond program when they are announced to the market, with the Tbill program perhaps indicating ranges rather than firm amounts.
- **Short-term responses to market volatility:** Tbonds are often viewed as the main instrument for financing the annual borrowing requirement (after allowing for external loans and credits and, possibly, external Tbond issuance), with Tbills essentially used to reduce cash flow volatility. Within the year, there is much more flexibility to respond to changes in market demand, interest rates, or cash flows.
- **Interaction with the central bank:** Operational understandings with the central bank—the timing and type of market interventions,



instruments used, use of intermediaries—are important to CDM, and should normally be discussed jointly with the central bank. There are more specific requirements for cash managers (access to the TSA, scope for managing temporary surpluses with the central bank, interest on accounts) and the information flows needed will be different. In the supply of services, the central bank may be fiscal agent for Tbill and Tbond auctions, although its role as banker may be more relevant for the cash manager.

This last point hints at the scope for administrative savings that effective coordination can generate. Both functions have some skill requirements in common—in particular, an understanding of financial markets (i.e., transactions in securities; structure of demand; and market infrastructure, which includes legal and taxation frameworks, trading conventions, and settlement and custodial systems). Many of these skills are often scarce in the public sector and are expensive to recruit and retain. It makes sense, from a cost-effectiveness perspective, to avoid duplication of the capability.

There is a similar potential for administrative savings in the data management and operational risk management tasks. Both functions manage important data and should have high regard to operational risk. It is not necessary to use the same database to manage the transactions and stock data of Tbonds and Tbills, although many countries have found it sensible to do so. The database must ideally be capable of managing a range of liabilities (i.e., external and domestic securities, loans, and credits) and, at a minimum, it should be capable of storing liability data securely; capturing selected market data for valuation purposes; making data available for analysis; projecting debt servicing payments; and triggering the payments in due course. In practice, however, many countries lack a single database that covers all these functions. Both the main propriety debt management databases in wide use (CS-DRMS of the Commonwealth Secretariat and Debt Management and Financial Analysis System (DMFAS) of the United Nations Conference on Trade and Development (UNCTAD)—cover a range of database functions in their latest versions). They are, however, still primarily recording systems and not transactions processing systems. Moreover, different countries may not have upgraded their databases, and although some use a mixture of systems with potential additional capabilities, they are not always successfully realized and may still be inadequate for more sophisticated debt management purposes, let alone cash management.

Cash management potentially involves many more daily transactions than debt management.⁷ That, in turn, argues for a more sophisticated transactions processing system that integrates the front-, middle-, and back-office capabilities, and ideally is electronically connected also to the relevant settlement systems so that individual transactions are processed seamlessly, thus reducing the risks associated with multiple interfaces. A highly schematic summary of the key CDM system requirements is presented in Figure 3.4, indicating the shared and separate requirements. All these systems require careful management and skilled IT staff. Back-up protocols and disaster recovery sites are essential, along with a business continuity plan that extends to all processes and systems (Storkey, 2009). The sharing of such facilities is sensible financially and, indeed, in many cases disaster recovery facilities will extend to the whole of the ministry's operations.

These considerations are among those that have led to the integration of CDM functions in many developed countries. This also applies increasingly in middle-income countries.

ORGANIZATIONAL STRUCTURES

Integrated Cash and Debt Management Unit

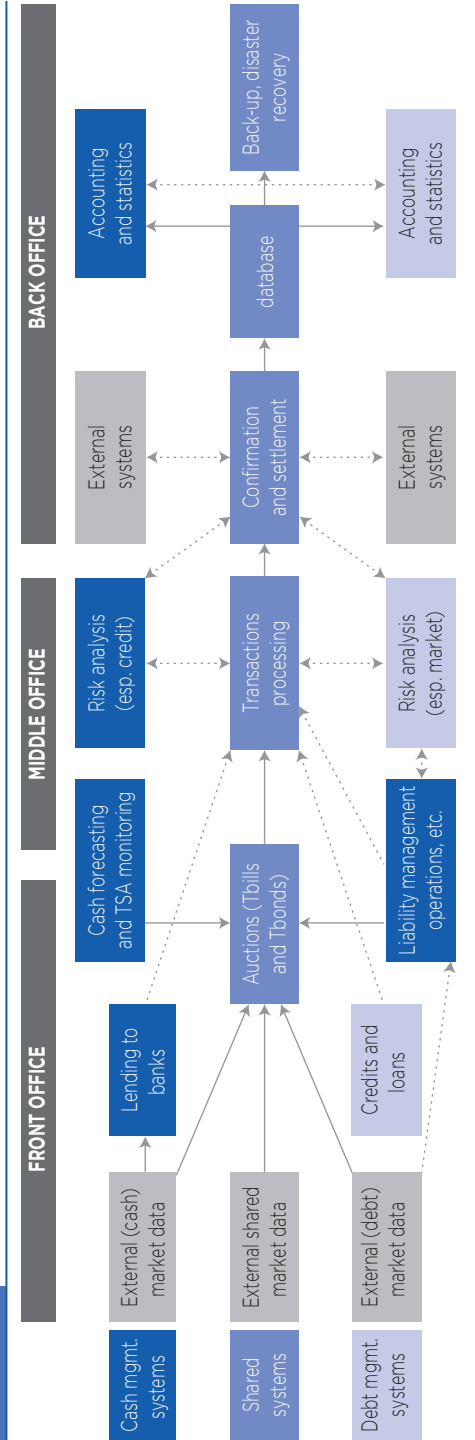
The organizational structure of a modern DMU is based on the familiar separation of responsibilities between the front, middle, and back office. A summary of the key functions is shown in Box 3.1.

The analysis and negotiation of loans and credits from multilateral and bilateral lenders is mostly a front office task. Once a loan has been agreed, however, the information is passed to the back office to manage the data and to ensure that disbursements are recorded and the debt is serviced by the due date.⁸ There is not always much choice for the terms and conditions of loans and credits but, where possible, they should be negotiated consistently

⁷ For active cash managers in the countries of northern Europe, it is quite usual for there to be 40-60 cash management transactions every day, while the number of debt transactions is much less.

⁸ In some countries, the DMO has a persistent problem keeping the database up to date (e.g., following successive loan disbursements). It is strongly preferable for all interactions with the creditor on disbursements, as well as on loan servicing, to go through the DMO rather than from the project management unit directly.

FIGURE 3.4 SHARED INFORMATION TECHNOLOGY SYSTEMS



Source: Authors' elaboration.

BOX 3.1. KEY FUNCTIONS OF A MODERN DEBT MANAGEMENT UNIT

- Senior management (supported by internal audit and compliance).
- Front Office: Primary issuance and execution, internal and external, and all other funding operations, including loans and credits and secondary market transactions (debt and cash).
- Middle office (1): Policy and portfolio strategy development and accountability reporting.
- Middle office (2): Internal risk management (policies, processes, and controls).
- Back office: Transaction recording, reconciliation, confirmation, and settlement; maintenance of financial records and database management; debt servicing.

This structure still allows for the contracting out of some functions (e.g., to the central bank as fiscal agent for the handling of auctions). Some countries contract out debt registration and debt servicing functions, although the debt office retains policy control.

with the DMS and within a framework set by the middle office. For these reasons, the teams handling external loans and credits should be part of the integrated DMU, although it often makes sense for them to be a separate management unit within the front office; the type and flow of work is very different from that involving securities markets.

Cash management functions integrate comfortably with this basic structure, although there may be some differences in practice, depending on the nature of the cash management responsibilities. The three basic functions identified above are:

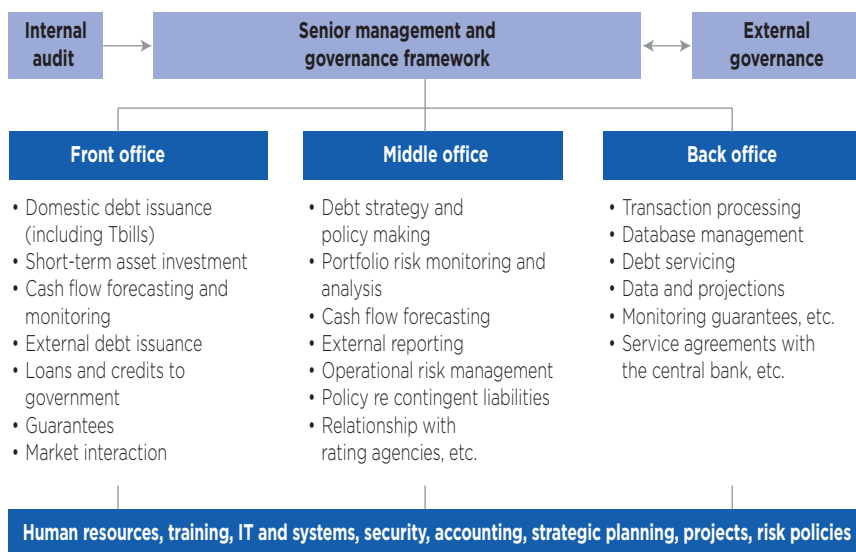
- **Cash flow forecasting:** Cash flow forecasting may be shared with others in the MoF or treasury. There may be a separation between those compiling the “above the line” (i.e., revenue and expenditure) forecasts, which may fall to those officials monitoring execution of the budget, who will often also be the ones drawing on information from the revenue and spending departments; and those projecting “below the line” transactions (debt and other financing operations), where the cash and debt managers may be better placed. Integrating the forecasts would normally be a middle-office activity in the DMU. The middle office would pull together the different sources of information and present forecast sensitivities or what-if scenarios to senior management for decisions on Tbill issuance or other borrowing and lending. The more active the cash management, however, the more important it will be to have forecast support close to the front office. Thus, although the weekly decision parameters may be driven by the middle office, if the front office’s task is to take account



of the emerging flows within the day, it will need an up-to-date picture of what is happening to government transactions. Someone in the front office will probably need to be monitoring the position and receiving in-day updates.

- **Monitoring and accessing the TSA:** Real-time monitoring of the TSA is probably part of the front office function noted above. There will be other roles, however, within the DMU. Daily reconciliation may be necessary, which can sometimes be done within the transaction processing system, but otherwise manually—usually by the back office or the accounting support team. Underlying analysis of the required cash buffer, as well as retrospective analysis of forecasting performance, would be a task for the middle office. If there was any question of drawing on other reserve funds, that policy question would also fall to the middle office, which will tend to have the links with the macroeconomic and fiscal policy departments within the ministry.
- **Financial market interaction:** In this case, the location of the function is unambiguous. As already stressed, it is important that there is only one interface with the financial market. There may still be cash or debt market specialists within the front office, but the management should be unified at that level.

The slightly different systems requirements of debt and cash managers have already been noted. They should be managed, however, as an integrated function by the IT department, whether that is in the DMU or the wider ministry. Of the other roles, however, that cut across the front, middle, and back offices within the DMU, it is worth noting that there will be new capabilities required of the governance and risk management frameworks. Cash management may require more frequent decisions, with less time for analysis and consultation than does debt management; and cash management objectives are qualitatively different, with the focus not so much on the cost-risk trade-off, but also on ensuring that cash is available when needed—whatever else happens. The decision-making structure must support this; that means that the DMU—and, in turn, its front office—must have the delegated authority to make short-term borrowing and lending decisions without prior approval of a minister or senior official(s) elsewhere in the ministry (although they periodically may want, of course, to set or review the parameters of the delegation). The potentially wider range of counterparties—particularly when investing surplus cash—adds a major dimension to

FIGURE 3.5 FUNCTIONS OF AN INTEGRATED DEBT MANAGEMENT OFFICE

Source: Authors' elaboration.

credit risk analysis, and the additional operational risk management requirements have already been mentioned.

The functions of the integrated DMU are summarized in Figure 3.5. The figure distinguishes between those that fall into the front-, middle-, back-office split and those that are “horizontal” in nature.

Separate Cash and Debt Management Functions

There are many countries that maintain separate functions, although the boundaries between them differ from place to place. The cash management function will often be fully integrated within the treasury. The management of cash will have developed alongside the management of government payments, and the emphasis will have been on monitoring cash balances—whether held in the TSA or elsewhere—ahead of releasing budget authority or processing payments. That naturally also becomes the location for cash flow forecasting, although as the possibility of more active cash management comes into focus, the coordination issues addressed in this note also become more apparent. How onerous

they are in practice may depend on where the debt management function has developed. In some cases, it is part of the treasury, and coordination is relatively straight forward. In others, however, the policy importance of debt management has been emphasized, perhaps distinguishing it from the more “executive” role of the treasury, and it has developed closer to the macro-fiscal policy functions at the heart of the ministry.

As already argued, at a minimum:

- There should be a single interface with the market for market transactions, selling Tbonds and Tbills, and investing short-term cash surpluses. That also means sharing front-office systems, such as those from Bloomberg and other data providers. There have been unfortunate examples where a treasury is building a front office to manage Tbills with an entirely separate part of the ministry issuing debt; this is wasteful and damaging. The single front office may be part of the DMU (perhaps the most usual) or the treasury, or both may use the central bank as agent.
- Support services should be shared, particularly those where there are substantial economies of scale (e.g., in relation to disaster recovery).
- The operational risk framework should take account of the interaction between the functions, particularly if the institutional separation means that there are more manual or semi-manual interfaces.
- There should be frequent and systematic exchanges of information between the debt managers and cash managers with regard to the profile of cash flows, issuance plans, and options.

Coordination of management decision making is also of great importance. There are two dimensions to this: strategic and tactical.

The DMS, typically prepared initially within the middle office of the DMU, will usually take account of the role of Tbills in the debt portfolio. If short-term cash assets are significant, the DMS should consider the structure of assets, as well as liabilities, in an asset and liability management framework. In particular, by matching explicitly the risk characteristics of various financial assets and liabilities on the government's balance sheet, the exposure to economic shocks can be greatly reduced. The DMS should be endorsed by a Public Debt Committee or similar body, comprising all the main macro-fiscal and financial policy functions. Its main roles are the formulation of strategic debt management policy objectives; the mandating of those responsible

for strategy execution; and the setting of targets and objectives and subsequent monitoring of performance.⁹

Decisions on short-term cash management must also take account of the wider policy framework. Interaction with the debt management issuance program is an obvious aspect of that, although there may be other decisions to be made; for example, transferring cash between accounts, bringing forward asset sales, or—as a fallback—restraining expenditure appropriations. For these reasons, some form of Cash Coordinating Committee (CCC) is usually recommended. Meeting frequently, its main role would be to review recent developments and the latest cash forecasts, and to decide on action in the period ahead. As stressed above, in an active cash management environment, its role is not to approve individual transactions (although it may decide details of forthcoming Tbill auctions), but to agree to the parameters and policy framework within which those transactions are made. In doing so, the CCC would bring together relevant functional responsibilities. These might include the central bank, partly for its views on market developments, but the CCC can also be the vehicle for passing the latest cash flow forecasts to the central bank which, in turn, are an important input into its liquidity forecasts. Larger spending ministries and the revenue authority could attend if judged useful. Summary details are presented in Box 3.2. If it is necessary to hold back appropriations or cut approved budgets, the detailed decisions should not normally be made by the CCC; that is a role for the budget directorate.

The functions of the split organization and the associated coordination structures are summarized in Figure 3.6. It assumes that the DMU is not part of the treasury.

⁹ The central bank would normally be a member of the Public Debt Committee. Firstly, it is able to contribute its knowledge of domestic financial markets when discussing the appropriateness of different issuance strategies. Secondly, in most countries the foreign currency reserves are held on the central bank's balance sheet, and the size and composition of those assets are relevant when considering the composition of government liabilities and the extent to which it is possible to hedge different parts of the balance sheet (sometimes referred to as sub-portfolio matching). There is a strong argument that the DMS should be developed taking account not only of cash assets, but of the full range of assets and liabilities on the balance sheet of the government (defined broadly to include the central bank). See, also, previous references in discussion of debt management functions above.

BOX 3.2. CASH COORDINATING COMMITTEE**Members**

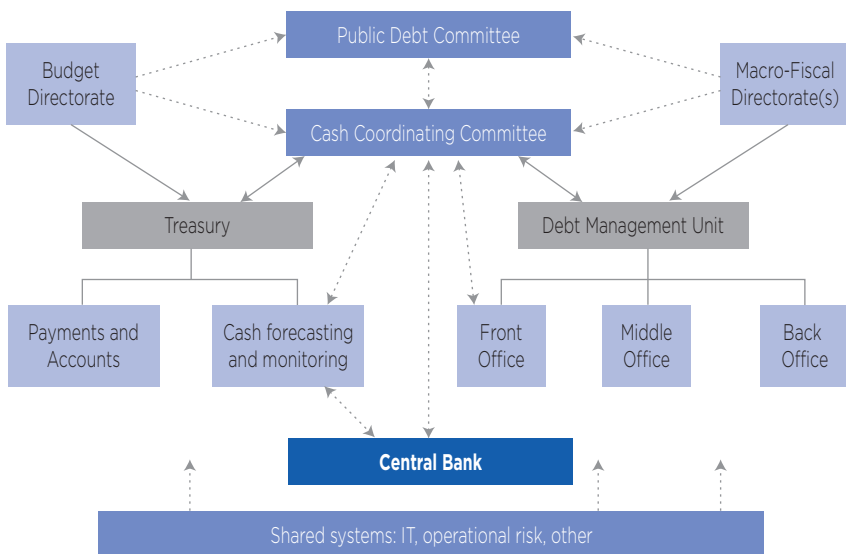
- Head of the Treasury (chair)
- Heads of (or senior representatives from):
 - Debt Management Directorate
 - Budget Directorate
 - Fiscal Policy Directorate
- As required: representatives of
 - Central Bank
 - Revenue Administration
 - Larger line ministries
- Secretary from Cash Management Unit

Responsibilities

- Review cash flow out-turns and the comparison with forecasts
- Review cash flow forecasts for the period ahead
- Decide on the action needed to ensure cash adequacy over the period ahead, making recommendations accordingly.

Meetings

- Weekly

FIGURE 3.6 CASH AND DEBT MANAGEMENT COORDINATION

Source: Authors' elaboration.

INTERNATIONAL EXPERIENCE

The variety of institutional arrangements for DMUs that countries have adopted has expanded considerably in the last two decades. They can be categorized according to their degree of institutional independence:

- **Offices within the government:** Departments operating within the Ministry of Finance (or equivalent) in which the DMU reports directly to the minister: Argentina, Belarus, Brazil, Bulgaria, Canada, Colombia, Czech Republic, Indonesia, Italy, Japan, Korea, Latvia, Lithuania, Macedonia, Mexico, New Zealand, Peru, Poland, South Africa, Turkey, United States, Uruguay, and Vietnam.
- **Established as an agency by the government:** Established by the government as an agency, often formalized as a DMO, with substantive operational autonomy in relation to the MoF (or equivalent): Australia, Belgium, France, Netherlands, Nigeria, and United Kingdom.
- **Established by a specific law:** Agencies whose functions and operational frameworks are defined by a specific law: Austria, Finland, Ireland, Portugal, Slovakia, Sweden, and Thailand.
- **Established under the General Corporation Law as a public company.** A public company established under the general law of companies with no specific provisions that distinguish it from other companies in the private sector (e.g., Germany and Hungary), while operating within the framework of policies set by the MoF (or equivalent).

In all these cases, “independence” has to be qualified. Many DMOs, including some that are fully integrated in the ministry, have substantial operational and managerial independence. They should, however, all be executing strategies that have been agreed at senior political levels, potentially by or on the recommendation of a Public Debt Committee as noted above. The creation of the DMO helps to support this distinction between the strategy, which is properly approved by ministers, and its implementation—which is a more technical process and can suffer from undue political influence and the market uncertainty that it can generate.

The creation of DMOs dates back to the eighteenth and nineteenth centuries,¹⁰ but it was during the 1990s and 2000s that a wave of organizational

¹⁰ Sweden in 1789 and the Netherlands in 1841, for example.

reforms took place in many countries. Countries realized that there is a performance gain from the integration and the possibility to use the reform as a way to improve professionalism, develop a more strategic approach, and generally enhance the power and tools available for managing government resources. A DMO also supported the separation between debt management and fiscal policy from monetary policy—an important consideration, especially in the Eurozone countries.

There are counter arguments to the creation of an agency. The more institutional distance there is between the MoF and the DMO, the stronger the governance framework must be. There is otherwise a problem of the DMO developing its own agenda that is not fully aligned with that of the ministry: the “principal-agent” problem. A strong governance structure, however, has to be managed; in effect, the ministry would need to retain a competent “intelligent customer” function to ensure that the DMO was given clear objectives and targets, and to monitor its performance against them. That in turn, however, would risk spreading skilled resources yet more thinly. For these reasons, it is usually recommended that, although the agency structure has many advantages, it should preferably remain institutionally part of the MoF or close to it, rather than entirely separate. Table 3.1 shows a sample of DMOs with respective dates of creation or major structural reforms.

It is true that no DMO is exactly the same, but all of them do have clearly identified divisions that take care of front-, middle-, and back-office functions. In general, they also have additional divisions that respond to specific issues, such as a division that deals with loans from international financial institutions as donors. The structure of the French Treasury, for example, follows to a large extent the typical DMO model. It has a very compact structure and a staff of only 38 people (Figure 3.7).

The internal governance structures of the DMO are also important. Arrangements are needed for internal policy making, delegation, and communication. Risk management policies and procedures should be established, consistent with objectives and best market practice. The vertical front-, middle- and back-office structure needs to be supported by horizontal mechanisms for business planning, the operational risk management framework, and capacity building, including IT, training and staff conduct. Many DMOs establish internal decision making and reporting structures that cover risk policies and audit, as well as the main operational areas of CDM.

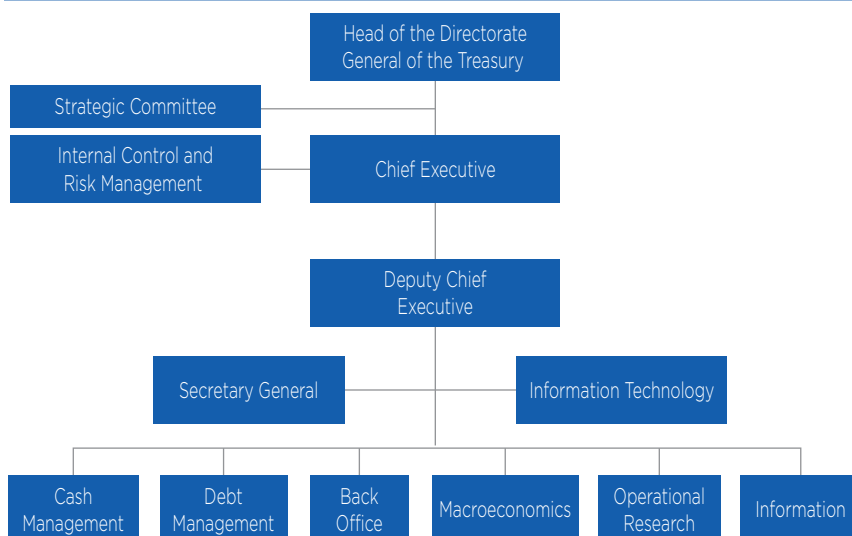
Other circumstances that seem to influence the structure of the CDM units are related to the development of the financial market and a more active cash management. There are three main stages of development to consider: (i) no

TABLE 3.1 COUNTRIES WITH DEBT MANAGEMENT OFFICES: DATE OF CREATION OR RESTRUCTURING

| | |
|--|---|
| Sweden: Swedish National Debt Office (SNDO)—1789 (change in government in 1998) | Netherlands: Dutch State Treasury Agency (DSTA)—March 1841 |
| United States: United States Bureau of the Public Debt (USBPD)—1940 | New Zealand: New Zealand Debt Management Office (NZDMO)—July 1988 |
| Austria: Austrian Federal Financing Agency (ÖBFA)—December 1992 | Hungary: Hungarian Government Debt Management Agency (ÁKK)—May 1995 |
| Portugal: Instituto de Gestão do Crédito Público (IGCP)—December 1996 | United Kingdom: UK Debt Management Office (UK DMO)—April 1998 |
| Denmark: Denmark's Nationalbank Government Debt Management—June 1999 | Ireland: Irish National Treasury Management Agency (NTMA)—December 1990 |
| Australia: Australian Office of Financial Management (AOFM)—July 1999 | Thailand: Thailand Public Debt Management Office (PDMO)—December 1999 |
| Greece: Greek Public Debt Management Agency (PDMA)—1999 | Nigeria: Nigerian Debt Management Office (DMO)—October 2000 |
| Indonesia: Indonesian Direktorat Jenderal Pemngelolaan Utang (DJPU)—January 2006 | Brazil: Secretaria do Tesouro Nacional (STN)—Created in 1986 and restructured in 2001 |
| France: Agence France Trésor (AFT)—February 2001 | Germany: German Finance Agency GmbH—June 2001 |
| Israel: Israeli Government Debt Management Unit (GDMU) —January 2002 | Turkey: General Directorate of Public Finance (GDPF) —April 2002 |
| Slovakia: Agentúra Pre Riadenie Dľhu a Likvidity (ARDAL) —February 2003 | Surinam: Staatsschuld Suriname (SDMO)—February 2004 |
| Czech Republic: Czech Republic Debt and Financial Assets Management Department—November 2005 | Malta: Debt Management Office (DMO)—2006 |
| Peru: Dirección General de Endeudamiento y Tesoro Nacional—April 2011 | Colombia: Dirección General de Crédito Público y del Tesoro Nacional—December 2006 |

Source: Authors' elaboration.

domestic government debt markets; (ii) domestic bond markets that are not deep/liquid; and (iii) domestic markets that are deep/liquid. In the first case—and to an extent the second—countries rely mostly on donations and loans provided by bilateral and multilateral institutions. In these situations, the need to have both functions in the same units is less clear-cut. When debt management is related to the preparation of project loans, knowledge of the financial market is not a precondition. In the third case, the government has more

FIGURE 3.7 ORGANIZATIONAL STRUCTURE OF THE FRENCH TREASURY

Source: French Treasury. Available at www.aft.gouv.fr.

debt options; should develop a DMS and implement an annual financing plan that is consistent with the DMS; and build a yield curve to give to market participants a benchmark for pricing other instruments. On active cash management, the situation is similar. Unless the domestic financial market is robust and active, there are few options to investment by the treasury. In addition, all these circumstances require additional technical skills not always available in the public sector. It is in this active environment that close coordination is essential, and the benefits of an integrated unit become especially evident.

Functions and Organizational Structures in Latin American Countries

This chapter applies the framework discussed above to categorize the way CDM functions are organized in 17 LAC countries.¹¹ We applied a questionnaire to collect information on the main functions, mechanisms, and structures of

¹¹ Countries included in the survey are Argentina (ARG), Bolivia (BOL), Brazil (BRA), Chile (CHI), Colombia (COL), Costa Rica (CRI), Dominican Republic (DR), Ecuador (ECU), El Salvador (SLV), Guatemala (GUA), Honduras (HON), Mexico (MEX), Nicaragua (NIC), Panama (PAN), Paraguay (PRY), Peru (PER), and Uruguay (URU).

coordination; reports and systems available for recording transactions; characteristics of the issuance of Tbills and Tbonds; size and qualification of the workforce; provision for legislative authorization to issue debt; and advantages and disadvantages of an integrated structure.

Distribution of Functions

There are only three countries in Latin America that operate under an integrated DMO model (Brazil, Colombia, and Peru); however, in none of them have the reforms yet been fully implemented. In the other countries, the Treasury and DMOs operate under independent structures and rely on coordination mechanisms to assure consistency of policies and procedures. Table 3.2 shows how typical CDM functions are distributed in each country. In both models, coordination is very relevant, but it is even more relevant when functions are separated. Some of the issues relevant for coordination are related to the relationship with the market (as emphasized above, this can be complicated and risky when the market has to relate to multiple entities dealing with Tbills and Tbond issuance), a definition of the most efficient volume and frequency of auctions (less optimal decisions may be made because of insufficient coordination), and the reporting of transactions (debt amounts and cash balances, or debt market and money market transactions, may be found only in separate reports, making it difficult for investors and other external analysts to assess, comprehensively, government finances).

Six out of 14 major functions are usually performed by treasuries and 8 by DMUs.¹² Typical treasury functions are: (i) cash flow forecasting and planning; (ii) monitoring and management of the TSA; (iii) investment of excess cash; (iv) issuance of Tbills; (v) payment of debt service; and (vi) payments flowing from execution of the budget (and, in some cases, management of the execution authority). Typical DMU functions are (i) development of the annual financing plan; (ii) review and execution of the annual financing plan; (iii) issuance of Tbonds in the domestic market; (iv) issuance of other securities in the domestic market; (v) market risk management and analysis; (vi) relations with the market; (vii) recording of financial operations; and (viii) issuance of accounting and statistical reports.

¹² This chapter adopts as a general nomenclature “treasury” for units usually dealing with cash management and management of the TSA, and DMU or “debt unit” for units dealing with bond issuance and debt management functions. Should both functions be performed by an integrated unit, the term “integrated unit” is used.

TABLE 3.2 MAIN FUNCTIONS OF CASH AND DEBT MANAGEMENT IN LATIN AMERICAN COUNTRIES

| Function | Integrated debt management office | Treasury or similar, separated from the public debt office | Public debt office or similar, separated from the treasury | Other Unit |
|---|-----------------------------------|--|---|---|
| 1. Development of the annual borrowing plan (linked to the debt strategy) | COL, PER, BRA | CRI | ARG, BOL, CHI, DR, ECU, HON, MEX, NIC (in coordination with the treasury), PAN, SLV, URU | CHI, GTM: Budget HON: with small participation of the treasury |
| 2. In-year revision and execution of the borrowing plan | COL, PER, BRA | ARG, CRI, MEX, NIC, CHI | ARG, BOL, DR, ECU, GTM, HON, MEX, NIC, PAN, SLV, URU | CHI: Budget |
| 3. Bond issuance in the domestic market | COL, PER, BRA | ARG, CRI, NIC, SLV | ARG, BOL, CHI, DR, ECU, GTM, HON, MEX, PAN, URU | SLV: Central Bank |
| 4. Tbilis issuance in the domestic market (short term securities) | COL, PER, BRA | ARG, CRI, DR, GTM, HON, NIC, SLV | BOL, CHI, DR, ECU, HON, MEX, PAN, URU | |
| 5. Issuance of other securities (including repos) in the domestic market | COL, PER, BRA | HON, CRI, NIC | ARG, BOL, CHI, DR, PAN, URU | CHI: Budget ECU: Central Bank MEX: Central Bank (monetary policy bills) |
| 6. Cash flow forecast and cash plan preparation | COL, PER, BRA | ARG, BOL, BRA, CRI, DR, ECU, GTM, HON, MEX, NIC, PAN, SLV, URU | | CHI: Budget |

(continued on next page)

TABLE 3.2 MAIN FUNCTIONS OF CASH AND DEBT MANAGEMENT IN LATIN AMERICAN COUNTRIES (continued)

| Function | Integrated debt management office | Treasury or similar, separated from the public debt office | Public debt office or similar, separated from the treasury | Other Unit |
|---|-----------------------------------|--|--|--|
| 7. Monitoring and management of the TSA | COL, PER, BRA | ARG, BOL, CRI, DR, ECU, GTM, HON, MEX, NIC, PAN, SLV, URU | | CHI: Budget |
| 8. Liquidity investment in the short term (including reverse repos) | COL, PER, BRA | ARG, BOL, CHI, CRI, DR, HON, MEX, NIC, PAN | | CHI: Budget ECU: Central Bank GTM: not allowed SLV: not used URU: not done |
| 9. Management and analysis of market risks | COL, PER, BRA | BOL, CRI, HON, MEX | ARG, BOL, DR, GTM, HON, MEX, NIC, PAN, URU | CHI: Budget ECU: Central Bank SLV: not used |
| 10. Market relations | COL, PER, BRA | BOL, CRI, MEX, NIC | ARG, CHI, DR, GTM, HON, MEX, NIC, PAN, URU | ECU: Central Bank SLV: not used |
| 11. Registering of financial operations | COL, PER, BRA | BOL, CHI, CRI, DR, MEX | ARG, ECU, GTM, HON, MEX, NIC, PAN | CHI: Budget GTM: Accounting URU: Central Bank |

(continued on next page)

TABLE 3.2 MAIN FUNCTIONS OF CASH AND DEBT MANAGEMENT IN LATIN AMERICAN COUNTRIES (continued)

| Function | Integrated debt management office | Treasury or similar, separated from the public debt office | Public debt office or similar, separated from the treasury | Other Unit |
|--|--|---|--|--|
| 12. Preparation of accounting and statistics reports | COL, PER, BRA, | ARG, CHI, HON, MEX, NIC, URU | ARG, CHI, CRI, ECU, GTM, HON, MEX, NIC, PAN, URU | BOL, GTM, NIC, SLV: Accounting PAN: Comptroller DR: Accounting and fiscal Policy CHI: Budget |
| 13. Payment of the debt service | COL, HON, PER, BRA | ECU, CHI, CRI, DR, GTM, HON, MEX, NIC, PAN, SLV, URU | ARG, BOL, DR, GTM, NIC | PAN: Accounting and comptroller URU: Central Bank |
| 14. Budget execution | COL, BRA | BOL, CHI, HON, GTM, MEX, SLV, URU | ARG, CRI, PAN, ECU | GTM: Accounting NIC: Executing unit DR, PER, SLV: Budget |
| 15. Other functions | COL (loans with bilateral and multilateral entities, management of state-owned enterprises, ownership, etc.) | NIC: public sector entities are responsible for the execution | CRI: issuance of bonds in the international market | PER: Accounting (definition of accounting standards) CHI: compliance report and definition of the benchmark |

Sources: Treasury and debt management units of each country.

Annual Financial Plan

Annual financial plans are important to define the strategy to issue debt. It is important that these plans are well integrated with the medium-term fiscal framework and the budget process. In 15 countries the DMU is responsible for developing the annual financial plan (ARG, BOL, BRA, CHI, COL, DR, ECU, HON, MEX, NIC, PAN, PER, PRY, SLV, URU). In HON, it is developed with some degree of coordination with its Treasury and in CHI and GUA, in coordination with the Budget Directorate, Dirección de Presupuesto (DIPRES). In CRI, the Treasury prepares this plan. The DMU is also in charge of the in-year review and execution of the financing plan in the same 15 countries and, in 3 of them, in coordination with the treasury (ARG, MEX, and NIC). In CHI, the Budget Unit—jointly with the treasury—performs these tasks.

Issuance of Tbills

Issuance of Tbills is very important for short-term liquidity purposes. In a few countries, it is not the same unit that is responsible for issuing Tbills and Tbonds in the domestic market. Furthermore, in a few countries, the treasury has been assigned to undertake both tasks. Tbonds are issued in the domestic market by the DMU in 14 countries (ARG and PRY, jointly with the treasury; BOL, BRA, CHI, COL, DR, ECU, GUA, HON, MEX, PAN, PER, URU) and in 3 countries, they are issued by the treasury (CRI, NIC, SLV). In SLV, this task is performed by the Treasury, jointly with the Central Bank. In 10 countries, Tbills are issued in the domestic market by the DMO (BOL, BRA, COL, DR, ECU, HON, MEX, PAN, PER, URU), in 5 countries by the treasury (ARG, CRI, GUA, NIC, SLV), and in 2 countries (DR, HON) by both units. In PRY, they were authorized in 2014 but have not been issued yet. The split responsibilities for Tbill and Tbond issuance in the countries mentioned can potentially cause confusion in the market in terms of government strategies and policies.

In 9 countries, the DMO issues or transacts other securities (including repos) in the domestic market (ARG, BOL, BRA,¹³ CHI, COL, DR, PAN, PER, URU). In 3 countries (HON, CRI, NIC), the treasury does this; in 2 (ECU, MEX), however, it is the Central Bank and, in CHI, it is the Budget Unit.

¹³ The Central Bank of Brazil uses repo operations for market liquidity management. It uses Tbills and Tbonds issued by the Treasury as collateral. The Central Bank is forbidden by law to issue its own securities.



Cash Flow Forecasting and Cash Planning

Cash flow forecasting is an essential activity of the treasuries and is important to anticipate cash needs during the upcoming months. In 16 countries, cash flow forecasting and planning and the monitoring and management of the TSA are the responsibility of the respective treasury (ARG, BOL, BRA, COL, CRI, DR, ECU, GUA, HON, MEX, NIC, PAN, PER, PRY, SLV, URU). The only exception is CHI, where these activities are undertaken by DIPRES.

Investment of Cash Surplus

Investment of cash surplus is a way in which to obtain some financial benefits from available resources. Many countries invest their short-term cash surpluses only at the central bank or at the public commercial bank where the TSA is maintained, although a few do not make investments at all. In some countries, there are provisions that prohibit the treasury from performing short-term investments. Sacrificing the capacity of treasuries to invest available financial resources might seem to undermine the objectives of a TSA, and it can prove difficult to attract autonomous entities to deposit their resources in the TSA.

Cash surpluses are invested by the treasury in 12 countries (ARG; BOL; CHI, jointly with the Budget Unit; COL; CRI; DR; HON; MEX; NIC; PAN; PRY, in progress; PER), and in ECU by its Central Bank. In GUA, investment is prohibited by law, and in URU and SLV, there is no active investment. In BRA and ECU, all TSA balances remain invested at the Central Bank.

Risk Analysis and Management

A good risk analysis is fundamental to identify potential risks and manage the exposure of treasury and DMUs in terms of investing liquidity or issuing debt.

The function of risk analysis and management has been allocated in most countries to the DMU. Risks are analyzed and managed by the DMU in 10 countries (ARG, BRA, COL, GUA, MEX—in some cases, in coordination with the treasury—DR, NIC, PAN, PER, URU); in BOL and HON by the DMU and the treasury; by the Central Bank in ECU; and by the Budget Unit in CHI. In PRY, it is not performed.

Market Relations

It is essential to a modern treasury and DMU to define a transparent and close contact with the financial market. Some of the units in Latin America are considered very efficient and transparent.

The relationship with the market is, in 13 countries, the responsibility of the DMU or the integrated unit (ARG, BRA, CHI, COL, DR, GUA, HON, MEX, NIC, PAN, PER, PRY, URU). In MEX and NIC, this task is performed in coordination with the treasury. In CRI and BOL, the task has been assigned to the treasury and to the Central Bank in ECU.

The Institute of International Finance (IIF) assesses investment relations according to two main indicators: (i) overall assessment of investor relations and data transparency practices; and (ii) assessment of data dissemination practices. The situation in 11 countries of the region is shown in Table 3.3.

Recording of Financial Operations

Recording financial operations is usually the responsibility of the DMU. This activity is important in terms of accountability and transparency. The recording of financial operations is a function assigned to the DMU in 11 countries (ARG, BRA, COL, ECU, GUA, HON, NIC, PAN, PER, PRY, while in MEX it is also by the Treasury). In another 3 countries (BOL, CRI, DR), the treasury bears this responsibility; in CHI, it lies with the Treasury and Budget Unit; in URU, with the Central Bank; and in GUA, with the Accounting Unit.

Accounting and Statistical Reports

The maintenance of accounting and statistical reports is also important, but these functions are performed in Latin America by differing units. They are

TABLE 3.3 INVESTOR RELATIONS AND DATA DISSEMINATION PRACTICES

| Country | Investor relations | Data dissemination |
|----------------------|--------------------|--------------------|
| Maximum score | 42 | 44 |
| Brazil | 41 | 41 |
| Chile | 41 | 42 |
| Colombia | 35 | 34 |
| Costa Rica | 16 | 26 |
| Dominican Republic | 36 | 41 |
| Ecuador | 6 | 33 |
| Mexico | 42 | 39 |
| Panama | 32 | 28 |
| Peru | 41 | 40 |
| Uruguay | 42 | 41 |
| Venezuela | 6 | 33 |

Source: Institute of International Finance (2014).

assigned to the DMU in 12 countries (ARG, BRA, CHI, COL, CRI, ECU, GUA, MEX, NIC, PAN, PER, URU); to the treasury and the DMU in 6 countries (ARG, HON, MEX, NIC, PRY, URU); in 4 countries to the Accounting Unit (BOL, DR, GUA, SLV); and in PAN to the Office of the Comptroller.

Payment of Debt Service

The same diversity is encountered in relation to the payment of the debt service. The payment of debt service is assigned to the treasury in 7 countries (CHI, CRI, ECU, MEX, PAN, SLV, URU); in 5 countries to the treasury and DMU (DR, GUA, HON, NIC, PRY); in 5 countries to the DMU (ARG, BOL, BRA, COL, PER); in URU to the Central Bank; and in PAN to the Accounting Unit and Office of the Comptroller.

Budget Execution

The budget is executed by the treasury in 7 countries (BOL, CHI, HON, GUA, MEX, URU, while in SLV also by the Budget Unit); by the DMU in 7 countries (ARG, BRA, COL, CRI, ECU, PAN, PRY); by the budget unit in 4 countries (DR, GUA, PER, SLV); by the executing units in NIC; and in GUA by the Accounting Unit.

Organizational Structure

The size and complexity of the organizational structures of the treasury and DMUs are quite variable in Latin America (Table 3.4). Integrated DMUs have a workforce of between 110 and 150 staff; treasury units between 50 and 100 staff; and the smallest offices from 8 to 31 staff. Large DMUs have between 50 and 75 staff, and the smallest from 8 to 34 staff.

Coordination Arrangements

Coordination between CDM units is very important considering the need to finance budget execution in all units of the government. International experience favors formal organization of committees with clear functions and mandates, periodic meetings, and participation of the main areas responsible for the definition of cash plans, debt strategy, Tbond issuance, exchanges of information, and results assessment.

There are formal and informal coordination committees in almost all countries in LAC. In 13 countries (BOL, BRA, CHI, COL, CRI, DR, GUA, HON, MEX, NIC, PAN, PER, PRY), there are formal committees to coordinate decisions

TABLE 3.4 NUMBER OF STAFF WORKING ON TREASURY AND DEBT FUNCTIONS IN SOME COUNTRIES IN LATIN AMERICA

| Country | Treasury | | | | Debt | | | |
|---|------------|--------------|----------------|-------|------------|--------------|----------------|-------|
| | Management | Professional | Administrative | Total | Management | Professional | Administrative | Total |
| <i>Countries that operate cash and debt functions in separate units</i> | | | | | | | | |
| Argentina | 20 | 50 | 30 | 100 | 15 | 40 | 20 | 75 |
| Bolivia | 4 | 4 | | 8 | NA | NA | NA | NA |
| Chile | 5 | 14 | 12 | 31 | 4 | 7 | | 11 |
| Costa Rica | 2 | 65 | 20 | 87 | 2 | 30 | 2 | 34 |
| Ecuador | 2 | 5 | 2 | 9 | 3 | 20 | 3 | 26 |
| Guatemala | 7 | 30 | 16 | 53 | 8 | 45 | 12 | 65 |
| Honduras | 2 | 38 | 15 | 55 | 2 | 33 | 15 | 50 |
| Nicaragua | 12 | 31 | 7 | 50 | NA | NA | NA | NA |
| Panama | | | | 66 | | | | 23 |
| Dominican Republic | NA | NA | NA | NA | | | | 57 |
| Uruguay | 5 | 22 | 6 | 33 | 1 | 6 | 1 | 8 |
| <i>Countries that operate treasury and debt functions in an integrated unit</i> | | | | | | | | |
| Brazil ^{a, b} | 11 | 125 | 10 | 146 | | | | |
| Colombia ^a | 8 | 110 | 20 | 138 | | | | |
| Peru ^a | 22 | 82 | 6 | 110 | | | | |

Notes:

^a Treasury and debt functions are carried out in an integrated unit.^b Does not include staff that perform other functions, such as accounting and oversight of subnational governments.
NA - not available.

and policies relating to CDM. The rest of the countries rely on informal mechanisms and meet when needed (ARG, URU). Some of the committees deal with other issues, such as monetary policy and budget. The main functions of such committees are discussed in Box 3.3.

BOX 3.3. FUNCTIONS OF THE MAIN COORDINATION COMMITTEES

Twelve countries have formal coordination committees and two have informal committees (Argentina and Uruguay), relating to treasury and debt functions.

ARG: Committee of informal coordination of the Secretariat of Hacienda and the Secretariat of Finance, which is responsible for managing the financial management system.

BOL: Committee which advises the Deputy Minister of the Treasury and Public Credit in analyzing cash flow forecast, financing needs, and the debt situation. Participation at weekly meetings by the Department of Planning and Operations of the Treasury (Dirección General de Programación y Operaciones del Tesoro) and the Public Credit Department (Dirección General de Crédito Público).

BRA: Has a Debt Management Committee (as well as a Budget Execution Committee (Junta de Programação Orçamentária). The Debt Management Committee has monthly meetings and is responsible for the cash forecast of the public debt, taking into account the debt strategic plan (annual borrowing plan, other budgetary revenues for debt payments, indicators of composition and maturity of the debt, and others), monitoring the debt strategy plan, and defining the auction calendar. The Budget Execution Committee defines bimonthly budgetary and financial ceilings for the central government.

CHI: The Coordination Committee between the Treasury, Budget Department, and MoF, which advises the Minister of Finance, discusses at monthly meetings budget, Treasury, and debt-related issues.

COL: The Treasury Committee, which holds monthly meetings, discusses cash management; debt financing and market analysis; revenue collection; budget execution; among other related functions of the Public Credit and National Treasury Department (Dirección General de Crédito Público y Tesoro Nacional). There is another inter-institutional Treasury Committee between the MoF and the Central Bank, where debt and cash matters are involved; its main objective is monetary coordination and issues related to the management of Treasury balances, operations affecting domestic debt market liquidity, and the issuance of Tbonds for monetary policy purposes.

CRI: The Auction Committee has weekly meetings and brings together representatives of the Office of Public Credit, Treasury, and the Office of the Minister of Finance.

DR: The Council of Public Debt is a high-level committee involving the Secretary of Finance, Governor of the Central Bank, and Secretary of Economy, Planning and Development. It meets twice a year. The functions of the Council are to propose the debt policy and strategy, propose the debt ceiling, recommend the financial characteristics for new debt, and recommend the maximum amount of collateral and guarantees.

GUA: The Programming and Execution Committee advises the Minister of Finance on matters of budget, accounting, Treasury, public debt, and fiscal analysis. It meets twice a month and defines the allocation of payment authorization for entities that implement the budget.

(continued on next page)

BOX 3.3. FUNCTIONS OF THE MAIN COORDINATION COMMITTEES *(continued)*

HON: Committee to advise the Deputy Minister of Finance on cash and debt management. It holds monthly or bimonthly meetings.

MEX: The Technical Investment Committee and Working Committee advise the Secretary of the Treasury on issues related to debt, budget, revenue collection, and cash planning. The Technical Investment Committee meets annually and the Working Committee monthly.

NIC: The Financial Operations Committee is composed of the Minister of Finance and the General Directorates of the Treasury, Public Credit, and Legal Unit, and it meets weekly. It is responsible for approving the annual borrowing plan; defining Tbond issuance and the auction calendar; approving the results of the auctions, policies on financial investment, and the bids for financial investment; coordinating with the Central Bank's Tbond issuance; and submitting quarterly reports.

PAN: The Treasury Committee advises the Minister of Finance and meets weekly. Participation at the meetings includes the units responsible for Treasury functions, debt, revenue collection, and budget.

PER: The Assets and Liabilities Committee (ALC) and the Cash Committee (CC). The ALC reviews and evaluates the guidelines, policies, principles, strategies, and methodologies to optimize the overall management of financial assets and liabilities of the government (the operating rules of ALC are in the process of approval). The CC establishes the conditions for a balanced budget for monthly income and expenses of the Treasury; approves the cash budget; coordinates and agrees on the actions necessary for the implementation of the cash budget; performs a comprehensive monthly monitoring of the implementation of public expenditure; and assesses the implementation of the budget.

PRY: An Interagency Advisory Team analyzes the current macroeconomic conditions to define the economic, monetary, and fiscal policy and short- and medium-term projections; analyzes market conditions (maturity, interest rates, issuance calendar)—domestic and international—to consider the issue of Tbonds or guarantees provided by the Treasury; and advises the Minister of Finance on other financial and technical issues. It meets before a Tbond issuance is scheduled.

SLV: Cash and debt management are handled separately. Short-term debt is coordinated, involving the Central Bank, Treasury, and Directorate General of Public Credit.

URU: There is no formal committee. Coordination is managed through an ad hoc group that meets periodically, which brings the heads of the units of Debt Management, Treasury, and the Macro-Fiscal Advisor to discuss issues of common interest.

In 5 countries the committee is a cash or treasury committee. In other countries, the committee is an “auction” committee (2 countries), an Investment Committee (1), a Budget Execution Committee (1)—with participation of the Presidency and the Ministers of Finance and of Planning—or a Debt Committee (2). In PER, there are two committees: Cash Committee and Assets and Liabilities Committee (ALC); as there are also two in MEX—the Technical Investment Committee and Working Committee.



In 9 countries, the committee has advisory and decision-making functions; in 6, it has only decision-making functions; and in one (PER), it has only advisory functions. When it has advisory functions, it provides advice mostly to the Minister, and in 2 cases, also to the Vice Minister (Viceministro); in one country, only to the Vice Minister (BOL); and in CHI to the Treasury and DIPRES.

In one country, the committee is chaired by the Treasurer and in another by the Deputy Treasurer; in 6 countries, it is chaired by the Minister of Finance, and in 3, by a Vice Minister. In PER, the Minister chairs the ALC and the Vice Minister the CC; and in MEX, the Minister chairs the Technical Investment Committee and the Vice Minister chairs the Working Committee. The Secretariat of the committees is supplied by the treasury in four countries, while in PER by the Directorate of Analysis and Strategy for the ALC and the Vice Minister of Finance for the CC. In NIC, it is chaired by the Legal Advisory Directorate.

The frequency of meetings of the committees varies from weekly to biannually. The committees meet on a monthly basis in 7 countries (BRA, CHI, COL, HON, PAN, PER, while in MEX, the Working Committee); weekly or biweekly in 4 countries (BOL, CRI, DR, GUA); every six months in 2 countries (DR, URU); and in SLV and PAR, only when issuance of Tbills is required.

The committees in most cases do not include some of the key stakeholders, such as the Tax Administration Agency, the Central Bank or the Budget Directorate. Regarding the main units/functions represented in the committees, besides the Treasury and DMUs (in 9 countries), the Tax Administration Office is represented in only 2 countries (COL, MEX—but in COL, it participates as a guest); the Central Bank in 2 countries (COL, DR—but in COL, in a separate committee where only the Treasury and DMU meet with the Central Bank); and the Budget Unit participates in 4 countries (CHI, COL, GUA, MEX).

Frequency of Issuance of Tbills and Tbonds

Seven countries do not issue Tbills to meet temporary liquidity needs. These are (i) BOL, BRA (issuances only for reasons of monetary policy and preference of the market); (ii) CHI, COL (only for reasons of monetary policy); (iii) DR uses credit lines to finance short-term liquidity needs; and (iv) NIC and PRY do not issue. PRY has recently approved legal authorization to issue Tbills, but no operation has been executed so far.

The frequency of issuance of Tbills varies from weekly to yearly. It is weekly in BRA, MEX, and SLV; fortnightly in PER and CRI; and quarterly in COL. In HON and ECU, frequency is not predetermined and, in GUA, in general, it is only once a year.

The duration of the Tbills varies from 1 to 12 months. They are 6 months and 12 months in BRA,¹⁴ and one year in COL, GUA, ECU, and HON. In COL, the Tbills are initially 364 days and reopened in four auctions when they come to 90 and 180 days of remaining maturity. In CRI, Tbills are offered twice a month with durations of no less than nine months. Tbills are from 1 to 12 months in PAN; 3, 6, 9, and 12 months in PER; and 28, 91, 182, and 364 days in MEX. In SLV, the terms are from 30 days up to 360 days.

In most of the countries, the timing of the issuance of Tbonds does not necessarily coincide with periods of temporary cash shortages; it has other drivers.

- BOL: Weekly funding needs are assessed to cover temporary shortages, followed by a decision on the amounts of Tbills to be issued. As there have been no liquidity problems, Tbonds ranging from 2 to 50 years have been issued to finance the budget.
- BRA: The Treasury issues securities according to the medium- and long-term strategy DMS. The resources from these issuances are integrated in a subaccount of the Public Debt Office, which constitutes the debt cushion. Current policy is to have a cushion equal to at least three months of debt payments (principal and interest). Auction dates are predefined in the annual borrowing plan at regular intervals (specifically, auctions of securities with fixed rates occur weekly, irrespective of the dates of debt payments). As liquidity in the TSA is very high, there has been no need to issue short-term liquidity Tbills to support budget execution.
- CHI: Dates of Tbonds are defined to match with temporary shortages of cash in relation to the issuance of Tbonds denominated in local currency. In the case of external issuance, the strategy is to have benchmarks at low cost.
- COL: Short-term Tbills are issued for monetary contraction operations, whose issuance depends on the needs of monetary policy. The market is informed beforehand of the calendar of the auctions and amounts.

¹⁴ The Brazilian Treasury also issues medium-term Tbills of up to four years.



These Tbills can also be issued for temporary operations, according to the liquidity needs of the Treasury. Although there is currently no outstanding balance, when such auctions are required, a calendar is issued beforehand. For Tbonds, there is a predetermined schedule, which follows a calendar previously published to the market. The securities issued are benchmarks of the yield curve for the medium and long term (i.e., those with maturities of 5, 10, 15, or 20 years).

- CRI: Issuance of Tbonds matches refinancing needs, and the shaping of the portfolio makes use of other instruments (swaps, reverse repos).
- DR: Has used credit lines to finance short-term cash needs.
- ECU: The primary objective of Tbond issuance is to cover the financial gap identified in the annual budget and, in executing the financing plan, to adjust it to the needs of budget execution based on the cash forecast.
- GUA: The strategy is to place all Tbonds when there is adequate demand and the interest rate is adequate with the understanding that all required resources will be raised during the fiscal year.
- HON: The issuance dates coincide with the periods in which a cash shortage is expected.
- MEX: Tbills are issued to cover temporary cash shortages. A flexible approach has been adopted in relation to the weekly amounts issued, while observing the quarterly target.
- NIC: Tbond issuance dates match the maturities of the Tbonds to reduce refinancing risk on the domestic public debt.
- PAN: Tbonds are issued in different amounts, taking into account the temporary cash needs.
- PER: The main strategy is to perform regular issuance of Tbonds in local currency (referred to as “regular auction”), to provide predictability to market participants, ensure stability of the sovereign curve yields, and preserve financial stability, including during times of uncertainty. To complement this strategy, the Treasury can carry out “special auctions,” which depend on market conditions and should be in line with overall strategic objectives. These auctions can also reflect the specific liquidity needs of the Treasury to cover eventual mismatches between revenues and payments.
- PRY: Long-term bonds are issued only to finance capital investments (golden rule).
- URU: The government has adopted a 12 month, prefinancing policy covering the debt service for at least one year.

Treasuries in Latin America have aimed to ensure predictability on the issuance of Tbills and Tbonds. With the exception of ECU, PAN, HON, and countries that do not issue Tbills, the other countries adopt a predefined issuance calendar. Predictability has been achieved because (i) issuance follows a debt strategy that covers at least one year; (ii) the financing program aims to give security to the investors; (iii) issuances are close or coincide with the expiration dates of other bonds to minimize refinancing risks; (iv) some countries have predefined their debt to minimize market volatility; and (v) issuance is done when demand is large and interest rates low.

Legislative Authorization

The ideal situation is when legal authority is given to the MoF to issue debt, according to a lump sum approved in the budget. In many countries, however, the framework is not flexible and, for each operation, it is necessary to have specific legislative authorization. The lack of proper legal authorization to manage debt issuance can be a risk in terms of adequate availability of resources during the year and it can be an impediment to manage the debt more efficiently.

In most countries, the legislature has to authorize the issuance of debt, although in more than half of the countries, this authorization is not required for the issuance of Tbills. In most countries, debt issuance is authorized by the budget law in a lump sum (ARG; BOL, only the external debt; BRA; CHI; COL; CRI; DR; GUA, only for short term; HON; MEX; NIC; PER; PRY, through the annual debt law; SLV). In COL, the issuance of internal or external debt requires various approvals, including by the legislature.¹⁵ In URU, the law authorizes an annual increase in the net public debt on a preestablished indexed amount. In other countries, individual and specific authorizations are required for each operation, particularly on external debt (in CRI and PRY for bilateral external borrowing and GUA, HON, SLV, and URU for all operations of external debt). In some countries, legislative authorization for issuance of Tbills for liquidity purposes is not required if redeemed before the end of the fiscal year (ARG; BOL; CHI; COL; CRI; HON, except when beyond the presidential term; DR; NIC). In ECU, prior legislative authorization to issue

¹⁵ In general, it requires (i) authorization of the Board of the Central Bank, which sets the general financial conditions for issuance; (ii) a favorable opinion of the Interparliamentary Committee on Public Credit to external debt; (iii) the annual law that establishes an overall amount; and (iv) annual law which determines the needs of credit resources to finance the corresponding budgetary appropriations.



Tbonds or Tbills is not required. In BOL, domestic debt is authorized through presidential decree. In PAN, issuance of domestic and external; and short-, medium-, and long-term debt requires only that the Executive informs the Assembly on the amounts authorized by the President.

Publication of Reports and Systems for Recording Transactions

Publication of plans and reports is essential for fiscal transparency and accountability. Usual reports that are published include (i) annual borrowing plan; (ii) in-year cash flow forecasting; (iii) Tbond and Tbill issuance calendars; (iv) results of Tbond and Tbill auctions; (v) debt position and cash balances; (vi) CDM performance reports; (vii) annual financial statements; and (viii) financial statistics.

In LAC, Treasuries and DMOs are mostly transparent. They prepare and publish a substantial number of reports, although the content and depth vary.

Fourteen countries prepare annual borrowing plans (BOL, BRA, CHI, COL, CRI, DR, ECU, GUA, HON, MEX, PAN, PER, PRY, SLV, URU,) and 10 publish them (BRA, CHI, COL, CRI, ECU, GUA, HON, PAN, PER, URU). Fifteen countries prepare cash flow forecasts (ARG, BOL, BRA, CHI, COL, CRI, DR, ECU, GUA, HON, MEX, PER, PRY, SLV, URU), although none publishes them. In 10 countries, a Tbond issuance calendar is published (BRA, CHI, COL, CRI, DR, GUA, HON, MEX, PER, URU), and in 8 countries, a calendar of Tbills is published (BRA, COL, CRI, MEX, PAN, PER, SLV, URU). Results of auctions are publicly available in 15 countries (ARG, BOL, BRA, CHI, COL, CRI, DR, GUA, HON, MEX, PAN, PER, PRY, SLV, URU).

Annual financial statements are published in 13 countries (ARG, BOL, BRA, COL, CRI, DR, GUA, HON, MEX, PAN, PER, SLV, URU) and financial statistics are published in 14 (ARG, BOL, BRA, CHI, COL, CRI, DR, GUA, HON, PAN, PER, PRY, SLV, URU).

Six countries publish a report on debt management performance, comparing plans with objectives established. Only in CRI is a report that assesses the cash management performance in comparison with the objectives publicly available; and information on daily or monthly cash positions is published only in 5 countries (ARG, CHI, COL, GUA, SLV). Table 3.5 presents the preparation and public availability of cash and debt reports for 10 types of information.

Many information systems are used in the region to record the issuance and repayment of Tbonds and Tbills. DMFAS (the UNCTAD system) is used in 6 countries (ARG, ECU, HON, NIC, PAN, PRY) for recording the issuance

TABLE 3.5 MAIN CASH AND DEBT REPORTS

| Report | Internal Use | External Publication | Responsible Agency | Frequency |
|----------------------------------|---|--|---|--|
| 1. Annual borrowing plan | ARG, BOL, ECU, MEX, PAN, SLV | BRA, CHI, COL, CRI, ECU, GTM, HON, PAN, PER, URU | BOL, BRA, ECU, HON, MEX, PAN, SLV, URU: Public Debt Office CHI: Budget COL, PER: Integrated Debt Management Office CRI: Treasury | ARG: monthly adjustments CHI: semester COL: annual with revision in the middle of the year CRI: semester PER: annual |
| 2. In-year cash flow forecasting | ARG, BOL, BRA, CHI, COL, CRI, DR, ECU, GTM, MEX, PAN, PER, SLV, URU | | BOL, DR, HON, PAN, SLV: Treasury BRA, COL, PER: Integrated Debt Management Office CHI: Budget URU: Treasury and Public Debt Office | ARG: annual, monthly, daily BOL: annual, monthly, daily BRA, COL, GTM: daily CHI: annual CRI, PER, SLV, URU: monthly DR: quarterly ECU: annual, semester, monthly, daily HON: weekly MEX: annual, monthly, daily |

(continued on next page)

TABLE 3.5 MAIN CASH AND DEBT REPORTS (continued)

| Report | Internal Use | External Publication | Responsible Agency | Frequency |
|---|---|---|---|---|
| 3. Bond issuance calendar | ARG, BOL: no existe, ECU, PAN | BRA, CHI, COL, CRI, DR, GTM, HON, MEX, PER, URU | COL, PER: Integrated Debt Management Office CRI: Treasury ECU, DR, HON, MEX, PAN, URU: Public Debt Office | BRA: annual/quarterly CHI, COL, ECU, PER: annual CRI, URU: semester DR, GTM: monthly HON, MEX: quarter |
| 4. Tbilis issuance calendar (short-term securities) | ARG, BOL: no existe, COL, ECU, GTM, PAN | BRA, COL, CRI, MEX, PAN, PER, SLV, URU | COL, PER: Integrated Debt Management Office CRI, MEX, SLV: Treasury ECU, PAN, URU: Public Debt Office | BRA: annual/quarter COL: monthly CRI, URU: semester GTM, PER: annual MEX: quarterly SLV: no predefined frequency |

(continued on next page)

TABLE 3.5 MAIN CASH AND DEBT REPORTS (continued)

| Report | Internal Use | External Publication | Responsible Agency | Frequency |
|-----------------------------|---|--|---|---|
| 5. Results of the auctions | COL, ECU, PAN, PER | ARG, BOL, BRA, CHI, COL, CRI, DR, GTM, HON, MEX, PAN, PER, URU | BOL, HON, MEX: Central Bank | BOL, BRA, CRI, GTM, MEX, PER, SLV: weekly |
| | | | BRA, DR, PAN, URU: Public Debt Office | CHI: when issuance occurs |
| | | | CHI: Ministry of Finance | COL, ECU, HON, URU: monthly |
| | | | COL, PERU: Integrated Debt Management Office | |
| 6. Government cash balances | | | CRI: Treasury | |
| | | | ECU: Central Bank and Stock Exchange | |
| | | | SLV: Various by the Stock Exchange | |
| | BOL, COL, CRI, DR, ECU, GTM, HON, MEX, PAN, URU | ARG, BRA, CHI, COL, GTM, SLV | BOL, CRI, DR, ECU, HON, MEX, PAN, URU: Treasury | BRA: quarterly |
| | | | BRA: Accounting Office (Treasury) | COL: monthly with delays |
| | | | CHI: Budget | CRI, ECU, DR, GTM, MEX: diario |
| | | COL, PER: Integrated Debt Management Office | HON, SLV, URU: monthly | |
| | | PER: Integrated Debt Management Office | SLV: monthly | |
| | | SLV: Accounting | URU: monthly | |

(continued on next page)

TABLE 3.5 MAIN CASH AND DEBT REPORTS (continued)

| Report | Internal Use | External Publication | Responsible Agency | Frequency |
|--|--|---|--|--|
| 7. Debt management performance in comparison with objectives and targets | ARG, BOL, CHI, COL, DR, ECU, HON, MEX, PAN | BRA, CRI, PAN, PER, SLV, URU | BOL, BRA, DR, ECU, PAN, SLV, URU: Public Debt Office CHI: Ministry of Finance COL, PER: Integrated Debt Management Office CRI: National Treasury HON: Public Debt Office and Treasury MEX: Public Debt Office/Planning Office | BRA: annual and monthly CHI, ECU, PER, URU: annual COL, HON, MEX, SLV: monthly CRI: quarterly |
| 8. Cash management performance in comparison with objectives and targets | ARG, BRA, CHI, COL, DR, ECU, GTM, HON, MEX, PAN, PER, SLV, URU | CRI, SLV | BRA, CHI, CRI, DR, ECU, HON, PAN, SLV, URU: Treasury COL, PER: Integrated Debt Management Office MEX: Treasury/Planning Office | BRA, GTM: daily CHI, COL, ECU, HON, MEX, SLV, URU: monthly PER: quarterly |
| 9. Financial statements | BOL, CHI, COL, ECU, HON | ARG, BOL, BRA, COL, CRI, DR, GTM, HON, MEX, PAN, PER, URU | BOL, BRA, CRI, DR, ECU, HON, MEX, PAN, SLV: Accounting CHI: Treasury COL, PER: Integrated Debt Management Office URU: Treasury and Accounting | BOL, COL, ECU, HON, MEX, PER: annually BRA: quarterly CRI, URU: monthly GTM: every four months SLV: semester |

(continued on next page)

TABLE 3.5 MAIN CASH AND DEBT REPORTS (continued)

| Report | Internal Use | External Publication | Responsible Agency | Frequency |
|--------------------------|--------------|--|---|--|
| 10. Financial statistics | COL, ECU | ARG, BOL, BRA, CHI, COL, CRI, DR, GTM, HON, PAN, PER, SLV, URU | BOL: Treasury BRA: Economic and Fiscal Studies (Treasury) CHI: Ministry of Finance COL, PER: Integrated Debt Management Office CRI, HON, PAN: Accounting DR: Fiscal Policy and Budget ECU: Fiscal Policy MEX: Planning Office SLV: Economic and Fiscal Policy URU: Treasury and Accounting | BOL, PER: annual CHI, SLV: quarterly COL: daily, weekly, monthly CRI, ECU, GTM, HON, URU: monthly MEX: monthly, bimonthly, quarterly |

Source: Treasury and debt management offices of each country.

and repayment of Tbonds and Tbills, and in these countries, they are also recorded in their financial management information systems (in a few cases, both systems interface). In 5 countries, they are recorded in their own debt system (BRA, CHI, COL, MEX, PER). In COL (internal debt) and MEX (all debt), data are also recorded in central bank systems. In 2 countries, the relevant data are recorded only in central bank systems (CRI, URU) and in one country (SLV), in the stock exchange system.

ADVANTAGES AND DISADVANTAGES OF INTEGRATION

The CDM functions operate well in some respects in LAC, despite the use of different structures or organizations. It appears that historical tradition has prevailed instead of adopting a modern DMU approach. Even where the potential advantages of integration are recognized (see Box 3.4), the need to change current legislation and administrative—and perhaps congressional—practices creates barriers to change. The three Treasuries in which both functions are integrated considered that coordination has been facilitated, that there is tendency for a more comprehensive financial policy, and that the consolidation of financial operations is easier. In none of them, however, is a fully integrated operation in place.

In the countries with two separate units, the more effective ones are those with better coordination mechanisms and support of better integrated accounting and financial information systems. Specialization and autonomy are considered advantages of the model with separated offices. It is recognized, however, that consolidation of financial information and risk management analysis is more difficult and that there may be some difficulties in coordinating issuance and management of short-term liquidity. It has also been noted that sometimes the sensitivity of the DMU to the short-term liquidity problems identified by the treasury is not optimal. In some cases, the treasury has had to ration cash to cope with localized liquidity problems because the DMU has not been quick enough to react. In this regard, the DMU has preferred to keep the debt issuance calendar unchanged.¹⁶ Most of the countries recognize that coordination is the main bottleneck regarding the separated model.

¹⁶ Although many countries outside Latin America issue Tbills with more flexibility, even when they operate a strict calendar for Tbonds.

BOX 3.4: ADVANTAGES OF THE INTEGRATION AND SEPARATION OF CASH AND DEBT MANAGEMENT ACCORDING TO COUNTRY AUTHORITIES

Summarized below are the opinions of country officials on the issue of integration of cash and debt management functions. Authorities point out that there are more advantages than disadvantages toward integration.

Advantages of integration:

- Allows for a comprehensive overview of financial issues related to budget financing and cash needs and, therefore, better liquidity management. Allows for an integrated strategy on the financial requirements of debt and treasury management.
- If the two are not integrated, financial programming may be affected, since the debt office may not have the same sense of urgency in terms of timing and amounts—"if issued, it is fine; if not, it is fine, too."
- If not integrated, the risk of concentration on a particular date is greater, which implies large cash withdrawals on the same date (and higher liquidity risk). Thus, integration can help to smooth the maturity profile and improve flexibility on the corresponding interest rate risk that is generated by a higher volume of refinancing (for financial markets).
- Defines comprehensive strategies for the implementation of investment operations (active) and funding (passive), taking into account the different opportunity costs.
- Represents an advantage in relation to the impact of strategy planning, given that with coordination, the execution times and transmission are lower.
- Legal and risk policies are centralized, which are considered transversal policies and similar in nature in terms of debt and treasury management.
- When they are not integrated, registration of transactions is done separately, which can create delays and difficulties in consolidating information and reporting. When integrated, statistics are prepared more comprehensively.
- When not integrated, it is dependent on another unit (Public Debt), because it lacks direct information (debt to cash flow). In addition, units may have conflicting views, putting at risk the coordination of the cash and debt units.
- Staffing requirements are reduced.
- It places more relevance on the economic evaluation of the operations. A financially preferable operation in the short term, and analyzed individually, may threaten strategic objectives in the long run and against the balance.

Advantages of keeping separate units:

- Align incentives either because who defines the benchmark is different from who is responsible for managing the cash. In this case, the Ministry of Finance sets the benchmark, the budget office decides its implementation, and the treasury executes and controls.
- A risk of being integrated is the concentration of responsibilities on debt and treasury operations under only one manager, implying an ethical impediment when making decisions that impact debt, foreign exchange, and monetary markets ("Chinese Wall"). However, this issue is mitigated by the creation of strategic committees, such as the Treasury Committee or Asset-Liability Management Committee, to approve policies and guidelines.
- Because they are different functions, specialization is advisable.
- The areas of competence of each one are respected.



CRI is the only country that had an integrated unit in the past, but now it has two separate units. Their assessment, however, is that the integrated unit worked better than the current arrangement.

As countries are becoming more sophisticated in terms of cash management, it appears that the separation of functions imposes more disadvantages than advantages. With the (i) accumulation of large cash surpluses; (ii) tendency of the treasury also to invest not only in the short term, but also in the medium and longer term (e.g., through creation of sovereign wealth funds and other extra-budgetary funds); (iii) increase in size and complexity of financial operations; and (iv) need to have comprehensive and timely financial reports, the integrated approach tends to respond quicker to the needs of the government and to changes in the market. It also provides for a more economical use of scarce administrative resources.

The transition from separated to integrated structures, however, tends to be longer and more complicated than initially envisaged by the ministries of finance. As well as the need for legislation and new internal arrangements, both functions have to continue to be fully operational during the transition; usually there are no fully integrated information systems in place; and internal capacity needs to be upgraded substantially during the process.

Another major constraint is the capacity of the new units to retain and adequately remunerate the staff. Many DMUs will be unable to recruit experienced staff directly, and will rely on internal training programs. They will, however, often then be unable to pay staff in line with private sector analogues,¹⁷ and as the new DMU becomes more sophisticated, private financial institutions will be interested in recruiting people who have acquired enhanced expertise. In most countries, the DMU will be the largest treasury in the country—certainly when measured by market impact—and the expertise accumulated by these officials will be very valued by the market.

As noted above, in some countries the access to more flexible pay arrangements was one of the considerations in adopting an agency structure when setting up a DMU—even while it was still in the MoF.¹⁸ There are

¹⁷ In one of the countries where there is an integrated unit, the need to retain some highly skilled staff was the key reason to maintain two divisions (and two division chiefs) that should have otherwise been merged.

¹⁸ For example, in the United Kingdom, the DMO was able to establish its own pay structure; it still had to be approved by the civil service authorities, and annual increments must be consistent with government-wide policy, but it gave the DMO some flexibility to recruit and retain key skills.

BOX 3.5: BRAZIL: STRUCTURAL CONDITIONS TO RETAIN QUALIFIED PROFESSIONALS IN THE DEBT MANAGEMENT OFFICE

In Brazil, the creation of a specific career in 1986 to attract high-level professionals to the debt management office was a turning point. Selection of finance analysts is done through an open and competitive procedure. Salaries are similar to those paid to professionals working in other strategic areas, such as the Central Bank and the Tax Authority, and other benefits are provided, such as a pension fund and health insurance. Training is provided continuously to keep economists up to date and abreast of developments and to incentivize them to stay in the public sector. Rotation has reduced significantly since then.

examples in Latin America where positive structural conditions have been created to retain qualified professionals in the DMU (see Box 3.5).

A comprehensive approach is recommended in those countries that decide to move to an integrated structure. It would include (i) a detailed definition of the functions to be retained and added by the new entity and its relationship with key stakeholders (including respective responsibilities with others in the MoF and with the central bank); (ii) a detailed study of the best governance structures and organizational arrangement to facilitate the synergies of the new entity; and (iii) the support of reliable and comprehensive accounting and information systems. The work should also cover the management and staffing of units that might not be the focus of the integration process. CDM functions are very different from the payment and accounting functions of the traditional treasury. The latter may require more staff, but the skill requirements and processes are very different; hence also the managerial styles. This may be reflected in the internal structures of an integrated unit that covers all these functions, with the senior director general or chief executive delegating treasury process management to a deputy with relevant senior management experience.

A program of capacity building will be important, including a structured training program linked to business objectives and a realistic and attractive remuneration policy, as well as other measures to encourage job satisfaction that could retain and attract competent staff. Some offices have found a formal business plan useful, as a way not only to clarify objectives and identify capability gaps, but also to build a common culture and enhance individual commitment. This reform may take some years to be implemented; it is a project and, like other projects, there needs to be a process to identify priorities and sequencing, as well as tasks and dependencies.

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The Treasury Single Account in Latin America: An Essential Tool for Efficient Treasury Management

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INTRODUCTION

Good public financial management (PFM) is about ensuring that all of a government's cash is available for management by the treasury. This requires creating a treasury single account (TSA), which contributes to the efficient use and control of these financial resources. Establishing a TSA is essential in modern treasury management. It enables the centralization of public funds and their consolidated management. It also acts as a catalyst and facilitator for cash management reform by transforming treasuries and allowing them to go beyond their traditional payer role to perform the functions of a modern financial manager by adopting efficient planning, forecasting, financing, and financial investment mechanisms, as well as actively managing cash.

Many countries in Latin America have recently made efforts to create a TSA to improve their financial management;¹ others, such as Argentina, Brazil,² and Colombia, established TSAs decades ago, although they are still

¹ The most recent efforts to create a TSA are taking place in the Dominican Republic, El Salvador, and Panama.

² See Annex I which offers more details about TSA development in Brazil, where the TSA was first implemented in Latin America.

seeking ways to manage them more efficiently. Some countries have made more progress than others in their reforms, and their operational models and the scope and functionalities of their TSAs differ.

This chapter presents the current status of TSA implementation in 17 countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay. While this publication in no way recommends a particular framework or model for all governments, it presents some guiding principles of implementation and benefits the ongoing reform processes by identifying and describing the achievements made so far by countries that were successful in consolidating this tool. The objective of the chapter is to provide a synopsis of the experience of the countries of the region in developing or consolidating a TSA to support similar developments elsewhere in Latin America and in other regions.

This chapter highlights some successful innovations and identifies areas where work is yet to be done to guide reform and promote the use of modern practices. Key factors that have influenced reform during the last six years in the region include, to a large extent, peer learning and emulation resulting from the creation of the Latin American Treasury Forum (FOTEGAL). This forum delivers seminars and implements annual work programs (including courses, research, and technical assistance) supported by various international organizations (International Monetary Fund (IMF), Inter-American Development Bank, World Bank).

The chapter includes four sections besides this introduction. The second section presents the conceptual framework that is used as a reference to examine the current status of TSA implementation in Latin America and to identify the basic characteristics of an efficient TSA. The third section examines aspects of its conceptual design (or structure), using the legal framework as a starting point, as this usually defines some basic features of the TSA in the countries. It also includes the issues of TSA coverage, the degree of fungibility of the resources, key operational aspects (revenue collection, payments, accounting), and the role played by integrated financial management information systems (IFMIS) in these operations and in TSA management in general. The fourth section examines the degree to which active cash management is used, discussing topics such as the remuneration of TSA balances and the existence and use of instruments and mechanisms for the treasury to finance temporary cash shortfalls and invest temporary cash surpluses, without which all the benefits of a TSA cannot be obtained. The final section of this chapter includes suggestions

for improving areas that may generate substantial progress toward modern treasury management.

Finally, this study contains information gathered from various sources. Most important are those from (i) the authors who, as technical assistance providers, have visited almost all the countries in the region; (ii) the annual surveys of the treasurers performed for the FOTEGAL seminars (most recently in July 2014); (iii) the presentations made by the treasurers during an event on TSA development in Latin America; and (iv) the presentations made at the FOTEGAL seminars.

CHARACTERISTICS OF AN EFFICIENT TSA

In a narrow sense, a TSA can be defined as a single bank account (preferably held at a central bank) or a unified structure of bank accounts and accounting or “virtual accounts” (subaccounts) with which the government, through a single administrator (generally the treasury),³ manages the revenues and payments centrally to obtain a consolidated cash position at the end of each day (Fainboim and Pattanayak, 2011). Defined in a broader sense, a TSA is a set of systems, processes, norms, and procedures applied to a national treasury for the consolidation of funds and their financial management. An efficient TSA has six main characteristics (Fainboim and Pattanayak, 2011):

- **Location:** The TSA should be operated at the central bank because the resources held there are exposed to less counterparty risk compared to private or public commercial bank deposits and, therefore, will not face moral hazard risks.
- **Coverage:** At a minimum, coverage should include all central government entities and resources.⁴ The cash resources of these entities

³ In Latin America, there is no unique term that refers to a national government treasury, although many local variations exist (e.g., national treasury, general treasury, public treasury). For this study, reference will be made simply to treasury.

⁴ Decentralized entities that are not business-related and central government entities that are autonomous should be included when fulfilling government functions and when they are entirely or largely financed by the government, as occurs in many Latin American countries, and do not offer goods or services to the market at economically meaningful prices. Decentralized business entities (public enterprises) should be included in the TSA if a significant part of their budget is financed with government

should be integrated in the TSA, covering budgetary and extrabudgetary resources (irrespective of their source of revenue), collecting agencies, beneficiary entities, or end users of those resources to ensure that the maximum amount of cash resources is centrally managed. This will reduce explicit and opportunity costs that the treasury incurs by managing government cash.^{5,6}

- **Concentration:** Government agencies should not maintain resources in bank accounts that are beyond the oversight of the treasury, and the treasury should be given the power to authorize the opening or closing of bank accounts within the government treasury. This feature follows the former one whereby the balance of all government bank accounts is swept into the TSA at the end of each day.
- **Fungibility:** For the treasury to manage its cash flow according to financial principles, fungibility of resources should be allowed to achieve maximum efficiency.⁷ Book-entry accounts are designed to guarantee the fungibility of TSA resources for treasury use, irrespective of their budget earmarking or appropriation.⁸ The principal

resources or they fulfill important government functions whose costs are not covered by the government. Inclusion of subnational governments should be encouraged rather than enforced (as their degree of autonomy is higher), especially those with larger budgets. Social security resources should be included in the TSA if the system operates as a pay-as-you-go system. If this is not the case, the treasury could propose that some portion of social security resources that are usually invested in the short term are either loaned to the treasury at a market rate or invested in treasury bills (Tbills).

⁵ With regard to opportunity costs, the TSA generates savings by reducing the need to issue short-term Tbills. In terms of explicit costs, it enables the government to earn higher revenues by making the most of temporary surpluses when compared with a TSA with reduced coverage. For example, the Guatemalan Treasury estimated a saving of approximately Q 42 million (US\$5.6 million) in 2014, following the establishment of the TSA.

⁶ The concentration of revenues in the TSA facilitates the automation of recordings, account reconciliation, and control of financial transactions, as well as provides for more transparency.

⁷ A corollary of the last two characteristics (concentration and fungibility) is that the TSA can promote the operational efficiency of budget execution units by streamlining the receipt, transfer, and payment processes even within government. Standardizing budget processes and documentation, in turn, will reduce banking and operating costs.

⁸ The use of these accounts should be accompanied by legislation that prevents the earmarking of resources or, alternatively, permits the temporary use of resources by the treasury for cash management purposes whenever these are not required in the short term for the purpose for which they were set aside.

function of these accounts is to ensure that earmarked resources are owned and available to the beneficiaries without having to hold them in separate bank accounts. Thus, they facilitate bookkeeping and the control of cash flows and balances, usually functions of bank accounts. Best practice is to hold book entries in a government IFMIS, although it is possible to adopt a system whereby TSA subaccounts within the same bank function as book entries.

- **Timely revenue and payment transactions:** Government resources should be placed into the TSA immediately after being collected and disbursements made only when expenditures are justified. This is referred to in the literature as minimizing the float; in other words, reducing the time it takes to receive and make payments, which is an opportunity cost for the government.
- **Timely information:** Information about the government's aggregate cash position should be available and accessible on a daily basis, preferably in real time.⁹ Timely information about the availability of cash is indispensable to update the cash planning and daily operations of the treasury in the financial markets (e.g., investment of temporary surpluses, short-term debt issuances).

Finally, it is essential to establish a solid legal base for the adoption of a TSA. Its coverage and granting authority to the treasury should be defined to enable the opening and closing of bank accounts.

Although the concept of cash unity and a TSA had existed for a long time, it was boosted in the 1990s with the advent of information and communications technology (ICT), which has led to the development of new tools to record and manage government cash flows and balances.¹⁰ As a result, operational procedures have been streamlined and processing times for financial transfers have been reduced. The technological change has also eliminated

⁹ Treasury information for decision making should include not only the resources that it manages directly, but also the cash or cash equivalent managed by government entities. Moreover, the treasury should be capable of independently producing statements on the government's financial position. This includes the amounts deposited in the entities' bank accounts, the financial investments, and the interest earned on these investments.

¹⁰ Among these are cash pooling and the use of so-called sweep accounts, electronic fund transfers, real-time gross settlement systems, and automated account reconciliation.

processes that previously were carried out only through ledger records and procedures over a wide range of bank accounts, distributed throughout various offices in different localities.

Likewise, ICT has facilitated automated recording and reconciliation, as well as strengthened the control of cash flows and balances. More importantly, it has enabled access to information in real time on the entire resources of the treasury,¹¹ as well as offered mechanisms to support the centralization of cash resources for treasury management, even in situations where the government's operational processes or institutionalized practices still require a system that will operate various bank accounts.

THE TSA CONCEPTUAL MODEL

Despite sharing the same objective, there are significant differences in the TSA conceptual models that have been adopted in each country in Latin America. Before examining these models, the term “conceptual model” used in this chapter should be defined. The following definition of a TSA is an initial reference point: “(...) it is a bank account or a set of linked bank accounts through which the government transacts all its receipts and payments and gets a consolidated view of its cash position at the end of each day” (Fainboim and Pattanayak, 2011). Fainboim and Pattanayak also say “At least four key issues should be addressed in designing a TSA system: (i) the coverage of the TSA; (ii) the government bank account structure; (iii) the transaction processing arrangements and associated cash flows; and (iv) the roles of the central and commercial banks in managing the TSA and providing banking services.” To these issues should be added the fungibility of government resources available to the national treasury (i.e., the capacity to temporarily use the resources of other entities while they are not required by those

¹¹ To generate financial data, the treasury must maintain an operational mechanism that can guarantee the receipt of information regarding bank account movements and balances. It is possible to develop and include functionalities in the IFMIS that can permanently update information on all types of government funds, whether or not they are included in the TSA. When there is no automated system for recording these movements and balances, the treasury can only prepare reports of the government's financial position on the basis of information supplied by the banks (bank statements). In this case, the process usually takes far longer, resulting in out-of-date information, thus preventing appropriate financial management.

entities) and also the possibility of temporarily using the resources that are not included in the TSA (by, for instance, borrowing them) as two key additional characteristics.

These elements of the conceptual design are examined below for the different countries of the region. The examination starts with an analysis of the legal basis for the TSA, as it usually determines key features of the conceptual design, and is followed by an analysis of the aspects described in the previous paragraph.

Legal Basis for the TSA

As with all public actions, managing the resources of a government should be supported by appropriate legislation in compliance with the principle of legality. This chapter examines the nature of the rules that establish the TSA, its institutional coverage, the competencies or power assigned (usually to the treasury) for authorizing the opening and closing of bank accounts, and the choice of bank that will operate as general cashier, where the resources to be managed will be concentrated.

Nature of the law establishing a TSA

The higher the hierarchy of the law that creates the TSA, the more stable its legal support will be. It will also be more difficult to make exceptions that may weaken the operation of a TSA and reduce its benefits.

A TSA is most commonly established in Latin America by law (Table 4.1),¹² as is the case in 13 of the 17 countries included in this analysis. Costa Rica, Ecuador, and El Salvador allow for a TSA within their respective constitutions, while in Bolivia, its legal support is provided by a supreme decree of the executive power (Decreto Supremo del Ejecutivo).

In 11 countries, the law that creates a TSA is an organic or special law, which is a better option compared to an ordinary law, because its higher rank requires a qualified majority in congress to be amended. If countries with higher-ranking laws were added to those that have a constitutionally established TSA, the number of countries with a strong legal framework would

¹² It is important to highlight that in two countries the rule that establishes the TSA is a Treasury Law (Ley de Tesorería), while in the rest of the countries it is a Financial Administration Law (Ley de Administración Financiera) or an Organic Budget Law (Ley Orgánica de Presupuesto).

TABLE 4.1 LEGAL BASIS BY COUNTRY FOR A TSA

| Country | Rule | Articles |
|--------------------|--|----------------------|
| Argentina | Financial Administration Law (Ley de Administración Financiera) No. 24156 of 1992 | 80 |
| Bolivia | Supreme Decree (Decreto Supremo) No. 25875 of 2000. | 3 and 4 |
| Brazil | Public Finances Law (Ley de Finanzas Públicas) No. 4.320 of 1964 | 56 |
| Chile | Organic Decree Law on Financial Administration of the Government (Decreto Ley Orgánico de Administración Financiera del Estado) No. 1263 of 1975 | 32 |
| Colombia | Budget Law (Ley de Presupuesto) No. 38 of 1989, thereafter incorporated in the Organic Statute of the Budget (Ley Orgánica de Presupuesto) | 73, 98, 101, and 103 |
| Costa Rica | Political Constitution | 184 |
| | Financial Administration Law (Ley de Administración Financiera) No. 8131 of 2001 | 66 |
| Dominican Republic | Law of the National Treasury (Ley de Tesorería Nacional) No. 567 of 2005. | 11 |
| Ecuador | Political Constitution | 299 |
| | Supreme Decree (Decreto Supremo) 1429 of 1977 Organic Law on Financial Administration and Control (Ley Orgánica de Administración Financiera y Control) | 166, 172, and 173 |
| El Salvador | Political Constitution | 224 |
| | Organic Law on Financial Administration (Ley Orgánica de la Administración Financiera) No. 516 of 1995 | 72 |
| Guatemala | Organic Law on the Budget (Ley Orgánica de Presupuesto) No. 101 of 1997 | 55 |
| Honduras | Organic Law on the Budget (Ley Orgánica de Presupuesto) No. 83 of 2004 | 94 |
| Mexico | Federal Law on Budget and Treasury Responsibility (Ley Federal de Presupuesto y Responsabilidad Hacendaria) of 2006; latest reform in 2012 | 51 |
| Nicaragua | Financial Administration and Budget Regime Law (Ley de Administración Financiera y del Régimen Presupuestario) No. 550 of 2005 | 94 |
| Panama | Law 56 of 2013, creating the National Treasury System (Sistema Nacional de Tesorería) and the National Treasury Single Account (Cuenta Única del Tesoro Nacional) | 6 |
| Paraguay | State Law on Financial Administration (Ley de Administración Financiera del Estado) No. 1535 of 1999. | 32 |
| Peru | Law on the Financial Administration Framework (Ley Marco de la Administración Financiera) 2812 of 2003. | 25 |
| Uruguay | Law 17.213. Substitution of certain articles of the Annotated Text on Accounting and Financial Administration (TOCAF) (Texto Ordenado de Contabilidad y Administración Financiera) of 14 September 1999. | 22 |

Source: Authors' elaboration.

increase to 14. This highlights the high level of legal standing of the TSA within the region.

In Panama, a Treasury Law (Ley de Tesorería) was approved in 2013 (Law No. 56 of September 17, 2013) and, in Guatemala, several amendments have been made recently to the legislation (Legislative Decree No. 13-2013) (Decreto Legislativo No. 13-2013). The law in place in both countries established, in general terms, the principle of a TSA, although it has not been more extensively developed.

Authority of the treasury to open and close bank accounts

The explicit granting of power to authorize the opening or closing of bank accounts is essential to prevent cash resources being managed outside of the TSA in bank accounts that are not approved by the national treasury. In 12 countries (Brazil, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, Peru, Uruguay), the law grants the national treasury the right to open bank accounts and to close those without authorization to achieve greater TSA efficiency. In 4 countries (Argentina, Bolivia, Chile, Ecuador), this power is granted to the national treasury through executive decree (Decreto Ejecutivo) and, as in Panama, by a law that gives power to the comptroller general for those institutions that are not included in the TSA and to the national treasury for those institutions that are.

Selection of the bank, acting as general cashier bank for consolidating TSA resources

Placing the TSA in the central bank has advantages and disadvantages (Table 4.2) compared to holding the account at a private or public commercial bank. The advantages include the elimination (or substantial reduction) of credit or counterparty risk and the prevention of moral hazard—risks that could be significant if the TSA were to be held at a commercial bank. The central bank, therefore, is a much safer haven for government deposits than a commercial bank.

In most countries (13) in the region, the law assigns the bank (general cashier)¹³ that consolidates TSA resources. In 11 countries, it is assigned to the

¹³ This study applies the term “general cashier bank” when referring to the bank in which the TSA is held, which, in some countries, may not be the central bank, but a public commercial bank (see next footnote). The term “auxiliary cashier bank” refers to commercial banks that provide services to the treasury.

TABLE 4.2 ADVANTAGES AND DISADVANTAGES OF THE TSA IN THE CENTRAL BANK

| Advantages | Disadvantages |
|--|--|
| <ul style="list-style-type: none"> • Counterparty (credit) risk is minimal. • There is no moral hazard risk. • No public commercial bank is placed in an advantageous situation with respect to the rest of the commercial banks. • If the treasury uses active cash management to maintain low and stable balances at the central bank, the direct monetary impact of the treasury's inflows and outflows is minimal, as is the effort the bank must make (and the lower the costs) to minimize the changes in the banking system's liquidity. The effort and the costs of controlling liquidity in this case become the responsibility of the treasury or the Ministry of Finance. • Facilitates coordination between fiscal and monetary policy. • Facilitates cost-effective banking arrangements and rapid settlements. Agreement can be reached for the central bank to act as a clearing house for government operations, which can speed up settlements. | <ul style="list-style-type: none"> • Risk of the central bank failing to remunerate the TSA cash balance or setting lower-than-market interest rates (lower than those offered by commercial banks). This disadvantage could be reduced, however, if cash is managed actively by maintaining minimum and stable balances at the central bank and investing excess cash in the commercial banks. • If the treasury fails to engage in active cash management, its cash movements will have a strong and direct monetary effect on the economy (as it is the most important entity with regard to mobilizing an economy's resources) that will force the central bank to undertake significant open-market operations to control bank liquidity, thereby affecting the central bank's financial situation. In this case, the cost and the effort to control liquidity will fall to the central bank. If, as a result of these activities, the central bank suffers losses and these are not covered by the government, the bank's independence will be threatened. |

Source: Authors' elaboration.

central bank. Interestingly, in two of three economies in the region that are fully dollarized (Ecuador and El Salvador) the central bank has reserve functions and acts as a general cashier for TSA resources. In six countries, the law requires a public commercial bank to fill the role of general cashier (Argentina,¹⁴ Chile, the Dominican Republic, Panama,¹⁵ Peru,¹⁶ Uruguay).

¹⁴ In Argentina, the role of general cashier is exercised by the National Bank of Argentina (Banco de la Nación Argentina), the leading public commercial bank; in Chile, the State Bank (Banco del Estado); in Panama, the National Bank of Panama (Banco Nacional de Panamá); in the Dominican Republic, the Reserve Bank (Banco de Reservas); and in Uruguay, the Bank of the Oriental Republic of Uruguay (Banco de la República Oriental del Uruguay).

¹⁵ Panama has no other option, since its currency is the US dollar, and it does not have a central bank.

¹⁶ In Peru, the law states that the TSA must be held at the National Bank (Banco de la Nación), although the daily transfer of a large part of government resources to the Central Bank of Peru (Banco Central de Reserva del Perú (BCRP)) implies that in practice, the TSA operates mostly in the BCRP.

Participation of commercial banks as auxiliary bank cashiers

In all countries included in this study, the regulations permit a commercial bank to act as collector and disbursing agent of funds, but the level of services provided to the treasury varies considerably between countries, as described below.

Existence of specific TSA regulations

In Costa Rica, the Dominican Republic, and Peru, there is a specific set of regulations that governs the operation of the TSA. Most commonly, the arrangements are incorporated into either the general regulations of the law that establishes the TSA, the regulations governing the treasury subsystem, or the technical rules of the treasury subsystem. Irrespective of the type of legal instrument, it is crucial that a clear and complete set of regulations is established and complemented by procedures that explicitly stipulate the functioning of the TSA.

Other Aspects of the TSA Design

Structure of bank accounts

The classification proposed by Fainboim and Pattanayak (2011) includes three different account structures:

- **Centralized:** The TSA is composed of a single account, generally held at the central bank. This system is managed by either a centralized authority (for example, a centralized treasury, with or without regional units) or by individual line agencies/spending units. Either way, the relevant transactions are accounted for and managed through a well-developed accounting system that identifies the ownership of resources by way of subaccounts or book-entry accounts, acting as substitute bank accounts.
- **Distributed:** This structure comprises various independent accounts (generally at zero-balance, held at commercial banks) operated by line agencies/spending units for transactions—for payment or collection—with the condition that the positive and negative balances maintained in these accounts are netted into the TSA main account whenever possible. The money is transferred (usually, at the beginning or end of each day) into these accounts as and when approved payments are made, and the general cashier bank (holding the TSA) provides the consolidated cash position at the end of each day. This structure

enables funds to be consolidated through procedures known as cash pooling services.¹⁷

- **Mixed:** This combines the features of the above two structures. The consolidation of resources is complemented by payment accounts that decentralize the payment process within regional management units or treasuries. In each case, the balances within the banking system are also swept into the TSA at the end of the day.

Taking these concepts as references, it becomes clear that the mixed structure model predominates in eight countries, which is explained by the use of collection and payment accounts (although, in some cases, these are zero-balance accounts). Nearly all of these countries claim that the mixed model accounts operate as temporary mechanisms, until such time when more efficient collection and payments processes are available. In five countries (Bolivia, Chile, El Salvador, Guatemala, Mexico), the model adopted is decentralized, and in four countries (Brazil, Ecuador, Honduras, Nicaragua), it is centralized, although in the latter two countries there are certain exceptions.

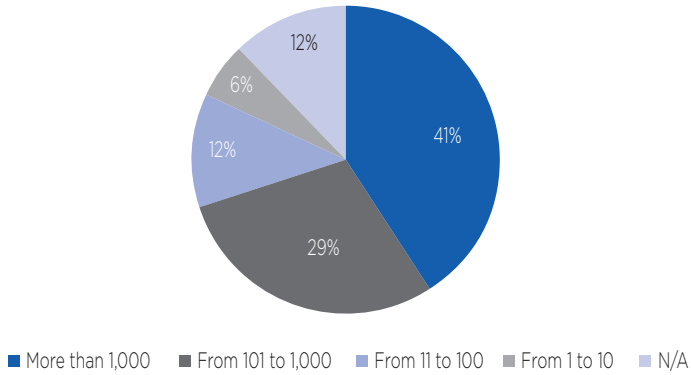
Number of bank accounts

There is still a considerable number of bank accounts for cash management in the “general cashier bank” and in commercial banks (“auxiliary cashiers”), which is an indication that TSA rationalization has not yet been achieved, nor have the advantages it offers fully materialized. The replacement of bank accounts by ledgers and book entries in the IFMIS and by zero-balance accounts remains a pending task in many countries. In seven countries, more than 1,000 bank accounts are still held at commercial banks (Figure 4.1), with some countries holding more than 5,000 commercial accounts. In Bolivia, for example, the number of mixed fiscal, payment, and collection accounts held at private banks is as high as 6,800.

Similarly, six countries (Argentina, Bolivia, Chile, Colombia, El Salvador, the Dominican Republic) maintain between 101 and 1,000 accounts at the “general cashier bank,” demonstrating that it has been a challenge to

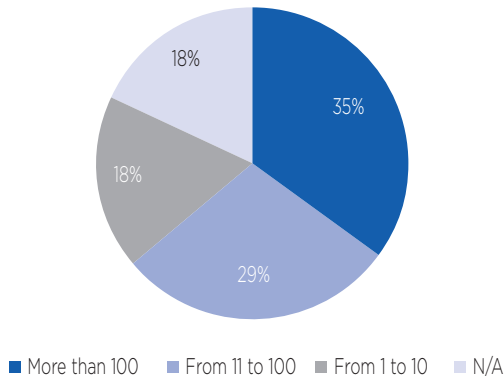
¹⁷ Cash pooling is defined as “(...) centralized management by the Treasury for groups of enterprises or for corporations with several branches. This management practice enables various accounts operated by each business in the group to be transferred to a single, centralized account, with the corresponding information advantages and cost reductions.” See www.ibercaja.es/contenidos.php.

FIGURE 4.1 PERCENTAGE OF COUNTRIES WITH BANK ACCOUNTS HELD IN COMMERCIAL BANKS (“AUXILIARY CASHIER BANKS”), BY NUMBER OF ACCOUNTS



Source: Authors' elaboration.
Note: N/A = Not available.

FIGURE 4.2 PERCENTAGE OF COUNTRIES WITH BANK ACCOUNTS AT THE GENERAL CASHIER BANK IN WHICH THE TSA IS MAINTAINED, BY NUMBER OF ACCOUNTS



Source: Authors' elaboration.
Note: N/A = Not available.

simplify the structure of bank accounts for TSA management (Figure 4.2). Bolivia holds 395 fiscal accounts at its central bank. In Chile, treasury resources are deposited in 5,286 accounts at the State Bank (Banco del Estado), which is responsible for the TSA, as well as in private commercial banks. The high number of bank accounts is explained by providing all the

necessary information for operational management, such as information on the collecting bank, revenue sources, and earmarked resources. This does not contribute to improving efficiency, since it will perpetuate the operational activities related to the opening, reconciliation, and maintenance of each account.¹⁸

Furthermore, in countries that do apply book-entry accounting (i.e., bank books or single accounts to track the ownership of the resources in the TSA), not all have the same functionality and/or their range is limited. In Peru, for example, book-entry accounting has limited scope: there are TSA subaccounts at the Bank of the Nation (Banco de la Nación) to monitor and manage revenues and payments, as well as bank accounts at the central bank to control earmarked resources. Moreover, some entities still maintain accounts to manage their own-source resources. Book entries (accounting or “virtual accounts”) exist in Bolivia, although payments are charged to the bank accounts. In Nicaragua, the system of book entries also has limited scope, given that a significant part of government resources continues to be managed through bank accounts that remain beyond the coverage of the TSA.

Coverage of the TSA

The higher the volume of resources managed by the TSA, the greater the benefits it will generate. It is therefore argued that the TSA should have the widest possible coverage of public resources that are used to fulfill governmental functions. As Fainboim and Pattanayak (2011) indicate, “The TSA should have comprehensive coverage; that is, it should ideally include cash balances of all government entities, both budgetary and extrabudgetary, to ensure full consolidation of the government’s cash resources.”

This section presents information that relates to the scope of coverage of the TSA in Latin American countries. The degree of legal and institutional coverage, as well as coverage according to type of funds (or revenue sources) is also examined. Regarding institutional coverage, the institutional or administrative classification of the public sector—put forward by

¹⁸ Furthermore, most countries hold an account for each foreign currency as part of the TSA, which entails a cost of carry. The decision to create these kinds of accounts should only be taken when the level of international reserves is low and there is a significant risk that reserves are inadequate to service debt.

the Government Finance Statistics Manual of the IMF (IMF, 2014: 8–39)¹⁹—is used as a reference.

Among the countries that are examined, Argentina, Brazil, and Mexico are federal states and Bolivia is a Plurinational State (*Estado Plurinacional de Bolivia*), where reference will be made to liquid resources at the federal or national level. In addition, there is a difference in some countries between devolved and decentralized institutions. This depends on the level of autonomy that the legislation grants to one or the other; however, they are treated in this chapter as a single category: decentralized institutions.

Legal coverage versus real coverage

In only 3 of the 17 countries reviewed (Argentina, Brazil, Costa Rica) have all institutions under current regulation been incorporated into the TSA. This goes to show that, except in a few cases, the creation of TSAs in Latin America is a work in progress with most countries facing significant challenges in terms of coverage to fully meet regulation requirements.²⁰ It also underlines the fact that implementation of a TSA not only requires legal support; it also calls for a series of complementary operational and political measures to be effective.

Sector and institutional coverage of the TSA

The situation is noticeably heterogeneous regarding institutional coverage, with plenty of room to enhance coverage in most countries. Only Brazil, Colombia, and Costa Rica have implemented a TSA throughout central government, including the judicial and legislative branches (Table 4.3).²¹

¹⁹ According to this manual, the public sector can be divided into two main subsectors: financial and nonfinancial. The general government and nonbusiness public enterprises pertain to the second subsector. The general government can be further classified into various levels: central, state, and local, while within the central government, there are ministries or secretariats and nonbusiness decentralized institutions. Social security can either be considered a separate subsector or it can be included in the subsector that organizes and manages its funds (e.g., central government and/or the regional and local governments). In both cases, social security is considered a part of the general government.

²⁰ This chapter does not discuss whether the existing legal coverage is suitable or should be reformed.

²¹ Only in Brazil does the TSA include the totality of central government resources and the nonbusiness decentralized entities. It is the only country of which it may be said that the TSA's coverage is almost comprehensive, with the exclusion of certain trust funds and external credit resources. (See Note 29 and Annex 4.1.)

TABLE 4.3 SUBSECTORS AND TYPES OF ENTITIES NOT INCLUDED IN A TSA

| Country | Ministries | Judiciary | Legislature | Social security | Decentralized entity | Autonomous entity | Universities | Electoral Commission | Others |
|--------------------|------------|-----------|-------------|-----------------|----------------------|-------------------|--------------|----------------------|--------|
| Argentina | | | | | | | | | (a) |
| Bolivia | | | | | | | | | (b) |
| Brazil | | | | | | | | | |
| Chile | | | | | | | | | (c) |
| Colombia | | | | | (d) | (d) | | | (d) |
| Costa Rica | | | | IP | (d) | IP | IP | | |
| Dominican Republic | | | | | | | | | (l) |
| Ecuador | | | | | | RG | | | (e) |
| El Salvador | IP | | | | | | | | |
| Guatemala | | | | | | | | | |
| Honduras | IP | | | | IP | IP | | | (f) |
| Mexico | | | | | | | | | (g) |

(continued on next page)

TABLE 4.3 SUBSECTORS AND TYPES OF ENTITIES NOT INCLUDED IN A TSA (continued)

| Country | Ministries | Judiciary | Legislature | Social security | Decentralized entity | Autonomous entity | Universities | Electoral Commission | Others |
|-----------|------------|-----------|-------------|-----------------|----------------------|-------------------|--------------|----------------------|--------|
| Nicaragua | IP | | | | | | | | (h) |
| Panama | IP | | | | | | | | |
| Paraguay | IP | RG | IP | | | | | | |
| Peru | IP | | | (j) | | | | | (i) |
| Uruguay | | | | (k) | | | | | |

Source: Authors' elaboration.
 RG = indicates that the resources from general revenues are not included in the TSA.
 IP = indicates that only the independent revenue of the respective group of entities is not included in the TSA.

The notes in parentheses refer to other entities not listed under separate columns that are not included in the TSA, such as (a) fiduciary funds; (b) healthcare agencies; (c) entities with independent revenue; (d) entities obliged to invest their cash surpluses in government securities; (e) Comptroller-General; (f) Public Ministry, Supreme Audit Institution, Public Security Secretariat (Secretaría de Seguridad), Presidency; (g) National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía (INEGI)), economic and salary provisions, federal contributions for federative and municipal entities (Aportaciones Federales para Entidades Federativas y Municipios); (h) electoral commission; (i) trusts, donations, external and internal project loans, and revenue directly collected by local governments; (j) ESSALUD; (k) revenue of the State Health Service Administration (Administración de los Servicios de Salud del Estado (ASSE)); (l) Electoral Commission (Junta Central Electoral), Supreme Electoral Court (Tribunal Superior Electoral), transfers to decentralized institutions (including social security and universities) and municipal councils, Attorney General's Office (Procuraduría General de la República), and Chamber of Accounts (Cámara de Cuentas).

In 6 countries (El Salvador, Honduras, Nicaragua, Panama, Paraguay, Peru), the own-source revenues directly collected by ministries are excluded from the TSA.²² Financial resources of the judiciary are not included in 9 countries (partially included in Paraguay), and the resources of the legislature are excluded in 10 (partially excluded in Paraguay).

In Mexico, the TSA only applies to the executive branch, although within that area there are the following exceptions with budgetary and management autonomy: autonomous branches (public independent organizations); the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía (INEGI)); social security contributions; economic and salary provisions, and Federal Contributions for Federative and Municipal Entities (Aportaciones Federales para Entidades Federativas y Municipios). These exceptions represent a significant percentage of the budget, whereas the legislature's and the judiciary's share of the total budget is only 2 percent.

Proposals have been frequent to exclude the legislative and judicial branches from the TSA, based on the principle of independence. It is important to highlight, however, that incorporating any entity into the TSA does not imply a loss of autonomy in terms of spending decisions, which should be emphasized when the TSA is being set up. Moreover, neither the legislature nor the judiciary has the institutional capacity and the technical know-how for good treasury management. Therefore, costs and efforts would be duplicated without achieving benefit. In the countries that have yet to incorporate the legislative and judicial powers into the TSA, resources are usually transferred to bank accounts in the name of the respective branch (or power). These accounts are used as payment accounts, and they often involve idle balances; even if the balances are invested by these powers in the commercial banking sector, the treasury does not receive the interest on them and the choice of bank does not generally reflect an analysis of the risk it may represent.

The distinction between cash and budgetary autonomy is essential regarding the legislature and the judiciary, as well as vis-à-vis autonomous and decentralized entities. The legal power to spend is not represented by the fact that these entities and powers maintain cash in their accounts or have independent revenues. Modern legislation should allow the central management

²² In Panama, the law establishes that transfers made by the Treasury to entities not included in the TSA should be managed by the TSA, in accordance with the operational regulations of the TSA with respect to criteria of amount and nature. The independent revenues of these institutions can be included in the TSA voluntarily and in coordination with the Treasury.

of resources without detriment to budgetary independence. Legal financial management frameworks should include rules that protect these entities from the potential risks of government action that may affect their capacity to execute budgets efficiently and effectively. Moreover, government accounting systems are able to clearly distinguish between the independent revenues of these entities and the resources received from the government.

Regarding decentralized nonbusiness institutions, in only Argentina, Bolivia, and Brazil have resources been fully included in the TSA. In Colombia and Costa Rica,²³ legal arrangements oblige certain subsectors not included in the TSA to invest their cash surpluses in government securities—another way of ensuring that the treasury manages these resources—although this way of achieving a wider coverage entails the payment of interest by the treasury. In Latin America, decentralized entities are legally independent bodies, generally created to be the executive arm of government, and a majority of them are financed entirely—or almost entirely—from the budget. In this case, their resources should be included in the TSA.

Furthermore, only Honduras includes revenues from public nonfinancial corporations, albeit on a partial basis. If public nonfinancial corporations are noncommercially oriented—that is, they do not sell products in the market, follow government policies, and depend to a large degree on transfers from the budget—they are considered enterprises in name only but not in practice. Consequently, they should be classified as part of the government sector and be incorporated into the TSA. Regarding decentralized nonbusiness entities and public enterprises, it is worth highlighting that the nature of an entity's activity (governmental versus commercial), rather than its legal status, should be the deciding factor for inclusion in the TSA.

Regarding social security institutions, revenues are not included in the TSA in 12 countries (Table 4.3) and in 2 others, a proportion of their revenue is not included. In Bolivia, Brazil, and Colombia, social security revenues are included in the TSA—a logical inclusion for resources that derive from defined-benefit pension plans (or pay-as-you-go plans), whereby pensions are financed primarily with resources from the budget. Capitalization-based pension plans (with fixed contributions), where the reserves are

²³ In Costa Rica, decentralized entities (53) and nonbusiness decentralized entities (30) which, overall, represent approximately 59 percent of expenditure, are not included in the TSA. Decentralized entities include autonomous entities, state universities, and university colleges, as well as Costa Rica's Social Security (Caja Costarricense de Seguridad Social).

invested in medium- and long-term securities (and benefits are fully funded), are usually managed by private pension funds and their resources should not be included in the TSA. Most countries in the region still maintain pay-as-you-go schemes managed outside the TSA, a decision justified by the financial autonomy that the law bestows on the managing institutions. This is not to ignore the fact that in either of the two situations, a significant part of the reserves (which, in any defined-benefit scheme, tend to be very limited) is channeled to the national treasury by way of investing in government T-bonds, since it is up to the institution responsible for administering the resources to decide on the composition of the investment portfolio, according to the policies set by the appropriate authority. The government, however, should not compel social security institutions to buy bonds nor permit them to do so at below-market rates.

Finally, only Costa Rica, Panama, and Peru include municipality resources in their TSA,²⁴ specifically those central government funds that are transferred to local governments. The resources are credited to the local government, while the treasury processes the payment orders forwarded by the account holder. In this way, the coverage of the TSA partially extends to public institutions excluded on the grounds of autonomy—often the case with provinces, departments, or municipalities. To follow this course of action would be a means by which the management of intergovernmental transfers, through the TSA, could influence subnational governments to include other resources—such as those generated or directly collected by these levels of government—in the TSA.²⁵ It appears to be considerably easier for the treasury to manage these resources through the TSA in countries where the own resources of a few subnational governments represent a large share of total subnational own resources. In certain countries, intergovernmental transfers are made periodically (usually every 10 days, once a month, or every two months), and the resources remain in the TSA until they are distributed. In a few other countries, transfers have conditions attached (e.g., for public investment purposes) and remain in the TSA longer because of delays in execution.

There is still a long way to go in terms of coverage, although progress to date has been encouraging. The scope of the TSA in seven countries has

²⁴ In Peru, only some of the municipal revenues are transferred to the TSA, as the changeover process remains incomplete. In the case of Panama, the transfer is stipulated by law, which has yet to be implemented.

²⁵ In Costa Rica, there have been several cases where local governments have voluntarily deposited their revenues in the TSA to take advantage of the payment services it offers.

increased over the last three years in such a way that the following are now included: (i) in Argentina, the accounts of six entities (Agencia de Administración de Bienes del Estado, Consejo Nacional de Coordinación de Políticas Sociales, Defensoría del Público de Servicios de Comunicación Audiovisual, Unidad de Información Financiera, Centro Internacional para la Promoción de los Derechos Humanos, and Junta de Investigación de Accidentes de Aviación Civil); (ii) in Mexico, pensions and payments of certain social programs, as well as tax rebates; (iii) in Peru, resources collected by the national and regional executive units; funds earmarked for universities (through transfers); revenue from the Municipal Compensation Fund (Fondo de Compensación Municipal); Contributions to Funds of the Office of Pension Normalization (Contribuciones a Fondos de la Oficina de Normalización Previsional (ONP)); and disbursements from international organizations; (iv) in Bolivia, the judiciary and entities that were not previously connected to the Integrated Management and Administrative Modernization System (Sistema Integrado de Gestión y Modernización Administrativa (SIGMA)); (v) in Guatemala, loans and donations; (vi) in the Dominican Republic, resources directly collected by central government entities and those of public hospitals (in process); and (vii) in Uruguay, the State Health Service Administration (Administración de los Servicios de Salud del Estado (ASSE)), which is under negotiation.

To further enhance the scope of TSA, it is essential to use persuasion to convince decentralized or autonomous institutions to consolidate their resources in the TSA (including the savings gained on interest payments as a result of improved expenditure controls) so as to gain such benefits as (i) operational facilities for revenue collection and spending; (ii) expenditure autonomy; (iii) elimination of financial management experts, systems, and controls; and (iv) a more developed and better maintained automated system than that in each entity. While interest should not be transferred to budgetary resources, it is possible for the revenue of these entities to be calculated at the same rates that the treasury uses for its own financial investments. These rates tend to be higher than those of the market since their transaction volume is much lower. The last measure may entice entities to accept the TSA in the view that their revenues will not be affected as a result of the inability to make their own financial investments.

Brazil, in only one year, was able to establish a comprehensive TSA, validating that technical or financial conditions do not limit implementation (see more details in the Annex). Resistance is often of a political nature and can only be overcome by firm commitment to reform from the highest authorities, up to and including the Presidential Cabinet.

Coverage according to type of funds

To analyze coverage according to type of fund or revenue source, this study identifies three categories: tax revenues, external loans, and donations. Although 12 countries now include tax revenues in the TSA, 5 have yet to fully do so—an extremely important objective to achieve substantial improvement in TSA coverage. This is mainly as a result of certain earmarked taxes and tariffs being managed beyond the scope of the TSA, a decision based on the legal arrangements that created the revenues. These arrangements originated from the false premise that to guarantee revenue for a specific purpose, it should be managed outside the TSA (an exception to the principle of fungibility or unified cash management).

Only four countries (Bolivia, Costa Rica, Ecuador, Mexico) have successfully included external credits in their TSAs based on the conditions creditors usually impose on such resources.²⁶ Likewise, hardly any country has included revenue from donations, with the exception of Guatemala, although Costa Rica is in the process of doing so. Lenders and donors often request that resources be held in separate accounts because of concerns of fiduciary risk. They may relax this requirement once cash management practices have improved in such a way as to guarantee the availability of funds for projects or other allocations, improve expenditure controls, and strengthen transparency and accountability through better communications, auditing, and external oversight. Improvements in budget execution and internal monitoring by institutions will assure lenders and donors that fiduciary risks have been adequately addressed. Nevertheless, lenders and donors need to be convinced that procedures are in place to ensure that funding is available for projects (or other uses) when needed.

Bank accounts beyond TSA control

Partial coverage of the TSA is reflected in the significant number of public bank accounts that remain beyond the scope of the treasury, either at the central bank, the public commercial bank that operates the TSA, or in private commercial banks (Table 4.4). In Peru, where nearly 14,000 accounts remain outside the control of the TSA, these correspond mainly to accounts opened

²⁶ In Brazil, external credit resources disbursed by international organizations are deposited in bank accounts in foreign currency at the Bank of Brazil (Banco de Brazil), a public commercial bank, until they are transferred to the TSA or used to reimburse payments made by the spending units. These payments are made with advances from Brazil's Treasury, showing that external credit resources are not deposited in the TSA.

TABLE 4.4 **BANK ACCOUNTS BEYOND TREASURY CONTROL**

| Country | Bank accounts with public resources beyond treasury control (at the central bank or in public or private commercial banks) |
|--------------------|--|
| Argentina | 2,267 (social security, legislature, judiciary, universities, tax agency, etc.) |
| Bolivia | Accounts belonging to public universities |
| Brazil | Trust fund accounts in public commercial banks and resources from external credit |
| Chile | Unavailable |
| Colombia | 300 (in commercial banks) |
| Costa Rica | Under 30, although some are authorized by the national Treasury |
| Dominican Republic | 3,264 accounts (2,640 held by the central government, 468 by decentralized public institutions, 156 by social security institutions) |
| Ecuador | Decentralized, autonomous governments: 4,400; social security: 182 |
| El Salvador | Accounts held by decentralized institutions (58 entities), receiving funding from the State |
| Guatemala | Unavailable |
| Honduras | At least one account per institution (there are at least 25 institutions) |
| Mexico | 324 trust funds |
| Nicaragua | Unavailable |
| Panama | Unavailable (implementation of the TSA currently underway) |
| Paraguay | Approximately 50 (universities, decentralized entities) |
| Peru | 14,000 accounts held at the National Bank (Banco de la Nación) (accounts containing revenues from the municipalities; transfers of funds between national government entities and subnational governments; deposits for works guarantees; and economic intervention) |
| Uruguay | 1,780 (central bank, 113; commercial bank, 1,667) |

Source: Authors' elaboration.

before TSA implementation and to operations that involve financial transfers to national sanitation and social programs, many of whose accounts are dormant. In the Dominican Republic, bank accounts beyond the scope of the TSA represent 92 percent of total public accounts.

Fungibility of Resources

The level of access to or the possibility of unified management (degree of fungibility) by the treasury in terms of institutional resources is critical to

the design of a TSA. A country may have a centralized TSA structure, but have very little or no capacity to use the available resources of the various entities. An ideal model would provide the treasury unrestricted freedom to manage funds in the TSA that are not required by account holders, and only to comply with the cash plan agreed with the holder. There may be situations, however, in which the use of resources is restricted as a result of a previous arrangement or owing to regulatory obligations. This would apply, for example, when resources are legally earmarked for specific purposes or when revenues are collected by institutions, making them inaccessible. Another scenario would be where a developed structure consolidates resources through book entries or “virtual accounts” (bank books or sub-accounts) with no provision for the treasury to use the entry balances, thus placing it in a position of having to borrow despite the resources it holds.

The treasury has full access to resources in only few cases: Brazil, Costa Rica, and Ecuador. Limitations on short-term use of government resources by the treasury exist in 12 countries,²⁷ mainly because of the legal arrangements that restrict treasury discretion to use earmarked or external resources. This, however, reflects confusion between the budget principle of not earmarking resources and the principle of cash unity or fungibility, given that the short-term use of resources is not considered detrimental to their specific purpose if the treasury is to guarantee the availability of such resources.

The regulations of Honduras and Nicaragua do not limit the principle of unity or fungibility of cash although, given the limitations of the conceptual model, the ICT developments for managing book-entry accounts have lacked foresight of a mechanism to record the short-term use of resources without reducing book-entry balances.²⁸ In certain countries, the term for using resources is restricted to the current budget period to ensure that resources are replaced before the end of the budget term, thus limiting financial efficiency.

In addition, a key aspect that relates to cash fungibility is the existence of funds whose resources must be managed separately, thus fragmenting the

²⁷ In Argentina, for fiduciary funds, public universities, and state enterprises (excluded from the TSA), the treasury uses the idle liquidity of these entities to meet the temporary cash needs of the central government. This also applies to Colombia in a similar manner regarding the liquidity surplus of decentralized institutions.

²⁸ In certain countries, the solution to overcome this limitation is to use an operational account that records the total amount of resources used in the short term by the treasury and which serves as a contra-revenue account to offset increases in its book-entry balance.



management of cash. A common practice in various Latin American countries is to establish funds to guarantee resources for specific purposes or to manage them, thus avoiding controls that other fiscal resources are subject to. Some of these funds are made up of fiscal resources, some of nonfiscal resources, and others are made up of mixed resources.

To determine the treasury's role in managing these funds, the time by which they should be used requires consideration. There must be a distinction between special and sovereign funds, the latter of which include stabilization, savings, investment, and pension funds, among others. In this chapter, a special fund—generally extrabudgetary—is one that has earmarked budget resources and follows specific policy objectives. The term for managing these funds is often shorter and they can be managed (partially or entirely) jointly with other cash resources. Therefore, the treasuries in Latin America usually hold these resources, together with other cash resources but not necessarily in a unified way.

Sovereign funds are funds or investment entities that are owned by or belong to the state. They are normally invested in financial or real assets (e.g., bonds, shares, real estate, precious metals, private equity funds, covered bond funds) and, to a large extent, in the external market. Generally, they are set up in response to macroeconomic conditions (i.e., fiscal stabilization) or for savings for future generations. These funds, also usually extrabudgetary, are created with resources that derive from fiscal surpluses, natural resource exports, and/or revenues as a result of privatization, among others.

Sovereign funds exclude international reserves and public employee pension funds that are financed by contributions from employers and employees. Stabilization funds follow macroeconomic objectives, and their resources are invested over the medium term, although a percentage may be invested over a shorter period. Finally, pension funds and savings—or investment funds—are invested over the long term with specific objectives (e.g., saving part of the investment revenues from natural resources for future generations). These require more specialized management and must be considered in the government's asset and liability management strategy. Their resources must be invested in a long-term portfolio. The above explains why these funds are usually managed by a specialized body, and why their investment portfolio may be entrusted to private sector investment firms (or banks).

One of the most significant challenges facing the efficient management of TSAs in Latin America, besides limited coverage, is the proliferation of special funds. Eight countries (Argentina, Chile, Colombia, Costa Rica, the Dominican Republic, Guatemala, Mexico, Uruguay) manage such funds, including

guaranteed funds from international organizations (e.g., United Nations), other donors, and third parties as well as those for education, promotion of regional and local public investment (in this case, various countries), and maintenance.^{29, 30} Some funds are managed jointly with TSA funds and others are managed separately. In countries where they are managed jointly within the treasury, their recording (accounting) and custody are separate.

In some countries, the law that allows the establishment of these special funds stipulates the manner in which they should be invested. In Colombia, they are managed according to the investment policies set by law, coinciding with policies that have been established for national government resources. For instance, certain funds whose management has been entrusted to the Colombian Treasury (e.g., communications, civil aeronautics, transportation, revolving funds) must place up to 100 percent of the quarterly average of the available cash balance into public debt securities. Several of these funds include the pensions of liquidated institutions or staff on early retirement, and the Treasury must therefore ensure that deposits are kept liquid. The Treasury may borrow these funds to cover temporary cash needs. In Argentina and Uruguay, funds also can be loaned to the government, and in Uruguay they are integrally managed with the resources of the Treasury.

Trust funds are often used in the region and, occasionally, their creation is associated with the management of special funds, although in other cases they arise as a result of the independent decision of a public entity. Trust funds are used for public resource management in 14 of 17 countries,³¹ although of the 14, only two have integrated trust funds into their TSAs (Costa Rica and Ecuador).³² This indicates that trust funds are used to manage public

²⁹ In Colombia, Mexico, and Peru, special and stabilization funds enjoy a high average share of the total resources managed by their Treasury.

³⁰ In eight other countries, special funds are not managed by the treasury and only one country (Costa Rica) has assigned a custodian to manage these resources, which relate to a pension fund.

³¹ In many cases, trust funds have multiplied to evade legal and budgetary restrictions.

³² In the trust funds included in Costa Rica's TSA, the trustee is a bank, although the resources, when not in use, remain in the TSA without remunerating its balances. As is the case with decentralized entities, the Treasury guarantees the availability of resources according to the cash plan provided by the trustee (the Treasury acts as the trustee's bank, despite the former perhaps being a bank). Several of the trust funds included in the TSA are credit trust funds that were established with public resources.



resources with the flexibility offered by the private sector and the process, in most cases, remains outside the TSA.³³

Costa Rica and Ecuador have managed to include their trust funds in their TSAs, demonstrating that this is not incompatible with the principle of unity of cash (or fungibility) and, at the same time, suggesting that the advantages of both mechanisms can be achieved. The use of trust funds, however, should be limited or be avoided entirely to prevent the duplication of public resource management costs that often lead to fragmented cash balances.

For the treasury, managing these funds in a unified way may yield the following benefits: (i) availability of resources for short-term financing of cash needs; (ii) guarantee of more effective management in terms of return and reduced administrative costs; and (iii) less risk to the treasury as a result of its all-encompassing view of assets and liabilities, where the treasury also manages the special funds of government entities that are financed with public resources. It is the role of the treasury to ensure that it has the operational capacity to maintain detailed records of the amounts invested on behalf of each fund and to guarantee the fungibility and ownership of resources, as well as the interest due to each one. Moreover, the treasury should have sufficiently skilled human resources to manage short- and medium-term investment portfolios.

There are currently eight sovereign funds in Latin America (Table 4.5), four of which are stabilization funds (Chile, Colombia, Mexico, Peru), one is a savings fund (Brazil), two are stabilization and savings funds (Mexico, Panama), and one is a pension fund (Chile). Stabilization funds usually have a short-term portion to be managed in a similar way to the TSA resources, with part of the resources invested, for instance, in demand deposits at the central bank. In Peru, these are managed separately, are in independent accounts in strategic portions, and are split between cash and term deposits—similar to the TSA.

The conditions under which pension funds should be included in a TSA have been mentioned above. Savings or investment funds, however, usually have a long-term horizon and do not fall within the cash management function; rather, they are managed based on medium- and long-term public investment policy, independent from the adopted TSA model. These funds are usually managed by autonomous bodies rather than the treasury and, in a few cases, by the central bank. Nevertheless, the Ministry of Finance is

³³ In Mexico, for example, Table 4.4 shows 324 trust funds that are outside the scope of the TSA. In Guatemala, the use of trust funds—whose resources are not integrated into the TSA—is a general practice.

TABLE 4.5 SOVEREIGN FUNDS IN LATIN AMERICA

| Country | Name of fund | Assets in US\$ millions* | Year created | Fund sources |
|----------|---|--------------------------|--------------|--|
| Brazil | Sovereign Fund of Brazil (Fondo Soberano de Brazil) | 6.6 | 2008 | Financed by the 2008 budget surplus |
| Chile | Economic and Social Stabilization Fund (Fondo de Estabilización Económica y Social (FEES)) | 15.9 | 2007 | The positive balance that results from subtracting the contributions to the Pension Reserve Fund (Fondo de Reserva de Pensiones (FRP)) from the fiscal surplus, plus copper revenues |
| Chile | Pension Reserves Fund (FRP) | 8.2 | 2006 | Minimum contribution of 0.2 percent of gross domestic product from the previous year, plus copper revenues |
| Colombia | Savings and Stabilization Fund (Fondo de Ahorro y Estabilización) | — | 2011 | Petroleum |
| Mexico** | Petroleum Revenue Stabilization Fund (Fondo de Estabilización de Ingresos Petroleros (FEIP)) | 3.5 | 2000 | Petroleum |
| Mexico** | Mexican Petroleum Fund for Stabilization and Development (Fondo Mexicano del Petróleo para la Estabilización y el Desarrollo) | N/A | 2014 | Petroleum |
| Panama | Panama Savings Fund (Fondo de Ahorro de Panamá) | 1.3 | 2012 | Trust Fund for the Development of Panama and the Panama Canal Authority |

(continued on next page)

TABLE 4.5 SOVEREIGN FUNDS IN LATIN AMERICA (continued)

| Country | Name of fund | Assets in US\$ millions* | Year created | Fund sources |
|---------|--|--------------------------|--------------|---|
| Peru | Fiscal Stabilization Fund (Fondo de Estabilización Fiscal) | 9.1 | 1999 | Budgetary balance from ordinary resources, percentage of assets, plus concessions |

Sources: ESADE, KPMG, and Invest in Spain (2014); laws that establish funds and relate to fund management reports.

Note: N/A = Not available.

* Figures from 2014.

** Mexico has five other funds classified as budgetary stabilization funds (as well as FEIP): Federal Entities Revenue Stabilization Fund (Fondo de Estabilización de los Ingresos de las Entidades Federativas (FEIF)), Natural Disasters Fund (Fondo de Desastres Naturales), Federal Entities Reconstruction Fund (Fondo de Reconstrucción de Entidades Federativas), Infrastructure and Security Support Fund (Fondo de Apoyo para Infraestructura y Seguridad), and Mexican Petroleum Infrastructure Investment Stabilization Fund (Fondo de Estabilización para la Inversión en Infraestructura de Petróleos Mexicanos). The FEIF and the Natural Disasters Fund have significant balances. All are considered to be special funds, although FEIF can be classified as a sovereign fund. The latter also transfers resources to the stabilization fund and other funds.

a key actor in defining their investment policy, with ministry representatives frequently on the executive boards of these fund agencies.

Stabilization or savings funds need to be invested overseas or a small portion should remain at the central bank to avoid the negative effects of inflation and real exchange rates. This scenario is referred to in the economic literature as “Dutch disease.”

Operational Aspects: Revenue Collection, Payments, Account Reconciliation, and Accounting Register

This section provides an analysis of the operational characteristics of a TSA that identifies the most efficient mechanisms for four critical processes that relate to cash management; namely, the collection of revenues, payments, account reconciliation, and accounting registration. Best practices in these areas will ensure greater TSA benefits. Also examined are the ways in which an IFMIS has supported or may support such processes.

The application of mechanisms, such as electronic fund transfers, direct debits, or payment schemes using a real-time gross settlement (RTGS) system are, to a large degree, conditioned by the degree of national payments system development in the different countries of the region. External

conditions, therefore, may be a factor in the differences detected between countries, rather than a lack of interest by the treasuries in making these processes more efficient.

Tax revenue collection

In addition to a review of tax and tariff collections of resources belonging to the central government, this section examines own-source revenues of institutions within the sphere of the TSA. Usually, these entities set their own collection mechanisms—in many cases, by instituting physical cashiers within the entity itself—and do not transfer their revenues to the TSA. In some countries, the own-source revenues of government entities, such as ministries and separate institutions, are not included in the TSA.

The revenue collection processes of Latin American countries vary based on the characteristics of each country (i.e., size, infrastructure, degree of banking penetration). In Brazil, revenues are collected by more than 100 public and private banks and transferred directly to the TSA held at the central bank through the mechanisms of a national payments system. In Bolivia and Mexico, the treasuries have a revenue collection account in each collecting bank, which transfers the amounts directly to the TSA at the end of each day. In Peru, the collection process is carried out through a network of state and private banks, whereby transfers are made to the appropriate subaccount at the Bank of the Nation (Banco de la Nación)—a public bank with limited commercial activities—as indicated by the tax and customs agencies. A significant portion of the revenues is then automatically transferred daily to the TSA at the central bank (only a cash reserve is left at the Bank of the Nation). In Argentina, all entities whose resources are included in the TSA can maintain a revenue collection account at the Bank of the Argentine Nation (Banco de la Nación Argentina)—the public commercial bank that holds the TSA—under each revenue concept and source of financing. Each day, the revenues collected are transferred automatically to the TSA at that bank.

In many countries, tax collection agencies have become more autonomous, with the right to negotiate the terms of banking services (number of days of float or fees). The treasury participates in these negotiations in only eight countries (Bolivia, Chile, Costa Rica, El Salvador, Honduras, Mexico, Nicaragua, Uruguay), which is especially important to ensure rapid transfer of funds to the TSA. In other countries, it is the central bank, other banks, or the tax agency that determines or negotiates the conditions.

In most countries, revenues are first deposited in bank accounts held by the collection agencies before transfer to the TSA. Furthermore, revenue

collection bank accounts that are not zero-balanced are used in 12 countries, reflecting a need for more efficient revenue collection mechanisms. Their balances are transferred to the TSA with some delay, thus increasing the float and collection costs for the government. Revenues should be deposited directly into the TSA as quickly as possible, and the RTGS system is, without doubt, the ideal channel for their transfer.³⁴

Even though 14 countries remunerate the collection services (including the transfer of resources to the TSA) provided by commercial banks based on a fee per transaction (Table 4.6.), in only five countries (Argentina, Bolivia, Brazil, Mexico, Costa Rica) is this procedure the predominant form. In most countries where banks are remunerated by days in which resources are held (i.e., the number of days resources can be used by commercial banks without additional cost), this is the most common form of remuneration.

As Table 4.7 shows, the fiscal revenues of 11 countries remain in commercial banks from one to three days, and in 2 countries for four or more days. Over the last five years, 4 countries have managed to reduce the number of float days.

In all countries, taxes can be paid by cash or by check, which are the traditional payment mechanisms. Direct debits are less common and payment by credit card is even rarer (Figure 4.3). Argentina, Costa Rica, Mexico, and Peru make use of direct debits—a mechanism where, from the tax return submitted to the tax administration agency, an electronic transaction is created that translates into a direct debit into the taxpayer's previously registered account.^{35, 36} This automatic mechanism is undoubtedly more efficient, although it requires that the electronic payments system has the means of information technology (IT) required for this operation. In addition, nine countries have implemented the use of credit cards for tax payments, which

³⁴ Brazil does not use special collection accounts; revenues collected are transferred directly to the TSA and are withheld for one day of float. Argentina, Bolivia, Mexico, and Peru use collection accounts with transfers to the TSA at the end of the day of receipt.

³⁵ A feature of direct debit for tax returns is that the collection transaction is generated by the tax administration with the previous authorization of the account holder to debit the account in favor of the tax agency.

³⁶ A distinction must be drawn between charging to a bank account, which requires the account holder to authorize the charge to the account on each occasion, and direct debit, which entails a standing order to the account by which the account holder issues a single authorization; the agency is then authorized to debit the account, which is thereafter executed directly.

TABLE 4.6 METHOD OF REMUNERATION OF BANKS FOR REVENUE COLLECTION SERVICES

| Country | Percent of revenue collected | Days of float | Transaction charges |
|--------------------|------------------------------|---------------|---------------------|
| Argentina | X | | X |
| Bolivia | | | X |
| Brazil | | | X |
| Chile | | X | |
| Colombia | | X | |
| Costa Rica* | | X | X |
| Dominican Republic | | X | X |
| Ecuador | | X | X |
| El Salvador | | X | X |
| Guatemala | X | X | X |
| Honduras | X | X | X |
| Mexico | | | X |
| Nicaragua | | X | |
| Panama | X | X | X |
| Paraguay | | X | X |
| Peru | | X | X |
| Uruguay | X | X | X |
| Total | 5 | 13 | 14 |

Source: Authors' elaboration.

* All revenues collected by Costa Rica's Customs are covered by transaction charges, as well as a high percentage of internal taxes. Lesser tariffs have remuneration schemes for revenue collection based on days of float.

makes it easier for the taxpayer to comply with tax obligations; it is a method that will no doubt become more popular.³⁷

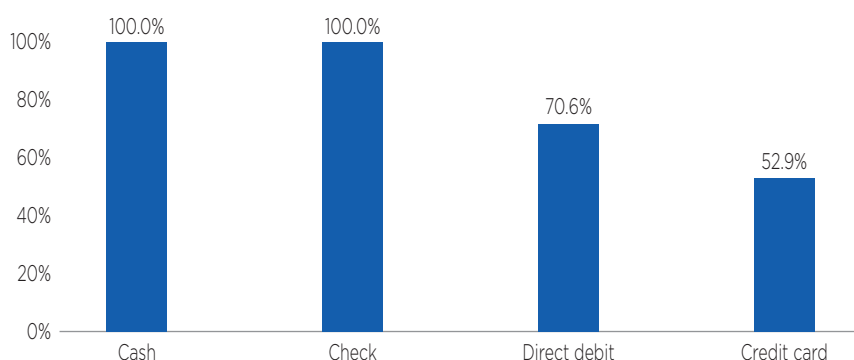
Using banks and financial institutions as auxiliary cashiers for revenue collection is common throughout Latin America, although five countries (the

³⁷ Using credit cards to pay taxes is another option for the taxpayer, which would generate an incentive for taxpayers and offers additional facilities (at a cost) when compared with electronic transfers from bank accounts due to the cash flow alignment benefit it provides (payment can be made today, but is not effective until the day when the card payment is due). Credit card payments to the TSA must be immediate, however, for a comparison to be made with electronic transfers from bank accounts.

TABLE 4.7 NUMBER OF DAYS FISCAL REVENUES ARE RETAINED BY COMMERCIAL BANKS BEFORE TRANSFER TO A TSA

| Remuneration | Duration | Country |
|--|----------------------|---|
| Number of days that fiscal revenues are retained in commercial banks | 0 days | Bolivia, Costa Rica (80 percent of revenues), Mexico, Paraguay, and Uruguay |
| | Between 1 and 3 days | Argentina, Brazil, Chile, Costa Rica (20 percent of revenues), Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Panama, and Peru |
| | Between 4 and 5 days | Guatemala |
| | ≥ 5 days | Colombia |
| Recent reduction in number of float days | 1 day | Dominican Republic, El Salvador, and Peru |

Source: Authors' elaboration.

FIGURE 4.3 PAYMENT MECHANISMS FOR TAXES PAID, ACCORDING TO PERCENTAGES OF COUNTRIES USING THEM

Source: Authors' elaboration.

Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua) combine them with revenue collection offices of the tax administration (i.e., civil servants who receive over-the-counter payments or payments through specially designed payment boxes). El Salvador, for instance, collects nearly 12 percent of its revenues with a mechanism known as direct management (*gestión directa*) through collection offices of the Treasury Directorate-General (Colecturías de la Dirección General de Tesorería) and Institutional Auxiliary Revenue Collection offices (Colecturías Auxiliares Institucionales) staffed by civil servants responsible for the collection, liquidation, custody, and deposit of funds. In Nicaragua,

the revenue collection process through banks is now underway, although the tax administration continues to rely on collecting offices (*colecturías*).

Electronic methods to prepare and submit tax returns and pay taxes are available in all Latin American countries, especially for large taxpayers. There is a dearth of information, however, regarding the relative share of these methods in terms of total revenue collection, although Brazil and Costa Rica have established that tax returns can only be submitted online. The experience of Chile's National Treasury (Tesorería General de Chile), which introduced the concept of a tax portal for paying contributions via Internet to any public entity within the scope of the TSA, is compelling. This experience can certainly be a reference point, in particular regarding the reduction in costs and the economies of scale that can be achieved through these methods.

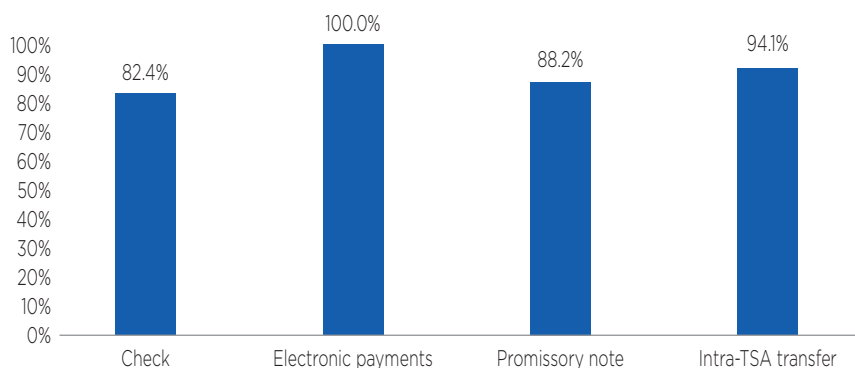
Government payment methods

As Figure 4.4 indicates, the use of checks for some payments (including payments for special circumstances) in the region is high, at 82.4 percent, while electronic payments to bank accounts are also very common (used in all countries). Much progress has been achieved in the use of electronic deposits: 12 countries (Bolivia, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Uruguay) have informed electronic payments to exceed 90 percent of expenditures; in Colombia, Costa Rica, Ecuador, and Guatemala, this is the general mode of payment, while in the Dominican Republic it represents 99.2 percent of all operations. Electronic payments in Argentina represent 99 percent of all payments made in the local currency. Less progress is seen in other countries, although the commitment to increase the use of electronic payments continues.

Direct payment by electronic means to a beneficiary reduces treasury costs and minimizes the risk of intervention by intermediaries along the payment chain. The electronic payment of salaries in Mexico has been estimated to save the federal government an annual amount of Mex\$5 billion, while electronic pension payments have generated a savings of Mex\$11.5 billion (Babatz, 2013).

Although eliminating checks entirely remains a challenge for most countries, payment by check in many of them represents a very small percentage of total payments. Promissory notes continue as a payment instrument made in person, as do transfers between the subaccounts of a TSA or ledger.

From a total of 12 countries that identified the main challenges that hamper the introduction of electronic payments, 5 have stated issues of a technological nature (Bolivia, El Salvador, Nicaragua, Peru, Uruguay), such as

FIGURE 4.4 GOVERNMENT PAYMENT METHODS (AS A PERCENTAGE OF COUNTRIES USING EACH METHOD)

Source: Authors' elaboration.

failure to integrate the procurement system with the financial management system; 3 countries (Bolivia, the Dominican Republic, Ecuador) experience difficulties arising from their communications infrastructure (e.g., poor signal reception in some areas); 2 countries have problems associated with the low level of penetration of banking services (the Dominican Republic, Nicaragua); Panama lacks coordination among the relevant parties; and Mexico faces resistance from some payees (unions).

Only in Panama, Paraguay, and Peru are payments by electronic transfer between subaccounts or ledgers of the TSA yet to be implemented, a mechanism especially practical for paying taxes to the treasury or for inter-institutional transfers. Payments or transfers in other countries between entities included in the TSA are carried by accounting records that exclude the physical transfer of funds—a significant benefit of a TSA. To transfer tax payments between subaccounts, the IFMIS notifies when tax has been paid and submits it to the tax collection agency as if it were a bank.

Nearly all countries have discretionary funds as petty cash or minimum expenditure accounts (i.e., revolving funds) for urgent or minimal payments. Only Brazil, Costa Rica, and Ecuador manage without revolving funds.^{38,39}

³⁸ In Brazil, the petty cash fund operates through the use of a bank card, debited to the TSA.

³⁹ In Costa Rica, the revolving funds operate by way of transfer payments rather than bank cards. The cards used for institutional procurement are for fuel and travel expenses, charged to the TSA.

Revolving funds are an exception to the principle of unity of cash and their elimination is potentially challenging. They involve bank accounts managed beyond the scope of a TSA and, frequently, the use of checks for payments. Some countries are replacing revolving funds with debit cards, a payment method that is swifter than electronic payment, since electronic payments require prior registration in the IFMIS, as well as a processing period, which make it unsuitable for small payments.

Accounting record of resources deposited in the TSA

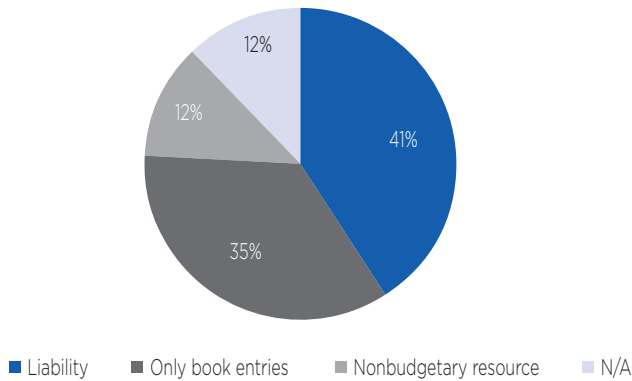
Countries within the region vary significantly regarding their accounting of the resources deposited in the TSA (based on information obtained from 15 of the 17 countries). Although the use of subaccounts or book-entry accounting (“virtual accounts”) for managing deposits is more common, the way in which these resources are treated is not consistent from an accrual accounting perspective.

In Brazil and Chile, the resources that correspond to the revenues of other accounting entities are simply recorded as revenue (budgetary revenue in Brazil and nonbudget revenue in Chile), although they are not reflected in the accruals accounts of the beneficiaries.⁴⁰ They are recorded and treated as a liability in Argentina, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, and Peru—a liability that increases when funds are deposited and decreases at the time of withdrawal or when payments are made with the backing of these resources. As Figure 4.5 illustrates, the most common approach is to record revenues as a liability (41 percent) and to record them solely as book entries (35 percent) which, in this case, are considered auxiliary accounting records. The liability approach is not only more rigorous; it also increases the willingness of the owning entity to deposit the revenues, since it resembles the approach to resources in a bank account as the ownership of revenues is respected.

The role of IFMIS in supporting collection, payment, and accounting processes

PFM requires the execution of a combination of macrobusiness processes, which include (i) budget preparation and execution; (ii) revenue management; (iii) cash planning; (iv) payments management; (v) debt management; and (vi) accounting. The use of ICT simplifies and automates operational

⁴⁰ The definition of accounting entities is not uniform in the region; however, in most countries, reference is made to entities with legal status with an independent budget and their own patrimony, as in the central administration, decentralized institutions, or public enterprises.

FIGURE 4.5 ACCOUNTING TREATMENT OF RESOURCES IN THE TSA

Source: Authors' elaboration.

Note: N/A = Not available.

processes, thereby substantially improving management throughout the various areas of activity of an organization. Benefits include the elimination of manual processes, reduction of errors and time taken to process operations, and development of an extensive database that has the potential to generate information for decision making at operational and strategic levels.

An IFMIS is an IT tool that has been developed to support the execution of core PFM activities. In addition, an IFMIS interfaces with other management systems (e.g., personnel, goods and services, procurement) and with other government entities' systems to exchange information more efficiently. More detail of the role of IFMIS in Latin America is available in Chapter 8.

Analysis of the different automated systems that have been adopted in Latin America indicates that no particular system is predominant in supporting the activities of government in the execution of various processes. In some cases, the IFMIS is a system of integrated modules, while in others, various systems operate different processes. No country has one automated system that supports all the processes involved in PFM. In general, the various systems provide support for the execution of the budget, cash management, and accounting.

Chile, Ecuador, and Honduras still lack a TSA management information system or a module for fully centralized cash management. The following section presents the main elements and functionalities of the TSA that have been incorporated into the IFMIS in Latin American countries.

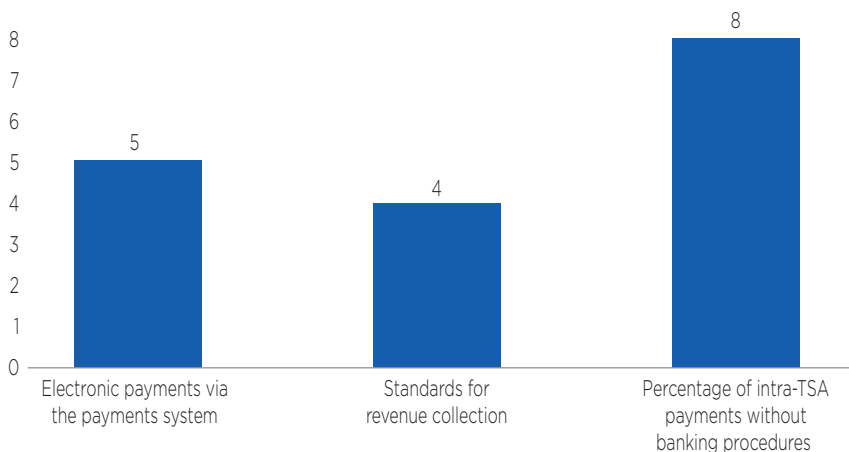
Revenue collection

In general, tax collection in all countries is administered by one or a handful of government entities. These entities usually have their own mechanisms and operational agreements with the financial system, which are not included in the IFMIS. To provide more efficient collection services to benefit both taxpayers and the government, tax administrations in most of the region use the computerized services of the banking system. Customs and tax collection agencies do not usually deal with all the revenues that the government receives, especially in relation to nontax revenues. There are cases in which a large number of government entities manage the collection of their own-source revenues. Provided through the IFMIS, a module for the different stages of revenue management (e.g., assessment, collection, classification, accounting) could increase efficiency in these processes. Only in Argentina does the IFMIS currently have the functionalities for this purpose. In Argentina, Brazil, Guatemala, and Mexico, IFMIS development has standardized bank documents for revenue collection (Figure 4.6).

Payments

The IFMIS can provide mechanisms for payments charged against different types of accounts, including book entry accounts. IFMIS mechanisms in

FIGURE 4.6 NUMBER OF COUNTRIES USING BANKING PROCESS MECHANISMS



Source: Authors' elaboration.

countries, according to the types of accounts that can be debited for payment, are characterized as follows:

- In eight countries (Argentina, Brazil, Costa Rica, El Salvador, Guatemala, Mexico, Nicaragua, Peru), the IFMIS is able to process payment by charging directly to its own book-entry accounts.
- In three countries (Argentina, Bolivia, Colombia), payments also can be processed through the IFMIS for resources held in accounts or subaccounts included in the TSA.
- Another model, adopted only in Peru, provides a method for processing payments through the IFMIS by charging to a bank account outside of the TSA, using the same functionality as the IFMIS for the TSA. It includes bank drafts (*giros bancarios*) and the issuance of payment documents, and provides interconnection with the banking network.
- In the four countries in which the systems lack a TSA management module (Chile, Ecuador, Honduras, Panama), payment operations continue to be conducted manually by issuing checks and other payment documents.
- In the Dominican Republic, where the TSA is not yet fully implemented, payments cannot be made through the IFMIS but through bank accounts.

Regarding the operational facilities the IFMIS can provide, the following methods are worth highlighting:

- In five countries (Argentina, Brazil, Colombia, Mexico, Peru), electronic payments are permitted through the Banking Payment System (*Sistema Bancario de Pagos*) which enables direct transfers to accounts in any bank without intervention from the government general cashier bank.
- In eight countries (Argentina, Brazil, Colombia, Costa Rica, the Dominican Republic, Guatemala, Honduras, Nicaragua), transfers or payments between any units included in the TSA can be executed without a bank procedure.

Accounting Records

Good financial management requires comprehensive information relating to all financial assets and liabilities of government, as well as the availability of

data according to accounting best practice standards. Many governments, nevertheless, produce accounting information that is out of date and focuses only on budgetary execution. Treasurers, therefore, have to depend on data supplied by banks, rather than from their own systems, thus preventing them from ascertaining the amounts held in accounts outside treasury control.

Two important aspects must be considered when using accounting information for financial management:

- The treasury must not rely only on information supplied by banks. It should ensure that all government entities record the movements charged to their accounts on a daily basis.
- Although administrative systems, other than the IFMIS, can provide the necessary data for treasury management, only accounting practices and standards can guarantee the quality of the information. Treasuries must, therefore, focus on the quality of accounting.

Managing the TSA on the basis of accounting information implies that supervision (control) of the book-entry accounts or subaccounts is integrated in the IFMIS and in accrual accounting (being in IFMIS is not necessarily a full and adequate reflection of the accrual accounts). Failure to integrate accounting data can affect the quality of accounting records and due reconciliation. An IFMIS can provide all the information necessary for financial management. However, standardized accounting practices, including reconciliation, double entry, and regular auditing mechanisms can offer information of a better quality, particularly if it is opportune. When the TSA system is a separate system from the IFMIS (i.e., when it is a different administrative system), account reconciliation requires an interface between them. The absence of interfaces would require frequent manual and *a posteriori* account reconciliation.

Only a few countries manage their TSA on the basis of accounting information, with most recording information in an administrative system, separate from the accounting processes. In Brazil, the IFMIS is the accounting system wherein transactions are made and reconciled every day and whereby the Treasury can have at its disposal information it requires regarding the account balances of government entities. In Argentina, the recording of accounting entries and reconciliation is automatic, so quality data is provided through the IFMIS for treasury management. The system developed in Guatemala is similar to that of Brazil, although it is being upgraded to ensure greater financial efficiency and comprehensive accounting control of TSA transactions.

The Treasury management model in Mexico is an automated accounting record mechanism, although the Treasury continues to operate various nonintegrated computerized systems for management.⁴¹ Daily cash management is conducted jointly with the Central Bank of Mexico. The process consists of preparing a liquidity report that details the amounts held in bank accounts and in the TSA, based on information obtained from the banks.

Other countries use administrative rather than accounting systems for financial management, such as Peru; that is, the IFMIS or another administrative system operated by the TSA will record the TSA balance—and sometimes of other accounts—using single-entry rather than double-entry bookkeeping. Some countries do not yet have such a system in place.

The most common approach is the recording as a liability or book-entry account recording which, for this purpose, is considered auxiliary accounting. As mentioned above, the liability approach is more rigorous and motivates the owning entity to deposit its resources in much the same way as in a bank account deposit, whereby ownership is maintained.

Mechanisms that classify funds according to various concepts (e.g., type of tax, revenue source, earmarked expenditures, independent entity revenue) are essential to financial management. In many instances, institutions often resort to opening accounts to gather the information required when the IFMIS is unable to monitor revenues and payments in detail, including those of the treasury. Given the advances in technology, this does not qualify as an efficient procedure. In fact, to eliminate accounts and to provide information through IFMIS records not only contributes to the effective unification of cash resources; it propitiates the elimination (or simplification) of many activities, such as transfers between accounts and account reconciliation, thus improving the operational efficiency of public management. In the more sophisticated systems, the IFMIS provides book-entry account details,

⁴¹ These include, among others, the Federal Integrated Financial Management System (Sistema Integral de Administración Financiera Federal (SIAFF)), Integrated Planning and Budget Process (Sistema del Proceso Integral de Programación y Presupuesto (PIPP)), Accounting and Budget System (Sistema de Contabilidad y Presupuesto (SICOP)), Integrated Federal Fund Accounting System (Sistema Integral de Contabilidad de Fondos Federales (SICOFFE)), Federal Treasury Debt Compensation System (Sistema de Compensación de Adeudos de la Tesorería de la Federación (SICOM)), Integrated Information System of Revenue and Public Expenditures (Sistema Integral de Información de los Ingresos y Gastos Públicos (SII)), and Bank Account Registration System (Sistema de Registro de Cuentas Bancarias (RCB)).

which can be reflected in ledger (accounting) accounts or in a system's simple ledger. This degree of detail of the information allows dispensing with bank accounts and converging to a single account model.

Only in six countries of the region (Argentina, Bolivia, Brazil, Mexico, Nicaragua, Peru) does the IFMIS provide details on the resources by source and other concepts. Likewise, only six countries have mechanisms that generate automated accounting entries, based on the budget and its execution recorded in their IFMIS (Argentina, Bolivia, Brazil, Colombia, Guatemala, Mexico). Furthermore, only four countries (Argentina, Brazil, Colombia, Peru) report that they have automated reconciliation mechanisms for the TSA and only the Dominican Republic and Paraguay have adopted automated reconciliation practices for other bank accounts.

The IFMIS of countries included in this study are set up to provide timely information on the resources deposited in the TSA. Regarding funds deposited in other accounts, the systems are, in general, limited with the exception of Brazil and Guatemala where the model used enables funds in government entity accounts to be recorded in ledger accounts, regardless of whether they are included in the TSA, and where the IFMIS provides timely financial information relevant to government funds. Box 4.1 provides details of this model.

Active Treasury Management

One of the most important objectives of cash resource centralization is to make active cash management feasible to reduce government financing costs and obtain a higher return on cash surpluses. Active treasury management can be defined as a combination of strategies and processes adopted to maximize the returns from short-term cash surpluses within acceptable risk levels. The intent is to reduce idle account balances, invest surplus liquidity, and limit the operational and credit risks that threaten treasury operations. Moreover, the mismatch between cash payments and receipts should be minimized.

The treasuries of the euro area and HM Treasury of the United Kingdom generally maintain a minimum and relatively stable balance at their central banks.^{42,43} The remaining cash is prudently invested, based on financial market options. The minimum balance is established as a target which could be achieved by using appropriate financial instruments, such as Tbills and

⁴² Not to be confused with the European Central Bank (ECB).

⁴³ These countries consider this objective to be the central element of active cash management.

BOX 4.1. IFMIS AS A LEDGER ACCOUNT SYSTEM

In at least two countries, Brazil and Guatemala, the IFMIS is a system that has been designed for the preparation of the accounts. Given that there is no administrative module for budget execution, cash management, or a TSA, the TSA system is the accounting system. There is no specific system to manage the TSA as there is in other countries. Budget execution is carried out through entries in ledger accounts. Detailed as necessary, various ledger accounts record the amount of the approved budget, the committed amount, the accrual, and the payment amount. The act of committing an expenditure, accruing it, or paying it is an accounting operation undertaken in the IFMIS that affects the corresponding ledger accounts. The same occurs with financial programming and execution (control of payment ceilings, details of sources, uses of funds, and other financial information). In Brazil, a reporting tool generates the reports for management based on accounting data on cash flows and balances.

TSA management is performed through accounting records and using accounting information. Each government entity (or budget execution unit) is an accounting unit responsible for the asset ledger account. The sum of all balances of all units is equal to the amount deposited in the TSA at the central bank.

Under this model, revenues paid into the TSA generate corresponding records and increase the balance of the collecting agency. The transfer of resources from one entity or unit to another is done through accounting entries that reduce the amount available for the transferring unit and increases the balance of the receiving unit. The same occurs when one unit pays another, as in the case of the purchase of goods by entities within the same government. Payment to a beneficiary that is not included in the TSA records a reduction in the existing balance of the TSA.

The advantage of an accounting system for financial management is that it follows the standards of control inherent to accounting, such as the double-entry system, adoption of internationally recognized rules, and the systematization of auditing.

repos, to average out the peaks and troughs. A so-called “rough tuning” process attempts to reduce weekly or monthly fluctuations through placing T-bills, while a “fine tuning” will smooth daily balances with the use of repos. For this, markets should be operationally sophisticated and financially liquid, and governments should have the capacity to ensure realistic cash forecasts, monitor them, update them when necessary, and actively participate in the money market.

Active management reduces the uncertainty that surrounds banking liquidity, facilitates monetary policy, and contributes to a reduction in short-term interest rate volatility. Moreover, improved cash management will assist in the development of a short-term securities market that, in turn, will enhance the management of cash surpluses (a virtuous circle).

Only a few Latin American countries have implemented such effective active cash management mechanisms. Most treasuries are still very passive in their cash management and continue simply maintaining available cash at the central bank or the public commercial bank where the TSA is located.

Remuneration of deposits held in the TSA

Interest is paid on the amounts deposited in the TSA in eight countries (Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, and Peru), and held at the central bank in six of these. Chile, Costa Rica, and Nicaragua invest in central bank securities.

In eight countries (Bolivia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Paraguay), the treasury maintains its resources in deposits at the central bank without remuneration. In five countries (Costa Rica, the Dominican Republic, El Salvador, Guatemala, Uruguay), organic laws that govern the central banks prohibit the payment of interest on government deposits.⁴⁴ The Dominican Republic's central bank pays interest at a market rate on account balances invested by its Treasury in term deposits at terms of less than six months. Nicaragua does similarly, although term deposits are issued by the Central Bank of Nicaragua (BCN) on the basis of an annual plan approved by the Treasury's Financial Operations Committee (Comité de Operaciones Financieras) and the Executive Board of the BCN. In Uruguay, the central bank, where the TSA is located, does not remunerate the balances at the TSA.⁴⁵ Receipts and payments in Bolivia are made through banking accounts called "fiscal bank accounts", opened in private banks, under a contract with the Central Bank of Bolivia (Banco Central de Bolivia (BCB)) to provide banking services to the government. The balances at the collection accounts are swept into the TSA at the BCB at the end of each day. For payments, the resources are transferred through the TSA to fiscal bank accounts. The balances maintained in the fiscal bank accounts face a 100 percent bank reserve when not withdrawn by beneficiaries.

The nonremuneration of deposits at the TSA in several countries, besides ignoring the opportunity cost of resources, may distort the investment decisions of the treasury and will discourage the autonomous institutions from participating in a TSA. This may also give them cause to seek legal exemption.

In cases where the central bank pays interest, the rate of remuneration is not linked to a market rate, with a few exceptions. In Colombia it is based on a projection curve of term interest rates, at the same time taking into account the money market and the fixed income securities market.

⁴⁴ The Executive Board of El Salvador's central bank can authorize the payment of interest on government deposits, with the vote of at least four of its members.

⁴⁵ In Argentina, the resources deposited in the Bank of the Nation of Argentina (Banco de la Nación Argentina (BNA)) are remunerated; the Treasury can also invest them in the financial market (although this is not common).

In Ecuador, a dollarized economy, the central bank remunerates the deposits based on the return obtained by the investments in international assets.

In Brazil, interest is calculated according to the median rate that applies to the treasury investment portfolio at the central bank. In Mexico, remuneration is calculated on the basis of its central bank's own target reference rate (policy rate). In Peru, however, an agreement with the Bank of the Nation (Banco de la Nación) establishes that the remuneration is determined by a discretionary rate, set periodically by the central bank's Monetary and Exchange Operations Committee (Comité de Operaciones Monetarias y Cambiarias) which, in recent years, has been set lower than the market reference rate.

Investments in the financial market

The cash surpluses in Argentina, Costa Rica, and the Dominican Republic are invested exclusively in public banks, with Bolivia, Chile, Colombia, and Peru investing in nonpublic commercial banks. The treasury in three countries—Chile, Mexico, and Panama—carries out overnight operations, while in Chile, it operates with reverse repos also (Table 4.8).

Only one country in the region (Chile) has adopted more active cash management practices, investing some available surplus cash, including investing in the public commercial bank, which holds the TSA. Investment auctions are performed in real time at the Santiago Stock Exchange (Bolsa de Comercio de Santiago), similar to the platform used for placing bonds. Chile's investment policy takes into consideration a risk analysis, which includes an

TABLE 4.8 INVESTMENT OF SHORT-TERM CASH SURPLUSES

| Instruments | Countries | Number |
|---|--|--------|
| Overnight investments in the inter-bank market | Chile, Mexico, and Panama | 3 |
| Certificates of deposit from commercial banks or other commercial bank securities | Argentina, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Honduras, and Peru* | 8 |
| Reverse repo operations | Chile | 1 |

Source: Authors' elaboration.

* Until May 2015, Peru's Treasury did not invest in commercial banks, although municipalities and central government entities had the authority to invest their own resources in the market. In the same month, the Ministry of Economy and Finance of Peru, through and in coordination with its central bank where the funds were held, auctioned for the first time treasury resources into fixed-term deposits. The auction took into account limits on credit exposure (to reduce counterparty risk) to each participating financial entity, the legal basis of which was provided by the central bank's Circular N° 021-2015, allowing for similar auctions for treasury resources at the Bank of the Nation.

evaluation of the eligible financial entities, and market valuations (mark-to-market) of financial instruments held in the Treasury's domestic and international investment portfolios.

In Mexico, the investment regime was updated in 2010 to include a wider variety of investment options. Mexico's Treasury has an investment arrangement decided by a technical committee, which prioritizes its investments, investing at the central bank, at development banks, and at the commercial banking sector in that order.

Argentina's legal framework authorizes its Treasury to adopt a wide range of options within its investment strategy. The investments, however, are concentrated in fixed-term deposits at the BNA of Argentina for a minimum of 30 days. The regulations in the Dominican Republic authorize its Treasury to place its surplus resources in remunerated accounts, either within the country or overseas, although an active management of temporary surpluses has yet to be put into practice. In El Salvador and Uruguay, surplus liquidity is not invested.

With the exception of Chile, none of the countries auction their resources among banks. In addition, those countries that invest in deposits at commercial banks do so without requiring collateral, which exposes them to counterparty risk. However, these countries' treasuries use other mechanisms to protect their investments from this risk. Countries investing in commercial banks preselect them according to their credit risk rating and the return they offer on investment. In Bolivia, the banks' risk rating must be A- at minimum and, for the short term, not lower than a P-1. In Colombia, the Deputy Directorate of Risk (Subdirección de Riesgo) evaluates the issuer and counterparty risk before allocating quotas to domestic and foreign banks. The CAMELS rating system is used to assess domestic banks in terms of their capital, assets, management, earnings, and liquidity, while for foreign banks, a rating methodology based on the probability of institutional failure to comply with its obligation uses data from credit default swaps and credit rating agencies. Mexico's counterparty risk rating is set by international rating agencies, while in Peru, the Directorate-General for Public Credit and Treasury (Dirección General de Endeudamiento y Tesoro Público) communicates the maximum bank quota (or investment limit) to each spending unit on a quarterly basis, taking into account the credit rating and a self-sufficiency ratio of the financial institution.

In June 2013, Peru promulgated a new Law on Repo Operations (Ley de Operaciones de Reporto, No. 27.06.2013). The Dominican Republic, meanwhile, is creating an investment unit within its Treasury.



Short-term deficit financing

Short-term deficits are financed by Tbills in 11 countries (Table 4.9). In Bolivia, Nicaragua, and Panama, however, Tbills are authorized but currently not used. In Nicaragua, the central bank issues short-term securities and the Ministry of Finance and Public Credit (Ministerio de Hacienda y Crédito Público) issues medium- and long-term securities. Shortfalls are financed through short-term loans from Peru's and Uruguay's central banks. This also applies to Panama through its National Bank (Banco Nacional), in which the TSA is located, and to the Dominican Republic through a line of credit from its Reserve Bank (Banco de Reservas), a commercial bank. Peru currently issues Tbills for market development, rather than for temporary deficit financing.

CONCLUSIONS AND RECOMMENDATIONS

Although TSA implementation has progressed significantly over the last 10 years in many countries, there are major challenges. Most countries do not have a TSA in place that can provide comprehensive coverage for central government. One of the main obstacles is the legal autonomy enjoyed by some entities, and the limitations on the fungibility of earmarked resources (and/or special funds) and of external credits.

Consequently, a significant change in the legal environment should enable TSA coverage to include all central government resources. In the case of political or legal difficulties regarding specific bodies or revenues, fungibility can be guaranteed by loaning the funds or through providing better mechanisms for revenue collection, payment, and accounting.

TABLE 4.9 FINANCING OF SHORT-TERM CASH SHORTFALLS

| Instruments | Countries | Number |
|---|--|---------------|
| Treasury bills (Tbills) | Argentina, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, and Peru | 11 |
| Short-term central bank loans | Peru and Uruguay | 2 |
| Short-term loans from the bank that operates the TSA. | Dominican Republic and Panama | 2 |
| Others* | Bolivia, Colombia, Costa Rica, Guatemala, and Honduras | 5 |

Source: Authors' elaboration.

* Inter-fund loans; temporary use of resources from specifically earmarked revenues in accounts managed by the TSA.

Very few countries have fully consolidated a TSA model that centralizes the resources in a small number of accounts (mainly zero-balance accounts), nor have they complemented it with an automated system to control fund ownership through subaccounts or book-entry accounting (the most efficient mechanism). Consequently, a conceptual model should be sought whereby:

- Controls regarding earmarked resources (whether or not it is own-source revenue of the entity) should be conducted through the budget and government ledger system (i.e., IFMIS or another system) and not through the creation of bank accounts.
- Book-entry accounts (or “virtual accounts”) should form a part of the IFMIS or a management system in interface with the IFMIS to enable the replacement of the information provided by the bank accounts.
- Bank accounts should be eliminated or substantially reduced. Their closure, however, may temporarily affect bank liquidity and, therefore, it should be gradual and in coordination with the corresponding banks.
- The potential of zero-balance account schemes as a part of liquidity management should be considered, especially for revenues and payments processed in a decentralized manner.
- Finally, a TSA model should be adopted that is consistent with the administrative autonomy granted to some entities and should include operational mechanisms compatible with their management needs.

Almost all countries in the region have not pursued an active cash management policy. The use of T-bills to cover temporary shortfalls is still very limited, and the use of repos is almost nonexistent. The cash surpluses are not auctioned among banks (with the exception of Chile). Many countries lack money markets sufficiently mature to be able to offer the financial instruments necessary for cash management on a daily basis. In some cases, however, it is not the market that is the challenge; rather, the obstacles that hamper progress toward a more efficient model include the legal environment, the capacity of institutions, and/or tax issues.

While there has been a considerable increase in the region of the use of electronic tax payments and immediate transfers of revenues to the TSA, operational limitations still remain; despite the rapid adoption of electronic payments, payments by check continue in many countries. The adoption of a TSA should result in more effective, safer, and economical financial management, and full advantage should be taken of technological changes and



of the modern tools for recording, centralizing funds, and generating information for decision making (an IFMIS, as well as automated banking services, should be used).

The ICT solutions provided for financial management should cover (i) revenue collection, identification, classification, and recording; (ii) account management, reconciliation, and transactions through banking networks; (iii) payments and transfers, including those between TSA-integrated entities; (iv) investment of own-source revenues of the different institutions included in the TSA, and (v) cash-flow forecasting and the identification of surpluses to invest and shortfalls to finance.

ANNEX I

BRAZIL: PIONEER OF AN EFFICIENT IMPLEMENTATION OF THE TSA

Implementing the treasury single account (TSA) in Brazil was only one of a set of public financial management (PFM) reforms proposed by the central government to tackle the macroeconomic crisis of the 1980s. Shortly following the creation of the National Treasury Secretariat (Secretaria do Tesouro Nacional (STN)) in March 1986, an integrated financial management information system was put in place—a process that took no more than eight months from the time of inception to implementation and accountability. This was conducted through financial statements produced by the system. The SIAFI was initially implemented with only key functionalities, with others added over time.

The SIAFI was received with little resistance by government entities (excluding public enterprises which do not depend on regular national treasury transfers). This was because few entities at the time had their own accounting and financial management systems and the SIAFI was a natural substitute for manual processing. Added to this was the understanding of members of the Brazilian Congress, who saw the benefits associated with the coverage of the system and recommended its adoption for the entire federal government.

The TSA was implemented a year later, in 1988, as a ledger account within the SIAFI, complemented by suspense accounts for controlling resources (from the Treasury or from the entities) in accordance with revenue source, earmarked expenditures, and other essential details. The TSA initially included only the resources administrated by the Treasury. Some preexisting bank accounts continued, specifically for collecting own-source revenues, for external loans, revolving funds (petty cash), investment of own resources, and for some special operations. The deposit of social security resources at the Bank of Brazil (Banco do Brasil), a public commercial bank, was maintained. However, since the implementation of the TSA, debits from these accounts were made only through bank orders issued within the system, requiring the corresponding accounting entries (with the exception of petty cash accounts where checks were still used).

Coverage of the TSA gradually increased: by the beginning of the 1990s nearly half of government funds were incorporated in the TSA and, by the end of the decade, the amounts outside the TSA were small. Only a few bank accounts for external loans and petty cash remained.



To achieve comprehensive coverage, regulations and operational mechanisms were put in place so that revenues flowed directly into the TSA, petty cash was managed by the use of a debit card drawing resources from the TSA, and an instrument to invest own-source revenues in the TSA was created. Adjustments were made to eliminate all bank accounts. Social security resources were incorporated into the TSA when the system started showing deficits as a condition for the Treasury to finance them.

Resistance to create a TSA by some institutions was overcome through a combination of incentives and sanctions. Key incentives were the operational facilities that were provided, better access to Treasury resources and, in accounts from which surplus liquidity was invested, higher-than-market rates were offered. An investment instrument was created in SIAFI. This mechanism could be implemented because the cost of financing the government is higher than the interest paid by the banks to their investors in term deposits. The Treasury decided to pay a rate equal to 97 percent of its average financing cost and higher than the rate paid for bank term deposits. As a result, institutional acceptance was high, given that it was difficult to justify the losses incurred by investing liquidity surpluses in the market. Of note is that the STN is legally authorized only to pay interest to entities with own-source revenues and authorized by law to invest these revenues (this is the case only in some autonomous entities, especially university foundations and a few other entities). One of the sanctions established was the enactment of a law that compelled entities to integrate their resources in the TSA under the threat of not approving their rendering of the annual accounts.

The main factor that facilitated the adoption of SIAFI and a TSA was a well-prepared team that was put in place to implement the reform, including experts in ICT, accounting, budget execution, and PFM with experience in the development of similar transactional accounting systems at the Bank of Brazil and the Brazilian Navy (*Marinha do Brasil*). The team had also high operational capacity, which is rare in the public sector. That these tools were rapidly and robustly implemented is also owed to the leadership provided by the Treasury, where many civil servants—including the Minister who took office in January 1988—had participated since 1984 in the preparatory work for public finance reform with the support and guidance of the IMF. Leadership was strong, planning was effective, commitment for change was firm—given the need to tackle the economic crisis while, at the same time, gaining support from the IMF—and the team was very capable in developing and implementing the reforms. Finally, a contributing factor was a government ICT agency on hand to assist in putting the SIAFI and TSA in place. This

obviated the need for an external developer, the procurement of which could have taken between six months and one year. At that time, an adequate off-the-shelf ICT software was not available that could have been easily adapted for government use; this, however, was a less important factor.



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Public Accounting and Fiscal Credibility

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INTRODUCTION

Sound public financial management (PFM) requires good practices across all its components. The recent global economic crisis has refocused attention on the potential role of public institutions to catalyze economic growth despite the extreme pressures on public finances. Most countries in Latin America are carrying out important PFM reforms that, among other objectives, aim to build a better regulatory framework to provide legal certainty and ensure confidence in public institutions. These reforms include modernizing institutions such as national treasuries, developing or improving integrated financial management information systems (IFMIS), and creating new tools for a more reliable budget—discussed in other chapters of this book.

The modernization of public accounting takes rightful place among the various reforms. In particular, these reforms include a transition to full accrual-based accounting and the application of international accounting standards, with the objective of improving government transparency and accountability; contributing to better decision making in the formulation of national policies; strengthening fiscal sustainability and credibility; and providing a wider, more accurate and reliable perspective of a nation's public finances. All these outcomes complement or reinforce the impact of other PFM reforms.

An accounting reform is a significant change in terms of scale and complexity. It brings many benefits, particularly as a consequence of the fresh information that it provides. This chapter—likely to be of interest to treasurers and other senior officials, in addition to public accountants, who are engaged in PFM—describes accrual accounting; provides a summary analysis of the status of the Latin American region; presents various case studies that relate to countries that are committed to accounting reform; and concludes with some thoughts on the execution of accounting reform in Latin America, including the implications for PFM practitioners.

ACCRUAL-BASED ACCOUNTING AS A TOOL FOR IMPROVING FISCAL CREDIBILITY

One of the lessons from the 2009 financial crisis was that an incomplete understanding of a country's underlying fiscal position can have a severe impact on its economy. This is usually a result of a lack of accurate information which, in some cases, is simply due to a government not being able to produce it. For example, a government may not have up-to-date data or reports on the size and maturity of its public sector debt; its hidden or implicit obligations to public corporations and public-private partnerships (PPP); accumulation of employee benefits, such as pensions; potential losses on assets; other liabilities that are not yet recognized; or contingent liabilities.

Since the late 1990s, there has been a concerted effort on the part of governments to improve fiscal transparency, especially since 2010. International institutions have developed international fiscal transparency standards, among which is the International Monetary Fund's (IMF) *Code of Good Practices on Fiscal Transparency* and its supporting guides and manuals; specific standards for budget transparency, prepared by the Organisation for Economic Co-operation and Development (OECD); statistical reporting standards in the form of the IMF's *Government Finance Statistics Manual (GFS)* and Eurostat's *European System of Accounts*; and accounting standards issued by the International Public Sector Accounting Standards Board (IPSASB).¹

According to the IMF, fiscal transparency—defined as the clarity, reliability, frequency, timeliness, and relevance of public fiscal reporting and the

¹ Note that all references to IPSAS refer to the standards promulgated at the end of 2014 and which are published by IPSASB in its official annual handbook.

openness to the public of a government's fiscal policymaking process—is a critical element of effective fiscal management. Fiscal transparency helps to ensure that the economic decisions of government are informed by a shared and accurate assessment of the current fiscal position, costs and benefits of policy changes, and potential risks to the fiscal outlook. Fiscal transparency also provides legislatures, markets, and citizens with the information they need to make efficient financial decisions and to hold government to account for its fiscal performance and utilization of public resources. Finally, fiscal transparency facilitates the international surveillance of fiscal developments and assists in mitigating the transmission of fiscal spillovers between countries.

Access to information is key to ensure financial accountability, although the incentives and regulations—particularly with regard to accounting standards and principles, as well as to the audit process—are also critical elements (Schick, 2013). Improving a country's accounting system by fully adopting accruals and comprehensively disclosing information will most certainly achieve greater transparency and accountability.

The IMF's new Fiscal Transparency Code gives significant importance to the comprehensive, timely, relevant, and reliable overview of the financial position of the public sector in accordance with international standards.² There are at least six dimensions that relate to accounting information, which are considered essential to fiscal reporting:

- Coverage of institutions. Fiscal reports cover all entities that are engaged in public activity, according to international standards.
- Coverage of stocks. Fiscal reports include a balance sheet of public assets, liabilities, and net worth.
- Coverage of flows. Fiscal reports cover all public revenues, expenditures, and financing.
- Timeliness of annual financial statements. Audited or final annual financial statements are published in a timely manner.
- Classification. Fiscal reports classify information in ways that make clear the use of public resources and which facilitate international comparisons.
- External audits. Annual financial statements are subject to a published audit by an independent supreme audit institution which validates their reliability.

² The Fiscal Transparency Code is available at <http://www.imf.org/external/np/fad/trans/>.

A country is classified as having achieved an advanced level of fiscal transparency when the above-mentioned dimensions follow international accounting and auditing standards. Such standards include accounting standards issued by IPSASB and auditing standards issued by the International Organization of Supreme Audit Institutions (INTOSAI).

Accrual-based accounting, if properly implemented, should prevent—or at least make more difficult because of increased transparency—some of the fiscal maneuvers or window dressing that governments revert to present their finances in an overly positive light. Such financial and accounting devices can have a significant fiscal impact (Irwin, 2012). Better accounting, reinforced by strong, independent, and professional external audit, can ensure better outcomes. Most significantly, accruals accounting can provide the vehicle to highlight such issues, in ways not possible under cash accounting. Like any vehicle, however, it may not be driven appropriately!

Key Conceptual Differences between Cash and Accruals

The concept behind accruals accounting is very simple. Under cash accounting, payments and receipts are recognized and brought to account when they are paid or received. In contrast, under accruals accounting, transactions and other events are recognized at the time they occur and in the accounting period to which they relate (and not at the time when cash or its equivalent is received or paid).³ So, for example, under accruals an advance payment of rent for five years is brought to account in the five years to which the rent relates, and not when the cash payment is made. Therefore, transactions and events are recorded and recognized in financial statements, based on the period to which they relate.

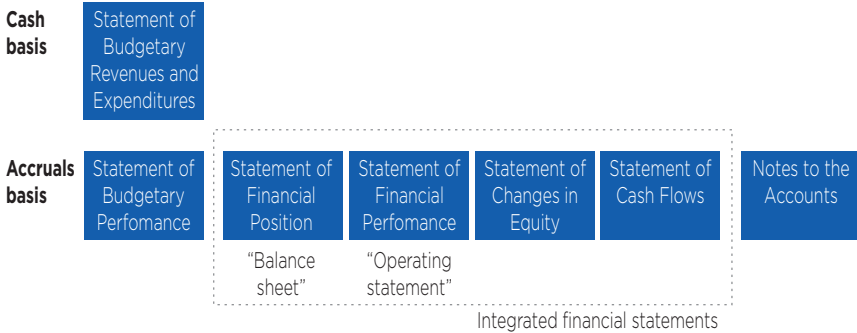
Behind what appears to be an apparently simple idea, however, there is considerable complexity associated with new concepts for those accountants accustomed to working only on a cash basis.

Perhaps the most significant conceptual difference with cash accounting is that accrual accounting concerns the full range of assets and liabilities of the accounting entity, as well as changes in their value. Cash accounting relates only to one asset: cash,⁴ including its related movements through

³ See, for example, the Cash IPSAS for such definitions.

⁴ “Cash” includes cash on hand, demand deposits, and cash equivalents—the latter of which are short term and highly liquid investments that are readily convertible to known amounts of cash. These are subject to an insignificant risk of change in value (Cash-Basis IPSAS, paragraph 1.2.1).

FIGURE 5.1 COMPARISON OF CASH-BASED AND ACCRUAL-BASED FINANCIAL STATEMENTS



Source: Authors' elaboration.

cash payments and receipts. This extension of the accounting perspective—from cash to all forms of value—is most clearly visible in the comparison between the principal financial statements that are produced under the two approaches (Figure 5.1):

- Under cash accounting,⁵ it is generally sufficient to produce a statement of cash receipts and payments, including opening and closing cash balances.
- Under accruals accounting, it is also necessary to produce a balance sheet⁶ which shows the assets, liabilities, and net worth or equity (i.e., assets less liabilities) of the entity at the start and end of the accounting period; an operating statement which shows the revenue,⁷ expenses, and surplus or deficit for the period; and a statement of any other changes in net worth (or equity), which are not reflected in the operating statement. Standards also require a cash flow statement and a full set of disclosure notes.

A second major variance between cash and accruals accounting is that the latter tends to break away from the focus on the annual budget and budget

⁵ Often under a modified cash basis, as in the many countries that account for budgetary expenditures on an accrual basis and revenues on a cash basis.

⁶ Statement of Financial Position is the terminology preferred by IPSAS.

⁷ Statement of Financial Performance is the terminology preferred by IPSAS.

performance. Traditional cash-based government accounting is often based on accounting for budget allocations and associated parliamentary appropriations to show whether ministries, as well as government as a whole, have under- or over-spent against their budgetary allocations and the sums voted by the legislature. Similarly, cash accounting is often restricted to accounting for budgetary moneys only—where the accounting entity is usually a budgetary entity (or budget holder). In contrast, accruals accounting covers all the resources used or belonging to an entity, including budgetary funds; and the accounting entity itself is defined in terms of economic concepts of ownership and control rather than in terms of budgetary accountability or boundaries. There is still scope for budgetary accounting within an accruals regime—elaborated on later in this publication—but the main determinants of accrual accounting coverage and presentation are economic rather than budgetary.

This wider perspective is interesting for other areas of PFM as an element that positively contributes to second-generation reform in treasury management which, today, is being pursued in some countries within the Latin American region. The new financial instruments that have come into use, such as treasury bills and treasury bonds, as well as other more complex financial instruments, would not be recognized in financial statements under a traditional pure-cash basis. A switch to accrual accounting will improve the comprehensiveness of financial statements and reporting, as well as the fiscal credibility of a country. Those countries with more fiscal credibility usually have better credit ratings and, hence, have increased access to international financial markets at lower interest rates.

A third significant difference between cash and accruals is the extent to which professional judgment is required concerning the basis of measurement and the boundary for capture. Under the cash basis, it is generally straightforward to decide which transactions should be captured within the accounts and how they will be measured (i.e., any transaction that affects cash balances, measured by its direct cash impact). Under accruals, however, it is not so straightforward: decisions are required about what constitutes the accounting entity or boundary, which assets and liabilities should be included, and how these should be measured and reported in the accounts. In accruals accounting there is far more scope for professional judgment, governed or guided by accounting principles or standards and exercised by professional accountants. This is a sharp contrast to cash accounting, where such matters may be determined by financial administrators who are responsible for the budget and its delivery, probably working with accountants who may be trained only in the specifics of budget accounting. The



move to accruals accounting, therefore, will doubtless bring a shift in the balance of influence toward professional accountants (and auditors).

One final conceptual difference that is important between cash and accruals is the degree of certainty and verifiability attached to figures in the accounts. Under cash accounting, it is not unusual for accounting and financial reporting to be in fine detail—to the last cent—and for balances to be directly and fully reconcilable with bank records or physical checks on cash equivalents. Under accrual accounting, accounts are composed of cash-based transactions, which can be directly verified, and accounting estimates and calculations, based on professional judgment and accounting standards. These latter items will include, for example, figures based on algorithms and formulas (e.g., depreciation, work in progress, bad debts provision), or estimates (e.g., actuarial estimates of pension liabilities, external professional valuations of assets). In essence, cash accounting measures and reports on one asset with great accuracy: cash. In contrast, accrual accounting reports on the entire range of assets and liabilities, although with some inherent inaccuracy or fuzziness (i.e., including accounting judgments and calculations that represent a best estimate of the value being reported).

What should be included and how best to value some economic account items are examples of questions that generate most debate. Nevertheless, despite the imperfections, it should be better to have a more complete picture of financial performance and position rather than focusing only on cash. Furthermore, full accruals accounting does not relinquish or reduce cash control and analysis; it actually supplements cash-basis accounting information by providing a cash flow statement, which is one of the financial statements prepared under accrual accounting that reflects all inflows and outflows of funds related to economic activity.

Links between Accruals and International Accounting Standards

The inherent need for professional judgment in accruals accounting leads directly to the question of how such judgment should be exercised. It is, of course, up to the discretion of a government or individual entity to develop and determine its own accounting policies, according to its own logic. However, this does not suggest that a government may set its own rules so as to present a more favorable picture of its finance and financial management.

There is much to be gained, therefore, from the development of standards that have some external validity. There is now a considerable body of international accounting standards and established practices, on which

FIGURE 5.2 INTERNATIONAL ACCOUNTING STANDARDS FOR VARIOUS PUBLIC SECTOR UNITS

| | | | |
|---------------------------------|--------------------|------------------------------|-------|
| Public sector | General government | Budgetary central government | IPSAS |
| | | Central government | |
| | | Regions | |
| | | Municipalities | |
| Government business enterprises | Central government | IFRS | |
| | Regions | | |
| | Municipalities | | |
| Private sector | | | |

Source: Authors' elaboration.

governments can draw. Much of this work has its roots in the efforts to standardize accounting practices in the private sector, now reflected in the International Financial Reporting Standards (IFRS), produced by the International Accounting Standards Board. For the public sector, and since the late 1990s, IPSASB—which is a part of the International Federation of Accountants (IFAC)—has been producing the International Public Sector Accounting Standards (IPSAS). The latter are largely based on IFRS, although they are adapted to or developed for the public sector. The only internationally recognized set of standards for the public sector are IPSAS (European Commission, 2013).⁸ The choice of international standards, therefore, will largely come down to IFRS for government business enterprises and IPSAS for the rest of the public sector (see Figure 5.2).⁹ Commercial entities within the public sector should apply IFRS or the national equivalent.

The advantage of basing national standards on international ones is that the latter have been developed after an arduous work on behalf of international experts, and based on national accounting best practices. In addition, private sector—and more recently public sector—standards are based on a conceptual framework that defines the purposes of financial reporting, outlining the main concepts that underlie accounting and the standards-setting

⁸ For a discussion of IPSAS's advantages and drawbacks, see European Commission (2013).

⁹ Some early adopters also used IFRS or similar commercial standards for this non-commercial segment of the public sector, due in part to the fact that at the time, the IPSAS standards had not yet been developed.

process. As such, international standards increasingly provide a sound and integrated framework of guidance. As a result, it should be easy, when viewing a set of accounts that follow international standards, to find the relevant information and understand it. Accounts that comply with international standards will almost certainly be more credible to the public and the legislature, as well as the international development community, lenders, and the rating agencies that monitor the financial health and performance of countries. While the work on these standards is already substantial, it is not yet complete. The process of developing and amending them, as well as identifying new requirements, continues.

International standards are framed in terms of financial reporting requirements; that is, they specify what should be reported or disclosed in annual financial statements. They do not specify the manner in which this information should be obtained or how accrual accounting should be implemented. They are, however, the key driver that informs the transition to accrual accounting.

With one exception, all standards apply to accruals accounting. There is, so far, only one (unnumbered) IPSAS for cash accounts and, as of end-2014, 32 accrual-based IPSAS (Table 5.1), of which one (IPSAS 15) has been superseded by later standards.¹⁰

At least in theory, it is possible to remain on a cash basis and claim compliance with international standards. It is evident, however, that IPSASB never intended for cash basis to be a permanent solution. The cash IPSAS even includes sections on accrual-type disclosures and the transition to accrual accounting. Furthermore, IPSASB has published a separate study paper that provides guidance on the transition from cash to accruals (IPSAS, 2011). It is therefore fair to say that the adoption of international standards will often go hand in hand with a switch to accruals. Transition to accrual accounting will usually involve the gradual adoption of relevant standards, as discussed later in this chapter.

International accounting standards are not mandatory; there is no international law that requires their adoption. Instead, each country should adopt or adapt the relevant standards into its own national law or regulations.¹¹ Nevertheless, countries that fully transition to accruals usually take

¹⁰ IPSASB publishes an annual handbook containing all the standards (see <http://www.ifac.org/public-sector>).

¹¹ See IPSASB (2006) for guidance on when national standard setters can legitimately claim compliance with international standards.

TABLE 5.1 ACCRUAL-BASED IPSAS

| Standard | Title of the standard |
|-----------------|---|
| IPSAS 1 | Presentation of Financial Statements |
| IPSAS 2 | Cash Flow Statements |
| IPSAS 3 | Accounting Policies, Changes in Accounting Estimates, and Errors |
| IPSAS 4 | The Effects of Changes in Foreign Exchange Rates |
| IPSAS 5 | Borrowing Costs |
| IPSAS 6 | Consolidated and Separate Financial Statements |
| IPSAS 7 | Investments in Associates |
| IPSAS 8 | Interests in Joint Ventures |
| IPSAS 9 | Revenue from Exchange Transaction |
| IPSAS 10 | Financial Reporting in Hyperinflationary Economies |
| IPSAS 11 | Construction Contracts |
| IPSAS 12 | Inventories |
| IPSAS 13 | Leases |
| IPSAS 14 | Events after the Reporting Date |
| IPSAS 15 | Financial Instruments: Disclosure and Presentation |
| IPSAS 16 | Investment Property |
| IPSAS 17 | Property, Plant, and Equipment |
| IPSAS 18 | Segment Reporting |
| IPSAS 19 | Provisions, Contingent Liabilities, Contingent Assets |
| IPSAS 20 | Related Party Disclosures |
| IPSAS 21 | Impairment of Noncash-Generating Assets |
| IPSAS 22 | Disclosure of Financial Information about the General Government Sector |
| IPSAS 23 | Revenue from Non-Exchange Transactions (Taxes and Transfers) |
| IPSAS 24 | Presentation of Budget Information in Financial Statements |
| IPSAS 25 | Employee Benefits |
| IPSAS 26 | Impairment of Cash-Generating Assets |
| IPSAS 27 | Agriculture |
| IPSAS 28 | Financial Instruments: Presentation |
| IPSAS 29 | Financial Instruments: Recognition and Measurement |
| IPSAS 30 | Financial Instruments: Disclosures |
| IPSAS 31 | Intangible Assets |
| IPSAS 32 | Service Concession Arrangements: Grantor |

Source: Authors' elaboration.



the standards into consideration to some extent, which is certainly the case in Latin America.

The adoption of standards can take place directly or indirectly (Bergmann, 2009). Directly, the legislation of the country refers specifically to the adoption of the original IPSAS text (e.g., Dominican Republic). Indirectly, as in the case of Brazil and Chile, the country approves standards in its legislation, based on IPSAS to a greater or lesser extent. These are followed by secondary regulations that put them into force. In both approaches, an accounting manual is the vehicle to promulgate national standards, while technical consultations with regard to their implementation are carried out through administrative resolutions.

Similarly, “adoption of IPSAS” can be distinguished from “adaptation to IPSAS.” In the former case, standards that are applicable to a country are transposed into national legislation without significant change. In the latter case, a country that adapts its government accounting to IPSAS usually does not entirely change its national legislation; rather, it includes some changes to bring it closer to international standards, such as in the case of Brazil. In addition, some countries may opt not to apply certain standards, as is the case of most of Latin America in terms of the IPSAS relating to financial reporting in hyperinflationary economies.

Advantages and Disadvantages of Switching to Accrual-Based Accounting

There is considerable debate about the advantages and disadvantages of switching to full accruals accounting. The growing weight of opinion, however, is in favor of accruals accounting, demonstrated by the increasing number of countries, worldwide, that have adopted or intend to adopt accrual accounting and international standards.¹²

Those who make the case against accrual accounting argue that cash accounting has served governments well for a very long time¹³—that it is well suited to the needs of the public sector, especially to budgetary accounting;

¹² See for example, the annual surveys of government accounting practice, published by Ernst & Young (http://www.ey.com/GL/en/Industries/Government---Public-Sector/Transparency-in-public-sector-accounting_Survey-results---accounting-system-trends) and PwC (2013).

¹³ See, for example, <http://www.slideshare.net/AndyWynne1/public-sector-accounting-the-cruel-world-of-neoliberalism?related=1>.

and that accruals can undermine cash and expenditure control. Opponents also state that much of the additional information that accruals accounting requires and produces (e.g., fixed assets, investments, or public debt) already exists and can be reported separately or as an adjunct to the cash accounts. They also contend that the cost of moving to accruals accounting is significant, and that the required systems and technical expertise may be beyond the capacity of governments in many developing countries. Finally, they contest that accrual accounting results in financial statements that are difficult to understand and interpret; that they rely too much on judgment rather than on certainty; and that they include numbers that are less accurate than cash numbers. These arguments are worth considering, for at the very least they highlight some of the key risks to avoid or which should be minimized when transitioning to accrual-based accounting.

In contrast, advocates of accrual accounting argue that it represents a significant change in the coverage and the transparency of governments' financial information. They claim that it provides public financial managers, parliamentarians, analysts, commentators, and members of the public with a more complete view of government financial performance and position, prepared within a coherent framework of international standards. Users of the accounts will be able to focus beyond cash and budgetary numbers, with the availability of structured information on material assets and liabilities. Users also will be privy to information that may never have been published before or that was only available in separate or highly technical publications. Supporters argue that accrual accounting is entirely compatible with cash control and management, stating that some of the weaknesses in public finance—exposed by the recent global economic crisis—such as high government indebtedness, would have been apparent sooner had accruals accounting been in place. On the issues of cost and transition challenges, these should not be avoided; rather, they should be appropriately managed, with a transition that is well planned and compatible with a country's capacity. Proponents of accruals accounting also believe that its adoption will strengthen or revive the various systems and controls that are required to achieve sound financial management (e.g., monitoring of asset holdings, public debts, and other liabilities). Furthermore, they point out that accruals accounting has been the norm in the private sector since the nineteenth century or earlier.

The intelligibility and reliability of accruals information presents challenges to government accountants. These can be overcome by the application of international standards to ensure that financial statements are

comprehensible, comprehensive, useful, and reliable (i.e., fit for purpose). Their reliability is reinforced by the scrutiny of independent and professional public audit institutions. A final benefit is that accruals accounting, when well implemented, may improve a government's standing with rating agencies, which influences the cost of borrowing. A half a percentage point less in interest rates can make a very significant difference in borrowing costs.

Overall, therefore, the balance of argument is more in favor of accruals. Implementation should be tailored to the needs and capacities of each country: transition should be at a pace that allows the costs to be managed and which is compatible with the capacity to undertake such reform.

PUBLIC ACCOUNTING IN LATIN AMERICA

In comparison with other regions of the world, public accounting in Latin America is well established. These countries prepare comprehensive financial statements on a yearly basis, following a modified cash or modified accruals basis.

The accounting systems in Latin America are all based on Spanish (or Portuguese) tradition in terms of legislation. In general, they are similar in the following ways:

- **Legal framework.** Countries have a solid and hierarchical legal framework. The government accounting system, as well as each segment of the PFM system, is defined by law. At the peak of the legal pyramid is the Constitution, which includes the consolidated data relating to the financial statements. Most countries include the supreme court of auditors and/or the comptroller general's office (*Contraloría*), as well as their obligations with regard to the audit of the consolidated statement and the deadlines for submission to parliament. At the second level of the pyramid, a financial-administration act or the organic budget law identifies the entity in charge of government accounting and the general principles on which government accounting will be based. These principles are developed by a secondary legislation (e.g., regulations, decrees), usually approved by the minister of finance and prepared by the government accounting director or *Contraloría*. Secondary legislation also includes the government accounting manual, guidelines that incorporate the methodologies, and accounting consultation.

- **Double-entry accounting.** Countries apply a double-entry accounting method that recognizes credit and debit records; this is equally applied by the private sector. The institutions responsible for recording data are established within the various line ministries, decentralized entities, regions, and municipalities. Data is recorded in an information and communications technology (ICT) system that is integrated with other systems, to a greater or lesser extent, depending on the country.
- **Transparency.** Countries prepare financial statements for publication (Table 5.2) and submission to parliament. The timing of submission varies among countries. According to the IMF's Fiscal Transparency Code, the "advanced" standard on the timeliness of annual financial statements is met when the audited or final annual financial statements are published within six months beyond the end of the financial year. Not many countries in the region meet this standard; they usually present their statements between 12 and 18 months beyond the end of the financial year.
- **Legislature oversight.** Countries involve their respective parliament in the final approval of consolidated financial statements, although the approval's impact and the discussions on public accounts vary significantly from country to country. In general, however, due to presentation delays, the parliamentary discussion has insignificant outcome or impact.
- **Multilayer government structure.** Finally, countries have—to a greater or lesser extent—a complex territorial structure that includes the central government, regions, many municipalities, and public business entities. It is important to highlight that subnational governments have significant autonomy in managing their expenditures, and their revenue system is based on a mix of transfers from the central government, as well as revenue. In some countries, subnational governments are able to approve their own accounting regulations and use their own ICT systems, although they are not always adequately integrated within the central government system. This profusion of systems tends to create greater complexity to the scope of accounting, making such reforms even more challenging. Moreover, the resources—in terms of technical capacities and methods—are often inadequate in comparison with central government, constituting significant obstacles to the full adoption of accruals.

TABLE 5.2 CONSOLIDATED CENTRAL GOVERNMENT REPORTS: REPORTING REQUIREMENTS AND PUBLICATION

| | Legal basis for reporting requirements | | | Publication of consolidated central government reports |
|--------------------|--|---------------------------------|----------------------------------|---|
| | Constitution | Law approved by the legislature | Organizational or internal rules | |
| Argentina | X | X | | Central Budget Authority website |
| Brazil | X | X | | Central government information portal |
| Chile | | X | X | General Controller Office information portal |
| Colombia | | X | | Line ministries or individual agencies |
| Costa Rica | | X | X | Central Budget Authority website |
| Dominican Republic | | X | X | Line ministries or individual agencies |
| Ecuador | X | | | Central Budget Authority website |
| El Salvador | X | X | X | Central government information portal |
| Guatemala | X | X | | Central Budget Authority website and line ministries or individual agencies |
| Honduras | | X | | Central Budget Authority website |
| Mexico | X | X | | Central government information portal |
| Panama | | | X | Line ministries or individual agencies |
| Paraguay | X | X | | Central Budget Authority website |
| Peru | | X | | Central Budget Authority website |

Source: Survey on budget practices and procedures in OECD (2014).

Accounting Reforms in Latin America

Latin America has experienced a growing interest in international accounting standards during recent years. Several countries have moved toward adoption, reflecting the advantages of fully applied accruals—as explained in the previous section of this chapter. None of the countries, however, has yet completed the transition. The concept behind accounting reform is to improve the reliability of data, transparency, and fiscal credibility of financial statements and to enhance the quality of decision making and the formulation of national policies.

This section broadly presents the status of accounting reform in various Latin American countries. The relevant data has been collected from various sources, including country websites, public documents, and the exchange of information that took place during the first seminar of the Latin American Government Accounting Forum (Foro de Contadores Gubernamentales de América Latina (FOCAL)) (Box 5.1).

To date, no country in the region has fully applied IPSAS or accrual-based accounting practices. However, none are applying simple cash accounting. Most countries are implementing a mixed system that combines accruals accounting for various elements and cash accounting for others.

Accounting reform is a custom-made process. Several conditions can affect the pace and rhythm of such reform, such as the degree of support from the highest authorities, level of capacity, and appetite for reform within

BOX 5.1. A PERMANENT FORUM ON GOVERNMENT ACCOUNTING: LATIN AMERICAN GOVERNMENT ACCOUNTING FORUM

In November 2014, the first seminar of the Latin American Government Accounting Forum (Foro de Contadores Gubernamentales de América Latina (FOCAL)) was held in Chile. The seminar was organized by Chile's *Contraloría General* with the support of the Inter-American Development Bank, International Monetary Fund, and World Bank. FOCAL is a new initiative, sponsored by 14 Latin American countries, in parallel to the successful Latin American Treasury Forum (Foro de Tesorerías Gubernamentales de América Latina (FOTEGAL)), established in 2010.

FOCAL^a aims to provide a permanent forum for technical discussions and exchanges of experience in the transition process to accrual accounting and the adoption of IPSAS. During the first seminar, the discussions focused on several topics, such as the importance of appropriate accounting standards to improve fiscal transparency and accountability; managing the transition from cash to accruals; and the accounting of financial instruments, concessions, and public-private partnerships.

^a Further information can be found at <http://www.contraloria.cl/NewPortal2/portal2/ShowProperty/BEA%20Repository/Sitios/FOCAL/index.html>.

the ministry of finance, as well as the specific functionalities within financial systems. A further key underpinning is the need to update accounting policies to fully complete the implementation process. These factors make it very difficult to categorize countries. Nevertheless, to present a view of the status of Latin America, four groups have been distinguished and are represented in Figure 5.3.

Excluding those countries (white) that fall outside of the national legislation sample, the first group of countries (light pink) (i.e., Argentina, Bolivia, Paraguay, Uruguay) includes those that have not formally initiated the transition process nor have adopted IPSAS. They account within their own legislation, usually with a mix of cash and accrual methods. It is very common, for example, that

FIGURE 5.3 ACCRUALS IMPLEMENTATION IN LATIN AMERICA



Source: Authors' elaboration.

revenues are identified when cash flow takes place, in contrast to expenses that are identified on an accrual basis (e.g., ensuring budgetary payments are made in the thirteenth month or similar extended period). In some cases, the national legislation is already broadly consistent with IPSAS, placing these countries in a better position at the start to enable them to complete the reform.

The case of Argentina reflects this particular stage—a country that has not changed its national regulation since 1996 and which, to date, has not yet published a strategy encompassing the adoption of IPSAS. The current system was approved by a resolution, submitted by the Secretary of Finance in 1996 to modify a previous resolution that was passed in 1993. The Secretary of Finance, through this resolution, delegates to the General Accountant the power to approve secondary legislation, referred to as *Disposiciones*. The resolution approves the Manual of Government Accounting, comprising a glossary, chart of accounts (CoA), operating instructions, and examples of financial statements.

Paraguay and Uruguay are in the process of analyzing the benefits of reform. So far, no strategy has been officially adopted.

The second category of countries (medium pink) includes those (i.e., El Salvador, Guatemala, Nicaragua, Panama) that are in the process of IPSAS accounting reform, having already implemented a strategy. In Guatemala, for example, accrual-based accounting began subsequent to the enactment of the Organic Budget Law in 1997, and the IPSAS implementation process commenced in 2005 as part of a financial systems project.

The transition to IPSAS in Panama also relates to a new IFMIS, now a priority of the Ministry of Economy and Finance. While IPSAS adoption is intended, the strategy has yet to be approved, (i.e., supported by the government's Director of General Accounting and the *Contraloría*, who are responsible for approving the new regulation).

The third group of countries (dark pink) (i.e., Colombia, Dominican Republic, Ecuador, Honduras) have prepared a transition strategy or are at the stage where an official pronouncement to transition to IPSAS has been made, although the transition has not yet officially begun. For instance, in Colombia, the Public Accounting Regime (Régimen Contable Público) approved a resolution in 2007 that comprises the General Public Accounting Plan, Operating Procedures Manual (Manual de Procedimientos), and Public Accounting Principles. In June 2013, the National Comptroller General (Contaduría General de la Nación) published a strategy to incorporate IFRS and IPSAS (Colombian Government, 2013). The strategy presents the background to the public accounting regulation, as well as the conceptual framework for IPSAS,

and it demonstrates the intention of the General Accountant to adopt IPSAS in the near future. The next step will include the approval of accounting policies in line with IPSAS, followed by the gradual introduction of the new framework. On its end, Ecuador enacted a law in 2010 that defines accruals as the accounting principle to be observed by entities in the nonfinancial public sector. The government plans to implement IPSAS by 2019.

Lastly, the fourth group of countries (red) shows those (i.e., Brazil, Chile, Costa Rica, Mexico, Peru) that have approved a plan to include legal authority to implement IPSAS or full accrual accounting. In Peru, for instance, IPSAS have been officially adopted and the authorities are working on applying the standards. In Brazil, however, there has been an official adaptation, or convergence, toward IPSAS.

In the case of Mexico, the General Law of Government Accounting (Ley General de Contabilidad Gubernamental) was approved on December 31, 2008. The law is applicable to the entire government. The initial date for implementation of the new accounting procedures was January 1, 2009, but the deadline has been extended successively to January 2013 and January 2014. In April 2015, the financial statements of the executive, legislative, and judiciary branches; autonomous entities; and the parastatal sector of the federal government were finally presented for the first time, following the harmonization of the framework.¹⁴ The law requires that revenues and expenditures be calculated according to accrual-based accounting procedures. In August 2009, the National Council of Accounting Harmonization (Consejo Nacional de Armonización Contable (CONAC)) published a conceptual framework relating to government accounting, which defined the accounting standards to be issued by CONAC, along with IPSAS standards, as well as supplementary IFRS ones.

Alternative Methods to Assess Progress

The survey that was presented at the FOCAL seminar represents those countries that are considering government accounting reform. Each anticipates issuing financial statements according to IPSAS standards over the medium to long term, despite the variation in their strategies, which will become apparent in the survey.

¹⁴ See the published financial statements at <http://www.cuentapublica.hacienda.gob.mx/es/CP/2014>.

The application process will differ between countries, although most have established 2019—or later—as the expected first year to issue IPSAS financial statements for their respective central government. The later date, for example, applies to Brazil (2020), Chile (2019), Costa Rica (2021), and Panama (2021). Countries that are in the initial stage of transition should expect a longer implementation period.

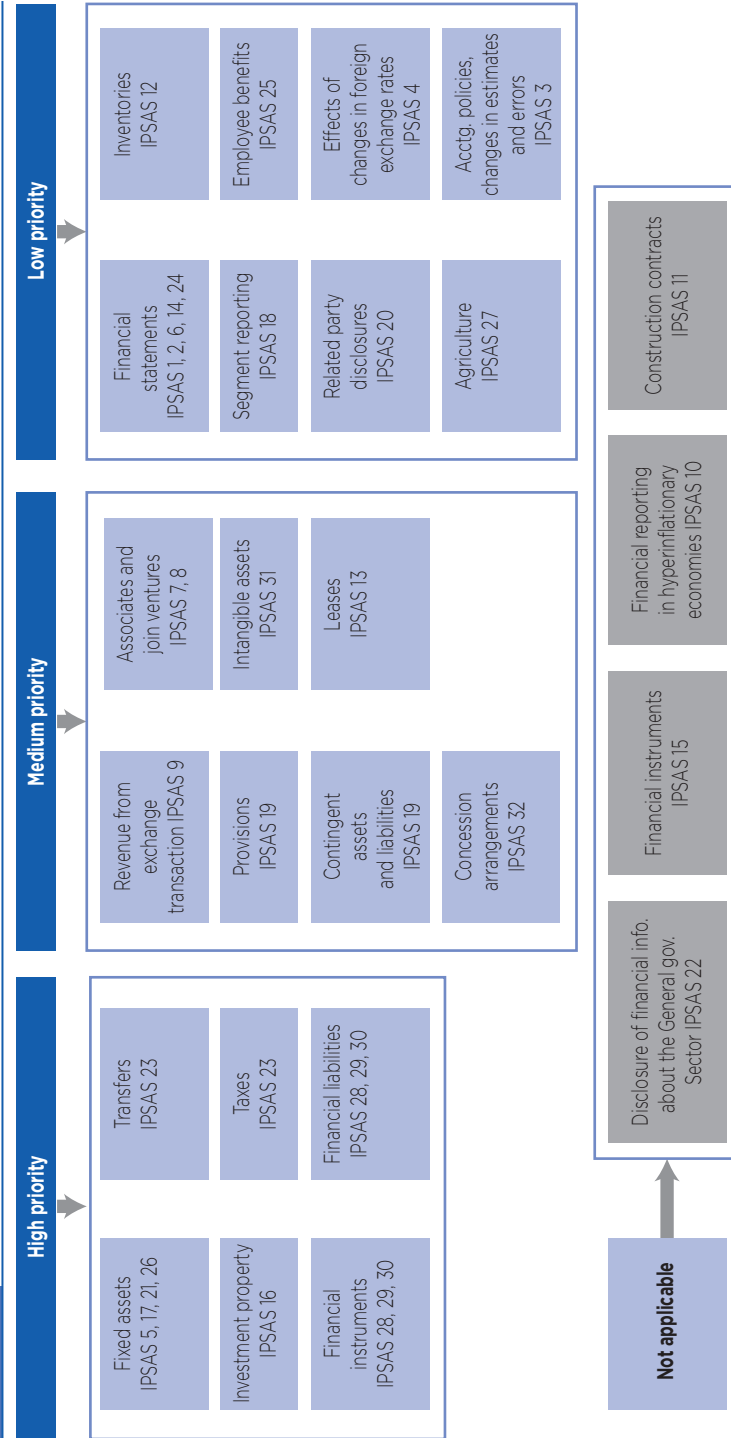
Most countries prefer to fully adopt IPSAS rather than assume specific amendments for their current frameworks. Countries, essentially, are not required to adopt the IPSAS standards in their entirety since some of the standards do not apply to them (e.g., IPSAS 10 regarding hyperinflation). Furthermore, various areas are missing from the current version of the IPSAS framework (e.g., mineral rights and reserves), for which other principles are more relevant. Some countries are adopting the standards in stages, such as in Honduras where the standards will be divided for the short, medium and long term. Chile categorized the standards in four groups, as shown in Figure 5.4, but issued all the standards at the same time in the Resolution of the General Controller Office number 16, approved in March 2015.

All the countries in the sample, with the exception of Uruguay, prepare financial position and financial performance statements (Uruguay prepares a Treasury Position statement, as well as a comparative statement of budget-to-actual amounts). Most countries also prepare a cash flow statement and one that compares budget to actual amounts; others (e.g., Costa Rica, El Salvador, Panama) add a statement of changes to net assets.

The coverage of financial statements varies significantly among Latin American countries. Some include information that only covers the central government, while others include the public sector. For example, Mexico prepares financial statements that cover only a limited number of entities within central government; Honduras includes only the central government, although it intends to eventually expand the framework to embody its municipalities. Chile and El Salvador incorporate general government, although they do not consolidate the accounts by layer of government which, instead, are presented in separate tables that make up the same document; and Peru's financial statements include the entire public sector. In nearly all countries, these statements are published, most of which are accompanied by an external audit review.

The timeline for financial statements varies. It takes up to 18 months in some countries, which is somewhat longer than the ideal under-six-month period, previously mentioned.

FIGURE 5.4 PHASED STUDY OF ACCOUNTING STANDARDS: CHILE



Source: Contraloría General de la República de Chile.

Finally, the comprehensiveness of disclosure notes varies significantly among countries. Most will present information on accounting policies, cash and cash equivalents, and public debt. In contrast, data relating to salaries and benefits of public officials and the details of uncleared, suspended accounts may also be reported.

Challenges

The survey of Latin American countries has revealed that countries that seek to upgrade their government accounting system to full accruals usually face two kinds of challenges:

- Transition process—how to prepare a strategy to adopt (or adapt) IPSAS: Four case studies on accounting reforms are presented to assist in the identification of the most important obstacles that countries face during transition.
- Standards—how to technically implement some of them: Based on the survey previously mentioned, some countries face accounting elements that are challenging. These include fixed and intangible assets (IPSAS 17, 31), accounting for contingent liabilities and provisions (IPSAS 19), tax revenue recognition (IPSAS 23), and financial instruments (IPSAS 28, 29, 30). Box 5.2 summarizes the implications of these specific standards.

Other issues that relate to accounting reform, which are considered key to its success, include the integration of government accounting with budget and treasury processes. These aspects highlight the significance of developing a standardized CoA and clear budget execution process; having a modernized IFMIS in place; and ensuring the relevant technical capacities. These issues are covered in the following section of this chapter.

Case Studies: Accounting Reforms in Chile, Brazil, Costa Rica, and Peru

Sequential Model of IPSAS Adoption: The Case of Chile

Experience has shown that the preferred way to implement IPSAS in the region is by doing it gradually and in phases. While there is no unique path to follow, Figure 5.5 presents a general approach, based on the experience of Chile—a simplified process of preparation and implementation of IPSAS and one that can be applied in other Latin American countries.



BOX 5.2. CHALLENGES REGARDING ACCOUNTING FOR ECONOMIC ACTIVITIES IN LATIN AMERICA

Fixed assets

Infrastructure assets (e.g., road networks, sewer systems, power and telecommunications networks) represent a major class of asset that is relevant to the public sector. Currently, no Latin American country has a complete inventory of its fixed assets. Such information can provide multiple benefits. In particular, it will make policymakers aware of the country's asset holdings and help to identify unproductive assets. By actively managing public commercial assets, a country can generate more income, thus lowering public debt and contributing savings on debt interest. Compiling an inventory, however, and obtaining valuations of the many types of public asset, can represent a major challenge, especially where asset management systems are obsolete or nonexistent.

From an accounting perspective, these elements (with the exception of heritage assets) are covered by IPSAS 17 and must follow the standard's requirements for recognition, valuation, and disclosure. The same applies to specialized military equipment. Physical assets covered by IPSAS 17 would normally be recognized at cost, including those costs associated with acquisition and preparation for use. Where there is no exchange transaction, the asset must be recognized at fair value. Thereafter, the asset is depreciated over its useful life, applying either the cost or revaluation method. The same method (cost or revaluation) must be applied to all assets within the same class:

- **Cost method:** The asset is carried at cost, less accumulated depreciation and impairment losses. Depreciation is charged as an expense over the asset's useful life, using a systematic basis (e.g., straight line, unit of use/production, diminishing balance).
- **Revaluation method:** The asset is carried at revalued amount, which is fair value at revaluation date, less accumulated depreciation and impairment losses. Fair value would normally be based on market values, although the absence of a market may require other approaches, such as the market value of analogous assets, depreciated replacement cost, or restoration cost. Valuations and revaluations would normally be carried out by professional valuers on a frequency determined by the nature of the asset and the volatility in value: the more volatile the value, the more frequent the valuation. Some assets may require annual valuation, while other classes may justify a three- or five-year revaluation cycle.

Upon disposal or retirement of an asset, there may well be a gain or loss that also needs to be recognized.

Heritage assets (e.g., historical buildings and monuments, archaeological sites, conservation areas and nature reserves, and works of art) are not required to be recognized; however, if recognized, they can be valued by using an appropriate method or methods, depending on their type.

Intangible assets

An intangible asset is an identifiable nonmonetary asset without physical substance. While it is tempting to consider that these are relatively rare, they are more common than might be imagined. They include copyrights, patents, and other intellectual property rights; software; websites; advertising, startup, research and development activities; airport landing rights; and broadcasting and telecommunication licenses. The recognition of these kinds of assets could facilitate better management of administrative concessions and the improved delivery of public services.

IPSAS 31 provides guidance on the accounting treatment of such assets. Under the standard, recognition of heritage intangible assets is optional, and the standard excludes concession or mineral extraction rights. Intangible assets should be measured initially at cost, unless they are acquired through a nonexchange transaction, when they

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BOX 5.2. CHALLENGES REGARDING ACCOUNTING FOR ECONOMIC ACTIVITIES IN LATIN AMERICA *(continued)*

should be measured at their fair value on acquisition. Subsequent valuation should use the cost or revaluation method, with all assets in the same class adopting the same method. Intangible assets with a definite lifespan are amortized, using a systematic method over their useful lives, while those with an indefinite life are not depreciated. An asset is derecognized when disposed of or it no longer brings economic benefit.

Provisions and contingent liabilities

The recognition of provisions in the balance sheet and the disclosure of information on contingent liabilities are important elements that can improve financial reporting for a country. IPSAS 19 concerns the reporting of probable or possible events which will have an effect on the entity's finances.

- A provision is a present probable liability of an entity, of uncertain timing or amount. The recording of the liability in the entity's balance sheet is matched to an appropriate expense account in the entity's operating statement.
- Contingent assets and liabilities, on the other hand, are possible and outside the control of the entity (e.g., liabilities that depend on judicial disputes), or (less commonly) are present obligations whose value cannot be estimated reliably. Contingent assets and liabilities are disclosed in the notes to the accounts.

Since the last global economic crisis, countries are paying more attention to fiscal risks and contingent liabilities. Several countries in the region are interested in preparing a report that reflects both components and, in some cases, are in the process of doing so.

Revenue recognition

This is probably one of the most challenging changes that a country in transition may face. So far, no Latin American country has recognized revenues under an accrual basis. The revenue recognition principle is a key component of accrual accounting, together with matching principle. They both determine the accounting period in which revenues should be recognized. According to the principle, revenues are recognized when they are earned (usually when goods are transferred or services rendered, or when a taxable event occurs), no matter when cash is received. In cash accounting, in contrast, revenues are recognized when cash is received, regardless of when it was earned. The implications are significant; think, for example, about income taxes; these are accrued during a fiscal year, but often collected during the following year.

Regarding taxes, IPSAS 23 suggests the recognition point or event for typical tax streams (i.e., when the legal right to receive has been established). IPSAS 23 poses special challenges in administrations where tax assessments are subject to regular legal challenge and other factors which may delay or impede eventual collection. Countries may, therefore, hesitate to apply the standard as recommended. If applied, however, the accounts would then show taxes assessed, as well as taxes "lost," though legal challenge and other reasons—which are items of legitimate management and taxpayer interest, reflecting on the efficiency of tax administration.

Financial Instruments

The use of financial instruments is becoming very popular and sophisticated in Latin America. Under a cash basis, some are not recognized in the budget, since they do not have any impact from a budgetary perspective. That is why the accounting recognition becomes a cornerstone for providing this kind of information to policymakers and third parties interested in the financial situation of a country.

The term "financial instrument" is defined as "any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another

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BOX 5.2. CHALLENGES REGARDING ACCOUNTING FOR ECONOMIC ACTIVITIES IN LATIN AMERICA *(continued)*

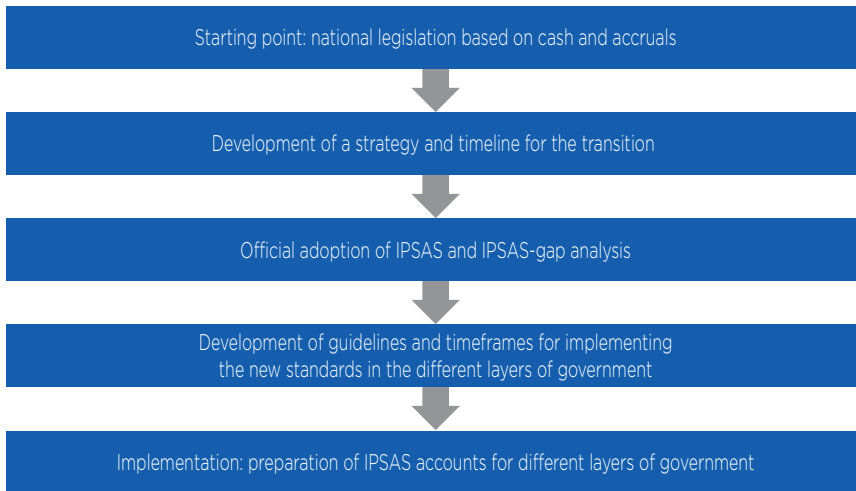
| Type of tax | Recognition point |
|------------------------|---|
| Income tax | The earning of assessable income during the taxation period by the taxpayer |
| Value-added tax | The undertaking of taxable activity during the taxation period by the taxpayer |
| Goods and services tax | The purchase or sale of taxable goods and services during the taxation period |
| Customs duty | The movement of dutiable goods or services across the customs boundary |
| Death duty | The death of a person owning taxable property |
| Property tax | The passing of the date on which the tax is levied, or the period for which the tax is levied, if the tax is levied on a periodic basis |

entity.” The asset or liability will be settled in cash or a contractual right to receive cash, or an equity instrument (e.g., shares). In practice, the term covers a range of assets and liabilities, such as cash, loans made and received, bonds held and issued, and equity investments. In addition to these “primary” financial instruments, it also covers derivatives, financial guarantee contracts, and other more complex arrangements. There are IPSAS standards that deal with the presentation (IPSAS 28) and the recognition and measurement (IPSAS 29) of financial instruments. A further standard (IPSAS 30) deals with additional disclosures in relation to financial instruments and risk.

IPSAS 28 sets out the principles for classifying financial instruments as assets, liabilities, or net assets, as well as principles for offsetting financial assets and liabilities. It discusses the various types of financial instruments and establishes some basic principles as to their accounting treatment:

- Classification is based on substance, not the form, of the instrument and is made at the time of issue of the instrument.
- An equity instrument gives the holder a residual interest in the net assets of another entity.
- Other financial assets or liabilities oblige the issuer, or confer on the holder, the right to receive cash or another financial instrument.
- Interest, dividends or similar distributions, and losses and gains relating to a financial instrument are reported as revenue or expense.
- Offsetting of financial assets and liabilities is permitted only when an entity has a legally enforceable right to set off the amounts and has the intention to settle on a net basis or realize the asset and settle the liability simultaneously.

IPSAS 29 requires that all financial assets and financial liabilities, including all derivatives and certain embedded derivatives, are recognized in the statement of financial position. On initial recognition, the asset or liability is measured at its fair value where possible. Where the financial asset or financial liability is not recognized at fair value through surplus or deficit (in effect, assets and liabilities not held for trading), these are measured at fair value plus those transaction costs directly attributable to the acquisition or issue of the financial asset or financial liability. Interest, dividends or similar distributions, losses, and gains relating to financial instruments should be recognized as revenue or expense in surplus or deficit. The standard requires the distinction to be drawn between financial assets and liabilities, as distinct from equity instruments (where the holder has a residual interest in the net assets of another entity).

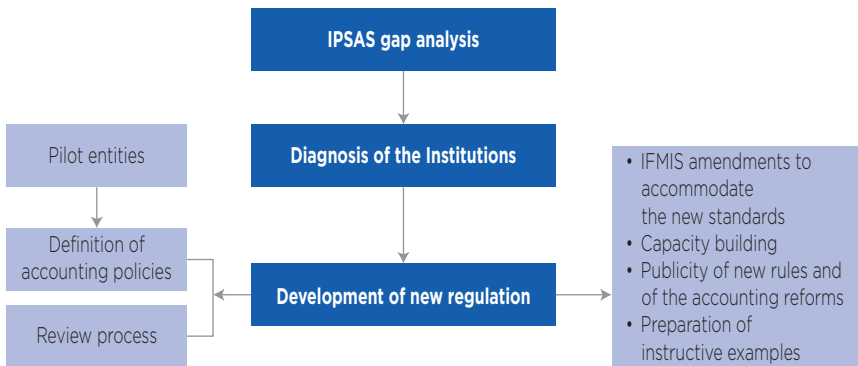
FIGURE 5.5 APPROACH TO THE ADOPTION OF IPSAS IN GRADUAL STEPS

Source: Authors' elaboration.

These steps are taken in turn:

- **Legal framework.** Due to the legal tradition of public administration in Latin America, the starting point would be the preparation or modification of national legislation. Practice varies from country to country on what types of legislation or norms govern public accounting and which part of government is responsible for them. These legal provisions need to be reviewed to support the transition and adoption to accruals.
- **Strategy.** The second stage is the development of a strategy and timeframe for the reform. In Chile, the Comptroller General of the Republic (Contraloría General de la República (CGR)) took the lead in the process, and aligned its strategy with other bodies involved with or affected by the reform. Once the support of these other organizations was obtained, the CGR established a timetable that aims to fully apply IPSAS by 2019. The process formally started in 2010, with the intention to start in 2016 with the implementation of IPSAS in the central government.¹⁵ The statements will cover all entities included in

¹⁵ This deadline originally was 2015, but it was postponed one year to improve capacities and allow the institutions to reflect accounting adjustments prior to the application of the new standards.

FIGURE 5.6 PRIORITIZE CONVERSION TO IPSAS: CHILE

Source: Comptroller General of the Republic of Chile.

the budget, those that are centralized and decentralized, and some autonomous bodies, such as the CGR. The coverage will be expanded gradually, including the municipalities at the final stage. The strategy revolves around three main components: legislation, ICT systems, and capacity building.

- **Gap analysis.** The third step involves the official adoption of IPSAS and the undertaking of a gap analysis, which compares existing practices with IPSAS requirements. This facilitates the preparation of a timetable and set of tasks that can be agreed and shared with all the actors in the process. In Chile, the IPSAS gap analysis has allowed the authorities to identify four groups of standards, varying in their degree of difficulty. The analysis also identified some standards that were not applicable in the country.
- **Guidelines.** The fourth step is to develop guidelines and timetables for implementing the new standards in the different layers of government. In this phase, it is essential to invest in capacity building and to adjust the IFMIS to the requirements of the new accounting system.
- **Implementation.** The fifth and last step relates to the actual implementation of the standards and the preparation of financial statements. This phase is expected to be achieved gradually, and will not end with the first release of government financial statements. The full implementation of accrual accounting requires continuing improvement, to be managed in subsequent years, and the assurance that

accrual practices are embedded as part of the normal business of the organization. The accounting reform is more than a mere accounting enhancement—it is a transformation of the government PFM system and will be of benefit to the entire country.

Convergence to IPSAS: The Case of Brazil

Brazilian accounting reform is based on national standards that converge toward IPSAS. The seed of the accounting reform dates back to 2000, when the Fiscal Responsibility Law was approved. This Law included some directions regarding accrual-based accounting and required the preparation and presentation of cost accounting information. The approval of the IMF *GFS Manual 2001* contributed to government interest in reforming public sector accounting.

During the 2000s, there was some work toward government accounting modernization, including the creation of a Convergence Committee in 2007. This worked under the Federal Accounting Council and involved accountants from several states and municipalities. The National Treasury of the Ministry of Finance has been one of the leading institutions. In 2008, the Ministry of Finance decided to converge the Brazilian public sector accounting standards toward IPSAS, and it placed the National Treasury in charge of the convergence process to include all levels of government: central, states, and municipalities. Later, in 2009, a decree formally delegated the role to consolidate public sector accounting regulation to the National Treasury. So far, the Treasury has created the Brazilian accounting manual, including the guidelines on the practical implementation of the standards.

The convergence plan includes dissemination to all public sector accountants of the IPSAS in the form of a Portuguese-language version. While the implementation of accruals in Brazil is based on IPSAS, it is not a full adoption; instead, it is based on a convergence toward these standards. Having a convergence plan in lieu of a full adoption plan has introduced some flexibility in the accounting reform.

Brazil has adopted some key steps in the implementation process to smooth out the path toward accounting reform:

- There is only one national CoA that is used by the central and subnational governments.
- The National Treasury has developed a template for financial statements that permits all layers of government to share the same financial information through their ICT systems.



- The regulations are established by law, which means that the adoption of the accounting manual for the public sector is mandatory.
- The legislation is very comprehensive and aims to consolidate the public sector accounts under the same national standards. The consolidation of financial statements, including all layers of government, is a good source of information for policymakers.

The reform, however, has suffered from several delays; the most recent plan is to have the accounting manual in effect as of 2015 for all levels of government; there is doubt, however, that this will be achieved comprehensively. It is likely that the central government and some states will be able to implement it in 2015, with others starting its execution in 2016 or later. Delays in the implementation can be attributed to the following issues:

- At inception, the reform was supposed to include all layers of government (26 states, the Federal District of Brasilia, and more than 5,500 municipalities). The lack of technical capacity in some states and most of the municipalities, as well as the lack of an appropriate financial management information system, has resulted in a delay in reform plans, particularly at the subnational government level. Obviously, some states are more likely to be ready for the implementation of national standards than others. The State of Santa Catarina, for example, has made a lot of progress in comparison with other states. States in Brazil face financing difficulties in strengthening their accounting departments and updating systems to meet the growing complexity of the new standards. Some states are resorting to external consultancy to support the accounting transition, a change that requires consolidation of accounts and elimination of duplication of accounting for budgetary and accruals purposes. The cost of these changes is likely to be offset by efficiency gains in the medium term.
- Difficulty in applying complex standards (e.g., those on financial instruments, social benefits, or infrastructures). Some of these standards incorporate valuation methods previously unknown to officials, as well as other challenges (e.g., creation of a database of physical assets).
- In the case of some of the states, the new methodology will probably reveal information not currently available, such as a sizable pensions deficit or the value of tax incentives granted to companies, as well as the corresponding impact of these incentives on the fiscal performance of states. Only a few states currently report the amount of fiscal

incentives and the claimed benefits associated with them—in each case, outside of the financial statements. States will also need to calculate their provisions for doubtful debts and disclose those risks, based on their probability of failure to receive monies.

- The accounting reform requires change in public sector culture. Since the reform has involved several players—the Federal Accounting Council, National Treasury, consultative bodies, academia, federation representatives, among others—the discussion of standards has sometimes been complex. An initial optimistic timeline had to be adapted to the available capacity and, in some cases, to circumvent resistance.
- Accounting policies that are beyond the capacity of the current ICT systems for central and local governments have also led to delays. The National Treasury has used this delay as an opportunity to select which IPSAS requirements to implement first, taking into account political agendas (e.g., avoiding the recognition of large, long-term deficits and liabilities). For these and other reasons, some state Courts of Accounts have not required compliance with some of the standards issued by the National Treasury, even though this will impair full comparability of accounting information.

Accounting reform: The Case of Costa Rica

Costa Rica¹⁶ has been implementing IPSAS since 2001, when the National Accounting Office (responsible for elaborating the general accounting standards) signed an agreement to formally adopt IPSAS with the Inter-American Accounting Association (member of IFAC) and the Inter-American Development Bank under the framework of the Public Accounts Accountability Program. The first step taken after this pronouncement was to build a legal framework to support its adoption. In 2001, the Financial Administration and Public Budget Law was approved, and it included “government accounting” as a subsystem of the new Financial Administration System. The Regulation under that Law declared that the National Accounting Office is the body responsible for the elaboration of the specific rules and technical guidelines on government accounting.

Several decrees have been approved since 2008, including a National Accounting General Plan for the public sector entities of Costa Rica. Initially, a decree established that the adoption and implementation of IPSAS

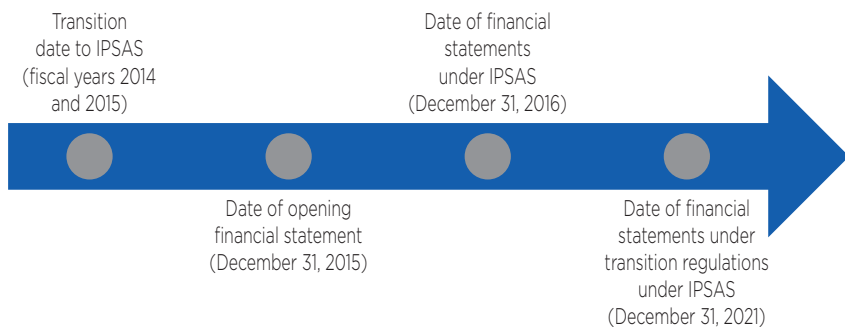
¹⁶ Further information can be found at <http://nicspcr.com/>.

should commence in January 2009 and be completed by January 2012 by the central government. Due to the difficulties in achieving that deadline, in 2011 the deadline was extended to 2016. Among the difficulties are the complexities of applying the new standards, lack of a well-structured plan to complete the reform, and lack of the necessary resources (i.e., legal support, consultants, systems, and investment in capacity building). The implementation plan of IPSAS adoption by the central government is gradual, and Costa Rica has distinguished two phases: the first includes standards that can be applied in 2016 and the second includes the “transition regulations,” which is supposed to be completed by 2021. Government business enterprises, however, are required to present their first financial statements under IFRS by 2016.

In 2011, together with the review of the deadline for IPSAS execution, other significant steps were undertaken: (i) elaboration of an action plan; (ii) update of the General Accounting Plan with the new standards issued (at inception in 2008, it included 18 IPSAS, and it was extended in December 2011); (iii) update of the Accounting Action Plan for the nonfinancial and nonbusiness public sector; (iv) elaboration of the IPSASs Implementation Methodology, using the IFAC guidelines of Study 14 on the Transition to the Accounting on the Basis of Accruals; and (v) investment in capacity building.

As a result, Costa Rica currently is working on the implementation process with the challenge of issuing the first IPSAS financial statements for the central public sector by January 2016 (excluding transitional regulations). The action plan includes the milestones that are shown in Figure 5.7.

FIGURE 5.7 APPLICATION OF MILESTONES FOR IMPLEMENTATION: COSTA RICA



Source: IBSASB/IFAC (2014).

Adoption of IPSAS: The Case of Peru

Public sector accounting reform in Peru is based on a comprehensive legal framework, from the point of formal law and drilling down specific aspects by way of lower-level legislation. The main driver of the reform is the General Directorate of Public Accounting of Peru (Dirección General de Contabilidad Pública (DGCP)), although a higher body at the executive or legislative level has not formally approved a formal action plan.

Since 2010, DGCP has been directly responsible for the regulation of public sector accounting standards for all levels of government (central, regional, and local), and is making substantial effort to implement IPSAS within the entire public sector. All 32 IPSAS were adopted through a resolution approved in September 2013. The implementation of the 32 IPSAS is guided by resolutions (e.g., in 2014, it approved a resolution on PPP), directives (e.g., in 2014, on derivative financial instruments), as well as instructions (the latest dates back to 2005 and contains formulas and depreciation rates). Although all IPSAS have been formally adopted, some of these secondary regulations have delayed the effective adoption of some of the standards (e.g., IPSAS 18, 24), restricted options on certain IPSAS (e.g., valuation of property, plant and equipment), or departed from IPSAS—at least in the immediate future (e.g., post-employment benefits).

Peru's DGCP has also elaborated a new CoA. There is a unified single CoA, issued in 2009, which is based on the requirements of IPSAS and GFSM2001 (Peru's GFS reporting is still based on GFS86), and it applies to all levels of government. It was last updated in 2013.

It is particularly remarkable that the consolidated financial statements (Cuenta General de la República), presented by Peru's DGCP, include the entire public sector. This coverage is very comprehensive by international standards; very few governments consolidate the entire public sector. This consolidation aims to be in full compliance with IPSAS and it is based on IPSAS (for the government sector) or IFRS (for state-owned enterprises). The accounting policies, however, are not harmonized, but the differences are relatively limited since IPSAS and IFRS are similar standards, essentially based on the same principles.

BEST USE OF PUBLIC ACCOUNTING: FULL ACCRUALS AND ITS IMPLICATIONS FOR TREASURERS AND SENIOR FINANCE STAFF

Reliable and complete accounting information can bring multiple benefits to a country, as previously discussed; however, it takes time to adapt



the system to new standards. Strong political commitment is needed from inception. There is much to be planned during the transition to full accruals.

This section provides an overview and discusses some of the main aspects that will be of interest to treasurers and other senior finance staff in the public sector. For accountants and others interested in more technical matters, there is also other useful guidance material on the transition to accruals (Khan and Mayes, 2009; IPSAS, 2011; Flynn, Moretti, and Cavanagh, 2015).

Why should treasurers and other senior finance staff be concerned with an accounting reform full of technicalities and arcane questions that are of interest only to accountants? This section argues the fact that they will want—and need—to be involved with the reform, since it will affect many matters within the domains of other finance staff. These include:

- Organizational structures established to oversee the accounting reform;
- Timescale and phasing of reform;
- Design and delivery of strategies for a transition to accruals;
- Rollout to different parts of the public sector;
- Oversight of assets and liabilities, other than cash;
- Changes to accounting and other systems;
- Impacts on budgetary, treasury, and other financial control systems; and
- Changes to coding systems and charts of accounts.

Organizing for Reform: Key Actors and Participants

It will come as no great surprise that the principal participants in the reform will be public sector accountants. These will be involved at the central level to develop strategies, establish accounting standards, and monitor implementation. In Latin America, this role usually falls to the responsibility of an Accountant General, Comptroller General, or equivalent official (see Box 5.3). Accountants will also play a role at the entity level—that is, in each accountable organization such as a Ministry or agency—to oversee implementation and continued operation of accounting systems.

The central cadre will need to work with teams or networks of accountants in each subsector or individual entity. Much of the transition work will fall to these people at the operational level. It is also quite possible, however, that the training and experience of these public accountants—at the central and operational levels—will have been acquired in the existing system. If that is so, there will need to be a major educational program to expand their acquaintance and expertise in accruals accounting.

BOX 5.3. ACCOUNTING REFORMS IN LATIN AMERICA: RESPONSIBILITY

Most Latin American countries have a General Directorate of Government Accounting Unit in the Ministry of Finance, whose General Director (Contador General) will usually take the lead on reform. This is the case in Colombia and Peru, among others.

Other countries, such as Chile, have a different model, where the Comptroller General's Office, (*Contraloría General*)—a body independent from the Ministry of Finance—is the entity in charge of government accounting, from the development of rules to the preparation of the financial statements. In Chile, for example, the transition model and the strategy are led by the *Contralor General* and his team. Nevertheless, the success of the reform is due to significant collaboration and interaction with the General Directorate of the Budget and the ministries.

Other countries have a more complex structure, such as Panama, in which the General Director of Government Accounting, under the Ministry of Finance, takes the lead on reform, although the Comptroller General's Office is in charge of the legislative development, as recognized in the Constitution. In these cases, the successful implementation requires even a stronger engagement of all the competent institutions.

In Brazil, there have been several players involved in accounting reform: the federal accounting council, which sets the Brazilian public sector accounting standards and which has defined the convergence process; and the National Treasury, in charge of the approval of the public sector accounting manual and the issuance of guidelines. In addition, during the reform process, other bodies have also been consulted, such as the Court of Accounts, responsible for public audit and the compliance with the accounting rules; consultative bodies of accounting practices; public accountants operating in states and municipalities; federal representatives; and academia. All of them played a role in the discussion of the standards before they were approved and became mandatory.

Public auditors will also have a key role, since their expertise will need to grow in parallel with the accountants. A switch to accruals will throw up new challenges for audit offices, and they too may need significant additional training to equip them for this new environment. Auditors will require as much skill and acquaintance with the new accounting standards as do the accountants who compile the accounts. Furthermore, the audit office or offices should be involved in the transition strategy to ensure that audit opinions are taken into account and to minimize subsequent avoidable disagreements over accounting policies and presentation.

Accountants and auditors are not the only ones interested in this new type of accounting. In any public administration, there will be a wide range of people who have to work with accounting systems and data. These include staff in the treasury and in economic planning and budgetary departments, who develop the annual or multiyear budgets and monitor budget implementation. A change to accruals may well affect the basis on which the budget is drawn up, or it may affect other expenditure control mechanisms. There are also senior managers, financial managers, and budget holders who need to understand how the new



accruals will be executed. Finally, the national statistics department will have an interest since they also have to produce data according to international standards, established by the IMF and others and, often, they need to rely on government accounting systems for much of their information.

Transition will almost certainly require changes to ICT systems and manual procedures. This, in turn, will involve ICT departments and business analysts throughout the public administration. The scale of such changes should not be underestimated, and poor systems implementation is one of the greatest risks to a successful transition. Equally, these system changes should neither be seen as the central driver or focal point of reform, nor the reform be viewed as ICT-led. There are many dimensions to reform, of which ICT is an important one; it should be the servant of reform and not the master.

One final and important body with an interest in the transition will be the legislature. It will almost certainly be called upon to sanction or authorize the legislation required to introduce accruals accounting. Those in the legislature will also be interested in the progress made with transition. Most importantly, they will need support to be able to interpret and use the new information that accruals accounting will provide. As mentioned earlier, it is important to approve the legal framework that supports accounting reform within the different layers of the legal framework.

Strategists should not lose sight of the essential need for action at the central, subnational, and decentralized entity levels. In theory, the transition to accruals accounting could be left entirely to the individual entities working within international standards. Such a libertarian approach, however, is unlikely to be successful and would certainly not support proper consolidation, since each entity will probably interpret standards differently and on different timescales.

Instead, the transition to accruals may offer an opportunity to rethink the architecture of public accounting. The demands of consolidation will swing the balance of advantage toward central solutions, since full and successful consolidation requires the coordination of accounting policies across a wide range of bodies. Furthermore, if all or many types of organizations need to develop new ICT systems, there may be an advantage to central, rather than distributed solutions. Solutions may range from “central light,” in which the minimum is centralized (e.g., a consolidation system only)—for example, in the case of Brazil—to “central heavy” (in which all systems are provided centrally)—for example, in the case of Peru.

At the very least, successful transition requires strong central coordinating forces, even if implementation is left to the lower levels or individual

entities. It is very likely, though, that these central mechanisms will need to be accompanied by subsectoral mechanisms, since each subsector may face particular challenges (e.g., legacy systems and procedures, different legal requirements, special classes of transaction) which need to be worked on within a central framework of standards and other requirements. Such subsectoral mechanisms will also be important in achieving buy-in and support from those most closely involved in implementation.

Implementation Process and Timeframe

A full switch to accrual accounting is unlikely to be quick. Advanced economies have taken five or more years to make the transition. In emerging countries, a full transition could last 10 or more years. The timescale and degree of effort will very much depend on the starting point.

In the particular case of Latin America, countries begin from a position where some parts of the public sector may have already adopted or have always been using accrual-based accounting, thus providing the advantage of a cadre of public accountants already versed in accrual accounting. The reform can be more challenging in subnational governments, since implementation at this level will have to start from a position of little expertise in this area. For these levels of government, the trajectory toward transition could be a very long one.

In considering implementation, it is useful to think of transition as a number of different dimensions in which public accounting will need to change. For each part of the public sector, planners will have to think about:

- Growth in the range of transactions (revenues, expenses, assets and liabilities) to be captured within the accounts, so that all material items are included.
- Development of the financial statements to include these additional classes of transactions and associated disclosures.
- Development and application of more advanced techniques for valuing account items, so that the financial statements give the most accurate and useful view of public finances.

Design and Delivery of Strategies for a Transition to Accruals

As is the case for any major reform, a vital first step is to research, develop, and put in place an overarching strategy. As we saw in the case studies,



BOX 5.4. INITIAL PLANNING AND STRATEGY

Matters to be covered in an initial gap analysis

- Data and analyses on the territory to be covered; types of public sector bodies; classification (commercial or noncommercial); and current state of readiness, among others.
- Information on existing accounting standards and reporting practices for public bodies of all types (i.e., commercial and traditional government).
- Data and analyses on the types and materiality of revenues, expenses, assets, and liabilities, which may need to be integrated into the new accounts. At this stage, in the absence of decent records on assets and liabilities, it may be necessary to make informed guesses as to materiality.
- Information on existing accounting and related financial systems and their suitability to support accruals accounting.
- Data and analyses on the availability of accounting expertise and experience in the public sector, and each sub-sector.

Coverage of a transition strategy

- Which accounting standards will be used and where, and how they will be developed, modified, or maintained in the future.
- Legislative changes needed to legitimize the switch from cash or modified cash to accruals.
- Sequencing of implementation for each subsector or type of body.
- For each subsector, what system developments and improvements, as well as what growth in accounting capacity, will be required to sustain the transition and eventual adoption of accruals.
- For each subsector, how accounting systems and related financial reports will gradually encompass or include all relevant transactions (revenues, expenses, assets, liabilities).

some countries have suffered from delays in the reform process due to the lack of a clear action plan and strategy to guide the reform. It is recommended that the strategy first be informed by a gap analysis and that the strategy itself cover all the key areas (Box 5.4).

For most governments, implementation will almost certainly entail a gradual expansion of accounting systems and financial reporting to include more accrual accounting features until full accruals status is achieved. This means expanding the classes of assets and liabilities, applying more international standards, and developing financial statements and related disclosures, year on year, until the required degree of compliance is achieved.

International accounting standards allow for this gradual adoption, with many including provisions (“waivers”) that give entities more time to meet all the requirements during the transition period. The maximum waiver period is five years, although most standards provide for three years. In many cases,

however, it is likely that the practical challenges will be of a scale such that the implementation period will extend beyond five years, in which case it is inevitable that interim or intermediate financial statements will not be fully compliant with international standards, despite the transition waivers. This, however, does not imply that there is no value in striving toward adopting these standards; rather, it is better to be fully aware of this fact and to manage expectations accordingly.

Note that during the interim period, countries in transition are unable to claim that they are in compliance with international standards until the final few years prior to this achievement, based on the waivers. During the trajectory, transparency is essential, and an indication of what is or is not compliant with international standards must be included in the notes to the financial statements, as well as what the next steps are in terms of the transition.

A question often asked is whether it is advisable or necessary to achieve compliance with cash-based IPSAS prior to embarking on the road toward accrual accounting. This, however, may not be the best way forward for countries that have already moved beyond pure cash-based accounting, as is the case in Latin America. The cash-based IPSAS is, undoubtedly, a useful benchmark for countries within a pure cash environment. Many countries will, nevertheless, start their transition from a point where they already operate on a modified cash basis (especially where accounting is based on budgetary rules). In such cases, they will already be in an early stage of transition, thus making it senseless to return to pure cash accounting.

Rollout across the Public Sector

At the outset of implementation, it is useful to consider a planned and gradual rollout across the various parts of the public sector. International accounting standards require “consolidated” accounts that include all the transactions and balances of those entities and resources that are controlled by the reporting entity. In the case of government, therefore, there is an expectation that the accounts consolidate many, if not all, public bodies. Likewise, international statistical standards apply to public sector data and other aggregates. From reform inception, implementation should be coordinated for each group or type of public entity, with each group being consolidated during the transition period. Table 5.3 shows how the public sector is divided into subsectors.

A typical sequencing for consolidation purposes, which gradually encompasses the entire public sector, is exemplified by the following:

- Start with central government (i.e., ministries, departments, and associated decentralized entities).
- Rollout to subnational government levels, including noncommercial satellite entities. At this point, the national and subnational governments can be consolidated to produce accounts for general government.¹⁷
- Lastly, include public corporations to provide a public sector or whole of government account.¹⁸

The sequence above may need to be adjusted, especially where different sectors are more or less advanced, or have started from different positions in the trajectory toward accruals accounting. Execution in each subsector should proceed as resources and existing capacities dictate. There is little point in delaying or stalling execution in one sector while other sectors catch up or overtake. In some instances, for example, entities that are at arm's length may already be applying accrual-based accounting, and will need to continue toward IPSAS compliance, in parallel to introducing accruals from inception into central government. Figure 5.8 provides such an example, demonstrating how the various parts of a general government may proceed toward accruals and eventual consolidation.

TABLE 5.3 COMPONENTS OF THE PUBLIC SECTOR^a

| | | |
|---------------|---|--|
| Public sector | <ul style="list-style-type: none"> • Public corporations | <ul style="list-style-type: none"> • Public financial corporations • Public nonfinancial corporations |
| | <ul style="list-style-type: none"> • General government (see note) | <ul style="list-style-type: none"> • Central or national government • Subnational government (e.g., region, province, state, municipality) |

Source: Authors' elaboration.

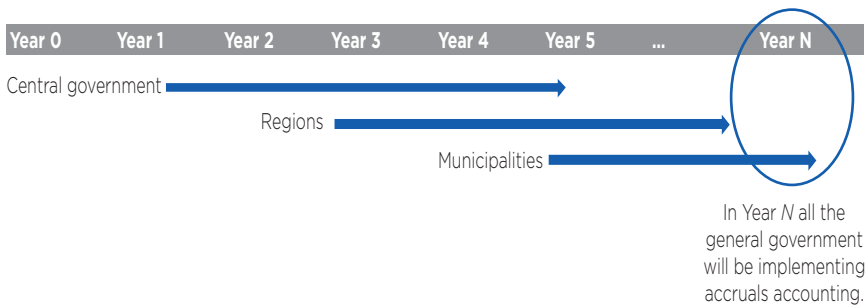
Note: Each sector of government may have social security institutions that are constituted as separate or semi-independent authorities/funds.

^a The terminology and classification here derives from statistical conventions; although accounting standards use slightly different terminology (especially Government Business Enterprises instead of Public Corporation), the meanings are the same for all practical purposes.

¹⁷ General government is a statistical concept, defined as the public sector less public corporations. In effect, it aims to capture traditional government functions exercised at all levels of government (central, regional, local).

¹⁸ Commercial organizations, such as public corporations, should report using IFRS or national-equivalent accounting standards, and they will need to convert their accounts to be compatible with IPSAS or their national equivalent, so that they can be consolidated.

FIGURE 5.8 SEQUENCE OF IMPLEMENTATION IN GENERAL GOVERNMENT: AN EXAMPLE



Source: Authors' elaboration.

Capturing Additional Classes of Assets and Liabilities

As previously explained, the transition period will entail a steady growth in assets and liabilities (and associated transactions) for capture and disclosure; the gradual development of the financial statements and other disclosures; and eventual adoption of international standards in parallel with these two other developments. It is essential to have a transition strategy in place; while there may be a single objective (full accruals across all public bodies), there are many alternative paths toward its achievement. The essence of a transition strategy is to ensure that the path selected is custom-made for local capacity and existing arrangements, and that it takes into consideration the legal and institutional traditions.

In an ideal situation, this expansion of the accounts to include additional categories of assets and liabilities will follow a sequence that is dictated by cost (assembling the data) and benefit (materiality of the data to be disclosed), prioritizing those that are most cost beneficial. In practice, however, the sequencing may well be dictated by the capacity of existing systems, as well as the cost of adding or developing new ones for additional information.

There are several approaches to the sequencing of accounting reform. One was prepared by Flynn, Moretti and Cavanagh (2015), according to which the sequence is as follows:

- Cash and cash movements (i.e., the starting point, a cash basis);
- Then add payables and receivables;
- Then add other financial assets (debt, investments, others);

- Then add physical assets, including inventories; and
- Lastly, add intangible assets and liabilities.

There is nothing sacrosanct about this particular sequence; for example, if reliable data on physical assets is available, there will be no need to delay or defer its inclusion to a later stage. Likewise, the government may also have sufficient data to include public service pension liabilities, based on actuarial valuations. For some data classes (e.g., fixed assets), however, it may be a challenge to develop and verify opening balances, since the data may be incomplete and a major stocktake will be needed to bring the data and systems up to date.

This gradual expansion also implies that the various IPSAS will come into play at different stages of the transition. Those relating to the fundamentals of accounts presentation and accounting policies (e.g., IPSAS 1-4, 6, 14, 18, 19, 20, 24) will be applicable from the outset, although their provisions may only be achievable in stages. Thereafter, as each type of asset and liability is added to the mix, the related standards will come into the picture. For instance, standards relating to operating revenues, borrowing costs, various investments, and other financial instruments, as well as leases (IPSAS 5, 7, 8, 9, 13, 28-30) may come earlier within the transition. Subsequently, inventories and physical assets may be added (IPSAS 11, 12, 16, 17, 21, 26), with intangible assets (IPSAS 31) following on. Public-private partnerships represent a special class of asset (and liability) that can be included in these later stages (IPSAS 32—see Box 5.5). The timing of employee benefits (IPSAS 25) and the accrual of tax revenues (IPSAS 23) have traditionally posed challenges,

BOX 5.5. PUBLIC-PRIVATE PARTNERSHIPS

These types of arrangements are becoming an increasingly popular way for a government or public body to acquire an asset—or the use of an asset—without having to provide the capital outlay at outset. A private enterprise will provide the asset, and may well maintain it through its lifecycle in return for annual or other periodic payments. Such arrangements throw up issues as to who “owns” the asset and whether or not it should appear on the public sector balance sheet.

IPSAS 32 deals with such “Service concession agreements” (note that it does not deal with all types of relationship with the private sector, which fall under other standards relating to investments, leases, and financial instruments). Under IPSAS 32, the general rule is that the asset is recognized on the public balance sheet, alongside the liability for future payments to the service provider. The idea is that the accounts present the true picture of these arrangements and the extent to which the public body enjoys the use of an asset, even though it nominally “belongs” to a private sector partner.

BOX 5.6. VALUATION METHODS

The principal alternative to historic cost is referred to as “fair value,” which is meant to represent the amount for which an asset could be exchanged, or a liability settled, between parties. Fair value is often based on market values for the same or analogous assets or liabilities. Where no market data or analogue exists, a fair value may be calculated, based on reasonable assumptions that a buyer might be expected to use. Fair value methods are used principally for marketable assets and liabilities, while other methods are used for some types of assets (e.g., stocks) and liabilities.

and these may occur sooner or later during transition, depending on the degree of preparedness.

Note that although each standard may apply at a given stage during transition, each may need to be implemented gradually (e.g., if a recommended valuation method is not possible from the outset).

Once each class of asset or liability is added to the balance sheet, the associated revenues and expenses—as well as other changes in value—are added to the operating statement. In this way, the financial statements extend to include all relevant stocks and flows. Moreover, the integrity of the accounts is maintained; all changes in balance sheet values are captured in the operating statement (or, as in a few cases, in the statement of changes in net assets).

Another dimension of this gradual growth in coverage is the potential to move valuation methods gradually for some classes of assets or liabilities from the most simple (typically, historic cost) to the more sophisticated methods that are recommended or required for full compliance with the relevant accounting standard (see Box 5.6).

This sequencing of transaction classes above can be applied to one type of entity as a group (e.g., all central ministries), but the timing and sequencing may be different for each type of entity (e.g., central and local government), depending on the systems and data that are available at the outset. The availability of accounting data for each type of entity would also need to be coordinated with the strategy and sequencing for consolidation.

During this gradual transition and adoption of standards, the accounts will provide a progressively more complete and accurate picture of a country's financial performance and position. At the outset, these will be seen solely in terms of cash balances and changes in them; by the end, however, the accounts should capture all material assets and liabilities and how these change over the year. Interim accounts will lay somewhere in between. The degree of completeness at any stage in the trajectory will depend on the materiality of assets



and liabilities yet to be included. Accuracy will also increase as accounting policies approach those required by the standards.¹⁹ It is essential, however, that the notes to the accounts explain this transition strategy and identify such exclusions and departures from standards, so that the user of the account is fully aware of these gaps. The initial gap analysis—which is an integral part of the transition strategy—would be expected to help ensure that the more material exceptions are tackled sooner rather than later.

Implications for Budgetary, Treasury, and Financial Control Systems

A significant challenge in any transition to accrual-based accounting—and one of particular interest to treasurers—is how the new accounting methods will integrate with the budgeting system and associated financial controls. The centrality of budgets and legislative approvals, together with subsequent accountability for budget execution, are the key differences between public sector and private sector accounting modalities. Traditionally, budget regimes have focused on cash or modified cash control.

Governments that are considering a move toward accrual accounting face three issues that relate to budgetary and other financial control systems:

- Whether or not to move budgeting to an accruals basis;
- How to report on budget outturns in an accruals accounting environment; and
- How to reconcile accruals accounting with traditional controls over cash and other stages of the spending process.

On the first of these questions, one simple option is that accruals accounting is introduced without any change to cash-based budgetary systems and rules. This, however, would mean that new accruals financial reporting is completely divorced from budgetary accounting; not only because budgeting remains on the basis of cash or modified cash, but also because the coverage of the budget is likely to vary from that of financial statements. As previously

¹⁹ “Accuracy” in this context means that the figures provide a true and fair view of the value of the asset or liability, or the changes in its value over the year; where the figures are based on estimates or other valuation methods, there is no such thing as a 100 percent “true” or accurate figure against which the accounting estimate can be judged.

stated, the boundaries and presentations of accrual accounting are governed by economic concepts and not by administrative or budgetary rules.

A complete separation of systems for accounting and budgeting has other drawbacks. First, there would be the burden of running two separate and parallel systems. Second, there is the risk that financial reporting may be seen as a tiresome and irrelevant afterthought, since administrative and parliamentary oversights focus on budget approval and performance. Third, it would be very complicated to link or make connections between the two presentations of the public finances, and there would be confusion over which presents the more useful or correct picture and for which purposes.

There may be advantages, therefore, in better integration between accounting and budget. Experience to date, however, shows that accrual accounting is not automatically accompanied by accrual-based budgeting; many countries have retained cash-based budgeting or some hybrid alongside accrual-based financial reporting (Blöndal, 2004; Schick, 2007). There are several reasons for this:

- Finance ministries and legislatures may be reluctant to let go of cash as the basis for their control over the public purse, either because of tradition or the “concreteness” of cash.
- Accrual budgeting requires greater financial literacy, as well as a strong framework of rules and accompanying policing, to ensure that budget numbers are realistic to begin with and that budget outturn numbers are reliable. Without strong discipline, spending departments may be tempted to use the flexibility inherent in accrual accounting to circumvent budget rules.
- An accrual budget regime may be difficult to reconcile with the idea that the budget is an absolute limit which cannot be exceeded, and this problem is likely to be exacerbated where budgets and budget limits are very detailed. This issue arises because some account or budget items are noncash or may be outside the full control of the spending body (say, for example, that debtors are worse than anticipated, or an actuarial cost is revised upwards, or assets revalued downwards—all leading to an excess over budget). An accruals budget regime, therefore, is better suited to a more flexible regime where budget variations (negative and positive) are allowed but must, nonetheless, be accounted for.

In practice, most countries have opted to retain cash or modified cash-based budgeting, or to place budget limits only on those budget components



which are more directly controllable. In other cases, they may have adopted dual budgeting, whereby departments have budgets for accruals alongside an overall cash control, which is also subject to budget approval.

On the second question—the reporting of budget performance within accrual accounts—international standards (IPSAS 24) require an entity to show outturn against original and final approved budgets, either as an additional financial statement or as additional columns to one of the other main financial statements. IPSAS 24 only applies where the budget is published, as is the case in the majority of Latin American countries. The standard also requires, in the notes to the account, an explanation of material differences between outturn and budget, unless such information is already published elsewhere and a suitable cross-reference is provided in the notes. In those cases where the final budget is always the same as the outturn—because the budget is revised and approved on a continuous or near-continuous basis—the explanations should focus on variations between outturn and the original budget.²⁰

This requirement may seem straightforward enough, although in practice there may well be complications in meeting it. The degree of difficulty will depend on three things: the coverage, classification, and accounting basis for the budget:

- If the coverage of the budget is less than that of the financial statements, then budget comparisons may only be possible within segmental reporting and not in the principal statements.²¹ This would almost certainly be the case for consolidated accounts of general government or the public sector, since not all expenditures will be covered by the budget. In this context, for example, one segment could be “budgetary central government,” with another for “other central government,” with similar distinctions between budgetary and nonbudgetary expenses being included for other subsectors or levels of government. Another complication of coverage would be the use of multiyear budgets—the standard provides guidance on how these might be matched to annual financial reporting.

²⁰ Some countries have disclosure of the original budget proposed by government, budget approved by legislature, modified budget, and outturn.

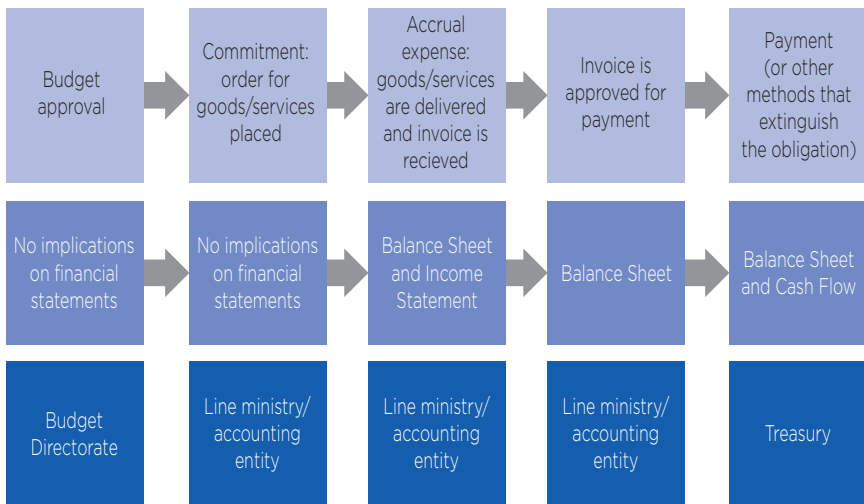
²¹ Segmental reporting, covered by IPSAS 18, encourages more detailed analysis of financial results by operating “segment” or other component parts in the disclosure notes to the accounts.

- If the principal classification of the budget differs from that used in the main financial statements, a separate statement of budgetary performance will be needed, with reconciliation to the totals shown in the main financial statements. This could well be the case, for example, where the principal budget classification is organic (by ministry or sector), while the classification in the main financial statements is economic (e.g., staff costs, goods and services, grants).
- If the budget is accruals-based, reconciliation would be to the numbers in the operating statement or the segment operating statement. If the budget is cash-based, then the reconciliation would be to the cash flow statement or segment cash flow statement. If the budget is based on modified cash, however, reconciliation would be more complicated—there would need to be a reconciliation between account and budget totals before a breakdown of budget performance could be provided.

Budget reporting practices vary from country to country. In many economies, the tradition will be to have a sizeable set of public accounts that show consolidated information for budgetary central government, together with detailed outturn and budget information for each ministry or sector. In other traditions, the consolidated account is the main accounting output, with departmental accounts and other analyses published separately (or unpublished). In this latter situation, the new consolidated accrual accounts could include only high-level budget comparisons with a cross-reference to the detailed budget analyses available elsewhere.

The third question relates to the natural concern of treasurers that accruals accounting may undermine a government's ability to control cash or other aspects of the spending regime. The short answer is "no." Budgeting and spending control systems usually comprise controls which are based on Parliamentary approvals and on other controls (usually more detailed ones), exercised by the Ministry of Finance under its delegated authority. Cash controls can either be embedded within the Parliamentary appropriation or budget approval system—subject directly to legal limits—or, instead, they can be implemented as one of a set of administrative controls under the jurisdiction of the ministry of finance. For example, a ministry of finance could, alongside accrual budgets, also impose controls on cash releases, as it might do for staff expenditures or numbers, administrative expenditures, capital expenditures, or any other control items in a

FIGURE 5.9 LINKS BETWEEN BUDGET EXECUTION, FINANCIAL STATEMENTS, AND TREASURY MANAGEMENT



Source: Authors' elaboration.

year. Spending departments would need ministry of finance authority to vary these limits. Furthermore, of course, a ministry of finance would still wish to keep a close eye on cash flow and liquidity as part of its treasury management or financial programming function. Such cash-based controls will still be possible, since an accrual accounting system also facilitates control over cash flows—in the same way that the millions of businesses worldwide, which use accrual accounting systems, continue to exercise control over their cash flows.

One particular issue of interest to treasurers will be that the traditional control and monitoring over commitments may not be executed directly through the accounting system. The link between the budget execution process, financial statements, and treasury management is shown in Figure 5.9.

From this illustration, it can be seen that the traditional and broad concept of a commitment—the earmarking or release of funds for specific expenditures before an order is placed or an invoice is raised—has no direct equivalent in the accounting sphere (being neither an accrual nor a payment). Instead, commitment control would need to operate at an earlier stage in the expense cycle, or through financial programming which limits the cash releases available in any given period. Alternatively, if a government

is building its own accounting system, it may wish to incorporate this additional functionality within its system design.

In Latin America, budget execution is reported on a mix of cash and modified cash basis: budget execution reports present revenue on a cash basis and expenditures on a modified cash basis, which means that expenditures are registered when the obligation for payment is recognized (*devengado* or *liquidado*, depending on the country). In general, this obligation crystallizes on the invoice date. In some countries, however—mainly due to weak internal controls—the date included in the system is a different one, which undermines the credibility of data.

Depending on the country and on the ICT system applied, accounting entities may generate two entries into the system, one for accounting purposes and the other for reporting budget execution—which can jeopardize the uniformity of data. Modern financial systems promote the integration of such information and the simplification of data entry to avoid this kind of problem.

Accounting and Other Financial Information Systems

Transition often involves major changes to government financial systems, and it requires much more systems integration than modified cash accounting does. Although accruals accounting will still obtain much of the required data from transactions passing through the payment or receipts cycles, it will also need data that may come from satellite or separate systems (e.g., debt management systems, human resource systems for staff benefits). Furthermore, accruals accounting will also use accounts figures that are based on algorithms, formulas, or estimates. Accrual accounts also require additional disclosures (e.g., contingent liabilities, related party transactions) that may require new data not previously assembled or analyzed. Transition is thus not simply a matter of modifying an accounting system; it involves integrating or using data from a number of sources.

Indeed, integration is so central that accrual accounting may be one of the key drivers behind implementation of an IFMIS, since it is best served by close integration of various financial systems (e.g., General Ledger, Accounts Payable and Receivable, Revenue Management, Procurement, Fixed Assets, Personnel, among others) that were previously operated on a standalone basis or were loosely integrated. Many countries in Latin America use an IFMIS project as a driver and enabler of their new government accounting system (see Box 5.7). Chapter 7 of this book discusses, in more detail, the reforms of the IFMIS systems in Latin America.

BOX 5.7. IFMIS REFORM: A COMPONENT OF ACCOUNTING REFORM

Panama, for example, is changing its current integrated financial management information system, known as SIAF Panama, to a new one, referred to as Integration and Technical Solutions of the Operational Management Model (Integración y Soluciones Tecnológicas del Modelo de Gestión Operativa), which will facilitate the adoption of the new accounting standards. The new system will become operational in 2015, whereas the adoption of IPSAS will be a longer process, expected to be completed in 2021.

In Peru, there has already been a pronouncement on IPSAS adoption and a Law has been enacted to adopt IPSAS. Currently, the government is modernizing the IFMIS, known as the Integrated Administrative and Financial System (Sistema Integrado de Administración Financiera (SIAF)), which will be replaced by a new version, SIAF II. The new system will help to improve the application of the new standards by accounting entities.

Classification of Accounting Transactions

One area of transition which could have consequences for non-accountants is that of the classification of transactions. This may appear to be a rather dry and technical matter, strictly for bookkeepers; however, in modern financial systems, classification is central to many financial management activities and to the production of useful management information. Transition should take into account the need to align, as far as possible, accounting and budgetary classifications—preferably from reform inception.

A CoA is a set of codes that are used to classify accounting transactions. While a principal use of a CoA is to provide the classifications required for financial reporting, in modern integrated systems the CoA also provides the classifications for other purposes such as budgetary control and reporting, management information, and statistical reporting. A CoA, therefore, will often have several dimensions or segments, each containing a different classification system (Cooper and Pattanayak, 2011). The CoA needs to reflect the interests of many parties and, most especially, the budget, control, and accounting officials.

In many countries, government use of cash or modified cash accounting will already have a standard CoA to be used by all entities within central government, with possibly another for local government and yet another for satellite bodies. These charts of accounts will cover receipts and payments, and the internal structure of the CoA will probably reflect the classifications used in the budget. For public enterprises, these are more likely to maintain their own CoAs, capable of supporting IFRS-style accrual reporting. In the transition to accruals, one of the first developments should be the production of

a new CoA, to be used by all public noncommercial entities, extending the CoA to cover assets and liabilities, as well as other changes in net worth (i.e., other than receipts and payments).

One tension which this new standard CoA may introduce is the inability of each institution or type of institution to include elements that cater to their own specific characteristics or operational needs. Ideally, therefore, the standard CoA should leave room for such user-defined classifications of expense and revenue, among others. The degree of standardization, in part, will depend on the degree of detail to be provided in the consolidated accounts. In some countries, the tradition is for the government consolidated account to be the only place where such detail is provided (with individual entities not producing their own accounts). In other countries, this detail is disclosed in individual entity accounts, while the consolidated accounts (and, thus, the standard CoA) are more summarized. Nevertheless, where a country elects to present highly summarized consolidated accounts, the standardization at lower levels may be justified by the needs of financial control or detailed analyses of government finances.

Potential confusion may arise between the CoA needed for financial reporting, based on IPSAS, and the coding systems needed to support statistical (often referred to as “fiscal”) reporting under the IMF’s GFS. In contrast to IPSAS, GFS does come with a standard reporting template and a standard classification system. At first glance, there is a great deal of commonality between GFS and the way in which a government may present its financial statements. There are, however, important differences between IPSAS and GFS, reflecting their different objectives and perspectives, and it would be wrong to use a GFS-based reporting template and coding system for financial reporting without modification.²² A better solution is to adopt one of the classification systems (IPSAS or GFS) as the principal coding to be used in everyday operations and data entry, with the ICT system automatically mapping this coding system to the other classification system. In this way, a single coding entry and set of coded transactions can be used to produce IPSAS accounts, as well as GFS statistical reports. The principal coding structure may be IPSAS or it might be GFS—the choice will mostly depend on whether the budget is intended to mirror the eventual accounts, or whether it is based on GFS classifications.

²² For a discussion of the differences, see IPSASB (2012) and IPSASB (2014).



Finally, this standard government CoA is very unlikely to be suited or applicable to government business enterprises that should be following IFRS reporting requirements. If the eventual intention, however, is to produce whole-of-government accounts that cover all commercial and non-commercial parts of government, there will be a need for a further mapping system, allowing IFRS-based accounts to be translated into IPSAS-based accounts and then merged with the IPSAS-based data. This conversion may not be wholly straightforward, however, since one difference between IFRS and IPSAS will be in the valuation methods used for certain types of assets or liabilities. The original IFRS data, therefore, may need to be reworked first before mapping. Clearly, such mapping and reworking will be easier if the consolidated accounts are in summarized form—it will be much more onerous if the financial activities and position of government enterprises have to be reclassified to three or four levels of detail.

CONCLUSIONS

An analysis of practices in the region demonstrates that like other complex PFM reforms, accounting reforms take a long time to implement. They should be founded on a detailed action plan and strong political commitment from inception.

Accounting reforms usually take a long time because it is necessary to change legislation, develop complex standards and norms, change ICT systems, and improve the capacity of thousands of accountants spread across the central and subnational governments. These demands put considerable pressure on the leaders of accounting reform. Support from the legislature is essential, since legal reform is usually the first step—as seen in the cases of Brazil, Costa Rica, and Peru. The approval of new legislation also shows the commitment of the executive and legislative levels to the reforms, and it provides the visibility necessary for leaders of the reform to move ahead. Good communication is essential to keep stakeholders and society informed, especially considering that the reform's impact will take a while to become apparent.

An accounting reform has more chance of succeeding if it is part of a broader PFM reform; in most of the case studies, it was advantageous to be connected with the development of a new IFMIS or to the improvement or updating of the existing one. In addition, some interested parties, such as treasurers and budget officials, can play an important role, as they are the most direct beneficiaries of better financial information.

The territorial structure of many Latin American countries—with large numbers of municipalities, several regions and/or states, and a considerable degree of autonomy within the public sector—adds to the complexity of the reforms. Capacities vary among governments and, usually, a big investment in capacity building is required, particularly in relation to the municipalities. This is the reason why reform should be a gradual process and why it should adopt flexible timeframes for implementation. For example, it can begin at the level of central government, and gradually move to states or provinces, and then to municipalities.

The benefits of accounting reform are evident in the substantive increase in financial information on noncash assets and liabilities. This impact, however, is not immediate and needs an educated audience, as the information is more complex to understand and interpret. In practice, evidence shows that better accounting provides more credibility and can eventually lead to improved credit ratings. Moreover, the disclosure of information that was previously not available or not consolidated (e.g., deficits of public corporations; contingent liabilities of PPPs; accumulated cost of employee benefits, such as pension; loss of assets; and contingent and unrecognized liabilities) will expose fiscal risks that will need to be taken into consideration by policy-makers. This is precisely where the benefits of accrual accounting are most evident.



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Finding the Costs of Public Services: The Experience of the State of São Paulo in Implementing a Cost System

James L. Chan and Mario Pessoa

INTRODUCTION

Cost accounting and analysis are important for improving budgeting, performance evaluation, and resource allocation decisions. Spending budgets are basically the aggregation of the allowed costs of producing goods and services in certain quantities. Government officials are urged to make resource allocations on a rational basis; that is, by comparing the costs and benefits of alternatives. This calls for the identification and projection of those alternatives. These and other examples point to the general need for cost information in government. More specifically, since government is supposed to operate on a not-for-profit basis, cost is—or should be—used as a basis to set user fees—and perhaps taxes as well, if possible. Furthermore, government operations should be economical and efficient in order to keep taxes and fees as low as possible.

The government of the State of São Paulo is implementing a public service cost system (PSCS) to better inform the public about the cost of public services.¹ The primary objectives are to generate savings, improve public service efficiency, strengthen budget realism, and increase transparency. It goes beyond the cost system that was implemented at the federal level to

¹ The State of São Paulo is the most developed state in Brazil. It has an economy that is larger than most Latin American countries.

calculate cost at the level of programs and budgetary entities. The reason for this is because the State of São Paulo prefers to influence decisions also at the micro level; that is, at the level of activities provided by the cost centers. First, regarding the cost centers, the cost project calculates cost at the level of the direct service provider (e.g., schools, hospitals, and prisons) that is one tier below current budgetary entities. Second, in terms of programs, it calculates cost at the level of service or activity, one level below the program. The rationale is to influence performance at the operational level. The system, therefore, has to provide cost information to the cost center managers, where the services are provided.

International experience has shown that it is very complex to implement cost systems in the public sector. This is because of the complexity of public administration, nonexistence of a standardized and well-tested cost methodology in the public sector, difficulties in motivating policymakers to use cost information in making budget decisions, and the large volume of financial information to be processed. In addition, most public sector information systems are not easily adapted for generating cost information.

To overcome these difficulties, in 2011 the Department of Finance (Secretaria da Fazenda (SEFAZ)) of the State of São Paulo requested the International Monetary Fund (IMF) and the Institute of Economic Research Foundation (Fundação Instituto de Pesquisas Economicas (FIPE)) to provide technical assistance (TA) in cost accounting. The four-year technical assistance project was intended to draw from international experience in cost systems, define cost methodologies and reports, identify financial and nonfinancial information used to calculate cost, provide capacity and training, define a project management framework, and propose an implementation strategy.

During its first stage, the PSCS aimed to calculate costs of public services provided by selected cost centers (e.g., hospitals, schools, and prisons), applying standardized methodology and using existing financial and nonfinancial data and systems. The services initially identified were to be aligned with the activities of the multiyear plan (Plano Plurianual (PPA)). Four entities were selected as pilots: Department of Education (Secretaria de Educação (SEE)), Department of Health (Secretaria da Saúde (SS)), Department of Penitentiary Administration (Secretaria de Administração Penitenciária (SAP)), and the entity responsible for assisting youth in legal custody (Casa Foundation (Fundação Casa)).

The main outcomes of the project would be a conceptual model of the cost system (cost manual, definition of policies and procedures used to calculate costs); design of reports; adjustments of the government financial management information system (Sistema Integrado de Administração Financeira dos Estados



e Municípios (SIAFEM)) to generate cost information; alignment of cost services with PPA activities; and capacity building of staff in charge of the PSCS. The first phase of the project was anticipated to be completed in 2015, at which time cost information was expected to be produced automatically by the SIAFEM.

Despite the substantive results having been achieved to date, implementation has not yet been completed. The project has turned out to be more difficult to implement than was initially envisaged. The contributing factors were the complexity of defining the public services to be cost; lack of country experience on which to base the design of the system; initial reluctance to invest the necessary time to prepare field studies and analytical work; significant volume of financial and nonfinancial information to process; coordination of multiple layers of stakeholders; and amount of time required for a consensual methodology and strategy. Future steps include expanding the project to other services, further aligning services and PPA activities; and using cost information to improve budget allocation decisions, performance evaluation, and cost control.

This chapter consists of four major sections. The first section on cost accounting and analysis will explain fundamental cost concepts and will briefly describe some international experiences in applying those concepts. The following two sections will describe the experience of the State of São Paulo in creating a costing system for its public services. The proposed approach will be compared to how it was actually implemented. Finally, an evaluation that was carried out has produced some conclusions and drawn some lessons to improve the practice of cost accounting and analysis in government. As a project that is not yet fully implemented, it is too soon to assess the results achieved in terms of the impact on budgetary and financial systems.

COST ACCOUNTING AND ANALYSIS

Fundamental Cost Concepts²

Despite the fact that “a revolution in the practice of cost management” (Cooper and Kaplan, 1999) has taken place, some cost concepts are so

² The concepts discussed in this section are detailed and illustrated in Zimmerman (2011), Blocher et al. (2008). Khan (2000), despite the reference to government in its title, presents mostly quantitative techniques and numerical illustrations. Thompson (1999) offers a catalogue of cost concepts and techniques. Ingram (1992) outlines the steps in determining the cost of government services in three stages: identifying cost centers and goals, measuring services, and identifying costs and finding costs.

fundamental that they have remained in mode. This section introduces some of them, which can be used for costing goods and services produced by government, as well as for planning and control. Since concepts are abstract, numerous examples have been provided to illustrate them. Essentially, since they are derived from the application of economics to real-world situations, there are various cost concepts for different purposes.

Concepts for Costing Goods and Services

Direct costing and full costing are the two basic methods used to calculate the cost of goods and services (cost objects). Direct costing includes only the cost of resources that are easily traceable (attributable) to the outputs, such as raw materials and production workers. Since direct costs are likely to change in response to the volume of output produced, direct costing is also known as variable costing. Efficient production requires support services (overhead), such as maintenance and managerial supervision. These overhead costs are also referred to as indirect cost because they are not easily traceable to individual units of an output. This is why full costing is also known as absorption costing, in which $\text{total cost} = \text{direct costs} + \text{indirect costs}$.

It is easier to calculate the cost of producing goods than it is the cost of rendering services. Given the tangible nature of goods (e.g., a mobile phone), it is relatively easy to identify and quantify the material inputs used and the labor hours required. The production process tends to be structured, and one is able to visualize the work in progress and, ultimately, the finished goods. Furthermore, what is not sold remains in the finished goods inventory. In contrast, services, such as education and health care, are intangible and cannot be stored in inventories. The service process tends to be less understood and engineered; indeed, to be effective, service has to be flexible and adapted to the needs of the recipient. The server often requires the cooperation (coproduction) of the recipient. Furthermore, in the case of public goods consumed collectively by a community, it is difficult—or not sensible—to divide them in order to set individual fees or taxes that reflect their costs. These complicating factors have to be taken into account when designing cost systems in government.

Unless otherwise specified, the costs discussed in this chapter refer to actual costs—the financial sacrifices made in achieving an objective, such as producing government services. Information on actual costs is sought after because it is considered objective or even true. Actual costs are, however, only as true—or valid—as the cost accounting concepts and procedures that are used.



Nevertheless, actual cost information is essential, since it responds to the question of how much it cost. Knowing the actual cost produced by a cost accounting system, however, is only the start. Cost analysis based on the data is required to establish the hidden properties and relationships. For example, an average cost number on its own does not disclose the range or distribution of the underlying cost figures. Furthermore, analysis is often necessary to make raw cost data useful for planning, budgeting, and performance evaluation purposes.

Cost Concepts for Planning and Budgeting

Since planning and budgeting relate to the future, future cost is more relevant than the historical cost that is reported in the financial statements produced by financial accounting systems from past transactions and activities. For example, in the accounts, a piece of equipment may be reported at historical cost, adjusted for depreciation. Its current replacement cost, however—or even better, future replacement cost—is significantly more useful in capital budgeting. A future cost is an estimate, even if the estimate is made by projecting from the current cost or the past cost. For example, the estimation of future labor costs has to take into account such factors as productivity gains or the cost of living adjustments promised in contracts.

One way of estimating future cost is to relate cost to the future level of the activity (cost driver) that will cause cost to rise or fall. In this regard, costs that change in response to the activity level are called variable costs; and those that do not change within a certain range of activity levels are fixed costs. For example, with the number of prisoners considered to be the cost driver of prison costs, food consumption is a variable cost, while utilities (e.g., electricity) represent a fixed cost. Total cost can be estimated by using the following formula: $\text{fixed cost} + (\text{unit variable cost}) \times (\text{number of units})$, or $(\text{utilities and other fixed costs}) + (\text{food cost/prisoner}) \times (\text{number of prisoners})$.

The concept of opportunity cost is applied in decision making. Establishing an opportunity cost entails the selection of an alternative from various available options (e.g., spending more on public safety instead of public education). In that case, the opportunity cost of more public safety is the foregone gain in learning. This simple example shows that while opportunity cost is theoretically sound, it requires imagining the alternative use of resources and speculating the benefits that might be produced. This is difficult to implement in reality. In deference to greater feasibility and objectivity (if not due to lack of imagination), financial accounting remains with actual or historical cost, which economists dismissively refer to as sunk cost.

Good managers are often tempted to make changes in the way services are provided to achieve greater economy or efficiency. For example, in the face of rising labor costs, a municipal government may consider replacing existing garbage trucks with more sophisticated ones, thereby reducing the crew from two persons to one. The more capital-intensive approach would reduce the labor costs associated with the garbage collectors in the sanitation departments. The latter are common costs (i.e., the same regardless of the alternatives) in contrast to the differential costs for equipment and garbage collectors. Only the differential costs and differential benefits—not common costs—should affect the decision outcome. Differential costs, therefore, are sometimes referred to as a relevant cost for decision making.

Barring exceptional circumstances, when changes do take place in government, they are of an incremental nature. Zero-base budgeting that leaves no government activities unexamined is rare; instead, incremental budgeting is practiced far more often. Whereas zero-base budgeting would examine total cost, incremental budgeting focuses on marginal costs; for instance, the cost of adding or dropping a program, or the cost of adding or reducing a certain number of employees. While decision making at the margin is a conservative approach that favors the status quo, it is more efficient and requires less information.

In budgeting—as in performance evaluation (see below)—a very useful concept is standard cost or allowable cost. Budgeting is, in essence, a series of standard cost calculations. Continuing with the earlier example regarding garbage collection, the cost includes labor cost and capital cost. Whereas financial accounting keeps track of actual cost in terms of the amount paid to employees, the determination of standard labor cost necessitates judgments about the desired levels of labor productivity and compensation. In this way, when budgeting is based on standard costs, benchmarks are available for subsequent performance evaluation.

Cost Concepts for Performance Evaluation and Control

When resources are scarce or budgets are tight, managers—on their own initiative or requested by the management—tend to contain cost or even reduce cost. As mentioned by Robinson (2007), using cost information to link funding to results is an essential issue that relates to performance budgeting theory and practice. Robinson continues, “Expenditure prioritization decisions are viewed as a matter of deciding how to allocate money between



programs, the starting point is to measure program costs so as to permit a comparison between program costs and benefits.” The issue, however, is which method should be applied to measure program costs to allow a reasonable and expedited comparison.

Cost for performance evaluation can be conducted in three ways. The first method recognizes the tradeoffs between service (in terms of quantity and quality) and costs. The second method of evaluation takes the perspective that lower cost is more favorable than higher cost, recommending cost cutting with little attention to the consequences. The third and more rational approach compares actual costs with standard costs so that significant cost variances are investigated for potential corrective action. The first method makes use of cost analysis; its success, however, relies on operational and financial staff, since the information on quality and quantity is at the operational level. This approach requires in-depth knowledge of the cost composition relating to a particular service, according to a specific quality and quantity. Only the specialists at the operational level would know what impact on the provision of service in terms of quality and quantity would be acceptable. While this approach is recommended, it is difficult to implement in large scale. The second method is rather simplistic and should be avoided, as it tends to sacrifice quality across the board. The third method, within the competency of the finance department, is recommended and is described next.

Total costs are broken down to direct material, direct labor, and overhead costs. Labor cost is simply added for illustration. Total actual labor cost = actual hourly rate x actual number of hours worked; total standard labor costs = standard hourly rate x standard number of hours allowed. The hourly rate standards are usually set by the human resource department for different categories of employees, based on required skills and prevailing market rates, among other factors. Amount of time is allowed on the basis of a combination of objective factors (e.g., work load) and subjective actors (e.g., management expectation of productivity improvement). Therefore, total cost variance = (total actual labor cost) – (standard labor cost). While the total cost variance may be used to evaluate the general manager, it is not appropriate to evaluate the production manager, since he/she could only influence the efficiency of operations. A labor efficiency variance is found, therefore, equal to [(actual hours worked – standard hours allowed) x standard hourly rate]. Applying the same principle of holding managers responsible for their controllable cost, the human resource department is informed of the labor rate variance, which is equal to [(actual rate – standard rate) x actual hours worked].

In addition to responsibility accounting—holding managers accountable—another advantage of this approach is efficiency. That is, a manager’s attention is immediately directed to the discrepancy between what happened and what should have happened. If the variance is significant (i.e., excessively large), the manager is prompted to take remedial action. Obviously, too high an actual cost relative to the allowable amount (unfavorable variance) is undesirable from a financial standpoint, and it should be investigated and corrected; neither is too high a favorable variance—actual cost being low compared to the standard. The manager should examine whether quality is being compromised due to, for example, using less-skilled workers on a lower pay scale and cheaper materials at lower prices. In other words, an effective cost performance evaluation system will allow, or require, managers to use their qualitative judgment to interpret cost data.

Conclusion

In essence, the word “cost,” excluding the adjectives to describe it further, is not useful in practice. Doing so has resulted in a confounding variety of cost concepts. In actual fact, true cost only exists to the extent that (1) a valid cost concept is used and (2) reliable numbers are collected to measure that concept. In theory, the above analysis and examples have shown a variety of cost concepts to enable cost accounting and analysis to meet several purposes. These purposes include scorekeeping, directing management attention to problem areas, and decision making, particularly resource allocation in planning and budgeting.

For basic scorekeeping, the applicable cost concepts are actual costs which are calculated by using financial accounting principles. While generally accepted accounting principles on the accrual basis require full or absorption costing, direct costing is regarded as appropriate for planning and control. In planning and budgeting, the concepts that are useful are future cost, differential cost, marginal cost, and allowable or standard cost. For attention-directing purposes and performance evaluation, standard costs provide the benchmarks for evaluating actual costs, so that significant cost variances are investigated and reduced as appropriate.

INTERNATIONAL EXPERIENCES

Despite claims by politicians and complaints by the public regarding the rising costs of government, there have been relatively few serious and sustained

efforts to measure and control government costs. This section reviews some of these efforts.³

Developing Countries

*Cost Information System: The Case of Brazil*⁴

In 2010, Brazil implemented cost information to improve budget allocation decisions. Designed and operated by the National Treasury (Secretaria do Tesouro Nacional) in the Ministry of Finance, the system has the capacity to integrate data from several systems (e.g., budgeting, accounting, asset management, purchasing, and payroll) into a single data-base by means of a powerful data warehouse. The central finance agency supplies the data to the operating departments for their own analysis. The system allows managers to produce cost information in terms of budget entities and administrative units and government programs.⁵ It has the capability to define cost centers and activities at a more detailed level in response to an entity's unique characteristics and needs. The system can generate cost using the top-down and bottom-up approaches. The latter is used by budget execution units and can incorporate quantitative information about goods and services.

The federal government has developed the Cost Information System that is currently available to all entities at the federal level (Brazil, 2015). The system is based on a business intelligence solution (Data Warehouse) that uses available information from the integrated financial management information system after some adjustments, such as expenditure paid in this year but related to previous years to bring more adequacy to the accruals concept for cost accounting.⁶ The adjustment methodology used by the federal

³ A more comprehensive review of recent international experiences is available in Chan, Holanda, and Pessoa (2012), which provides detailed citations that have been omitted from this chapter.

⁴ Sources of information about Brazil's cost system include Brazil (2015), Machado (2005), Machado and Holanda (2010), Holanda and Pessoa (2011), and Holanda, Lattman-Weltman, and Guimarães (2010).

⁵ An administrative unit is the lowest level of organizational unit for which the budget is allocated during execution. An administrative unit receives its budget from a higher budget unit. A budget unit can be composed of one or more administrative units.

⁶ The accounting system in Brazil is a modified cash accounting system with selective use of accruals, such as for inventory purposes. The State of São Paulo is moving gradually to accrual-based accounting as part of a national reform effort, to be completed in 2020. For more details on public accounting reform, see Chapter 5.

government also has been adopted in the State of São Paulo. The user of the system can select preformatted reports or construct its own reports. The system is publicly available on the website of the Ministry of Finance, <http://www.tesouro.fazenda.gov.br/custos>. The system allows the generation of cost reports by budgetary entity, program, economic classification, and activity. The purpose is to improve budget preparation and to control costs. An assessment of the use of the system to improve resource allocation, however, has so far not been done.

Some Brazilian states, such as São Paulo and Rio Grande do Sul, are implementing their own cost systems. The experience in the State of São Paulo is further discussed in detail later in this chapter. The State of Rio Grande do Sul has adopted a similar approach to the federal government: calculating costs at the administrative and programmatic levels (Di Francesco and Barroso, 2014). The system has been implemented in 14 agencies to date, although it is at a very initial stage. The purpose is to influence the budget preparation by making the projections more realistic.

Concern and Theory of Cost: The Case of China

In 2014, the Ministry of Finance of China launched a major initiative to improve the quality of financial management in the public sector. Since this effort is relatively recent, there is no written literature. This initiative reflects the concerns about the inability to accurately account for costs and to effectively control them,⁷ reflected in a number of publications. Zhou and He (2001) use economic theory to analyze the costs of government without attempting to define or measure such costs. Xu and Zhang (2008) discuss the costs of government operations in the context of improving public management and budgeting, again without addressing definitional and measurement issues. Xia, Zhao, and Xia (2009) collects a group of essays about the need to control excessive administrative costs in the Chinese government due to corruption and waste. These essays report expenditure numbers, again without a serious effort to deal with the technical issues of cost measurement. Despite the efforts already achieved, further refinement to calculate costs is essential.

⁷ Disclosure: One of the authors, James Chan, was appointed Special Advisor to the China Association of Chief Financial Officers, the main organizational vehicle for improving management accounting in China.

Developed Countries

Numerous attempts in Australia, Canada, New Zealand,⁸ the United Kingdom, and the United States have been made to raise awareness about the rising costs of government and to measure those costs. These instances illustrate the stages of developing government cost systems. The contents of each case are briefly described below, details for which are available in an unpublished technical note, entitled “The Nature of Public Services and Implications for Cost Systems,” which has been submitted to the State of São Paulo. The note presents a large number of studies to measure specific service areas, such as elementary and secondary education, health care, penitentiary administration, and social work.⁹ It also provides citations to the studies mentioned below.

Raising Awareness

The Chartered Institute of Public Finance and Accountancy (CIPFA) issued in 2011 a series of publications, entitled “counting costs” to encourage governments to create a “cost conscious culture” such that “cost considerations automatically feature in everyone’s actions across the organization.” CIPFA was responding to the findings of the UK Audit Commission for local governments that legislators did not have a good understanding of costs. CIPFA emphasized that cost analysis is not an end in itself, but that it is applied to influence decision making. The document, therefore, explains cost concepts and techniques, and endorses six international costing principles, originally intended for business. It also suggests that managers assess their understanding and use of cost information, as well as their relationship with the finance staff.

In 1985, the U.S. General Accounting Office (GAO) released a study, “Managing the Cost of Government: Building an Effective Management Structure,” in support of the Hoover Commission’s accrual budgeting proposal. The GAO raised the concern that the failure to disclose full costs, in fact, resulted from structural deficiencies in current budgeting and accounting systems. The GAO proposed that the federal government measure outputs and inputs, as well as use budgeting and accounting principles that match the delivery of services with the cost of the services.

⁸ New Zealand also has relevant experience, but is not discussed in this chapter. For additional information, see New Zealand (2014).

⁹ The note is not published but can be made available by the Author by sending an email to Mario Pessoa at mpessoa@imf.org. The note is in Portuguese.

Costing Services and Activities; Setting Standards

In 1984, the Government Finance Officers Association (GFOA) of the United States and Canada published *Costing Government Services: A Guide for Decision Making* by Joseph T. Kelley (1984). Kelley used actual cases to illustrate cost analysis to improve the decision making of North American municipal officials in considering new services, setting prices required to recover costs, and determining the amount of subsidies of self-financed municipal services.

A number of U.S. government agencies responded to the GAO's call to produce the cost information mentioned earlier. In 1990, a GAO survey found 59 cost systems (using the "resource consumption" definition of cost) in five U.S. federal agencies (Department of the Interior; Department of Health and Human Services; General Services Administration; Department of Agriculture; and Department of the Army). The problem of lack of uniformity in concept and practice in cost accounting in American federal agencies was dealt with through laws and regulations in the 1990s. In the early 1990s, the U.S. Congress passed two laws requiring government agencies to produce cost information. To realize the goals of the above legislation, in 1995, the Federal Accounting Standards Advisory Board (FASAB) issued Statement of Federal Financial Accounting Standards Statement No. 4, entitled "Managerial Cost Accounting Standards and Concepts for the Federal Government." To facilitate the implementation of the above standard, the Joint Financial Management Improvement Program (JFMIP), in 1998, issued "System Requirements for Managerial Cost Accounting."

Since the U.S. Government carries out so many of its programs and activities through other entities, the Office of Management and Budget (OMB) establishes cost accounting principles and standards to be followed by state and local governments, higher education institutions, and nonprofit organizations. These documents permit contractors and grantors to charge the federal government on the basis of allowable costs and full costs. Allowable costs are those for which the federal government is willing to pay. Many of the cost standards pertain to the allocation of indirect costs to federal contracts and grants.

In Australia's State of New South Wales, the Office of Financial Management in the Treasury, issued two Policy & Guidelines Papers, "Service Costing in General Government Sector Agencies" and "What You Do and Why: An Agency Guide to Defining Results and Services" (New South Wales Treasury, 2006; 2007). These administrative directives require the identification of results, so that it would be possible to define service costs. In our view, the guidance was not sufficiently operational to be practical, as the guides are concentrated

in explaining how to define the chain of outcome/output/activity relationship without being specific about how to calculate the cost of the service itself, leaving to each entity the responsibility to develop its own cost system.

Activity-Based Costing and Accrual Budgeting

The adoption and upgrade of cost information systems in U.S. federal agencies in the last 20 years was influenced by the issuance of the FASAB and JFMIP documents mentioned earlier, as well as by the advent of the activity-based costing (ABC) technique.¹⁰ The GAO report to Congress in 2007 noted that “implementation and use vary widely across 10 federal agencies.” In 2009, the Association of Government Accountants carried out a survey of 10 federal entities—mostly components of federal departments—that “had implemented MCA [managerial cost accounting] and were successfully using the information available to program managers” GAO, 2009: 5. Table 6.1 indicates the nature of the cost systems and how cost information was reportedly used.

In 2004, the GFOA updated its 1984 guide to costing government services. Most of the fundamentals remained unchanged, except for the analysis which became more quantitative and activity-based and was central to the new guide. The guide objectively stated the advantages and disadvantages of ABC. The main advantages were more accurate cost data and a better understanding of activities in terms of value-added and nonvalue-added activities. The key disadvantage was the high cost of obtaining the data. In 1999, the Florida legislature required this state’s departments to report the unit cost of providing services; otherwise, their appropriations would be reduced by 10 percent.

Since the beginning of the 1990s, the United Kingdom has been implementing accrual accounting and budgeting initially in departments and, subsequently, at the whole-of-government level. Departments are required to produce resource accounts.¹¹

¹⁰ Instead of pooling all indirect cost, ABC (1) accumulates the costs of indirect resources for each of the activities undertaken to produce a service, and (2) assigns these activity costs to the services in accordance to the amounts of activities required to produce the services.

¹¹ The United Kingdom no longer uses Public Service Agreements to capture the amounts of services delivered. It is, therefore, difficult to match departmental resource accounts with nonfinancial performance measures. For more details, see Brimson (1998).

TABLE 6.1 USING MANAGERIAL COST INFORMATION IN U.S. FEDERAL AGENCIES

| Item | Out of 10 Cases |
|--|------------------------|
| Characteristics of system | |
| Activity-based costing system adopted | 9 |
| Systems less than 10 years old | 6 |
| Uses of information | |
| Budget formulation | 10 |
| Cost control | 9 |
| Performance measurement/reporting | 9 |
| Informing decisions about reimbursements and fee setting | 9 |
| Program evaluations | 5 |
| Assistance with making economic choices/business decisions | 7 |
| Improve contract negotiations and contract oversight | 2 |
| Cash recovery analysis | 3 |
| Reward managers for cost effective approaches | 5 |

Source: Adapted from Figure 1 of AGA (2009).

In summary, there have been many uncoordinated efforts to find the cost of government services and to develop systems to capture those costs. Following private-sector examples, some governments have begun to use ABC, the literature of which features various initiatives. Due to the lack of accessible public information, however, it is impossible to assess how many of these initiatives began with a bang and ended with a whimper.

DESIGN FOR THE SÃO PAULO COST SYSTEM PROJECT

As indicated earlier, the relevance of cost concepts is determined by the purposes of cost accounting and analysis. Similarly, the choice of methodology for the State of São Paulo cost system project was influenced by the goals of finding the costs of services provided by the State. Interviews with senior officials in operating departments and São Paulo's Department of Finance (Secretaria da Fazenda (SEFAZ)) revealed that the main objectives were to improve resource allocation decisions and to control costs. On the basis of these objectives, it was decided that it would be prudent



to have an initial pilot project phase to develop and validate the methodology before commencing a full-scale rollout of the system across the entire state government.

The following steps of the pilot project were proposed and accepted by the authorities of the State of São Paulo:

1. Select a small number of pilot departments of diverse characteristics to develop systems and procedures for government-wide application.
2. Undertake field investigations to better understand these pilot departments in terms of their structure, function, and operational characteristics, particularly the services they provide and the resources used to provide those services.
3. Develop a profile of services to the extent of detail sufficient to respond to planning and management needs of these departments.
4. Develop cost accounting modules for these departments.
5. Produce a cost manual on the basis of generalizing the experiences gained in the previous steps, in preparation for state-wide implementation.
6. Prepare cost reports and analyze the cost information produced for presentation to managers, planners, and policymakers.

So far, items 1 to 4 are completed and items 5 and 6 are in process. All steps are expected to be concluded in 2016.

Since a review of the literature had not found precedents of a government cost system project of the scale and depth expected by the authorities of the State of São Paulo, a study was conducted by Chan, Holanda, and Pessoa (2012) to ensure the conceptual soundness of the project. The study analyzed the nature of public services, as discussed in the economics, accounting, and budgeting literatures, and found a considerable gap between theory and the need for practical guidance. Furthermore, the study could not determine precedents for the type of government-wide cost accounting systems envisaged for the State of São Paulo, despite the fact that there were numerous cost studies of specific service areas, including the four areas that had been selected for pilot projects. These service areas were elementary and secondary education, health care services, penitentiary administration, and social services. This knowledge of the “state of the art” made it convincing—even though costing services were technically difficult—that an ever larger challenge would be to develop a system that would encompass these and other services provided by the State. The challenge

could be overcome, in part, by developing a cost manual that would set forth uniform definitions, standards, and procedures.

Selection of Pilot Departments

Since the objective of the pilot project was to generate insight to develop a state-wide system, it was essential to select departments that had diverse characteristics. These characteristics included size, significance, organizational complexity, and complexity of service delivery processes. Size could be measured in terms of amount of annual spending, number of clients served, and number of staff members. Larger departments would likely be more significant, but significance could also refer to social impacts and, therefore, political sensitivity. For example, prisons were significant because overcrowding conditions produced unrest by inmates. This led to social pressures on improving prison conditions and debates on whether to build more prisons or outsource their construction and operation. Organizational complexity is, in part, indicated by the number of levels in the organizational hierarchy and the number of reporting relationships. Service complexity is reflected by the extent to which capital equipment is used and the requirement of skilled personnel. The last point was important because the higher the required skill level, the staff (e.g., medical doctors) would have greater professional authority to order resources (and drive up costs). As will be discussed in greater detail, the four pilot departments were Secretary of Health, Secretary of Education, Secretary of Penitentiary Administration, and the Casa Foundation.

Understanding the Production of Services

Since costs arise from using resources to produce and distribute government services to their recipients, it made sense to understand the resource consumption patterns, so that costs could be attributed (attached) to the resource consumed. The production function in microeconomics—expressing outputs as a function of such inputs as capital and labor—was a good starting point, although it was too abstract a function upon which to build an operating information system. Field investigations, therefore, were proposed to better understand these pilot departments in terms of their structure, function, and operational characteristics, particularly the services they delivered and the resources used to provide those services. Caution, nevertheless, should be heeded against pushing the engineering approach to an excessive extent; that is, detailing the service production process to identify activities only to the necessary extent for



costing those activities. This advice was based on the awareness that the more detailed the activity specifications, the more finely and arbitrary it would be to allocate costs so as to attribute the costs to those activities. Furthermore, we had to remind project sponsors and participants that the primary goal and output was the cost information of services. Operations research on service produced, while necessary, should be regarded as a means and not an end. Since the economist's production function could be drilled down to infinitely detailed engineering specifications, this phase of the projection had to be constrained in time and resources so as to leave adequate time and resources for the even more critical cost accounting and analysis phases.

Construction of Service Profiles

At the time of planning the pilot projects, the State of São Paulo was initiating a project at its Secretary of Planning department to change the traditional line-item budgeting to an output-oriented program budgeting system. Since a key objective of the cost system would be to supply data to the budget system, the hope was that the two projects would be synchronized so that there would be synergy between them. That is, the program budget structure would guide the identification of service outputs, and the cost system project would provide the basis for setting standard costs for services. While linking the two projects made sense, it was also risky in that the cost system project would be adversely affected by delays and other unfavorable developments in the program budget project. A contingent plan was to deduce the pilot departments' service profiles by elaborating their functional classification in a hierarchy of several levels, down to the level where cost data would be produced. For example, elementary and secondary education would consist of regular education, special education, and vocation education. These educational programs would have common, as well as unique, services. This exercise would lead to a profile of services that is sufficiently detailed to give a complete scenario of services provided, although not so detailed as to require arbitrary cost allocations.

Developing Prototype Cost Accounting Modules

A government accounting system includes components such as cost accounting, financial accounting, budgetary accounting, and others. The cost accounting modules for the pilot departments could be developed by using a number of approaches: (i) the service profiles are considered to be the primary database and costs derived from the financial data systems are

assigned to these services; (ii) from the financial data systems, total cost data are generated and then allocated to services or other cost objects; and (iii) a commingling of the previous two methods. Since the cost accounting subsystems at the pilot stage are not part of the on-going operating system, they are considered to be prototype modules.

Regardless of the approach taken, it would be necessary to decide on an acceptable definition of cost. Even though financial accounting principles require cost to be measured as full cost, influenced by the thinking of “different cost concepts for different purposes,” the State of São Paulo project had considerable flexibility in choosing applicable cost concepts and related measurement methods to achieve the planning and control objectives. Nevertheless, the introduction of accrual accounting into Brazil had the tendency to at least raise issues with defining cost in terms of cash outlay. It was also clear that, while various definitions of cost could be tried in the pilot project, the alternatives should be narrowed so that the same cost accounting policies and procedures would be adopted in the state-wide implementation.

Furthermore, regardless of the approach taken, it would be necessary to have some degree of integration of financial and nonfinancial data from separate and disparate databases. Financial data would derive from budget execution and financial accounting systems. Nonfinancial data would come from the personnel payroll system and the system for tracking the purchase, requisition, and inventory control of numerous types of materials. If the cost of capital consumption (i.e., depreciation expense) would be included in the calculation of overhead, the fixed asset accounts would be involved as well. Since these data systems were not designed with the calculation of cost of service in mind, considerable adaptation and modification was anticipated. For example, the labor cost of a teacher entails the combination of salaries, bonuses, if any, and fringe benefits such as insurance. Since the essence of the cost system project was to find the cost of service, his or her service could be expressed in terms of number of classes taught, and if the classes had an unequal number of students, some other measures of service might be devised. In general, data disaggregation was expected to be a major undertaking.

Finally, the calculation of service costs requires factual knowledge of how resources (and, therefore, their associated costs) are deployed to produce services. Since the production of a particular service (e.g., a surgery) requires personnel with particular skills, and a specific mix of materials in an environment of required equipment, it is often the case that such complex and qualitative information resides in the heads of knowledgeable specialists. The extensive involvement of managers (e.g., chiefs of medical services, school



principals, etc.) would be necessary to construct an accurate picture of how resources are utilized and costs are incurred. The solicitation of cooperation of managers, therefore, was included in the project design.

Cost Manual

The design of a government cost system entails the resolution of many conceptual and organizational issues. These issues would undoubtedly be debated and, hopefully, consensus or authoritative decisions are reached. Since the pilot project was launched to generate ideas and experiences, a Cost Manual was proposed to codify the results of the discussion and experimentation process. The Cost Manual would have the following general contents:

- Goals of the cost system with regard to planning and control
- Policies:
 - Governance: stakeholders, authority, and responsibility
 - The role of a cost system in the government process
 - Relationship between cost system and other information systems
- Standards:
 - Cost definitions and concepts
 - Guidance for cost accounting and analysis
 - Use of cost information
- Procedures:
 - Cost identification, tracing, and allocation
 - IT support for data collection and production of reports

While the experience of individual departments was valuable, it is essential to standardize processes and procedures for state-wide application. The major output of the project, therefore, was the Cost Manual to assist in the establishment of norms. Box 6.1 shows a summary of 10 cost standards, which are elaborated in the Cost Manual.

Preparation and Analysis of Cost Reports

It was intended that the first stage be to calculate the cost of services provided at the cost-center level (e.g., hospitals, schools, prisons). The expectation was for the Cost Manual to guide implementation by means of a standardized methodology throughout the state. This process would involve obtaining data

BOX 6.1. DEFINITION OF COST STANDARDS

- **Standard 1:** Quality of cost information. Cost systems must seek to produce cost information that will be useful, valid, reliable, and cost-effective.
- **Standard 2:** Development of cost systems. Cost systems must be developed gradually, taking into account current capacity and possible future expansion.
- **Standard 3:** Identification of cost objects. Cost objects selected must have a close relationship to the desired outputs of government activity. Government departments that provide services can serve as cost objects in the initial phase of developing the cost systems for the state government of São Paulo.
- **Standard 4:** Criterion for recognition. The recognition criterion used in cost systems must be linked as directly as possible to the expense (*despesa*), unless intermediate criteria, such as outlays (*gastos*) are accepted as a transition stage.
- **Standard 5:** Full costs, direct costs, and indirect costs. Full costs must be compiled through a technique known as absorption costing, in order to comprehensively understand the implications of the resources employed in creating a public service.
- **Standard 6:** Controllability of costs. Cost systems, based on departmentalization, must organize costs in light of their controllability, provided that cost control is part of performance assessment management.
- **Standard 7:** Determination of real costs: direct tracing of a cost system must be able to enable the accumulation and attribution of costs to services. Direct tracing of costs, based on a reliable measurement of resource consumption, is the preferred method to accumulate costs and must be used whenever possible.
- **Standard 8:** Determination of real costs: cost assignment. Before a cost assignment decision is taken, the costs and benefits must be compared. Costs should be allocated in accordance with criteria that reflect the relationship of cause and effect between the costs and the cost objects.
- **Standard 9:** Standard costs and cost behavior pattern. Program budgeting must be used as the basis for implementing a standard cost system to assess real costs. Budgeted values must be restated as standard costs to analyze cost variances. The cost behavior pattern should also be analyzed in terms of its variability to facilitate forecasting and control.
- **Standard 10:** Cost reports. A cost system must extend from the accumulation and analysis of costs through to the production of cost reports. The scope of the cost reports, their level of detail, and their frequency must be based on the responsibility and functions of their intended audience.

Source: Authors' elaboration.

in preexisting corporate information systems to be correlated with data that was specially collected with regard to the services of the pilot departments. Definition of the services needs to be aligned with the services identified in the PPAs in accordance with the new program-based budgeting approach. SEFAZ would be responsible for regulation, supervision, and quality control of the cost data generated, and the project manager would be responsible for validating the data and producing the cost reports. Initially, priority was given to producing quarterly summary reports to support decision making with an emphasis on improving budgetary and financial management.



IMPLEMENTATION OF THE SÃO PAULO COST SYSTEM PROJECT

Developing Consensus on Project Scope

The State of São Paulo is the largest state in Brazil, with a gross domestic product (GDP) in 2011 of approximately US\$865 billion (R\$1.349 trillion) and a population of 41.4 million people. This corresponds to 31.4 percent of the Brazilian GDP. The state is responsible for providing a significant number of services, such as primary, secondary, and college education; health care; public security; penitentiary services; social assistance; and investment in infrastructure such as roads, local airports, housing, and water and sewage systems. The state budget executed in 2011 was US\$85 billion (R\$160 billion), of which 92 percent was financed by its own taxes and fees.

The initial stage of the technical assistance project, provided by the IMF and FIPE, was concentrated in the definition of the scope of the project, objectives, and selection of the cost methodology to be applied. In April 2011, SEFAZ organized a workshop to develop consensus on cost methodology. The workshop drew participation from officials from SEFAZ, Department of Planning and Regional Development (Secretaria de Planejamento e Desenvolvimento Regional (SPDR)), Department of Public Management (Secretaria de Gestão Pública (SGP)),¹² and the pilot departments of Health, Education, Penitentiary Administration, and the Casa Foundation, with FIPE and IMF as consultants. Representatives of the federal government contributed the experience of implementing the federal cost system.

The workshop mobilized the key stakeholders at the state level, discussed national and international experiences, and built consensus on the objectives and strategy to be pursued. The approach was to build up the strategy collectively, favoring a gradual approach and taking advantage of the efforts and progress already made in compiling financial information. The discussion focused on formulating a proposal that should be useful, feasible, and sufficiently robust and standardized to allow generalizing the cost methodology to all entities of the state. The result of the workshop is summarized below.

In its first stage, the public sector cost system of the State of São Paulo aims to calculate the cost of services provided by cost centers that attend

¹² In January 2015, SPDR and SGP were merged, creating the Department of Planning and Management (Secretaria de Planejamento e Gestão (SPG)).

the population directly (hospitals, schools, and prisons, among others), using standardized methodology focused on direct appropriation on cost objects and using data from the existing information systems. Due to the conceptual and operational complexity of the cost system, implementation will be gradual and based on pilot projects. Initially, priority will be given to the production of quarterly reports to support high level decision makers and with emphasis on improving budget and financial management. It is important that the services to be cost are aligned with the activities defined in PPA and the subsequent managing for results framework. The Department of Finance is responsible for regulating, supervising, and providing quality control of the cost information, and the budget execution managers for collecting and validating cost information and producing cost reports.

At the outset, the following criteria were proposed and consensus was sought to determine the success of the cost system project: (i) there would be a good match between cost concepts and methods for the defined purpose of the cost system; (ii) it must be feasible to produce the desired cost information; (iii) the cost information would actually be used by intended users; (iv) the cost information would be found to be useful for intended purposes; and (v) the pilot projects would lead to the development of cost systems in other parts of the government so that the cost system would be sustainable over time. The six steps are described below.

Using Existing Corporate Systems

The cost system made maximum use of the available data in government information systems. After substantive investment, the State of São Paulo implemented various information systems that contain data that were potentially useful in generating cost information (SIAFEM, SIGEO, SIAFISICO, and SIMPA, among others).¹³ For this reason, financial and nonfinancial data already available were used as much as possible to speed up the production of cost information and to avoid duplicating efforts and wasting

¹³ SIAFEM (Sistema Integrado de Administração Financeira dos Estados e Municípios): main financial management information system; SIGEO (Sistema de Informações Gerencias da Execução Orçamentária): data warehouse that allows manipulating SIAFEM information to generate managerial ad hoc reports; SIAFISICO (Sistema Integrado de Informações Físico-Financeiras): physical and financial resources management system; SIMPA (Sistema de Monitoramento de Programas e Ações do PPA): a system that provides information on PPA programs and activities.



of resources. Although the available financial information regarding the stages of budgetary expenditure (commitment, liquidation, and payment) were different from the concept of cost, the project concluded that it would be possible by applying standardized accounting adjustments to transform the budgetary financial data at the verification or liquidation stage to cost information (see Table 6.5 for more details on the adjustments). The current data, however, were not classified by service and cost center. These parameters had to be included in the structure of the chart of accounts (CoA).

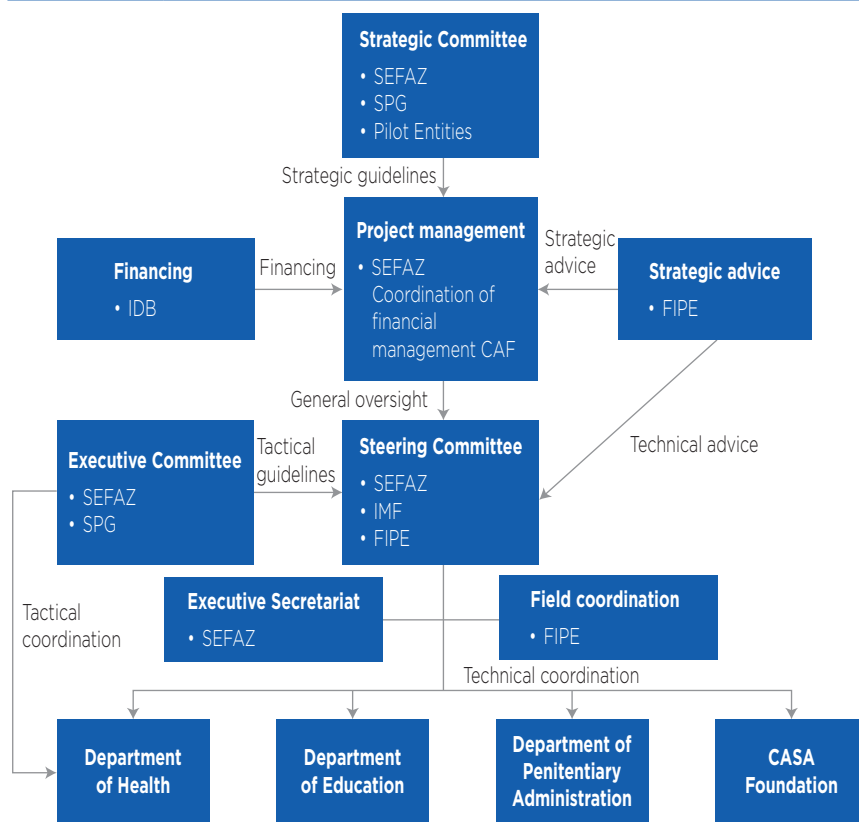
Project Structure and Support of Technical Assistance

Considering the complexity and dimension of the cost system, a governance structure articulating different levels of stakeholders was defined. The governance model included several committees at the strategic, tactical, and operational levels. It also defined the roles of key stakeholders in the conceptual and operational support (IMF and FIPE as technical assistance providers) and pilot projects (Figure 6.1).

The skills needed to implement the cost system were identified. Technical and personal skills were essential for the successful implementation of the cost system (see Table 6.2). SEFAZ allocated full-time financial analysts to the cost project. The IMF allocated one resident advisor for two years and made periodic short-term expert visits to provide guidance to the implementation and conceptualization of the project. FIPE allocated a team of academics and experts on a part-time basis to support the field work and preparation of studies and definitions of the cost system. At the end of 2014, SEFAZ created a formal Cost Division within the Accounting Department and allocated additional financial analysts. The pilot entities also assigned part-time staff in their accounting and financial divisions to work as counterparts of the cost project. At a later stage, staff members from the State of São Paulo IT Company (Empresa de Processamento de Dados do Estado de São Paulo (PRODESP)) in charge of information technology (IT) development were involved during the discussion of the proof of concept of the IT solution.

Relationship of the Cost System with the Program Budgeting System

One of the main characteristics of the State of São Paulo cost system is the link between the cost services and the activities defined in the PPA. This was intended to expand the usefulness of the cost system and provide

FIGURE 6.1 GOVERNANCE MODEL OF SÃO PAULO'S COST PROJECT

Source: Authors' elaboration.

TABLE 6.2 SKILLS NEEDED FOR IMPLEMENTATION OF THE COST SYSTEM

| Technical skills | Personal skills |
|--|---|
| <ul style="list-style-type: none"> • Technical knowledge of cost accounting: applicability of the concepts of costing, cost techniques, cost analysis methods • Familiarity with the service in accordance with standard operating procedures systems, socioeconomic characteristics of customers, service providers, inputs and products, quality assessment methods • Domain of statistical analysis, familiarity with software packages and capacity to interpret cost results | <ul style="list-style-type: none"> • Creativity and ability to analyze new situations • Leadership skills or the potential to develop them • Professionalism and ability to work together with colleagues trained in other disciplines • Good written and oral communication skills • Ability to negotiate and overcome resistance to achieve results • Project management competences: manage people and deadlines |

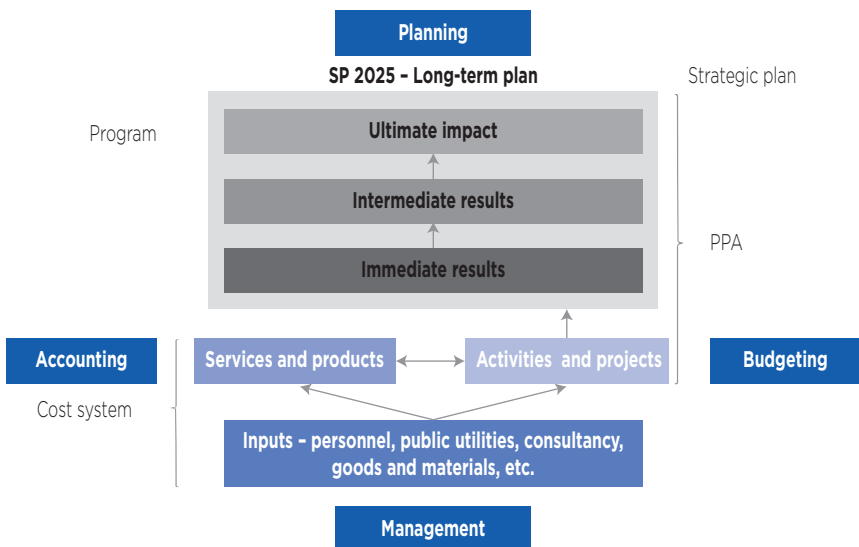
Source: Authors' elaboration.

information for planning, performance evaluation, and budgeting (not only for financial control).

The PPA is the main instrument for medium-term planning. It is structured by programs and provides information, such as (i) entity responsible for the program; (ii) outcomes, outputs, and inputs; (iii) activities; (iv) projects; and (v) programs. Indicators are defined at the program and activity levels. The cost project, however, identified that a uniform understanding of results, objectives, and indicators were not harmoniously applied. The cost project helped to rediscuss the structure of some programs, as was the case of the Department of Penitentiary Administration. Figure 6.2 shows the relationship between cost information and the PPA. Ideally, the services to be cost should be the same as those activities of the PPA; however, this was not the case in most of the pilot entities.

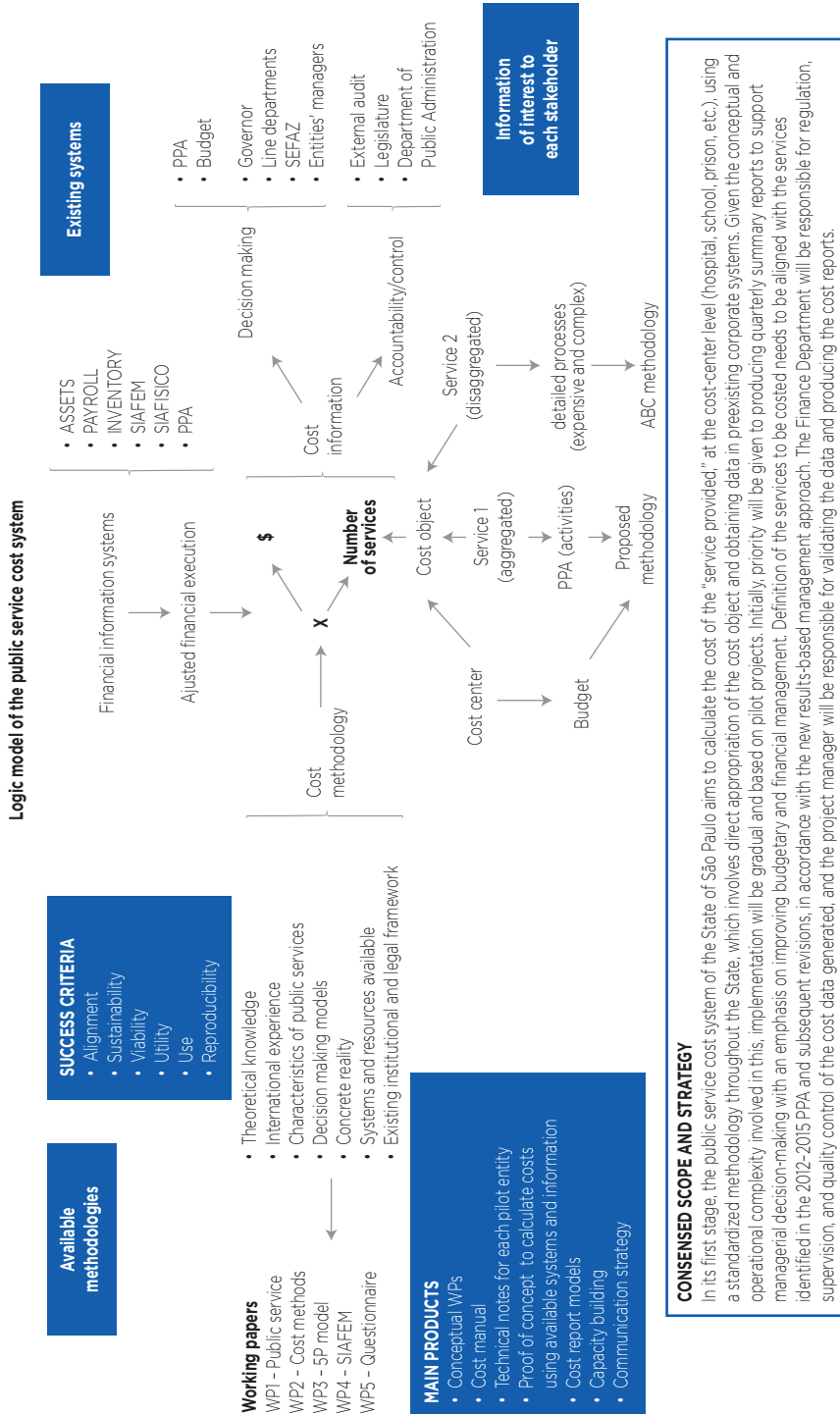
Figure 6.3 shows the conceptual model of the cost system. Cost information (X) should be generated by relating financial information with nonfinancial information (number of services). The project defined the cost concepts, based on detailed investigation on available cost literature and studies about the specific reality of each pilot entity. It has also prepared an inventory of the information systems available and the information required to calculate costs.

FIGURE 6.2 LINK BETWEEN THE MULTIYEAR PLAN AND THE PUBLIC SERVICE COST SYSTEM



Source: Authors' elaboration.

FIGURE 6.3 COST SYSTEM CONCEPTUAL MODEL



CONSENSED SCOPE AND STRATEGY

In its first stage, the public service cost system of the State of São Paulo aims to calculate the cost of the "service provided," at the cost-center level (hospital, school, prison, etc.), using a standardized methodology throughout the State, which involves direct appropriation of the cost object and obtaining data in preexisting corporate systems. Given the conceptual and operational complexity involved in this, implementation will be gradual and based on pilot projects. Initially, priority will be given to producing quarterly summary reports to support managerial decision-making with an emphasis on improving budgetary and financial management. Definition of the services to be costed needs to be aligned with the services identified in the 2012-2015 PPA and subsequent revisions, in accordance with the new results-based management approach. The Finance Department will be responsible for regulation, supervision, and quality control of the cost data generated, and the project manager will be responsible for validating the data and producing the cost reports.

Source: Authors' elaboration.

Four Pilot Case Studies

The selection of pilot projects was based on size, diversity, and availability of cost information. The pilot project budget covered approximately 38 percent of the total budget expenditure of the State of São Paulo in 2011 (Table 6.3).

The first pilot was Casa Foundation because of its previous experience with cost information. It had about 146 units that served approximately 11,000 juvenile offenders and was operated by 13,000 employees. Each youth received five meals a day, education (by the Department of Education), health care (by the Department of Health), counseling, social assistance, housing, and security. Casa Foundation produces information on the running costs of each youth by cost center.

The SEE was the largest employer in the state, with 5,350 schools providing primary, secondary, adult, and youth education for 5.1 million students. While basic information of the characteristics of schools was available, cost information was not.

The SS was the most complex entity of the state, with 3,148 units including 1,199 specialized clinics, 125 specialized hospitals, and 494 general hospitals. The size and complexity of the health sector required long debate on the services to be measured and cost centers to be studied. For example, the list of the national health system included more than three thousand procedures, the number of which was considered impractical to manipulate during the initial stage of the project.

TABLE 6.3 BUDGET 2011 OF THE PILOT PROJECTS (IN MILLION REALS)

| Entity | Personnel | Goods and services | Investment | Total | Percent |
|--|---------------|--------------------|---------------|---------------|------------|
| Penitentiary Administration Department | 1,498 | 665 | 513 | 2,676 | 3 |
| Education Department | 12,168 | 6,697 | 747 | 19,612 | 21 |
| Health Department | 2,583 | 9,039 | 766 | 12,388 | 13 |
| Casa Foundation | 455 | 345 | 25 | 825 | 1 |
| Subtotal pilot projects | 16,704 | 16,746 | 2,051 | 35,501 | 38 |
| Total budget ^a | 48,996 | 34,447 | 10,182 | 93,625 | 100 |

Source: Budget 2011.

^a Excluding obligatory transfers to municipalities, debt service, and judicial sentences.

The other pilot selected was SAP because of its similarities with Casa Foundation and, since the penitentiary units and services are very standardized. The SAP was responsible for managing 148 units, including one maximum security unit, 75 prisons, 36 provisional detention centers, 22 resocialization centers, 8 centers for progressive incarceration, and 6 penitentiary hospitals. The SAP provided security services, housing, health care, education, training, rehabilitation, counseling, and legal support to approximately 167,000 inmates who occupied 97,000 available beds. Overcrowding, therefore, needed to be carefully considered when analyzing cost information.

Field Work and Identification of Cost Centers and Services

The first activity was the application of a questionnaire to detail the services provided, map the organization structure, and identify systems and information available. The questionnaire enabled the project team to understand the reality of each organization, with its limitations, traditions, systems, and processes, and learn what information was available and feasible to obtain, as well as how managers made decisions. The FIPE applied the Ishikawa methodology to map the activities grouped in families of services. This analysis of the services led to a set of family of services that better represented most of the activities.

The survey was essential to understand the cost methodologies and information available in the State of São Paulo. It identified cost methods used, information available to support budgeting and planning, and systems used for processing financial and nonfinancial information. The survey also found the types of services provided and goods produced; main clients or customers; and how managers used financial and cost information; as well as the principal difficulties faced in collecting and analyzing cost and financial information. Alternatives were adopted in cases where certain information was not available. The survey was conducted with the idea of having a systematic and standardized approach for application in all the public entities of the State of São Paulo, rather than adopt a methodology that was custom-made for each type of entity.

Table 6.4 shows the cost matrix of the Department of Penitentiary Administration. Level 1 identifies the entity as a whole; Level 2 identifies the cost centers with different characteristics, and Level 3 defines the main services. To avoid excessive detail, the project adopted the concept of families of services (i.e., the most aggregated level of services that represents most of the

TABLE 6.4 COST MODEL OF THE DEPARTMENT OF PENITENTIARY ADMINISTRATION

| Level 1 - entity | Level 2 - cost center | Subcategories of the cost centers | Level 3 - services | |
|---|-----------------------|---|--|-------------------------|
| Department of Penitentiary Administration | Prison units | Provisional detention unit | Food, housing, education and training, healthcare, social assistance, counseling, legal assistance, security, social reintegration | |
| | | Penitentiary | | Male prison |
| | | | | Female prison |
| | | | | Maximum security prison |
| | | Progression unit | | |
| | | Resocialization center | | |
| | | Custody and psychiatric Treatment | | |
| | | Program of Social Reintegration and Citizenship | | |
| | | Central administration activities | | |

Source: SEFAZ and SAP.

services provided). In the case of the penitentiary, the main services were security, health care, education and training, food, housing, social assistance, legal assistance, and counseling. In addition to these penitentiary services, a program exists to assist prisoners with their reintegration into society. The administrative cost of SAP, as a whole, was taken into account, although it was not distributed by cost center or service. Figure 6.4 shows the relationship of those services and the PPA program, essential to allow that the cost be aggregated at the program level as well.

Another important step was to define the accounting adjustments that were necessary to convert budgetary information into cost information. The SIAFEM system is an accounting system that is capable of integrating budget, financial, and accounting information. It is structured in a way that enables it to identify which classes of the CoA need to be utilized when an expenditure or revenue is inserted. Since cost concepts differ to some extent from budget concepts, some adjustment had to be introduced. Given that the SIAFEM system adopts a modified cash accounting system, some cost concepts, such as depreciation and cost of future liabilities (e.g., pensions and other social benefits), are not covered at this stage. Once accrual accounting is fully implemented, the State of São Paulo will

FIGURE 6.4 SERVICES PROVIDED BY THE DEPARTMENT OF PENITENTIARY ADMINISTRATION AND LINK TO PROGRAMS AT THE PPA



Source: SPDR and SAP, PPA 2012/2015.

TABLE 6.5 ADJUSTMENTS FROM BUDGETARY TO COST INFORMATION

| | |
|---|---|
| Budget expenditure executed | |
| | Expenditure liquidated |
| | Expenditure committed but not liquidated |
| Adjustments in budgetary expenditure | |
| (-) | Expenditure committed but not liquidated in the current period to be liquidated in future periods |
| (+) | Expenditure committed in previous periods and liquidated in the current period |
| (-) | Expenditures of previous periods paid in this period |
| (-) | Stocks of goods to be used in future periods |
| (-) | Cash advances to be executed in future periods |
| (-) | Capital expenditure committed but not liquidated |
| Adjustment in capital expenditure | |
| (+) | Consumption of stock of products used in the period |
| (+) | Spending incurred related to cash advances in previous periods |
| (+) | Depreciation, amortization, and exhaustion |
| = Cost | |

Source: Machado (2005).

need to revisit this. Table 6.5 schematically describes the main types of adjustments.

Analytical Work to Support the Development of the Cost System

The ambitious proposal to have a standardized cost methodology for the entire public sector required a substantive volume of knowledge and studies to support project decisions. The project developed the documentation detailed in Box 6.2.

Proof of Concept by the IT System

Of note was the specification of the methodology to process available data and transform them into cost data. Figure 6.5 shows a high-level scheme of the proof of concept (POC) adopted in the cost system. The purpose of the POC was to test, in reduced scale, the capacity to identify cost data and automatically calculate it. This was done prior to modifying the current IT systems so as to test the viability of the proposal.

BOX 6.2. DOCUMENTATION OF THE COST SYSTEM

Working Papers: Purpose of defining the scope of the cost project, adapted to specific systems of and circumstances in the State of São Paulo.

- Clarification of concepts.
 - Nature of public services and implications to the cost system.
 - Cost concepts and available options and techniques.
 - SIAFEM as a source of cost data: potential and limitations.
- Foundations for the questionnaire and fieldwork.
 - Conceptual model of the public services cost system: objectives, policies, producer, process and products, what to observe in the field.
 - Guide for carrying out the cost system field study; define questionnaire to be utilized.

Technical Notes: Document existing systems and information available in each pilot project. The final result would determine the cost centers and services.

- Department of Health: Cost center (hospitals and clinics).
- Department of Education: Cost center (schools).
- Department of Penitentiary Administration: Cost center (penitentiaries and prisons).
- Casa Foundation: Cost center (custody center).

Manual of Cost Accounting Policies and Procedures

- Cost accounting policies: General principles, list of definitions and concepts, standards.
- Cost accounting procedures: Overall implementation guide, rules and procedures, considerations relating to the information system.

Proof of concept strategy: High-level functional specifications of the system; high-level architectural document; requirements document (with detail of business rules); main specifications of reports and access controls; screen and report prototypes; information technology implementation strategy.

Cost report templates: Definition of the content of the cost information report.

Note on communication strategy: How to communicate to politicians, managers, and the public, cost information. A careful strategy should be defined to avoid confusion of interpretation when publishing cost reports.

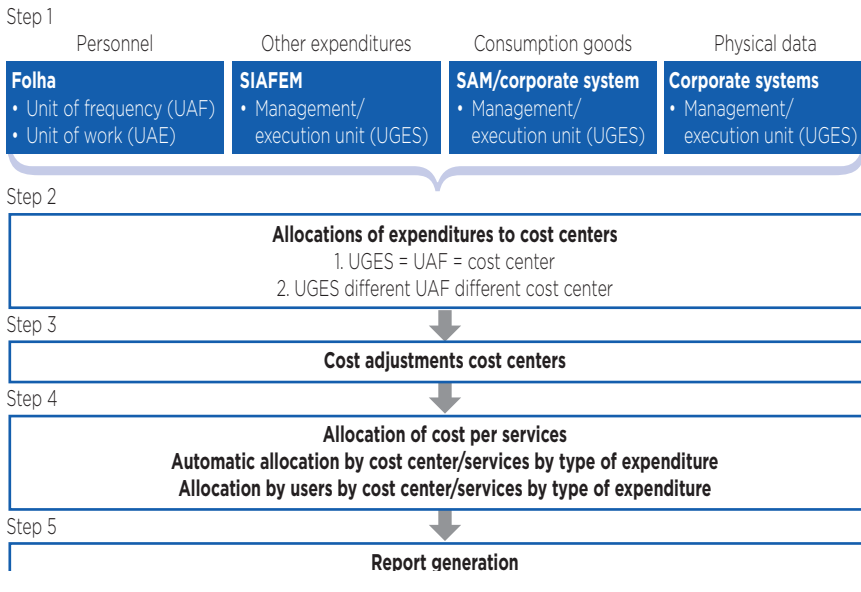
Project management framework: Definition of main stakeholders, roles, and responsibilities.

Capacity building and training strategy: Identification of training needs, definition of training content, and calendar.

Source: Authors' elaboration.

The SEFAZ performed a proof of concept between November 2013 and June 2014 to validate the feasibility of the cost system on the basis of its existing public financial management systems.¹⁴ The proof of concept

¹⁴ A proof of concept is an opportunity to demonstrate the capabilities of an IT system on a small scale and in a controlled manner. Developing a proof of concept can help organizations test an IT project's feasibility without having to incur the full cost of its development.

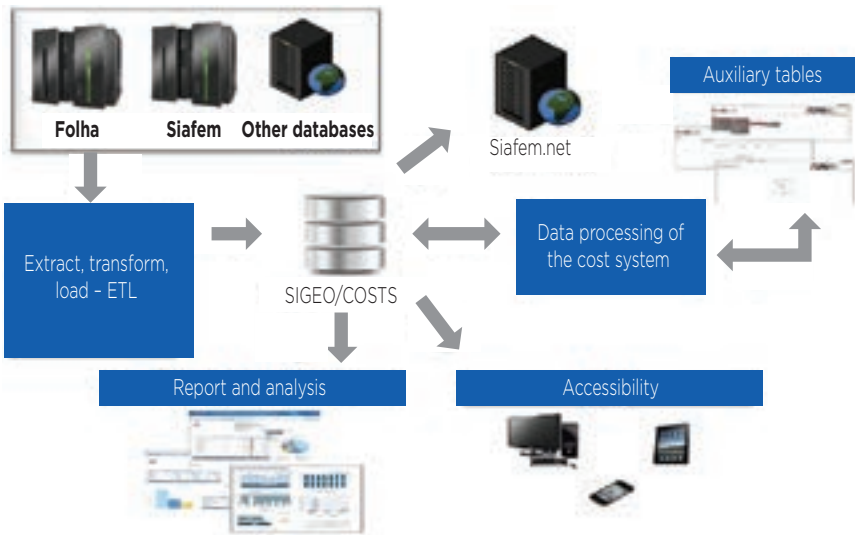
FIGURE 6.5 HIGH-LEVEL SCHEME: PROOF OF CONCEPT

Source: Authors' elaboration.

was carried out by SEFAZ with the participation of FIPE and PRODESP. Its objectives were to (i) develop a prototype of the information system with a limited functional scope and the capacity to process information from the original systems, allocate costs for each cost center and each service, and generate reports using basic filters (time periods, cost centers, and services);¹⁵ and (ii) confirm that reports generated by the prototype contain timely, significant, and reliable information that can be used for cost analysis within an adequate processing period and with adequate disaggregation of information.

The scope of the proof of concept was broadened considerably in 2014, at the institutional level as well as regarding the coverage of expenditure items. It included original processes to adjust and allocate costs for each cost center and service, in relation to personnel expenditures and a limited set of remaining expenditures in two SEE regional directorates

¹⁵ Filters are used to include various dimensions of data in the reports generated by an information system. The inclusion of a larger number of dimensions in a report increases its processing complexity, while it also requires data to be collected and processed from other information systems for each additional dimension of the report.

FIGURE 6.6 IT BLUEPRINT OF THE PROTOTYPE FOR THE COST SYSTEM

Source: State of São Paulo IT Company (Empresa de Processamento de Dados do Estado de São Paulo (PRODESP)).

of education and two SAP penitentiary coordination offices.¹⁶ During its implementation, seven hospitals under the Department of Health were added, and the scope was broadened in SEE to include all 95 regional directorates of education, which managed 5,300 educational establishments (schools). The objective was to cover 80 to 85 percent of all costs in each sector, including the costs of personnel, public utilities (water, electricity, and telephony), cleaning services, and services specific to each sector, such as laundry and catering in the health care sector. The FIPE documented the processes and actions performed in the entities, including the parameters used to allocate some expenditures by services, such as the parameters for laundry in hospitals. Figure 6.6 shows the blueprint of the prototype for the cost system.

¹⁶ In SEE, the areas studied were (i) the North II Regional Education Directorate, covering 70 schools; and (ii) the Regional Education Directorate in Itaquaquacetuba, covering 58 schools. In the case of SAP, the analysis covered (i) the metropolitan region coordination office, with 28 penitentiary units; and (ii) the central region coordination office, with 23 penitentiary units.



Cost Reports and Cost Analysis

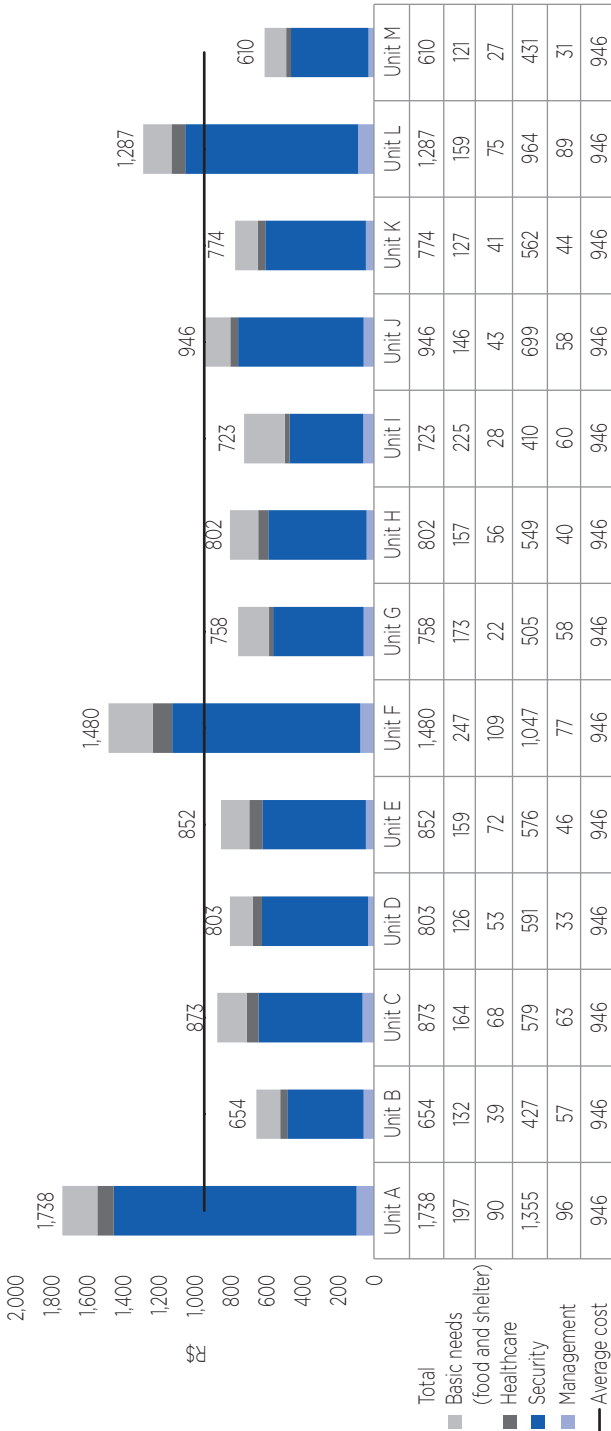
The preparation of cost reports and cost analysis are the most incipient activities and need more work to be finalized. The SAP has already initiated a cost study of its operations, but subsequent to completion, the conceptual model of non-financial information, in other words not related to cost information, was produced. Non financial information includes, for example, the number of inmates, number of students and capacity of each school. Classified as cost centers were 147 units (prisons, rehabilitation centers, progression center, provisional detention center, hospitals, and maximum security unit). Initial running costs determined some wastage. The high costs in some units were fixed costs. It was not possible at the time, however, to identify cost by type of service provided (security, food and housing, education, training, legal assistance, and counseling, among others). Available information in SIAFEM has made it possible to obtain data on actual expenditures in each administrative unit, although this could not be characterized as cost information at the time. The reason was the incapacity to attribute administrative costs to the services and determine goods and services consumed.

The common practice of computing average cost carries a risk of misinterpretation. For example, other things being equal, overcrowding in a prison lowers its average cost because of the larger number of inmates to share the same fixed costs. The low average cost might be an indicator of a low quality of service and not of efficiency. A cost report without consideration of the quality of the service provided has serious limitations.

A cost report template was developed (Figure 6.7). The example presents expenses for each prison modality, then decomposes the expenses by specific category of prison—the progression center—and finally decomposes by service. Although the information on expenditure incurred by cost center could be useful for budgetary purposes, it tells little about the cost of services. Cost analysis is intended to answer questions such as: Does the size of prisons influence cost? How does overcrowding impact cost analysis? Is it possible to define a range of cost variation in which the cost of standardized cost centers or service is considered adequate? This is a stage that requires further development.

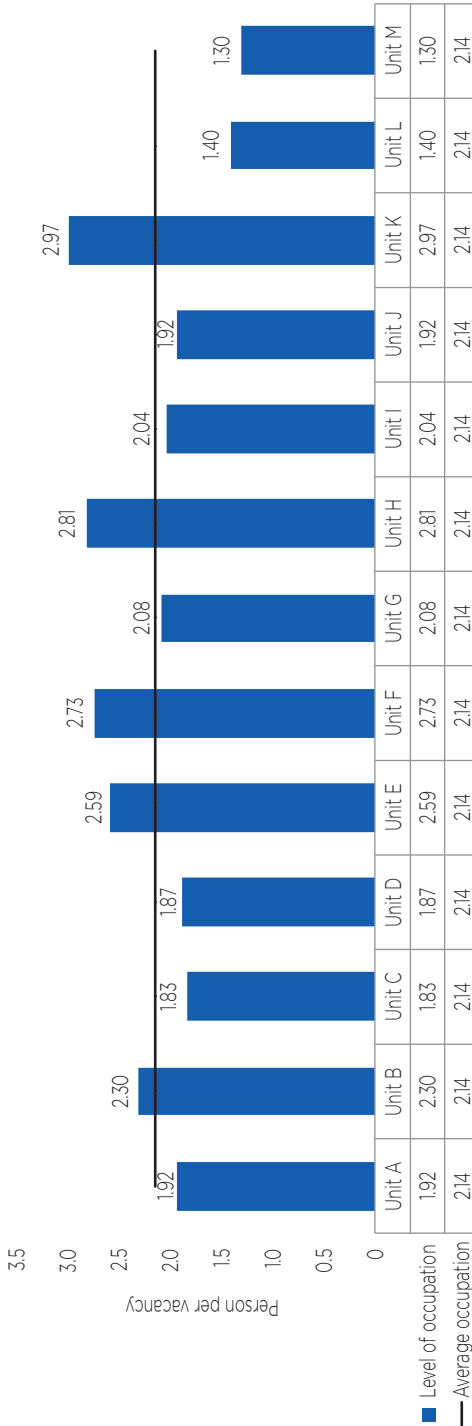
The same is applicable in relation to the use of the cost information in the decision making process. As the reports have not been stabilized and the quality of the information needs some fine tuning, they have not yet been distributed to the main decision makers, such as the State Governor and Secretaries of State. It is expected that by the end of the system implementation

FIGURE 6.7 EXAMPLE OF COST REPORTING OF THE DEPARTMENT OF PENITENTIARY ADMINISTRATION (MALE PENITENTIARIES: MONTHLY COST PER INMATE IN R\$)



(continued on next page)

FIGURE 6.7 EXAMPLE OF COST REPORTING OF THE DEPARTMENT OF PENITENTIARY ADMINISTRATION
(MALE PENITENTIARIES: LEVEL OF OCCUPATION – PERSON PER VACANCY) (continued)



Sources: SEFAZ and Yamazaki (2012).

period in 2016, periodic information will be produced, influencing the discussion with regard to the efficiency of the cost centers over time, comparison of costs among similar cost centers, and identification of good practices that can be replicated elsewhere.

CONCLUSIONS

The four-year experience of constructing a PSCS for the State of São Paulo in Brazil has confirmed earlier expectations about the multifaceted challenges of the project. This chapter concludes by recounting these challenges, which were overcome with varying degrees of success. The conclusion, therefore, focuses on the valuable lessons that international consultants and their clients—as well as other stakeholders—have learned in the process. These lessons provide the basis to offer some recommendations to governments that are interested in undertaking a similar project.

Perhaps the greatest challenge is to build and maintain a coalition of stakeholders. For the secretary of ministry of finance, as host of the cost system, the main stakeholders are the planning and budgeting staff; state-level policy makers; and heads, general managers, and operating managers of the line departments. All these actors are potential users of cost information, either because their decisions and actions have cost consequences, or they are charged with cost reduction without sacrificing service. Nevertheless, it is not easy to interest policymakers in the consequences of those costs. Similarly, it is not easy to secure the cooperation of managers, as they tend to view cost finding as a prelude to reducing their budgets. Consequently, mobilizing and keeping the interest and support of a core group of stakeholders is critical for the success of a cost system project. In a way, an indicator of success is the extent to which potential users are converted to actual users of cost information.

Highlighting the intersection of the supply and demand for cost information is likely to be another major challenge in designing a PSCS. There are so many cost concepts available to meet almost every conceivable need. Unless the potential users are able to reveal their preferences, the probability of intersection would be low; and especially, the cost system designer has to be very knowledgeable with the decision making and operational environment to offer a reduced set of alternative cost concepts for consideration by potential users. The conclusion is that it would be better to reduce the subjective element by focusing the information rationally required to carry out the



responsibilities of a particular organizational role, instead of basing the design of the cost system on the unstable preferences and imperfect knowledge of individual users. After all, over time individuals move in and out of official positions. An institutional information system, therefore, should be anchored on institutional roles.

It is important to note that the lack of sufficient international experience in the implementation of public service cost accounting systems for an entire administration imposed an additional burden to the project. The State of São Paulo had to invest significant effort in research and investigation and develop a complex system, while defining the scope and parameters of the project. For that reason, implementation was very cautious because the government would not be likely to release cost information before being completely confident about its accuracy. The project dedicated a significant amount of time to the knowledge about the specification and to the design and calculation of cost information in a way that could be practical, user friendly, and cost-effective. The project—initially envisaged to be implemented in two years—extended its schedule to four years to accommodate all these circumstances. One positive element was the administrative stability and political support during the period, which facilitated the implementation. This has made it possible for a more flexible calendar of implementation to be provided.

After reflecting on the experiences, the merit of the basic approach adopted by the cost system project in the State of São Paulo is convincing. The approach has six sequential stages, the first of which was the selection of the pilot departments and the second of which provides a conceptual foundation for the subsequent field work and case studies. The third stage requires studies of the service delivery systems so that the cost system will be grounded in the realities of particular organizational settings. To prevent the proliferation of custom-tailored systems producing noncomparable information, a fourth stage produces a manual of cost accounting policies and procedures to generalize the lessons learned from the pilot departments. The fifth stage is the definition of the IT specifications and testing of the solution. The final stage is the systematic production of cost reports and subsequent cost analysis. Professional judgment is required to maintain the delicate balance of uniformity in principle and flexibility in applications.

Finally, preparing, designing, and implementing a PSCS often results in taking more time and resources than initially projected. Since cost is such a commonly used word, the complexity of cost measurement and cost systems is almost invariably underestimated. Furthermore, it is all too tempting to be so fascinated by the details of service delivery that one overlooks

the increasingly arbitrary cost allocations needed to attribute costs to activities. Unless one keeps in mind that the objective of a cost system is to find costs and to use cost information to improve resource allocation and decision making, too much time and resources are likely to be consumed in collecting nonfinancial data. It requires an effective project manager to reserve sufficient time and resources to generate cost data to prevent a cost system project from becoming too costly.

The project carried out by the State of São Paulo is a relevant experience to other national and subnational governments, considering the dimension of the state and complexity of the public services provided. The approach adopted and the capacity to achieve the objective of producing cost information—adding a new dimension to the public service—have demonstrated that it is feasible to implement a solution that, albeit demanding in its nature, is less complex than implementing across the board a sophisticated solution such as the ABC methodology that has proved very expensive and difficult to sustain in the public sector.

In terms of the resources invested in the project, SEFAZ created a division with 8 financial analysts, hired consultants from the IMF and FIPE to work on the conceptual design and implementation, and mobilized its IT company (PRODESP) to develop the IT system. The project implementation is expected to take four or five years to complete, since its inception.

The next challenge will be to use the cost information to influence budget allocation and financial decisions, and to be part of the performance evaluation of programs and entities. But this will be addressed by the next stage of the project. The main lessons of the State of São Paulo cost system, therefore, are the following:

- **Keep the scope simple and realistic:** The experience has shown that generating additional financial and nonfinancial data in the public sector is challenging. It is important, therefore, to select a cost methodology that preferably adopts a direct allocation of cost to a few simple cost drivers. Number of services should not go beyond a dozen in a specific department.
- **Use available systems and information as much as possible:** Prior to investing time and resources in selecting the ideal cost structure, it is important to dedicate time to map and understand the systems and information available. The capacity of line departments to dedicate additional time to further detail and capture financial and nonfinancial information is very limited. The best alternative would be to make



small adaptations to the existing system and procedures instead of building specific and dedicated systems.

- **Use pilot projects to study current circumstance and familiarize financial analysts with cost concepts:** Using pilot projects will reduce the complexity and facilitate organization and convincing. Comprehensive solutions applicable to all entities in one leap are very risky and expensive. The Secretary of Finance needs to demonstrate capacity to generate results quickly, otherwise there is risk of fatigue and competing priorities will tend to reduce availability of resources.
- **Identify multiple uses and users of the cost information:** Cost information should serve multiple purposes and respond to multiple necessities. The approach adopted in the State of São Paulo was successful in defining the public services at a level useful for program managers and planners. It also involved the line departments in the definition of the services and how information would be collected and manipulated.
- **Use a proof of concept phase to test the IT solution before fully developing the IT system:** It is important to have a sound conceptual design of the cost system, as well as dedicate time to test the IT solution outside the main financial database as a kind of prototype. It is much easier to make changes and carry out adaptation in small scale at that stage than when an entire database system is already operational.
- **Invest time to understand the needs of the main stakeholders and communicate in a language that is familiar to their interests:** Because each sector is different and complex, it is important to invest time to understand the peculiarities and specific needs of each stakeholder. It is important, however, to keep in mind that a system to serve the entire government will have limitations to respond to all needs. It should be clear to the stakeholders, therefore, what a generic system can and will provide. A generic cost system will be able to respond to the needs of high-level authorities (governor, secretaries of departments, and chief executive officers of entities) and, to some extent, to the first line of managers of the main cost centers (hospitals, schools, and prisons); it will not, however, be able to respond to all needs of low-level managers of each individual department.
- **Install upfront a good project structure to manage the cost project:** Experience has demonstrated that it is important that the government allocate dedicated people to develop the cost system. It is also important to bring on external advice to learn new ideas and concepts. Finally, a well-structured decision-making process should

be defined to separate strategic, tactical, and operational decisions. Considering the size of a cost system, it is important to have a permanent division in the accounting department that is capable of maintaining the cost manual, specifying the cost system, analyzing data, and producing cost information.

- **Take into consideration the political cycle and avoid targeting the implementation of the system during administrative transition:** Such a complex project should start at the beginning of a new administration, as the development and implementation is likely to take three to four years. If this time is not available, the designers should target the project in two phases: the first one relating to the definition and design of the system and the second phase to the modifications of the IT system and generation of the cost reports and corresponding cost analysis. Ideally, the permanent production of cost reports should start at the beginning of the fiscal year to benefit from the entire budget execution and avoid distortions of the calculation, since there is a tendency to have some seasonal expenditure that may not be captured if the process starts during the year. This should be accompanied by a good communication strategy, as it will be necessary to explain to internal and external stakeholders what the new cost information entails, since it will be different in format and content from the information provided by other financial and budgetary reports.

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Integrated Financial Management Information Systems in Latin America: Strategic Aspects and Challenges

Gerardo Uña and Carlos Pimenta

INTRODUCTION

Integrated financial management information systems (IFMIS) are systems to support management of public sector budgetary, financial, and accounting operations and promote better public financial management (PFM) with a centralized registry of public sector revenues and expenditures. The IFMIS integrate budgetary, accounting, treasury, and public debt management processes, as well as generate corresponding reporting documents, mainly the financial statements.

The successful implementation of an IFMIS will produce timely, relevant, and reliable financial data to promote fiscal discipline, assist with resource allocation, and improve operational efficiency and fiscal transparency. IFMIS, therefore, constitute a powerful tool to enhance the PFM of countries, although they tend to be very complex and demand significant human and financial resources.

Every country in Latin America has an IFMIS; it is the region where these systems are more prevalent today. In 2011, 45 percent of World Bank projects in Latin America involved a high proportion of information and communications technology (ICT) for financial management purposes; that is, 25 out of 55 projects (Dener, Watkins, and Dorotinsky, 2011). Furthermore, from approximately the mid-1990s onwards, the Inter-American Development Bank (IDB) has supported 15 investment projects at a national level in an effort to strengthen PFM in the countries (IDB, 2010)—a great majority of which include developing an IFMIS.

Following two decades of operation, several countries have engaged in updating their IFMIS, specifically Argentina, Brazil, Chile, the Dominican Republic, Honduras, Nicaragua, Panama, Peru, and Uruguay. Despite institutional differences and varying levels of systems development, there are a number of strategic aspects that should be considered to improve the success of the design and implementation of IFMIS so as to ensure its benefits from the outset. The most significant considerations are the political economy, information technology programming strategy (i.e., in-house, outsourcing, or customized software), software guarantees, and acceptance testing, as well as actual implementation and systems maintenance.

The two key objectives of this chapter in its conveyance of knowledge for an optimum IFMIS are (i) to analyze the main characteristics and establish the state of their development in Latin America, including the upgrade progress of IFMIS that is currently being carried out; and (ii) to identify key aspects that should be taken into account when implementing a new IFMIS including features such as project management, function integration, technological and functional definitions, and process prioritization during the various stages of development.

The chapter is divided into four sections, the first of which is an introduction on the theory of PFM and IFMIS. The second is a description of current characteristics of IFMIS in Latin America and the third includes the key aspects to consider during the updating and strengthening of IFMIS in the region, including the political economy of an IFMIS project; conceptual model; management and administration of the project; information technology programming strategy; improvement of budgeting, accounting, and financial management efficiency; level of integration of these functions; establishment of a treasury single account (TSA) as a module; project development prioritization; importance of the testing stage; guarantee period and systems maintenance strategy; and change management. The fourth section presents the main conclusions and the challenges to implement the IFMIS in the region.

PUBLIC FINANCIAL MANAGEMENT AND INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEMS

IFMIS as Instruments of Public Financial Management

PFM is a broad and complex concept that has a variety of dimensions that take into account the political economy of public institutions and the diverse



fields and disciplines within government (e.g., legal aspects and management systems, organizational theory, computer science, and human resource management) (Allen, Hemming, and Potter, 2013).

The concept of PFM, therefore, is a general term that includes a combination of administrative elements, tools, and management systems that generate information, according to certain processes and rules, to support fiscal policy decision making (Cangiano, Curristine, and Lazare, 2013). PFM is also a set of directly and indirectly related processes and instruments that support macroeconomic estimates and projections to collect and allocate resources and report financial outcomes (Schick, 2013). This group of processes and instruments incorporates some practices such as fiscal rules and fiscal councils, the medium-term fiscal framework, a results-based budget (RBB), and IFMIS.

The main objectives of PFM are prioritized to ensure fiscal solvency, appropriate allocation of resources, and efficient public delivery of goods and services (Schick, 1998). To achieve them, PFM procedures and systems must operate efficiently and integrally within an institutional framework that incorporates appropriate and steadfast rules, structures, processes, and capacities.

The potential of IFMIS to contribute to a better PFM is strong. By generating timely and accurate information, it can streamline processes carried out by the public sector, according to financial management procedures. One of the key objectives of IFMIS is to produce financial data that is relevant to decision making. Information, therefore, should be timely, relevant, and reliable to support adequate fiscal policy decision making and contribute to sustainable development of initiatives that will improve public management. A financial and accounting information system that operates efficiently enhances the government's capacity to allocate and use public resources effectively and efficiently (Dorotinsky and Watkins, 2013).

IFMIS is essential to provide fiscal transparency (i.e., clarity, reliability, frequency, punctuality, relevance, and openness) by gathering data to enable the publication of past, present, and future public finance positions (IMF, 2012).¹ These elements are critical to the effectiveness of fiscal policy.

¹ Clarity refers to the ease with which users can understand reports; reliability reflects the extent to which reports reflect the government's real financial situation; frequency is the regularity of report issuance; punctuality refers to the time span between production and disclosing reports; relevance relates to the extent to which reports provide the necessary information for effective decision making; and openness is the ease with which civil society can grasp fiscal policy decisions that affect them and be able to hold government to account.

IFMIS is also essential for public management reform in its entirety due to the capacity it has to integrate the diverse administrative functions of the public sector and to link PFM to the management of human resources, assets, and the procurement of public goods and services, among others. In effect, the evolution of IFMIS in Latin America has seen many changes in public administration that changed the focus from a legal and formal approach to a more managerial one. IFMIS, therefore, has the capacity to support decision making beyond matters of finance by contributing to the modernization of public administration so that the governments can deliver public services more efficiently (Fariás and Pimenta, 2012).

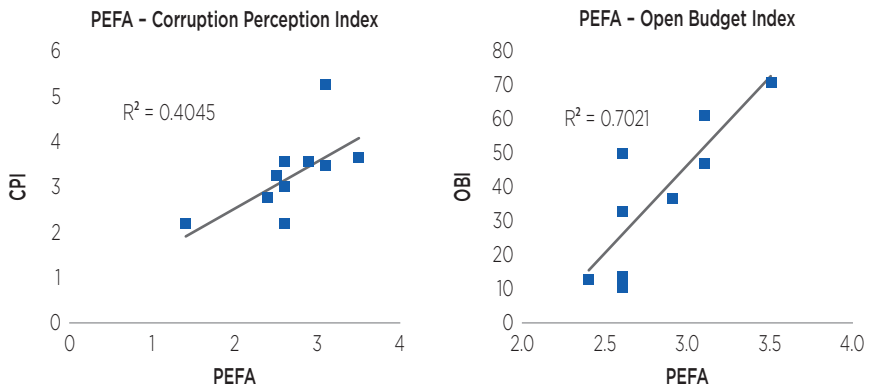
A growing number of empirical studies have highlighted the positive relationship between PFM and fiscal transparency, fiscal outcomes, and the perception of fiscal solvency (IMF, 2012). While significant steps were made during the 1990s to improve fiscal data transparency, the 2008 financial crisis showed that advanced economies also had weaknesses in the scope of information relating to their fiscal situations prospects and the associated risks. Furthermore, a direct relationship exists between the higher evaluation scores of Public Expenditure and Financial Accountability (PEFA) indicators,² the Corruption Perception Index (CPI), and the Open Budget Index (OBI) (Figure 7.1).

Good PFM will significantly increase fiscal credibility and economic development—perhaps not exclusively, but certainly as a contributing factor (De Renzio, Andrews, and Mills, 2011). Over the last decade, according to Dener and Min (2013), IFMIS have become critical in improving budget transparency. Disclosing public financial information to citizens improves fiscal transparency, as long as the published information is accurate, relevant, and accessible. In parallel, the authors indicate that fiscal transparency can enhance the trust that citizens can have in government if information is published consistently and transparently over a long period of time. The authors also state that major challenges still exist in the design of IFMIS to strengthen their capacity to capture the entire sphere of financial activities, as well as disseminate data transparently.

Generating in-year fiscal data will significantly increase transparency of budget information. It is up to government to develop the necessary systems and increase the institutional capacity essential to monitor aggregate expenditures and reconcile with revenue trends (IBP, 2010).

² For more details about this instrument, see www.pefa.org.

FIGURE 7.1 RELATIONSHIP BETWEEN PUBLIC EXPENDITURE AND FINANCIAL ACCOUNTABILITY INDICATORS AND THE CORRUPTION PERCEPTION AND OPEN BUDGET INDICES



Source: Authors' elaboration.

Note: The Corruption Perception Index classifies countries and territories according to the perceptions of the degree of corruption that exists in their public sector. A country or territory's score indicates the perceived level of corruption in the public sector on a scale of 0 (very corrupt) to 100 (very clean). The Open Budget Index is calculated on the basis of a simple average of the responses to the 95 questions contained in its survey, which relate to budgetary transparency and gives each country a score that range from 0 (very little or no information) to 100 (very detailed information).

Despite the benefits that IFMIS have, PFM on its own should be viewed as an open system that is vulnerable to influence, especially those influences that are political and economic in nature which, in turn, can impact on policy-making objectives. While it is possible to analyze individually the various mechanisms that form a part of PFM, its effectiveness will depend significantly on the institutional framework of each; that is, PFM is dependent on the formal and informal procedures of the framework within which various stakeholders will take a stand (North, 1992).

Main Characteristics of IFMIS

IFMIS are computerized systems that automate the financial procedures to register information on the collection of public revenue and commit them to public sector objectives (Farias and Pimenta, 2012). Although there is a range of definitions for IFMIS in the literature, they generally share the concept that it is a complex computer information system containing financial and accounting mechanisms that relate to the public sector, and that it

comprises a combination of subsystems and processes that are governed by general procedures and guidelines based on a PFM regulatory framework.³

The main objective of IFMIS is to provide the public sector with the necessary information to plan, execute, and monitor public finance. This includes the execution of the budget, consistent and systematic accounting recording, and assisting the Treasury to meet its commitments and manage its payments and debts, while simultaneously ensuring the quality of financial statements.

It is essential, therefore, that IFMIS contain a separate information system for each level of government to its greatest extent possible, in parallel with TSA coverage,⁴ which is reviewed in Chapter 4. The IFMIS should also include the central and decentralized administrations and social security entities to be able to register, at every stage of the budget execution, the revenues, payments, expenditures, pre-commitments, commitments, and accruals of finance and accounting in a timely manner. For this to effectively occur, the budget classification should be entirely consistent with the chart of accounts, in accordance with international standards (e.g., *Manual on Government Finance Statistics*, published by the International Monetary Fund (IMF) and the United Nation's *Functional Classification of Expenditure*).

An IFMIS is a set of sub-systems (modules) that interrelate with each other and which adopt a comprehensive approach to financial management; that is, a set of tools to achieve effective, efficient, and transparent public resource management within a framework for fiscal solvency. From this perspective, an IFMIS should not be viewed as an end in itself, but rather as an instrument that gathers information to support fiscal policy while improving public policy design through efficient resource allocation. As such, under PFM, it will improve the management of public expenditures and strengthen transparency and accountability, as well as macro- and microfiscal policies (Figure 7.2).

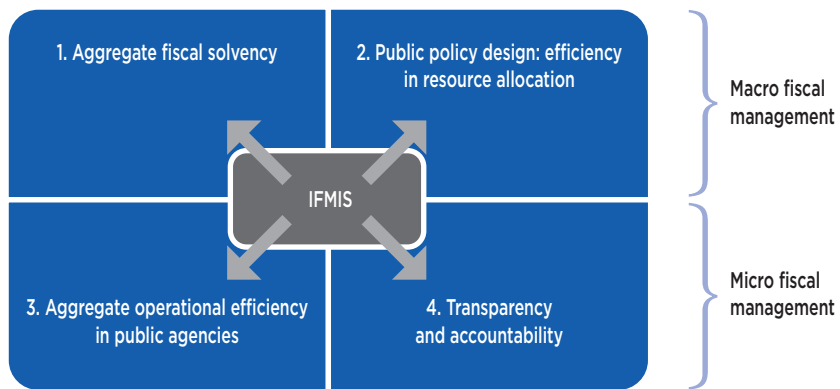
Based on the literature, an IFMIS has three significant operational advantages in terms of budget management:

- Timely, reliable, and secure capture and process of government financial transactions through automated information management

³ These shared concepts are found in Dorotinsky and Watkins (2013), Dener and Min (2013), Uña (2012), Farías and Pimenta (2012), Dener, Watkins, and Dorotinsky (2011), Khan and Pessoa (2010), and Makon (2000).

⁴ The principal TSA concepts used in this chapter are based on Pattanayak and Fainboim (2011).

FIGURE 7.2 RELATIONSHIP BETWEEN MACROFISCAL AND MICROFISCAL POLICY MANAGEMENT AND AN INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM



Source: Arenas de Mesa and Uña (2012).

systems in compliance with financial and accounting regulations and with a high level of data security and traceability.

- Enhancement of fiscal policy management, based on timely information of the financial position at any given moment—only possible with an accurate and consistently updated database that has wide coverage of the public sector.
- Capture and supply of financial, nonfinancial, and performance data that contribute to efficient and effective public management.

From an ICT perspective, IFMIS are huge systems, each with a large number of users. These users can exceed 4,000 and reach—as in the case of Brazil—almost 100,000. This includes broad geographic and institutional coverage and can include support to regional government agencies, as well as municipalities.

INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEMS IN LATIN AMERICA

Origin, Evolution, Opportunities, and Challenges

Since the mid-1980s, the existence of IFMIS in Latin America has increased; originally, it was a set of tools to address the recurring financial crises of the

region (Uña, 2011). These systems operate at the level of central government and, in some countries, include the regional and municipal levels. They are generally developed for fiscal management under the guidance of the Ministry of Finance.

More specifically, Brazil was the first country in the region, in 1986, to implement an IFMIS (Sistema Integrado de Administração Financeira (SIAFI)) and later, in 1989, Bolivia implemented its Integrated Management System and Administrative Modernization (Sistema Integrado de Gestión y Modernización Administrativa (SIGMA)). In the 1990s, the use of IFMIS expanded into Argentina, Paraguay, and Uruguay and, from 2000 onwards, was put in place in Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, and Nicaragua, as well as in the Caribbean. Aside from their relevance in addressing fiscal crises, the replication of IFMIS was initially driven by various other factors, as a result of advanced concepts of fiscal management and the progress of ICT. To date, IFMIS can be counted among nearly all Latin American and Caribbean (LAC) countries (Farías and Pimenta, 2012).

In terms of technology, a majority of IFMIS systems in the region constitute ICT programming to fit each country needs, including various versions and upgrades of system software. The last ten years have seen an increase in web-based systems as a result of the widespread use of the Internet. The developments of the 1980s and 1990s, in general, were based on a client-server architecture (multilayered), sometimes as monolithic mainframe systems. As of 2000, web-based systems have comprised various multilayered structures.

During the 1980s and 1990s, IFMIS were often developed in-house. This option was as a consequence of rigid and lengthy national procurement and contracting processes that discouraged systems development outsourcing and/or procurement of commercial off-the-shelf systems. Procurement, in some instances, required presidential approval, was cumbersome, and involved the review and agreement of multiple units (i.e., finance, procurement, information technology (IT), and planning), thus creating a delay in IFMIS project completion.

As a result, treasury authorities used to opt for an ad hoc contracting of human resources to speed up the implementation. At the time, furthermore, there was a dearth in the range of commercial systems that could be easily adapted to the public sector, as well as a risk of the Ministry of Finance depending on a specific commercial system, considering that an IFMIS is very strategic to the ministry.

Finally, the persistent financial restrictions in the region gave no further option but to follow this alternative. Procurement, involving several millions



of U.S. dollars at terms exceeding one year execution was not always feasible, given the lack of resources. Instead, an in-house working group would be assigned to IFMIS development, providing authorities the flexibility to manage resource allocations, although the capacity to deliver information on time proved to be very uncertain.

The situation has improved since then. Procurement and contracting procedures are now streamlined and the fiscal situation is better. In many instances, however, the preference for tailor-made systems persists in some countries due to an institutional inertia of ICT units, added to the convenience of changing processes developed in-house at any time.

This inertia often results in the lack of project team continuity at the completion stage due to salary differentials between the consultants and staff in other ministry units, as well as weak ICT capacity. It also is associated with the lack of knowledge and resources to manage more complex projects.

Despite the general availability of IFMIS in the region, not all are designed to fulfill the objectives of producing timely, relevant, and reliable data for fiscal transparency and accountability within a framework for fiscal solvency. In some cases, failure to produce budget information on time has weakened public expenditure management decision making. In others, financial statements (i) may have lacked comprehensive and reliable information on financial and equity positions, thus increasing fiscal risks; (ii) may not have totally complied with international accounting standards, based on the IMF's *Manual on Government Finance Statistics*; and (iii) may not have been published at the frequency required.

A further key aspect relates to the scope of institutional coverage of an IFMIS. Many countries in Latin America have an IFMIS that excludes decentralized entities, universities, and the national social security system. In general, IFMIS should have the same coverage as the TSA which, as Chapter 4 indicates, is not yet fully comprehensive in many countries.

In most of the region, the IFMIS captures and records data at all stages of budget execution, including the accounting records from the stage of budgeting to those of pre-commitment, commitment, liquidation, and payment, with the latter two captured at the accounting level as well. Some countries, however, do not record these stages at the time each one occurs; rather, they record all stages at the moment of payment, whereby the budget is managed on a cash basis, as in the Dominican Republic. Similarly, various countries do not have a budget classifier that is entirely consistent with the chart of accounts, which hampers the generation of automated financial statements, as in Honduras.

The deficiencies in IFMIS implementation and operation result in lost opportunities to strengthen fiscal transparency and accountability for effective fiscal policy coordination and fiscal risk management. According to the IMF (2012), fiscal transparency ensures that the economic decisions of government are based on the precise fiscal position, sound policy making, and adequate financial risk analysis. Moreover, fiscal transparency informs the legislature, markets, and civil society, holding a government accountable for its fiscal performance and use of public resources. Lastly, it facilitates the monitoring of financial performance, while simultaneously mitigating contagion of fiscal instability from country to country. Greater transparency, therefore, has many benefits and can be achieved and strengthened with an IFMIS in place.

IFMIS Currently in Operation

The predominant IFMIS model in Latin America covers four key areas: budget, treasury, accounting, and public debt management. IFMIS also interact with other public resource management systems, such as public investment, human resources and payroll, procurement and contracting, tax administration, and asset management.

This particular model consists of a single central database system with broad coverage, which is centrally administered under the centralized guidance of the Ministry of Finance, but with decentralized operations between public entities and their spending units.

The use of public financial systems in many developed countries is less standardized or centralized compared to Latin America, with the exception of some, including South Korea and France. Other countries, such as Germany, the United Kingdom, and the United States have not adopted a single public finance system that takes into account the entire public sector (Farías and Pimenta, 2012).

Latin America's most common IFMIS model generally comprises two main modules: one that supports the budget formulation phase and the other the budget execution and evaluation phases. The operating logic of the two modules differs completely. In the case of the budget formulation module, the ministry of finance is supported by the module to calculate projections. Projections are then calculated in the sector-based entities—based on ceilings that have been established by the Ministry of Finance, the latter of which ultimately consolidates and adjusts the sector projections. Estimates of physical variables are also included, as in Argentina, as are the drafting of annual operational plans and/or annual investment plans, as in El Salvador and Honduras. There is a trend to incorporate those functionalities into the budget formulation module



to support Medium-Term Expenditure Framework initiatives, such as in Peru—a move that has been spreading throughout the region, especially in Central American countries such as El Salvador, Guatemala, and Honduras.

A further growing incentive in the region is to increase the definition and use of performance data within the framework of RBB initiatives. In particular, Peru includes functionalities by using an RBB approach for multiyear budget planning as part of the budget formulation IFMIS module. In general, however, an IFMIS has only the capacity to process information relating to budget financial allocations. Such is the case in Argentina with its IFMIS (Sistema Integrado de Administración Financiera (SIDIF)). Supplemental performance data from the evaluations of intermediate or final results of public programs must be complemented with data from other systems and sources and reflected in the budget, since the budget is a central component of the RBB.

The operation of an IFMIS execution module is obviously transactional. It captures budget and accounting movements, verifies their relevance, and proceeds to record, store, and consolidate them. The execution module thus contains the financial and accounting procedures that relate to budget, accounting, treasury, and debt management, as well as the functionalities necessary to support the TSA in those countries that have one in place. Public sector financial statements are also generated by this execution module. The current IFMIS in the region generally interoperates with other management systems (e.g., public investment, payroll, and procurement) by using the execution module, based on specific flows between the IFMIS and these other information management systems.

The information system that integrates most efficiently into the region's IFMIS is that of public procurement and contracting (Farías and Pimenta, 2012). In addition, it is increasingly common for IFMIS to either incorporate the payroll system or for such payments to flow through the module. This practice includes public investment systems, especially where there is an exchange of data related to the identification of the investment projects.

Systems for payroll, contracting, and resource planning can be also linked to the IFMIS to improve public resource management. Those data systems that include payroll or procurement modules, as well as functions that are beyond the scope of traditional financial management practice, are known as Enterprise Resource Planning (ERP). Used routinely in the private sector, ERP has a series of integrated system applications that enable organizations to integrally manage their business and finances, including procurement and human resources. Some authors refer to ERPs adopted by the public sector as Government Resource Planning Systems (GRPs).

In the context of Latin America, the use of a single ERP-type system in the public sector is more usual at the subnational level or in single entities—generally public companies or financial institutions. It is in rare cases that there is a single ERP-type system throughout an entire public sector of a country. The strategy at the national level is usually to interoperate the IFMIS databases with other systems as payroll and procurement management. Nevertheless, Nicaragua and Panama are in the process of completing an ERP at the national level—an innovative experience for Latin America.

As mentioned previously, an IFMIS institutionally falls under the guidance of the Ministry of Finance or—as in Argentina, Bolivia, Chile, Colombia, Costa Rica, El Salvador, Honduras, and Peru—the Vice-Ministry of Finance (Vice Ministerio de Hacienda) or Budget Directorate (Dirección de Presupuesto)—or the Vice-Ministry of the Treasury (Vice ministerio del Tesoro), as in the case of the Dominican Republic. In Brazil and Mexico, IFMIS are the responsibility of the National Treasury (Secretaria do Tesouro Nacional and Tesorería General de la Nación), while in Uruguay it is under the Accounting General of the Nation (Contaduría General de la Nación).

IFMIS are being continually updated, an example of which occurs in Argentina, where the set of systems is now in its third generation (e-SIDIF) (Box 7.1). The new version offers better support for results-based management, as well as increased capacity to generate reports.

BOX 7.1 IFMIS IN ARGENTINA (E-SIDIF)

The IFMIS in Argentina (e-SIDIF) is oriented toward performance-informed budgeting, following the PFM reform focused on improving the managing for results framework. The conceptual approach is the public value chain, since it allows for synergies in both the planning phase of public policies and the implementation phase, where the budget gains momentum. This way, the outcomes identified in the performance-informed budget relate directly to strategic goals set by the government.

The e-SIDIF is a web-based online integrated system that manages almost 3 million budgetary, financial, and accounting transactions each year. The system is used in all the 116 financial administrative units of the central administration, and is also working in some subnational governments—such as La Rioja province—and, partially, through the deployment of the TSA in Buenos Aires province.

The design of the e-SIDIF allows for the automatic and simultaneous registration and management of budgetary and accounting operations. In addition, it provides the architecture to incorporate business intelligence (BI) features for data mining, online analytical processing, querying, and reporting, thus promoting and facilitating fiscal transparency. The BI features offer a variety of applications, providing user-friendly, efficient, and reliable access to the public (Sitio del Ciudadano, <http://sitiodelciudadano.mecon.gov.ar/sici/>), vendors (e-PROV), and political authorities (via customized datamarts for effective monitoring and financial programming).

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BOX 7.1 IFMIS IN ARGENTINA (E-SIDIF) *(continued)*

The management and oversight of the development process was in-house, with political and technical staff from within the Ministry of Finance, via a special Steering Committee institutionalized in 2010. The development of the e-SIDIF has combined both in-house and outsourced teams, taking advantage of open-source software. The IFMIS solution programming has been object oriented.

- **Accountability, transparency, and evaluation:** performance-informed budgeting tools included in the FMIS solution (Argentina ranked third in the region in the 2015 IBP survey).
 - Outputs identified for 75 percent of budgetary programs, and outcomes informed and updated quarterly for 40 percent of central government spending.
- **Decision-making support:**
 - User-customized reports and queries, fed by the online database with BI tools.
 - Integrated program outputs and outcomes included in the online database.
- **Management and efficiency-oriented:**
 - Digital signature and electronic trays.
 - Automatization and paperless management.
 - Transaction flow monitoring.
- **Solid policy background:** review of best practices and building on 20 years of PFM reform.
 - Interoperability (revenue agency, banking system).
 - Flexibility (IFMIS solution for the central and subnational government levels).
- **Open budget:**
 - E-Prov portal: web access to government vendors with user validation from the tax revenue services agency.
 - Citizens' portal: public web access to weekly information on budgetary execution, fed by the e-SIDIF database and recognized as a top IFMIS solution regarding open data (Dener and Min, 2013).

Peru is in the process of developing IFMIS II, a third-generation set of systems (Uña, 2012), to maximize its integration capacity and improve the timely issue of financial statements for the central government. The key element is its scope of institutional coverage. Peru is the only one in the region to operate integrally as one single system for all three levels of government (i.e., central, regional, and municipal) (Box 7.2).

Nicaragua and Panama are implementing customized commercial off-the-shelf software as their IFMIS. These are not, therefore, tailor-made systems—a traditional practice over recent decades.

With regard to operational coverage, all IFMIS in the region include the budget execution phase through a single module. Differences exist with the budget formulation stage, for which a separate module is necessary. In the case of Brazil, Chile, and Mexico, for example, coverage at the formulation stage is supported by individual modules that are minimally integrated into the execution module. At the federal level in Brazil, the Integrated

BOX 7.2 THE INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM IN PERU: SCOPE OF COVERAGE

The IFMIS in Peru was designed to integrate all stages of public expenditure for the national, regional, and local levels of government by utilizing a single budget classifier and chart of accounts as a basic prerequisite for effectiveness. The budget, accounting for 1,450 spending units throughout these three levels, is executed through the IFMIS, while the National Treasury acts as a bank for the regional and municipal governments, which consolidates the revenues of the entire public sector into the TSA. Other countries in Latin America differ in this aspect by controlling the revenues that are collected only at the central level, transferring them to subnational governments. Rarely are these resources executed through a single nationwide IFMIS system.

Furthermore, what is exclusive to Peru's IFMIS is that its budgetary planning module incorporates the results-based budget approach that includes a logical framework with output and outcome indicators. In general, IFMIS only has the capacity to process information relating to goods and/or services allocations.

Peru's Ministry of Economy and Finance (Ministerio de Economía y Finanzas) is currently developing a new IFMIS that covers all levels of government, leading to a results-based budget. It also has a new technology platform that could make the SIAF II more similar to an ERP system than to a traditional IFMIS.

Planning and Budget System (Sistema Integrado de Planejamento e Orçamento (SIOP)) is applied, developed by the Ministry of Planning, Budget, and Management (Ministério de Planejamento, Orçamento e Gestão) with open-source software tools. Mexico employs the Integrated Planning and Budget Process (Proceso Integral de Programación y Presupuesto) for the Ministry of Finance (Secretaría de Hacienda y Crédito Público).

In Chile, there is no single IFMIS for the budget formulation of line ministries. The data is processed in each ministry with their own systems before being sent to the Budget Directorate (Dirección de Presupuestos (DIPRES)) at the Ministry of Finance (Ministerio de Hacienda). The Ministry of Finance then consolidates the data in the Budget Administration System (Sistema de Información de Administración Presupuestaria (SIAP)). This system is able to simultaneously support the DIPRES during the budget execution phase.

Although the general trend in the region leans toward IFMIS administered by the Ministry of Finance, their operational coverage, architecture, and institutional scope varies among countries, as reflected in Table 7.1.

Implementation and Upgrades

International organizations have supported IFMIS implementation in countries in Latin American and the Caribbean since the 1990s. This generally

TABLE 7.1 MAIN ASPECTS OF INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEMS IN LATIN AMERICA: SELECTED CASES

| Country | IFMIS | Governing body | Development and programming strategy | Technological platform | Main operational characteristics | TSA |
|-----------|---|--|--------------------------------------|--|---|--|
| Argentina | Integrated Financial Management System (Sistema Integrado de Administración Financiera (SIDIF)). | Budget Under-Secretary (Subsecretaría de Presupuesto) Secretariat of the Treasury (Secretaría de Hacienda) at the Ministry of Economy and Public Finance. | In-house development. | Multilayer modules in client-server platform and in web platform. Use of open-source software and software protected by intellectual property rights. | The SIDIF covers the phases of budget formulation, execution and evaluation and includes modules for budget, accounting, treasury, and public debt. | The system supports the Treasury Single Account. |
| Brazil | Integrated Financial Management System (Sistema Integrado de Administração Financeira (SIAFI)), and Integrated Planning and Budget System (Sistema Integrado de Planejamento e Orçamento (SIOP)). | National Treasury Secretariat (Secretaria do Tesouro Nacional (STN)) at the Ministry of Finance (Ministério de Fazenda) for SIAFI, Ministry of Planning, Budget and Management for SIOP. | In-house development. | Federal System of Integrated Financial Management (Sistema Integrado de Administração Financeira (SIAFI)); Mainly monolithic mainframe and multilayer applications in client-server platform, with some web applications. SIOP is open source software by 100 percent. | The SIAFI covers the budget execution phase and has budget, accounting, treasury, and public debt modules. The SIOP covers the stage of budget formulation and supports the budget execution phase. | The system provides support for the Treasury Single Account. |

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TABLE 7.1 MAIN ASPECTS OF INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEMS IN LATIN AMERICA: SELECTED CASES *(continued)*

| Country | IFMIS | Governing body | Development and programming strategy | Technological platform | Main operational characteristics | TSA |
|----------|--|--|---|--|--|--|
| Colombia | Integrated Financial Information System (Sistema Integrado de Información Financiera (SIIF). | Ministry of the Finance and Public Credit (Ministerio de Hacienda y Crédito Público). | Development initially outsourced, then finalized internally (in-house). | Multilayer system in web platform using Microsoft software products by 100 percent. | The SIIF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury and public debt modules. | The system provides support for the Treasury Single Account. |
| Chile | State Financial Management Information System (Sistema de Información Financiera del Estado (SIGFE)) and Budget Administration System (Sistema de Administración Presupuestaria (SIAP)). | Budget Directorate (Dirección de Presupuestos (DIPRES)) at the Ministry of Finance (Ministerio de Hacienda). | Development outsourced (SIGFE). In-house development (SIAP). | SIGFE: web platform using service-oriented architecture and budget process management paradigms with Oracle software products by 100 percent. SIAP: multilayer application in web platform using software protected by intellectual property rights and open-source software. | The SIGFE covers the stage of budget execution and has budget, accounting, and treasury modules. Debt management is centralized at the Treasury (Tesorería General de la República). The formulation stage is covered by the SIAP under the auspices of the DIPRES. | The Treasury Single Account has yet to be implemented. |

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TABLE 71 MAIN ASPECTS OF INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEMS IN LATIN AMERICA: SELECTED CASES (continued)

| Country | IFMIS | Governing body | Development and programming strategy | Technological platform | Main operational characteristics | TSA |
|--------------------|---|---|--------------------------------------|---|---|--|
| El Salvador | Integrated Financial Administration System (Sistema de Administración Financiera Integrado (SAFI)). | National Directorate for Financial Administration and Innovation (Dirección Nacional de Administración Financiera e Innovación) at the Treasury (Ministerio de Hacienda). | In-house development. | Client-server multilayer platform. Has a data reporting management module that uses a commercial application (IBM Cognos). | The SAFI covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury, and public debt modules. | The Treasury Single Account has yet to be implemented. |
| Peru | Integrated Financial Administration System (Sistema Integrado de Administración Financiera (SIAF)). | Vice-Ministry of the Treasury (Vice Ministerio de Hacienda) at the Ministry of Economy and Finance (Ministerio de Economía y Finanzas). | In-house development. | Client-server platform with multilayer design, using software protected by intellectual property rights and open-source software. | The SIAF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury and public debt modules. | The system provides support for the Treasury Single Account. |
| Dominican Republic | Integrated Financial Management System (Sistema Integrado de Gestión Financiera (SIGEF)). | Vice-Ministry of the Treasury at the Ministry of Finance (Vice Ministerio de Hacienda). | In-house development. | Web platform with multilayer design using software protected by intellectual property rights and open-source software. | The SIGEF covers the phases of budget formulation, execution, and evaluation and has budget, accounting, treasury, and public debt modules. | The system provides support for the Treasury Single Account. |

Source: Authors' elaboration.

has taken the form of loans and technical assistance that includes the review and modernization of fiscal institutional capacity and its processes, as well as the development or acquisition of systems that make PFM reform feasible. It has incorporated the establishment of TSAs for the electronic reconciliation of accounts according to international standards for automated accounting, in addition to the interoperability or integration with other management systems.

The objective has been and continues to be the boosting of public sector institutional capacity to manage all stages of public expenditure integrally, transparently, and efficiently. In the majority of cases, these projects have included modernization or establishment of new IFMIS.

In the case of the IDB, over the last 10 years it has provided technical assistance and loans for PFM projects—the majority of which encompass IFMIS—to Argentina, the Bahamas, Bolivia, Brazil, the Dominican Republic, Guatemala, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, and Uruguay, among others. A total of 42 project loans have been made, amounting to US\$1.095 billion and averaging US\$26.1 million each, depending on coverage, products, and functionalities included. Several of these projects have included IFMIS at the sub-national level, as in the case of Argentina, Bolivia, Brazil, and Honduras (Table 7.2).

With regard to lending policy (based on loans that include reforms) and disbursement (based on compliance with policy commitments), the amounts provided by the IDB have been significantly greater, totaling more than US\$4 billion over the same period. These have been to Argentina, Bolivia, El Salvador, Guatemala, Haiti, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Suriname, Trinidad and Tobago, and Uruguay.⁵

Beyond LAC, the World Bank has financed 87 IFMIS projects between 1984 and 2010 in 51 countries, worldwide, by a total of more than US\$2.2 billion, with an average of US\$25.3 million (similar to that of the IDB). Of these, 29 loans targeted the LAC region, 25 projects of which have been completed and four were active in 2010 (Dener, Watkins, and Dorotinsky, 2011).

Many countries are independently financing the upgrades of their IFMIS. In some cases, finance has come from internal or external resources, including grants for technical assistance from donor countries.

⁵ The amount does not include a total of US\$2.243 billion in policy-based loans made to five Brazilian states during this period.

TABLE 7.2 INTER-AMERICAN DEVELOPMENT BANK LOANS IN EXECUTION TO SUPPORT PUBLIC FINANCIAL MANAGEMENT INVESTMENT PROJECTS (INCLUDING IFMIS)

| Country | Project | In thousands of U.S. dollars |
|---------------------|---|-------------------------------------|
| Argentina | Productive Institutional Strengthening of Provincial Fiscal Management, Phase II (Programa de Fortalecimiento Institucional Productivo de Gestión Fiscal Provincial, Segunda Etapa (PROFIP II)) | 36,000 |
| Bahamas | Public Financial Management and Performance Monitoring Reform | 33,000 |
| Bolivia | Municipal Management Improvement Program (Programa de Mejora de la Gestión Municipal) | 52,000 |
| Brazil | Program for Modernizing Instruments and Management Systems(Programa de Modernización de los Instrumentos y Sistemas de Gestión) (including the budget) | 28,600 |
| Brazil | 28 Projects: Management Support and Fiscal Integration Program (Programa de Apoyo a la Gestión e Integración de los Fiscos (PROFISCO)) (between US\$6 million and US\$120 million for each project in each of the Brazilian states and one project at the federal level). | 678,195 |
| Guatemala | Support for Modernization of the Ministry of Public Finances (Apoyo a la Modernización del Ministerio de Finanzas Públicas) | 8,500 |
| Honduras | Fiscal and Municipal Management Consolidation Program (Programa para la Consolidación de la Gestión Fiscal y Municipal) | 28,600 |
| Jamaica | Fiscal Administration Modernization Program | 65,000 |
| Nicaragua | Public Sector Financial Administration Modernization Program (Modernización del Sistema de Administración Financiera del Sector Público) | 10,000 |
| Panama | Fiscal Management Strengthening Program (Programa de Fortalecimiento de la Gestión Fiscal) | 50,000 |
| Paraguay | Strengthening and Modernizing Fiscal Administration Program II (Programa de Fortalecimiento y Modernización de la Administración Fiscal II) | 9,500 |
| Peru | Modernization of the Public Financial Administration System (Modernización del Sistema de Administración Financiera Pública) | 20,000 |
| Dominican Republic | Public Resources Modernization Program (Programa de Modernización de Recursos Públicos) | 21,000 |
| Trinidad and Tobago | Strengthening of the Financial Management System (Apoyo al Fortalecimiento del Sistema de Gestión Financiera) | 40,000 |
| Uruguay | Public Financial Management Modernization Program (Programa de Modernización de la Gestión Financiera Pública) | 14,500 |

Source: Authors' elaboration.

Key Aspects to Consider when Implementing or Upgrading an IFMIS

This section analyzes nine strategic dimensions of an IFMIS implementation that can be useful to government authorities, civil servants, and consultants involved in these projects, especially those at the Ministries of Finance. These dimensions include the (i) political economy; (ii) conceptual model, project management, and administration; (iii) definition of development and programming strategy; (iv) levels of integration relating to budget, accounting, and treasury management; (v) TSA implementation; (vi) prioritization of efforts during project development; (vii) importance of testing; (viii) guarantee period for service and maintainance; and (ix) change management.

These characteristics have been defined based on various studies and the sharing of experiences in the region of projects financed by the IDB and the World Bank, as well as those that have received technical assistance from the IMF's Fiscal Affairs Department. There is also a growing body of literature concerning public sector governance relating to large ICT projects and the importance of paying attention to the processes, human resources, and management of the project to achieve success during implementation (OECD, 2014; Nichols, Sharma, and Spires, 2011).

Political Economy

Each country's history, sociopolitics, institutions, and actors underpin the success of political decision making. Politics is conditioned by the incentives and constraints placed on various actors amid institutional rules that impact this interaction. From this perspective, the characteristics that make up the institutional and political economy become strategic with regard to the design and implementation of an IFMIS. More importantly, a project has a potential cross-cutting effect on PFM that can impact the entire public sector.

First, it is essential that IFMIS initiatives gain support from high-level public finance officials from the outset so that they are fully aware of the potential benefits and risks. Such a project requires experts to act as strong advocates to set the political stage and to provide the leadership that is essential.

Second, the location and hierarchical status of responsible units for the project are vital. Being under the aegis of the main sponsor or a high-level



authority will send a strong message to the public sector of the importance of the IFMIS and improve its chances for support. In particular, the IFMIS should not be under the ICT unit, as it should avoid the perception that it is merely a technology upgrade initiative rather than a complex project to streamline and strengthen PFM.

Institutional coordination building should take the form of committees. Within the Ministry of Finance, for instance, an ICT or IFMIS committee has the potential to facilitate consensus building for these initiatives.

In the region, IFMIS committees in Chile and Costa Rica are examples that have attracted interest, as have the examples of Honduras and Uruguay. In Chile, an Executive Board (Comité Directivo) comprises DIPRES authorities and the Comptroller General of the Republic (Controloría General de la República), set up solely for the purpose of developing the SIGFE, whereby the Board approves the IFMIS objectives. In Costa Rica, the Financial Management Coordination Committee (Comisión de Coordinación de la Administración Financiera (CCAF)) is tasked with the coordination of technical and operational aspects, ensuring that the views and recommendations of each department of the Ministry of Finance are taken into account. The CCAF falls under the Vice-Ministry of Expenditures (Viceministro de Egresos) and includes the Budget Directorate (Director General de Presupuesto), Accountant-General (Contador Nacional), Directorate of Public Credit (Director de Crédito Público), Directorate General of Procurement (Director General de Administración de Bienes y Contratación Administrativa), Treasury Directorate (Director de Tesorería), Technical Secretariat of the Budget Authority (Secretaría Técnica de la Autoridad Presupuestaria), and the Directorate General of Information Technology (Director General de Informática).

In Honduras, the Information Technology Committee (Comité de Tecnología de la Información) was established as part of the Finance Secretariat (Secretaría de Finanzas) in 2013, with the participation of the Directors of Governing Bodies (Directores Generales de los Órganos Rectores). Its objective is to enhance IFMIS institutionally under the responsibility of the Modernization Unit (Unidad de Modernización) of the Secretariat. In Uruguay, in order to develop the modernization project of the IFMIS (Sistema Integrado de Información Financiera (SIIF)), the Project Executive Board (Comité Directivo del Proyecto) was set up with the authorities of the Nation's Accountant-General, Treasury (Tesorería General de la Nación), and Budget Unit (Unidad de Presupuesto de la Nación). As experience shows, these coordination mechanisms should be replicated, strengthened,

and institutionalized as part of IFMIS development and implementation in the region.

Thirdly, there are incentives in the political economy of each country that can encourage various public sector actors to adopt IFMIS. The promotion of more extensive management instruments by the Ministry of Finance—including IFMIS as an ingredient with various components—will ensure more project encouragement.

Strong commitment of resources and willingness are needed by line ministries and the project team to gain consensus, especially from those who resist change. Behavioral change, supported by programs such as the Management Improvement Program in Chile, is a key to achieving success.⁶

Furthermore, it is essential to bear in mind that the rationale for the IFMIS project is an effort to promote reforms. Recent studies by Andrews (2013) indicate that many countries profess they are reforming their PFM simply by adopting a set of short-term gestures that are, most often, unsustainable over the long term, stemming from the lack of alignment with a country's particularities. This, ultimately, does not represent an ideal combination of solutions and adaptations (Andrews, 2013).

Andrews refers to this phenomenon as an institutional isomorphism, borrowing the term from the biological sciences, whereby some animals seek to resemble others within their environment as a means of security. Similarly, some governments feign the image that they have adopted best international practices in PFM as a means to gain support and credibility in the short term.

Another key aspect—identified by Andrews from an analysis of more than 100 countries independently evaluated with the PEFA methodology—is that reform very often is designed only at the central level (i.e., Ministry of Finance). It is common for these reforms and systems not to be implemented due to a lack of participation of the final users—mainly located in decentralized sector ministries—during the design phase.

In Chile, the Users Committee (Comité de Usuarios) was set up as a component of its SIGFE 2.0 project. It aims to draw participation, at the project stage, of intended users of the system—not only from the central level, but also from other public finance units—in order to address their needs.

⁶ Chile's PFM incorporates training programs in accounting and budgeting for its staff, including courses for the SIGFE, to improve public management. In addition, there is a staff merit scheme—of which PFM is a component—that is linked to performance (World Bank, 2008).



Project Management and Leadership

Due to the relevance and scale, as well as the economic, financial, and human factors associated with IFMIS, an adequate, high-level, and committed expert project team (EPT) should be created. The team should not be composed by only people from the Ministry of Finance, especially if it were made up with staff from the budget, accounting, treasury, and public credit units, who would have the project work added to their daily tasks, preventing them from concentrating on the project alone.

While it is critical to ensure that a dedicated, full-time EPT is in place, it is equally important to include the participation of relevant staff from the various areas within the Ministry of Finance (i.e., budget, accounting, treasury, and debt management) to validate the system's functionalities. Failure to effectively enhance communication between the project team and potential beneficiaries at the design stage may increase resistance by users, which could result in the delay of the project.

To effectively manage the project, there are two significant activities among the various ones that the EPT must focus on. First, it is essential to define precisely the scope and strategy of IFMIS functionality, the outcome of which should be reflected in the conceptual model as a basis for this kind of project.⁷

Second, at the ICT level, the project's technological architecture should be defined by taking into account the technological capacity of local markets so as to avoid the error of depending on next-generation products or paradigms that may not be supported within the country. The level of connectivity in the country should also be considered.

Alternatives at the Programming and Development Stages

Based on the experience of Latin America, there are four alternative methods to develop an IFMIS. These include (i) in-house development; (ii) development through consulting firms; (iii) outsourced development; and (iv) parameterization of commercial off-the-shelf systems.

- i. **In-house development.** Development is under the direct responsibility of the government, with the EPT to be sponsored by the Ministry

⁷ For more details on the scope of an IFMIS conceptual model, see Khan and Pessoa (2010).

of Finance. The hiring of individual experts should include various specializations (e.g., project management, systems analysts and developers, and software architects), ensuring project management coordination. The team will be responsible for the (a) selection, hiring, and management of individual consultants; (b) supervision and coordination of consultant activities; (c) quality control of software development; (d) operational and performance testing of the software; and (e) systems maintenance during production. The government will assume the costs, as well as the potential risks that may occur with regard to software codes during production.

This strategy has been adopted in several countries in Latin America, including Guatemala, Honduras, Peru, and the Dominican Republic,⁸ during the last decade, when the overall management of the project fell under the supervision of the Ministry of Finance due to procurement procedures restrictions, limited range of public financial information systems offered at that time, and the strategic importance of IFMIS. In recent years, the institutional inertia to update their ICT systems has led to incremental adjustments to systems, as necessary. Today, however, there are various alternatives, although the option for in-house development is less usual due to the length of time it takes and the fact that costs frequently exceed budget in the long term. Furthermore, as mentioned previously, it is difficult to break up or redeploy a project team that has been set up by the Ministry of Finance once the project has reached completion.

In-house development, however, has the advantage that the public sector can retain ownership of the source codes, thus reducing costs and needs for external maintenance services. It is also an option that allows for rapid response when changes or adjustments are necessary, especially with regard to new processes and procedures. This may lead to the need to maintain the services of the expert group, raising the costs beyond other available alternatives.

- ii. **Development through consulting firms.** While the Ministry of Finance usually maintains control of systems development, it leaves the contracting of individual specialists to one or more consulting firms, usually at a monthly rate, to minimize the administrative costs of

⁸ Brazil is also an example for in-house development, since the government contracted the public data-processing company (Serviço Federal de Processamento de Dados (SERPRO)) for its IFMIS.



recruiting, selection, contracting, and remuneration. The responsibilities of the project team include (a) defining the profiles of operations and technology specialists; (b) drafting terms of reference for human resource providers; (c) supervising and coordinating the activities of the individual consultants; (d) managing the contracts in liaison with consultancy firms; (e) carrying out operational and technical testing cycles to ensure software quality and performance; and (f) defining and executing maintenance services. The cost of software adjustments caused by errors in the system is met by the government.

The consulting firms assume the responsibilities of (a) hiring the consultants and managing their activities, (b) ensuring the specialists have the required technical qualifications, and (c) complying with the terms of the contract. The responsibility of the firms excludes development activities and the final outcome.

This option was adopted by Chile as part of the data consolidation and reporting component of SIGFE I. Other countries have introduced this alternative by liaising with public universities, such as Brazil, which partnered with the University of Brasilia on its SIOP, and Argentina which partnered with the National University of La Plata (Univesidad Nacional de La Plata (UNLP)) in relation to its e-SIDIF.

The advantage of this option is that it maintains public sector ownership of the IFMIS source codes without the need to select, hire, or pay a large number of consultants. Nevertheless, this option presents the same issues and risks as those of in-house development.

- iii. **Outsourced development.** Under this approach, the development of the system is outsourced to a software factory developer. The outputs of the system are precisely defined and the developer works within an agreed budget. This development model requires the project team to have strong institutional capacities to elaborate the detailed specifications of the system. The project team should be able to (a) define the principal operational and technical aspects of the system; (b) support the software developer in the design and building of the system; (c) carry out the testing of products;⁹ and (d) carry out tests of the individual components and, ultimately, the entire integrated system.

The software developer's role is to (a) hire qualified software development experts; (b) comply with the quality and delivery dates

⁹ Among the products to be tested and/or verified are the components, software codes, execution processes, systems documentation, and manuals of procedure.

of the product; (c) guarantee software quality; (d) adjust the software, if needed, in terms of design and operation during the guarantee period, and (e) provide the hardware and software infrastructure required for systems development and testing. The responsibility of the firm includes development activities and the final outcome.

Chile's development of SIGFE 2.0 followed much the same strategy as Uruguay, at present, with its modernization of the SIIF. Various states in Brazil, such as, Pernambuco, Santa Catarina, and Espirito Santo rely on this particular option with the advantage of maintaining source code ownership. This, as mentioned previously, will not only offset dependency on the consulting company and reduce maintenance costs; it will also avoid the issues and challenges of the other two alternatives previously mentioned.

- iv. **Parameterization of a commercial off-the-shelf system.** This option relates to the products that are available on the market, referred to as commercial off-the-shelf products (also available as World Class software), usually relating to the ERP type of product.¹⁰ Development of the system with this option could take less time than those products that are customized.

This option will require the project team to (a) define the main functional and technical aspects of the system, (b) support the consulting company during the process, (c) establish and manage the service, and (d) conduct product testing of the end product.

The role of the consulting company is to (i) provide qualified experts to customize the software, (b) identify, define, and validate system parameters; (c) deliver services, according to the terms of the contract, particularly with regard to deadlines, and ensure the quality of the developed software modules; (d) establish mechanisms to ensure the quality of the application, and (e) correct software malfunction during the guarantee period.

This off-the-shelf customization option is more often selected in Africa and the Middle East (Dener, Watkins, and Dorotinsky, 2011), as well as in France and South Korea or in countries where public institutions are autonomous in terms of budget management. In Latin America, some budget functionalities of Costa Rica's SIGAF are supported by World Class software, while

¹⁰ These are systems composed of a series of integrated applications, which enable the institution to manage the entire business and financial cycle, including procurement and human resources, in an integrated manner.

TABLE 7.3 MAIN CHARACTERISTICS OF DEVELOPMENT ALTERNATIVES FOR AN IFMIS

| | In-house | Development through consulting firm | Outsourced development | Parameterization of the commercial off-the-shelf system |
|-----------------------------|---|--|---|--|
| Composition of project team | System management, supervision, and administration | Management, supervision, and coordination External consultants provided by firm to develop system | Internal team to manage and supervise Software developer for system, responsible for final outcome | Internal team to manage and supervise Consulting firm responsible for customizing the application and the final outcome |
| Main costs | Management team Administrative team Development team Procurement of software and hardware components for development and testing | Management team Administrative team Contracting consulting firm Procurement of software and hardware components for development and testing | Management team Contracting software developer Procurement of basic software and hardware components for testing | Management team Contracting consulting firm to customize application Procurement of basic software and hardware components for testing |
| Development guarantee | Error correction and improvements to application performance by project team | Error correction and improvements to application performance by project team | Error correction and improvements to application performance by software developer during guarantee period (6 to 12 months) | Error correction and improvements to application performance by consulting firm during guarantee period (6 to 12 months) |

Source: Authors' elaboration.

in Nicaragua and Panama, the upgrade of the IFMIS in 2013 and 2014 with commercial software is still in process. Once the system has been acquired, adjustments and maintenance by the consulting firm take place over a two-year period before internalizing systems maintenance and upgrading.

On selecting an option, it is essential that the advantages and disadvantages be carefully analyzed. A risk and cost-benefit analyses of each alternative should be carried out before a decision is made so as to ensure the cost effectiveness and political viability of the product over the long term.

Budgeting, Accounting, and Treasury Management: Levels of Integration

As indicated by Dener, Watkins, and Dorotinsky (2011), one of the main attributes of an IFMIS is its capacity to generate financial statements by processing the information stored in the database. The five main statements are the balance sheet, results statement, statement of changes in equity, cash flows statement, and comparative budgeting (or accounting) statement.

To produce these in a timely and reliable manner, budget, accounting, and treasury modules should be integrated into the IFMIS. This guarantees the simultaneous recording of financial movements, as well as timely economic movements.

Since budgets in the region are generally managed on a modified cash basis where certain expenditures and revenues are recorded under accruals and others remain under cash, especially revenues—according to International Public Sector Accounting Standards (IPSAS)—it is essential to establish “locked flows” to assure the simultaneous registry in the IFMIS. This can be done at the accruals stage when budget and accounting flows have to be compatible so that the IFMIS will process the budget and accounting at the same time, based on the integrated chart of accounts. Treasury and accounting flows should operate in much the same way, as in Chile’s SIGFE 2.0.

Another alternative is the integrated budget-accounting-treasury chart of accounts, which can be designed to ensure that the IFMIS will automatically create an accounting registry for financial transactions. In this case, the integrated chart of accounts is measured by, for example, the budget program classifier that identifies the ledger accounts that are associated with budget transactions as assets/liabilities or income statements. This alternative was adopted in Brazil’s IFMIS (Box 7.3) and in Guatemala. Honduras used this approach in the design of the Integrated Municipal Administration System (Sistema de Administración Municipal Integrado (SAMI)).

BOX 7.3 THE BRAZILIAN IFMIS: AN EXAMPLE OF AN INTEGRATED APPROACH

The IFMIS in Brazil has operated since 1987 and currently covers more than 4,000 spending units throughout the country, with more than 100,000 users. It includes the three branches of government, the social security fund, and decentralized agencies.

The system automatically reconciles the budgetary, financial, and accounting functions and an automatic reconciliation with the TSA and produces the balance for the entire central government. The two fundamental elements of the system are a single chart of accounts for accounting, budgetary and financial operations, and the tables of events. The latter assists in creating various automated accounting entries in a single register.

More recently, the Brazilian Payments System (Sistema de Compensação Bancária) was integrated into the IFMIS so that the federal government's cash position is a part of the entire national banking system and is captured in real time.

Finally, a prerequisite for achieving budget and accounting integration is to harmonize the budget classifiers and chart of accounts. The update should be carried out in line with international standards, such as the IMF's *Manual on Government Finance Statistics* and the IPSAS.

IFMIS Support of a Single Treasury Account

A TSA is a crucial element of PFM reform in terms of cash management, and is an essential part of an IFMIS. This unified structure for the bank accounts of the government enables consolidation and optimal use of cash resources, including the capture and control of financial transactions, and contributes to debt management (Pattanayak and Fainboim, 2011). The output relating to the cash position at the end of each day is based on the fungibility of government resources, irrespective of source or destination.

For the TSA to operate smoothly there is a distinction to be made between each cash transaction by way of the accounting module, as is done in some countries that have different accounts for collection and payment purposes. This eliminates the need to manage each type of transaction within multiple bank accounts.

The design of a TSA should include the (i) scope of its coverage, (ii) structure of government bank accounts, (iii) role of the central bank and commercial banks in terms of TSA management, and (iv) a system to process transactions and corresponding cash flows (Pattanayak and Fainboim, 2011).

The fourth aspect depends on the IFMIS to process cash transactions. To facilitate this, transactions should be automated in parallel to electronic payments systems (Pessoa and Williams, 2012).

The IFMIS accounting and treasury modules must be designed so that it will record and gather data on all transactions, irrespective of the cash flows of specific bank accounts. The various cash transactions (i.e., receipts and payments) may be treated separately and should be captured by a system that consolidates the accounts in such a way as to allow the monitoring and control of annual allocations, as well as facilitate the issuance of monthly and quarterly statements by the Ministry of Finance.

To support the TSA, the IFMIS—at the design stage—should incorporate a chart of accounts and a budget classifier, configured so that it can identify the various accounts and disaggregations. This will facilitate the capture of revenues, payments, financing, and investment of surpluses.

Electronic interaction between the treasury, spending units, and banks (including commercial banks) is important. This will reduce transaction costs, allow for electronic payments, and capture receipts on a daily basis.

As Pessoa and Williams (2012) point out, an IFMIS is essential to carry out the core requirements of modern treasury management. An efficient set of systems will manage, monitor, control, reconcile, and produce budget and accounting reports on account balances in particular on the TSA itself.

In addition, the TSA should be able to project cash flow collection and payments over the short term; make projections that reflect information relating to the delay between payments and disbursements; compile three-month projections of daily cash flows administrated by the TSA, in addition to year-end forecasts; and monitor as close to real time as possible the variations in the aggregated TSA balance. Although IFMIS, in general, lack a module for cash flow forecasting—done by way of Excel-type spreadsheets in Latin America—they do hold historical data relating to daily collection and payments that are essential to prepare an accurate cash flow projection.

To effectively implement a TSA with the requirements of PFM, the IFMIS should be able to consistently produce timely data on budget commitments, accruals, and actual treasury transactions. Coverage should also be as broad as possible.

Prioritizing Project Development Efforts

The establishment of an IFMIS requires significant human and financial resources. Efforts, therefore, must be prioritized throughout every stage. A distinction should also be made between the original and new functions of the system.



According to the literature and based on the experiences gained in the region, project development that takes place in various incremental stages has less risk of failure than if it were carried out in one stage (Dener, Watkins, and Dorotinsky, 2011; Barros, 2012). The project, therefore, should be divided into three stages to reflect the budget cycle (i.e., formulation, execution, and evaluation, with the exception of the approval stage which is carried out by the legislature), so that the relative components can be designed sequentially and independently. These stages can be grouped into two: budget formulation in one and budget execution and evaluation in the other. What links these two phases together is the local Budget Law (Ley de Presupuesto), drafted with the support of the budget formulation module that captures the data on the allocation of funds between institutions, budget items, and/or programs, and forms the starting point of the execution phase.

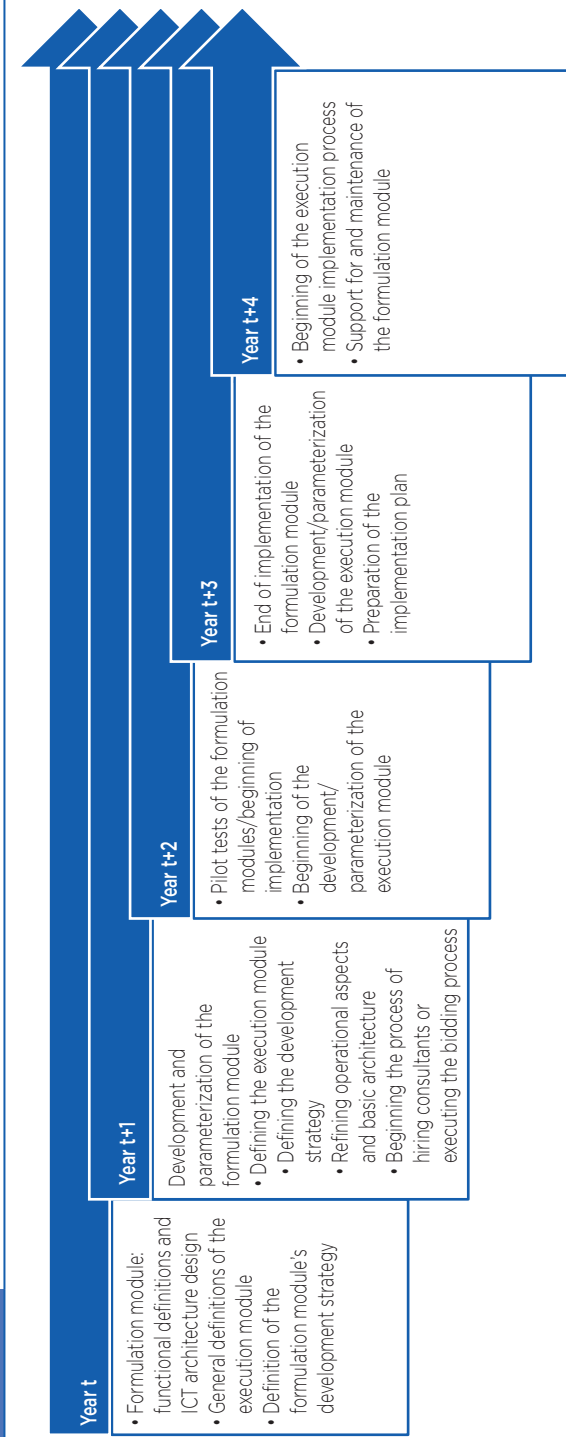
Given the complexity of the execution module, a strategy should be put in place to prioritize the update of the budget formulation module, as in the case of Honduras and Peru; strengthen the role of the project team; and enable them to adjust the consolidation mechanisms, streamline processes, and increase learning with regard to the technological innovations necessary to effectively execute module implementation—a more complex feat than that of the budget execution and evaluation module. A project of this complexity will require four to five years to become fully operational, despite the sequential stages (Figure 7.3). In this light, and to maintain the support of the Ministry of Finance, it is critical that tangible results are demonstrated in the short term (referred to as quick wins). This strategy should make the achievement of objectives easier and define the start of part of the new IFMIS upgrade within the project's second year, with the implementation of the budget formulation module as a first result of this initiative.

Importance of the Testing Stage

The execution stage should be sufficiently robust to include a testing phase, which is essential for efficient implementation of the IFMIS. By testing the operation and performance of the new system, errors can be corrected.

To effectively test systems functions, testing should include routine and easy processes, as well as ones that will be able to identify unusual business flows or atypical functions from a particular public institution. Furthermore, procedures pertaining to transaction statements, as well as the validations

FIGURE 7.3 PRIORITIZATION STRATEGY FOR THE IMPLEMENTATION OF AN INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM



Source: Authors' elaboration.



between the various system components must be comprehensively tested,¹¹ especially with regard to upgrades during development and/or the customization stage.

Performance and volume tests should take place in test conditions that are equivalent to a production environment.¹² Failure to recreate these conditions, or if they are done too quickly, may present challenges; thus, a volume of data equating at least one year's worth of transaction processing should be considered for testing. Data reporting tests should also be conducted—again, using a significant volume of data to ensure that response times are appropriate.

Standard parameters to the number of errors in the software are usually known as incidents. These are most certainly present in systems at the production stage. The unit of measure is the number of lines of code in the system, calculated in thousands of lines of code (KLOC). The average in the software development industry is 30 errors per KLOC at the time of testing. One error usually occurs when testing is done on World Class products, which is an acceptable result, although this can increase to between two and four errors per KLOC (Beckett and Putnam, 2010; Reifer, 2004; and McDermid and Kelly, 2007).

The criteria required by the Ministry of Finance for the testing phase should be determined. These should encompass (i) functionality issues, based on operational testing; (ii) technical issues, including the definition of performance-related parameters, scalability, and data volume management, and (iii) systems documentation with regard to operational and procedures manuals.

With regard to functionality, various types of incidents should be determined by level of seriousness, such as (i) blocking, which hampers the module's basic operation and/or capabilities that make up the system; (ii) critical, which relates to the ceasing of basic function execution and/or systems flows or the challenge in producing reports; (iii) normal, which relates to the failure to complete secondary requirements, such as atypical business cases or business procedures that are not central to the system; and (iv) minor,

¹¹ For example, in the case of developed software, the procedures that relate to transaction statements and validations should be tested at the business and presentation levels within the database. Special attention should be paid to pagination and transaction block mechanisms at the business level within the database.

¹² This means that the production environment does not have to be reproduced in terms of basic software and hardware components, but it must be equivalent on a smaller scale.

TABLE 7.4 ACCEPTANCE CRITERIA AND OPERATIONAL THRESHOLDS OF CHILE'S SIGFE 2.0

| | Types of incidents | | | |
|--|--------------------|----------|--------|-------|
| | Blocking | Critical | Normal | Minor |
| Maximum number of incidents in each operational test | 0 | 5 | 10 | 20 |
| Maximum percentages of each type of incident applied to the record of incidents during development stage | 0% | 15% | 35% | 50% |

Source: Uña (2013).

defined by actions being successfully completed with little impact on the system procedures.

Table 7.4 contains the acceptance criteria and operational thresholds of the SIGFE 2.0 in Chile. These were applied by the software developer during the testing of the entire system.

Guarantee Period and Maintenance Strategy

In a project the size and complexity of an IFMIS, it is necessary not only to carefully plan the implementation stage; it is essential to establish the guarantee period and maintenance service program. In the case of outsourcing (e.g., commercial or customized software), the guarantee period is a variable that will impact project costs. Conversely, in-house development or the option of hiring a consulting firm, where the guarantee cost is not fixed, may represent higher costs resulting from project delays due to error corrections. The experience of various countries, such as Guatemala and the Dominican Republic, are particular interesting examples.

The recommended guarantee period for an IFMIS project should be extended by a minimum of 6 to 12 months, which includes at least one year-end closure of the budget cycle and covers a significant number of public entities. For instance, Uruguay's Ministry of Economy and Finances (Ministerio de Economía y Finanzas) requested bidders to include the rates for three guarantee options in relation to the SIIF 2 (i.e., 12, 18, and 24 months). On this basis, the Ministry was able to select the most convenient guarantee period.

Various strategies are necessary during project execution with regard to IFMIS maintenance, so that the technical and operational knowledge gained by the project team is retained for the maintenance stage. The team's participation at the initial stage of system operation is, therefore, vital.



Furthermore, it is essential to decide whether maintenance should be carried out using internal resources, by hiring consultants, or by outsourcing the service. Given that maintenance of the system is essential during at least the first two years of operation, it should be carefully planned while taking into account the costs and benefits.

A Change Management Strategy

The change management strategy for an IFMIS project is essential and should include consensus building around the reforms proposed. As indicated by Allen, Hemming, and Potter (2013), the importance of identifying the stakeholders, developing institutional capacities, and actively managing change are equal to, if not greater, than those aspects that relate specifically to the technical design of PFM systems. The State of Sao Paulo, Brazil, exemplifies the importance of this dimension, whereby the IMF supported the implementation of a Public Services Costs System (Sistema de Custos dos Serviços Públicos). The organization has recommended the adoption by the Finance Secretariat (Secretaría de Fazenda) of a change management strategy to strengthen the implementation of the cost system that forms part of PFM.

An analysis of change management in projects of a technological nature by López (2013) indicates that although there is a definite point of departure and ultimate goal, it represents an extended, nonlinear process in which the image of what is to be achieved is constantly changing. The modification of an IFMIS project, therefore, may be faced with the resistance of various interest groups whose work routine may be affected. This situation can be managed by having a plan in place that defines the objectives, identifies the main groups that will be most affected, and outlines the relevant activities.

An outline of activities can help reduce opposition and include such examples as knowledge sharing events, whereby the experiences of those who have undertaken the process can be shared with the various interest groups to inform them of the benefits of change. The technical support offered by such multilateral organizations as the IDB, IMF, and World Bank is crucial in the area of knowledge management and dissemination of information throughout the entire region.

The establishment of an IFMIS User Committee, such as that for Chile's SIGFE, is a powerful way to promote change management by involving users of the system during the early stages of development and to take into account their requirements and recommendations. The modernization process of the SIIF in Uruguay, led by the Ministry of Economy and Finance,

convened relevant governing bodies to discuss and determine the improvements for the new version of their system. In parallel, the User Committee launched an implementation plan for public entities, based on their familiarity with the project, as a way of tempering resistance.

The strategy for change should target Ministry of Finance staff in key departments, including those of Budget, Accounting, Treasury, and Debt Management. Operational training in the new IFMIS functions should be provided to enable efficient use of the new or upgraded systems that comprise the IFMIS so that they can be adopted throughout the line ministries.

As previously mentioned, the support of senior ministerial authorities is critical. It depends very much on the political and economic aspects of the project and, therefore, every effort should be made to obtain this support.

CONCLUSIONS AND CHALLENGES

The establishment of IFMIS requires considerable financial and human resource commitment over a significant period of time—at a minimum, four to five years. A series of aspects that directly impact the initiatives to implement or modernize these systems need to be examined to inform an effective project management strategy. These include the political economy, project direction and management; IT programming and development plan; development and integration of main functions; IFMIS support to a TSA; essential testing; guarantee period; and systems maintenance service program. This chapter has reviewed these aspects with specific attention to the integration of IFMIS as instruments of PFM modernization, and it has examined the recent experiences of Latin American countries that are in the process of implementation or have recently upgraded their systems. The outcome of this analysis is that IFMIS is a key element of PFM. The capacity of the systems to provide data that is relevant, timely, and of good quality through streamlined processes, as well as support public sector financial management procedures, makes them a powerful tool for Treasuries and other entities in the public sector. It is important for Latin America to recognize that the significant efforts to consolidate a TSA have been possible as a result of the marked advances of some countries' IFMIS in recent decades.

A key element to success is the drive and support that the highest authorities in government—especially those at the Ministry of Finance— should provide to facilitate the implementation or upgrade of such systems, as well as the careful consideration of the various aspects that have been highlighted



with regard to strategy. These contributions will ensure IFMIS establishment or upgrading in order to achieve fiscal solvency, transparency, efficient resource allocation, and operational effectiveness among public entities.

Various Latin American countries currently face five major challenges in their ongoing efforts to modernize PFM information systems. First, subsequent to the strengthening and standardization of budget management seen in recent decades, there are now initiatives to incorporate IPSAS, as in the case of Brazil, Costa Rica, and Mexico. These initiatives consider accounting to be central to fiscal data, and have overcome challenges to improve the management of fiscal risk. Appropriate adoption of these initiatives requires a careful review of the chart of accounts, its integration with the budget classifier, correct and updated assessment of assets and liabilities, and a redraft of administrative processes. The units responsible for operating the IFMIS should consider how these demands will impact their data structures and processes so as to determine solutions to strengthen public accounting modernization efforts.

A second challenge relates to the strengthening of RBBs through IFMIS, which have yet to achieve optimal integration. Undoubtedly, an IFMIS—as a tool—has the capacity to record indicators relating to goods or services in budget programs. It is not, however, obvious that these kinds of indicators present the same level of aggregate value in the provision of services in such sectors as education and health as they do in those associated with government administration (e.g., diplomatic relations or offices of the presidency). It is therefore essential to establish good international practices so as to systemize these experiences; disseminate them as guidance for countries in the progress of integrating financial allocations and performance indicators within the framework of RBB initiatives, as in Chile, Mexico, and Peru; and seek more empirical evidence.

The third regional obstacle is the creation of data regarding unit costs of public services and the contribution of IFMIS in this process. In general, costs are restricted to particular programs and institutions in aggregate format, rather than at the level of cost centers or public services (e.g., hospitals, schools, prisons, primary education). Cost accounting and its integration in IFMIS for this type of data are relatively uncommon in the region, with the exception of the State of São Paulo, Brazil.

One of the lessons learned from the Brazilian example (see Chapter 6) is the importance of initially using the information that is already available in the IFMIS prior to investing time and money in a new separate system for costs relating to public goods and services. Based on this experience, it is

recommended that a system to capture such data be introduced into the IFMIS in addition to other information components. What should be clear is that an IFMIS is not one that generates information about public sector costs, products, or results (outputs and outcomes); rather, it provides the data to be consolidated with information from other sources. The only system in the region that can process such information within the IFMIS is Peru by way of its RBB module, as well as the ERP-type systems in Nicaragua and Panama.

IFMIS are faced with a fourth challenge relating to alternatives for modernization. Although the trend over the last 30 years in the region has been for the tailor-made option, there is growing interest in using commercial applications for financial management accounting. There is an increase in the number of examples that use business intelligence applications for reports with data that is captured and stored by IFMIS, as in the case of El Salvador and Honduras.

At the same time, as previously mentioned, Nicaragua and Panama have new IFMIS based on commercial software. These are not the tailor-made examples that have been used over recent decades. The lessons learned from these successes and challenges can be applied to future IFMIS upgrade programs and will effectively shorten the time it takes to implement such projects.

The fifth and last issue has been the application of modern or ERP-type IFMIS at the subnational level, which is still relatively rare. The first requirement is to set the same accounting standards throughout all levels of government, as in the case in Brazil since the 1960s and recently adopted by Argentina and Mexico for their respective provinces and states. Application of accounting standards is fundamental to ensure that the information reported by subnational governments is timely and comprehensive and that consolidation represents the public sector in its entirety. It is crucial that the financial systems of central government are aligned to those of subnational governments either by adapting them to the levels of government, as Brazil did with its states in the 1990s, or having the resources to buy or develop their own systems.

In conclusion, IFMIS implementation or modernization is a tremendously challenging undertaking which demands a high level of commitment from the authorities and staff of the Ministry of Finance. It also requires significant financial resources and a high degree of effort and dedication from project teams. There is no doubt whatsoever that an IFMIS is an extremely important PFM tool which, with the right ingredients, will strengthen the development of the region.



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Public Procurement in Latin America

Carlos Pimenta and Natalia Rezai

INTRODUCTION

Within the area of public financial management (PFM), procurement relates to the acquisition by the public sector of goods and services. This includes routine purchases of supplies (e.g., printer ink, paper, and fuel) to more complex contracts for large infrastructure projects, such as government constructions, subways, and bridges. Public procurement usually includes different stages: planning, selection, and contract management.

Procurement is one of the largest government spending activities and is estimated to account for up to 10 to 15 percent of global gross domestic product (GDP) (OECD, 2007). Depending on the institutional arrangements in place and the level of decentralization within each country, procurement regulation takes effect at the central, state, and local levels. Public procurement is a government's most vulnerable activity to waste and corruption (OECD, 2007) due to the volume of financial flows it can generate, the close interaction with the private sector, and the complexity. Public procurement, therefore, should be based on a set of three main principles—efficiency, efficacy (value for money), and transparency (Schapper, Veiga Malta, and Gilbert, 2006)—and regulated by way of well-defined procedures, as well as standards that are enforced to achieve transparency and efficacy. At the

same time, the principles should be sufficiently simple to enable efficiency and to attract a large number of participants.

Procurement also plays a vital role in the way in which governments manage public resources; it also influences the medium- and long-term effects of such resources on the economy and society. More specifically, procurement can affect whether public expenditure is efficient and effective by ensuring that suppliers are selected competitively and transparently, as well as supervised as such; quality of procured goods and services are achieved; and available information is reliable.

As the role of PFM has evolved to promote more efficiency of resource management, value for money, and accountability, so has the role of procurement. In general, reforms aim to increase the efficiency of procurement systems and procedures, ensure transparency of the award process, and increase competitiveness and savings through electronic procurement. Furthermore, procurement is starting to play a role in the design of economic, social, and environmental policies that improve citizens' welfare.

The structure of this chapter seeks to highlight the main principles of procurement mentioned above, and it is organized in the following way. A conceptual analysis is presented relating to the design, goals, and functions of procurement, together with a description of their relationship to PFM systems. This includes the importance of appropriate management in terms of public resources. Following this is a review of some of the factors that have contributed to the recent progress of procurement systems, such as information and communications technology (ICT) and the effects of commercial integration and liberalization. The chapter then explores the current state of public procurement systems in Latin America—legal and regulatory frameworks, institutional architectures—and their contribution to other public policies, based on standardized assessment methodologies. Finally, the chapter puts forward a series of policy recommendations that take into account the challenges that the region continues to face.

Impact of Procurement on Public Financial Management

Public procurement is embedded in PFM and, as such, influences a broader set of processes, systems, and institutions. These may vary in accordance with country's institutional arrangements and economic context; overall, however, procurement does affect how public administration manages its resources. Procurement systems—defined in this chapter as the set of rules, processes, and information systems that support procurement planning,



selection, and contract management—can (i) facilitate spending along budget forecasts; (ii) facilitate reliable and efficient resource flows and transactions; and (iii) enhance accountability and generate critical information to support prudent fiscal decision making.

PFM is an umbrella concept that covers administrative elements, tools, and management systems that are critical to produce information, processes, and rules that are necessary to aid fiscal policy decision making. It also provides the requisite instruments to carry out decisions (Cangiano, Curristine and Lazare, 2013). The primary objectives of PFM are to promote sustainable fiscal policy, effective allocation of public resources, and the efficient provision of public goods and services (Schick, 1998). To achieve these objectives, the tools and systems that make up PFM (e.g., procurement systems) must operate in an integrated and coordinated manner.

Budgeting is the basis of PFM. It ensures that broad policy objectives are translated into spending envelopes, based on anticipated economic conditions and spending priorities in various sectors, organizations, and programs (Andrews et al., 2014). Once the budget has been prepared, approved, and enacted into law, the executive branch has the authority to collect and spend resources. Efficient public procurement practices should contribute to sound expenditure management by allowing agencies to spend in accordance to budget allocations. The integration of budget planning with procurement systems ensure that public agencies and entities improve their resource management, share information, and reduce administrative transaction costs that are associated with updating, maintaining, and operating both systems. Furthermore, sector expenditure ceilings—in aggregate and in detailed allocations—can be integrated into systems to prevent cost overruns, unless funds have been allocated to specific objectives (OECD, 2010).

Procurement systems and procedures enable entities to purchase goods and services in a timely and cost-effective manner. Through electronic catalogues (e-catalogues), which are online repositories of approved suppliers and price comparisons, entities are able to purchase goods and services that most closely meet their needs in terms of price and quality. In addition, contracts can be paid on time, thus reducing penalties and arrears that are incurred due to late payments; and goods and services can be delivered as planned, resulting in improved quality of government service delivery. During this process, payments should be linked to treasury's cash management processes by way of integrated procurement and payment systems.

Procurement systems can reduce the misallocation of resources and promote greater transparency and efficiency. Corruption in public procurement can take the form of bribes to government officials and collusion by providers through price fixing or bid rigging (OECD, 2007). Fair and equal treatment of providers, however, can be achieved by publishing contract information, such as that pertaining to (i) procurement management, including tenders and selection and evaluation criteria; (ii) laws and regulations relating to public procurement; (iii) responsibilities of procuring entities; and (iv) a budget that includes acceptable cost allocations. Engagement with the private sector and civil society, as well as improved coordination with oversight and audit institutions, can significantly increase integrity in public procurement.

The ability to track resource flows and inventory is critical to PFM. Effective procurement systems can provide timely and reliable information that relates to public spending, enabling government officials to assess whether spending is consistent with budget allocations, whether relevant laws and regulations are complied with, and whether there is value for money. Such information not only enhance accountability across PFM; it also provide officials the necessary information to conduct valid spending analyses. Analysis will produce feedback for future budget negotiation, bringing with it realistic data on goods and services costs.

Transformation of Public Sector Procurement

The concept of procurement has evolved during the last two decades. Traditional and legalist procurement was mainly based on a set of procedures whose objective was to regulate the selection of goods and services provided through various categories of acquisition, while minimizing abuse and favoritism by way of open bidding. The majority of procured goods and services consisted of basic administrative supplies and relatively simple services. Integration with other PFM systems was limited and, in general, procurement was viewed as independent from other government systems and market conditions. Dissatisfaction with public procurement systems, in general, often led to periodic changes on rules and flurries of regulations on the selection and evaluation of suppliers, making procurement complex and burdensome.

During the last two decades, however, public procurement has significantly transformed—ICT has contributed substantially to the development of sophisticated procurement tools and systems; economic integration and trade liberalization efforts have aligned systems globally; and the establishment of

the Agreement on Government Procurement (GPA) and the creation of the Model Law on Procurement of Goods and Services have stimulated the promotion of global standards and good practices in public procurement.

The advance of ICT, in parallel to the rapid growth of the Internet and the decreasing financial costs of systems and databases, has provided an incentive to modernize the way in which governments operate. In terms of procurement, ICT was initially designed to facilitate the dissemination of online information. It provided a means by which purchasing entities could make public their procurement plans, thus increasing business opportunities. Now, the ICT tools that have been developed in response to the needs of procurement entities enable governments to strike a balance between the scale and flexibility of procurement systems design—not possible a couple of decades ago (Santos, 2011). Tools include transactional portals to support electronic reverse auctions and e-catalogues, as well as online procurement plans and supplier registries. The efficiency and transparency offered by these tools have increased competition as a result of open tenders; improved supply chain management through online tracking of contract outcomes; and facilitated contract management through electronic payment schemes.

Economic integration and trade liberalization, furthermore, have contributed to a more modern and standardized procurement concept (Allen, Hemming, and Potter, 2013). Among European countries, the creation of a single market—the European Union (EU)—has shed light on the overly complex and intricate nature of Europe’s public procurement frameworks. European governments now have aligned their systems and, since 2004, have adopted common procurement regulations to facilitate trade within the region. New regulations (Box 8.1) have been adopted to “simplify public procurement procedures and make them more flexible, benefitting both purchasers and businesses, particularly small- and medium-sized companies” (EU, 2014).

Compared to EU countries, however, the influence of common markets and international trade agreements on public procurement in Latin America has been very limited. In South America, the creation of the Southern Common Market (Mercado Común del Sur, or MERCOSUR), comprising Argentina, Brazil, Paraguay, Uruguay, and Venezuela as full members and Bolivia and Chile as associate members, led to the establishment of a procurement protocol in 2006. This protocol aims to facilitate economic integration and free trade (Mercosur, undated), and it recognizes that a common regulatory framework for public procurement is fundamental to transparency. Moreover, providers of goods and services in member countries are to be treated in a nondiscriminatory manner and procurement processes will be

BOX 8.1. NEW PROCUREMENT REGULATION OF THE EUROPEAN UNION

Voted into law by the European Parliament on January 15, 2014, European Union (EU) member states have until April 2016 to enact the new rules into national law. The new procurement rules, which will replace those that date back to 2004, aim to inject transparency and greater efficiency into the procurement process and increase access to all European companies so as to increase the number and quality of public products and services throughout the EU.

Among others, the rules, prompted by economic, social and political developments, seek to simplify public procurement procedures to make them more flexible; facilitate the negotiation of contract terms; reduce minimum procedure deadlines; and reduce the documentation required from participating companies.

While public procurement is considered a policy strategy instrument, the EU argues that the new rules also seek to implement environmental policies and support innovation and small- and medium-sized enterprises. Public authorities will be able to base procurement decisions on the best life cycle cost, factoring in a product's CO₂ footprint. Procedures for the purchase of innovative products and services will stimulate innovation in key public sector areas, such as those of health services and education. In particular, a new procedure, "innovation partnership," will allow public purchasers to select companies through competitive processes to develop tailored innovative solutions to specific problems. Finally, in recognizing that SMEs carry significant potential for job creation, growth, and innovation, the new dictates will encourage public purchasers to award contracts to several small businesses as opposed to a single, large company.

Source: European Commission website: http://ec.europa.eu/growth/single-market/public-procurement/index_en.htm.

conducted transparently, legally, objectively, and fairly. While negotiations have led to this important initiative, to date, not all Mercosur members have ratified the protocol, thus limiting its ability to fulfill its objectives.

The Central American-Dominican Republic Free Trade Agreement (CAFTA-DR)¹ has also prompted some—albeit limited—normative and administrative changes at the national level to adapt the principles and mechanisms of the agreement. Honduras, for example, has eliminated a clause in its public procurement system that required foreign firms to act through national businesses to participate in national bids. The Dominican Republic has enacted a public procurement law that embodies clauses relating to transparency and nondiscrimination and that reduces requirements for national participation in construction works.

¹ CAFTA-DR is the first free trade agreement between the United States and Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua.



At a more general level, the renegotiation of the GPA and the creation of the World Trade Organization (WTO) in 1995, upon completion of the Uruguay Round of trade negotiations in 1994, have added to the transformation of public procurement at a global level. The GPA, which provides a multi-lateral framework for the procurement of goods and services that is based on transparency, openness, and nondiscriminatory principles has helped to increase world trade and strengthen economic integration, primarily among member countries of the Organisation for Economic Co-operation and Development (OECD) and the EU. Latin American countries, however, have yet to sign this agreement and have only contributed to discussions as observers.

The Model Law on Procurement of Goods and Services,² originally published by the United Nations Commission on International Trade Law (UNCITRAL) in 1994, highlights the shortfalls of existing frameworks and their effect on the efficiency and effectiveness of public procurement. The most recent UNCITRAL Model Law, adopted in 2011, “contains procedures and principles aimed at achieving value for money and avoiding abuses in the procurement process. The text promotes objectivity, fairness, participation and competition and integrity toward these goals. Transparency is also a key principle, allowing visible compliance with the procedures and principles to be confirmed.” In particular, the Model Law reflects new practices that result from the use of electronic procurement methods.

The principles for public procurement, established under the GPA and the UNCITRAL Model Law on Procurement of Goods and Services, especially with regard to nondiscrimination, have been shaped by international financial institutions, such as the World Bank, Inter-American Development Bank (IDB), and other regional development banks. Discriminatory public procurement is characterized by a government’s tendency—explicitly or implicitly—to favor its own domestic firms over foreign ones. Explicit discrimination can take the form of domestic content requirements, where entities will award contracts to foreign firms under the condition that they buy components from domestic firms; or preferential price margins, where entities accept bids from domestic firms over foreign ones, as long as the difference in price does not exceed a preestablished margin.

Governments have tended to apply discriminatory practices to achieve a series of national policy objectives. For instance, they may favor domestic

² Available at http://www.uncitral.org/uncitral/en/uncitral_texts/procurement_infrastructure/2011Model.html.

small- and medium-size enterprises (SME) or firms in declining industries that do not have the capacity to compete favorably in international procurement markets, given their poor production techniques, reduced scale of production, and lack of expertise. Governments may wish to protect their respective defense sector by contracting national security services locally. Finally, for products and services that are subject to information asymmetries and compliance issues, they may select those domestic suppliers that are located within their jurisdiction to reduce associated monitoring costs (Breton and Salman, 1995).

There is evidence that the practice of discrimination in public sector procurement is a barrier to trade and to the effective use of public resources. The general argument, endorsed by IFIs and the GPA, is that the increased competition, higher quality, and procurement and budgetary savings that result from open domestic and foreign competition lead to a more efficient and effective allocation of resources. Furthermore, domestic businesses will become more competitive and, ultimately, will have the potential to position themselves in the global marketplace, leading to increased employment in the long term. Finally, nondiscrimination is viewed as a mechanism to reduce preferential treatment and increase transparency in the public procurement process (Evenett and Hoekman, 2004).

Overall, information on the topic of discriminatory public procurement is relatively scant, particularly with regard to Latin American countries. Whether or not protection of the public procurement market enhances or hinders efficiency and social welfare requires further review.

Although the GPA and Model Law are significantly important and can potentially influence public procurement modernization, their influence in Latin America is limited. In general, reforms in the region have been conducted on an isolated basis and have initiated prior to the more recent GPA and Model Law revisions.

Electoral reform and the consolidation of democracy, as well as the advent of civil society organizations (CSOs), such as Transparency International and International Budget Partnership, have had an impact on procurement systems. The issues of transparency and anticorruption practices have been incorporated into national and international development agendas since the 1990s. A public procurement system that clearly specifies the content of tender documentation, collects procurement data, monitors contracts, and provides for fair and timely dispute resolution promotes an increase in transparency from the stage of the needs assessment to that of contract management and payment.



Modernizing procurement systems is also a result of the growth of government and the rising complexity of related activities. Beyond the procurement of simple goods and relatively standard civil works, systems now need to accommodate integrated business solutions; concessions and public-private partnerships (PPP); large-scale ICT systems; and major infrastructure projects (Allen, Hemming, and Potter, 2013). While the key focus of procurement officers has been to ensure compliance with procurement laws, regulations, and procedures, modern procurement now demands a greater degree of procedural and administrative discretion, such as a strategic and knowledge-based approach to determine government needs and contracting strategies; management of tender processing; evaluation of project risks; and appropriate use of technology to enhance effective governance and transparency (Schapper and Veiga Malta, 2011).

It is evident that public procurement, since the 1990s, has undergone considerable transformation due to the advent of ICT, economic integration and trade liberalization, and institutional development, although the extent of this impact varies across regions. In particular, the creation of a common market among European countries has substantially altered the way procurement frameworks and systems are designed and the way regulations are adopted across the board. The rising volume of public expenditure has also created the incentive to modernize procurement systems so as to accommodate such complex government activity.

PUBLIC SECTOR PROCUREMENT IN LATIN AMERICA

Procurement systems in Latin America have been influenced throughout the years, among other things, by the region's legal heritage.³ In many countries, principles of Napoleonic or Roman law (civil law) are applied, by which codified rules and procedural formalities are strictly followed. Procurement contracts between the private sector and the state are considered public contracts that are ruled by administrative law and are subject to special judicial proceedings. Under this legacy, governments place a high degree of importance on the full accountability of public resources, both on revenue

³ In the context of this chapter, Latin America includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

and on expenditure (Ladipo, Sánchez, and Sopher, 2009). As such, public procurement systems in Latin America are endowed with an emphasis on legalism, control, and procedural formality as opposed to discretionary decision making, economic efficiency, risk management, and commercial objectives. Furthermore, risk aversion is an important characteristic of Latin American procurement systems, triggering excessive rigor in the application of norms that stifle competition and increase the costs of doing business with government.

Public procurement reform, often triggered by cases of corruption exposed by the media, has normally been carried out in a hasty manner (Santos, 2011). In these cases, a cost-benefit analysis on the effect of regulation on the principles of procurement—efficiency, value for money, and transparency, to name the most important—is scarcely carried out. Under these circumstances, regulations and procedures have been stacked onto existing ones, often resulting in complex and contradictory procurement systems.

Nevertheless, ICT has been a critical driver of public procurement systems modernization in Latin America. It has improved the way public entities conduct procurement (ECLAC/EU, 2013), allowed governments to increase transparency throughout the different stages of procurement, and empowered social control mechanisms. Today, approximately 70 percent of public contracting is published via the internet (IDB, 2014). Furthermore, technological advancements have led to more efficient public tendering through methods such as reverse auctions, framework agreements, and commodity exchanges. The degree of competitiveness engendered by ICT reforms has contributed to considerable savings of public resources in Latin America, amounting to approximately US\$33 billion in 2012 (IDB, 2014). Where procurement information was once fragmented, ICT has helped to aggregate information in centralized databases and improve the capacity of government to measure public procurement results.

Private sector groups in the region have also played a hand in reforming public procurement systems (Ladipo, Sánchez, and Sopher, 2009). Against recommendations by IFIs, together, professional and trade associations have pushed for the inclusion of protectionist policies to safeguard domestic businesses through the exclusion of foreign firms from bidding or by requesting price preferences and special treatment. Business groups have also pushed for the simplification of legal frameworks and reduction of procedures that result in excessive paperwork, affecting transaction costs.

Discussed in more detail in the following sections, procurement systems in Latin America have many common traits and features. They also face similar

challenges. In light of the previous section on the changing nature of public procurement, governments must go beyond adopting technology and increasing transparency to fully transform systems in the region. This transformation will depend, of course, on the specific economic, social, and political context of each country and the relative volume of public expenditure that is procured. To be successful, however, reforms must seek to address the culture of formalistic control, multiplicity of regulations, and excessive burden of procedures. Reforms must also seek to promote coordination across entities and allow procurement agencies to oversee systems and improve their alignment with national strategic goals. Finally, governments must continue to prioritize access by civil society to procurement information and their involvement and oversight as a means to increase transparency, participation, and competition.

Legal and Regulatory Framework

Legal Norms and Regulations

In Latin America, all countries have autonomous norms in place that regulate public procurement and are separate from general public financial management norms. In the majority of Latin American countries, these are legal norms that can be materially considered a statute, enacted by the legislative body. These statutes provide stability to procurement policies and procedures given that they cannot be discretionally modified by the will of an individual policymaker. At the same time, this stability requires procurement systems modernization reform to be subject to legislative debate. These debates—which can sometimes be lengthy and politically charged—may hinder the ability of procurement systems to adapt to changing market conditions, international trade treaties, and new procurement techniques. In the case of Brazil, Colombia, Ecuador, and Honduras, procurement policies and procedures are stated in their respective constitutions, a norm of an even higher hierarchy. In the case of Argentina and Venezuela, however, they are regulated through delegated decrees that are issued unilaterally by the executive branch (Volosin, 2012).

The scope of procurement norms and regulations in terms of institutions is important to determine the extent to which they apply to public entities. Furthermore, regardless of whether or not nonlisted entities are governed by their own regulations, discrepancies between them can reduce transparency and deter businesses from participating in public tenders across entities due to higher transaction costs. In Latin America, all countries formally state the scope of procurement norms and regulations, though their coverage varies substantially (Table 8.1) (Volosin, 2012).

TABLE 8.1 SCOPE OF APPLICATION TO INSTITUTIONS

| Institutions | Number of countries | Percentage |
|--|---------------------|------------|
| Central administration (ministries, departments, and agencies) | 18 | 100 |
| Provincial/state/local governments | 16 | 89 |
| Legislative and judicial branches | 14 | 78 |
| Public organisms created by law or autonomous (comptrollers, central bank, universities, etc.) | 16 | 89 |
| Public sector businesses or mixed businesses with majority state participation | 14 | 78 |
| Public entities or those with majority state participation | 7 | 39 |
| Public or private entities that receive or use public funds | 8 | 44 |
| Public-private partnerships without limits on majority state participation | 1 | 6 |
| Special funds or trust funds | 4 | 22 |
| Armed forces and police | 3 | 17 |

Source: Authors' compilation, based on Volosin (2012).

Note: Data include Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

In addition to stating the scope of institutions, procurement norms and regulations clearly state the scope by type of acquisition and contract. In the region, 15 out of 18 countries regulate the acquisition of goods and services and public works under a single regulation.⁴ The type of contract—supply of goods, general services, execution of public works, concessions, leasing, and consulting services—can also affect the level of dispersion of procurement information if the majority of contracts are excluded from regulation, thus reducing the level of transparency and competitiveness. With respect to contracts that are expressly included in procurement norms, all Latin American countries have regulations that cover them. With respect to contracts that are expressly excluded from procurement norms, only Bolivia does not regulate them (Volosin, 2012).

⁴ The exceptions are Argentina, Chile, and Mexico. In Argentina, the general regulations of the law are still applicable to public works, although only in a secondary manner.



In most Latin American countries, the management and implementation of these norms and regulations occur at a decentralized level, such as by individual government entities and ministries. In most cases, regulations stem from a legal norm and its associated regulatory decrees. In the case of federal countries, such as Argentina, Brazil, and Mexico, each state and province has its own procurement laws and regulations, based on the federal law. Furthermore, state-owned enterprises have their own, including special arrangements that exist for autonomous corporations or for other specific purposes. Such regulations were conceived to facilitate and expedite procurement arrangements when existing national laws lacked momentum and flexibility (Ladipo, Sánchez, and Sopher, 2009); however, they can inhibit transparency and damage the integrity of public procurement systems if access to information on the special regulation is limited.

The decentralized nature of procurement has led to a multiplicity of regulations in the region, which has a direct impact on costs, since businesses may decide to only bid for contracts with a limited number of entities. This fragmentation not only reduces competition in the market, but can also lead to collusion among businesses that bid with similar entities. In addition to limiting competition, fragmentation can prompt a high degree of effort on behalf of businesses to meet the documentation requirements of various agencies, thus increasing administrative costs. In addition, the multiplicity of procurement regulations increases the legal risks associated with conducting business with the government. In light of these legal risks and the complexities and costs associated with legal arbitration in Latin American countries, businesses are either deterred from bidding or, in some cases, are forced to increase prices to absorb the risk.

To address the effects of the multiplicity of regulations highlighted above, countries in the region have started to push for regulations that focus on the clients of public procurement, public entities and private sector businesses, and seek to simplify procedures. Some countries, for example, have created procurement manuals that are intended to provide guidance on policies and procedures, and can quickly be updated and refined to reflect changes to policies and procedures.

Controls

Most of the norms and regulations mentioned above emphasize the application of controls and formalities, much at the expense of efficiency. Under this approach, explicit procurement regulations seek to influence the market through mechanisms such as mandatory requirements and specific

prohibitions. This has resulted in complex, overregulated, and over managed systems that can sometimes inhibit bidders from submitting proposals. In Mexico, for instance, the domestic labor and material cost component of a bid must equal at least 50 percent of total cost. In Peru, in some cases, foreign firms are forbidden from participating in national competitive bids, irrespective of the firm's product or its willingness to adhere to national procurement policies (Ladipo, Sánchez, and Sopher, 2009).

The excessiveness of controls in public procurement systems across Latin America goes hand in hand with procedural formality. Piecemeal processes—which many times have been added to systems to address weaknesses revealed by individual cases of corruption, mismanagement, or scandals—have led to systems that are overburdened with low-value and, at times, contradictory procedures. Rather than controlling for results, procurement systems in the region control for procedural adherence.

As a result, procured projects can be subject to delays, high transaction costs, and an environment that encourages corruption as a means to expedite the processing of contracts or circumvent regulation. Excessive procedures can also encourage agencies to break down large projects into small packages or simply resort to noncompetitive methods to avoid cumbersome procedures.

Institutional Architecture

Indicators of Methodology for Assessing Procurement Systems on Interagency Coordination

In most Latin American countries, the coordination of procurement policies is spread across many entities, such as the ministries of finance, planning, public works, and the comptroller's office. Often, these entities have their own policy objectives and needs, resulting in a duplication of effort and sometimes even divergent systems, affecting the way in which procurement contributes to the management of public resources. In particular, public procurement would benefit from greater integration and/or interoperability with other PFM systems, such as budget planning and treasury management.

The OECD/DAC Methodology for Assessing Procurement Systems (MAPS)⁵ contains indicators that are intended to provide a harmonized tool

⁵ The indicators contained in the OECD/DAC MAPS "are intended to provide harmonized tools for use in the assessment of procurement systems, and has been designed to enable a country to conduct a self-assessment of its procurement system.

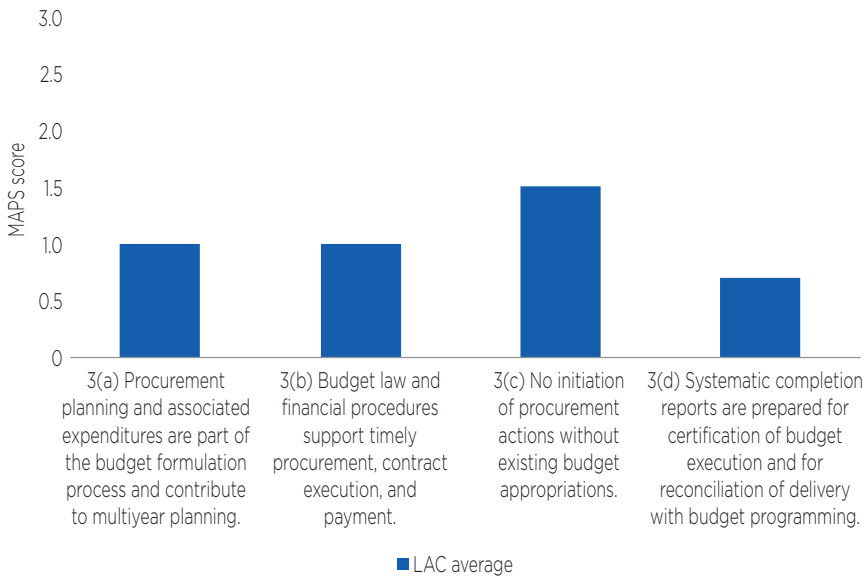
for the assessment of procurement systems. Although MAPS is designed to assess central government and national systems, the baseline indicators upon which it rests only “present a ‘snapshot’ comparison of the actual system against the international standards that the BLIs represent” (OECD, 2010). Often, these indicators refer to the existence of procurement laws, legal frameworks, and procedures, rather than on the way in which said laws, frameworks, and procedures influence procurement results and the efficiency of public expenditure. Furthermore, it is important to note that MAPS for Latin American countries rely primarily on subjective professional judgments by country officials, and that they have been carried out in different moments in time. As such, the quality and comparability across countries may not be entirely uniform.

In examining whether public procurement systems are mainstreamed and well-integrated into public sector governance systems, MAPS indicator 3 helps to determine “a) its suitability to discharge the obligations prescribed in the law without gaps or overlaps; b) whether the necessary links with other sectors of government affecting procurement exist; c) whether procurement operations are constrained by other external institutional factors; and d) whether the managerial and technical capacity of the system are adequate to accomplish procurement without unnecessary cost or delay” (OECD, 2010) (Figure 8.1).

In Latin America, the links between budget and procurement plans are weak. MAPS sub-indicator 3(a) assesses whether procurement planning and associated expenditures are part of the budget formulation process and whether they contribute to multiyear planning. Data show that public procurement plans are normally prepared based on the annual and multiannual operating plans, though not the majority of them; nor are they required to match the budgetary allocation available prior to expense commitment. In the case of Dominican Republic, Guatemala, and Honduras, procurement plans are drawn without any direct connection to budgetary planning exercises, and there is no requirement to match procurement plans with the availability of funds. This missing link between procurement and budgeting can

The scoring system ranges from 3 to 0 for each baseline sub-indicator. A score of 3 indicates full achievement of the stated standard. A score of 2 is given when the system exhibits less than full achievement and needs some improvements in the area being assessed. A score of 1 is for those areas where substantive work is needed for the system to meet the standard. A rating of 0 is the residual indicating a failure to meet the proposed standard.”

FIGURE 8.1 METHODOLOGY FOR ASSESSING PROCUREMENT SYSTEMS, INDICATOR 3: MAINSTREAMED AND WELL-INTEGRATED PUBLIC PROCUREMENT SYSTEMS



Source: MAPS assessment of each country.

Note: The years for the data are as follows: Peru: 2008; Colombia and Costa Rica: 2009; El Salvador, Guatemala, Honduras, and Nicaragua: 2010; Ecuador: 2011; and Dominican Republic and Paraguay: 2012.

result in uncertainty, late payments, and delayed contract completions, compromising the quality and efficiency of public expenditure.

Budgetary law and financial management procedures in Latin America are generally inadequate to meet procurement needs, according to MAPS sub-indicator 3(b), which assesses whether budget law and financial procedures support timely procurement, contract execution, and payment. On average, the time required to commit or appropriate budget funds once a contract has been awarded exceeds one week. In addition, the authorization of payments, following the approval of invoices or monthly certifications of progress, generally takes more than four weeks.

MAPS sub-indicator 3(c) assesses whether procurement actions are initiated without existing budget allocations. Data show that most Latin American countries have laws that require certification of availability of funds before the solicitation of tenders takes place. In addition, Colombia, Costa Rica, Ecuador, El Salvador, Nicaragua, and Paraguay have a system in place, such as paper or electronic interfaces between financial management and

procurement systems, to ensure the law is properly enforced. This system has only been integrated in Paraguay, however.

MAPS sub-indicator 3(d) assesses whether systematic completion reports are prepared for the certification of budget execution and for reconciliation of delivery with budget programming. This feedback mechanism is “needed to ensure that information on contracts covering major budget expenditures is provided to the budgetary and financial management systems in a timely manner to support the overall PFM system.” In most surveyed countries, procurement systems generally do not provide this information. In Nicaragua, information provided is erratic or normally submitted with considerable delay after the fiscal budgetary period. Colombia, Costa Rica, and Ecuador are the only countries that provide information on the completion of the majority of large contracts and submitted in a timely and systematic way.

Procurement Agencies

Many Latin American countries have created regulatory agencies to oversee and further develop procurement policies and systems. The institutional and financial autonomy enjoyed by some of these agencies has allowed them to push significant reforms since they are not bound by the eventual scarcity of resources. These agencies are considered the second most important influence, together with ICT development, that have contributed to the significant modernization of procurement in the region.

Through the establishment of better regulatory frameworks, institutional structures, and control systems, procurement regulatory agencies can help to reconcile the multitude of regulations and procedures across entities through standard bidding procedures (Table 8.2). This, in turn, can help decrease the administrative costs associated with bidding with various public entities, which can become highly cumbersome and expensive, and result in higher prices or fragmentation. The existence of a single agency can also ensure that policies are not only aligned, but that they are also consistent with national policy objectives and development plans.

In addition to mitigating the proliferation of policies and procedures, these agencies oversee the development, performance, and maintenance of centralized e-procurement systems. They also offer technical capacity and evaluative trainings; develop initiatives to promote the use of these systems by agencies and vendors; disseminate procurement information; and, in some cases, mitigate disputes (Box 8.2).

Through the standardization of micro-processes, however, regulatory agencies sometimes are in conflict with procuring entities. Often, these

BOX 8.2. CHILECOMPRA

Created in 2003 under Public Procurement Law No. 19.886, Chile's procurement agency, Dirección ChileCompra, administers the corresponding system in Chile. It operates under a single regulatory framework that is based on the principles of transparency, efficiency, universality, accessibility, and nondiscrimination. The e-procurement system has become one of the most advanced in Latin America. Despite initial setbacks resulting from lack of participation on behalf of purchasing agencies and suppliers, the site now facilitates over US\$9.500 million worth of transactions annually, amounting to approximately 3.5 percent of Chile's gross domestic product. Through the system, more than 850 state entities, from municipalities to hospitals to universities, transact with more than 100,000 businesses, large and small.

ChileCompra's success can be attributed to the systems and services provided by its procurement agency. For example, public purchasers are able to conduct routine purchases in a more timely and efficient manner through ChileCompra Express by accessing goods and services provided by businesses that have previously enrolled in a standardized agreement. Located throughout the country, Chile's procurement agency has also established a network of ChileCompra centers. These centers provide services to small- and medium-sized enterprises, ranging from technical support for ChileCompra to advice on business development, as well as how to participate in government tenders. Alternatively, larger companies and businesses have access to ChileCompra Training, a platform that provides users online access to technical manuals, information on accreditation programs, blogs, and course catalogues. In addition, a National Registry of Suppliers has been established to enhance national and international business opportunities for over 40,000 registered suppliers. ChileCompra's Compras Sustentables product relates to an additional platform that provides information on sustainable public procurement (SPP) in Chile. It includes links to related legal and regulatory documents and news on SPP. ChileCompra also has a transparency portal, Analiza, which provides reports on current tenders and contracts, tools to analyze historical information, and monthly statistical reports.

Source: See www.chilecompra.cl.

entities neither have the resources nor technical capacity necessary to carry out the responsibilities and mandates set by agencies, nor are they able to apply their own personal insight and judgment to those tasks.

Examples of such agencies in Latin America are the Directorate of Public Procurement and Contracts (Dirección de Compras y Contrataciones Públicas in Chile; Colombia Compra Eficiente; National Service for Public Contracts (Servicio Nacional de Contrataciones Públicas (SERCOP) in Ecuador; Sub-Secretary of Administrative Responsibilities and Public Contracts (Subsecretaría de Responsabilidades Administrativas y Contrataciones Públicas) in Mexico; National Directorate for Public Procurement (Dirección Nacional de Contrataciones Públicas (DNCP)) in Paraguay; and Regulatory Agency for State Contracts (Organismo Supervisor de las Contrataciones del Estado (OSCE)) in Peru (Table 8.2).

TABLE 8.2 FUNCTIONS OF THE LATIN AMERICAN PROCUREMENT AGENCIES

| Country | Agency | Year agency was created | Organizational autonomy | Budget autonomy | Update and manage procurement information systems, including e-procurement | Update and manage electronic registry of suppliers | Design procurement policies | Provide technical training to agencies | Provide technical training to suppliers | Mitigate public procurement disputes |
|------------|---|-------------------------|-------------------------|-----------------|--|--|-----------------------------|--|---|--------------------------------------|
| Argentina | Oficina Nacional de Contrataciones (ONC) | 1994 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Brazil | Secretaria de Logística y Tecnología de la Información (SLTI) | 2012 | | | ✓ | | ✓ | | | |
| Chile | Dirección de Compras y Contrataciones Públicas (ChileCompra) | 2003 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Colombia | Agencia Nacional de Compras Públicas (Colombia Compra Eficiente) | 2011 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Costa Rica | Dirección General de Administración de Bienes y Contratación Administrativa | 2001 | | | | | ✓ | ✓ | | |

(continued on next page)

TABLE 8.2 FUNCTIONS OF THE LATIN AMERICAN PROCUREMENT AGENCIES (continued)

| Country | Agency | Year agency was created | Organizational autonomy | Budget autonomy | Update and manage procurement information systems, including e-procurement | Update and manage electronic registry of suppliers | Design procurement policies | Provide technical training to agencies | Provide technical training to suppliers | Mitigate public procurement disputes |
|--------------------|--|-------------------------|-------------------------|-----------------|--|--|-----------------------------|--|---|--------------------------------------|
| Dominican Republic | Dirección General de Contrataciones Públicas (DGCP) | 2006 | | | ✓ | ✓ | ✓ | ✓ | | |
| Ecuador | Servicio Nacional de Contrataciones Públicas (SERCOP) | 2008 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| El Salvador | Unidad Normativa de Adquisiciones y Contrataciones de la Administración Pública (UNAC) | 2000 | | | ✓ | | ✓ | ✓ | | |
| Guatemala | Dirección Normativa de Contrataciones y Adquisiciones del Estado | 2008 | | | ✓ | | ✓ | ✓ | | |
| Honduras | Oficina Normativa de Contratación y Adquisiciones del Estado (ONCAE) | 2001 | | | ✓ | | ✓ | ✓ | | |

(continued on next page)

TABLE 8.2 FUNCTIONS OF THE LATIN AMERICAN PROCUREMENT AGENCIES (continued)

| Country | Agency | Year agency was created | Organizational autonomy | Budget autonomy | Update and manage procurement information systems, including e-procurement | Update and manage electronic registry of suppliers | Design procurement policies | Provide technical training to agencies | Provide technical training to suppliers | Mitigate public procurement disputes |
|-----------|--|-------------------------|-------------------------|-----------------|--|--|-----------------------------|--|---|--------------------------------------|
| Mexico | Subsecretaría de Responsabilidades Administrativas y Contrataciones Públicas | 2003 | | | ✓ | | ✓ | ✓ | | ✓ |
| Nicaragua | Dirección General de Contrataciones del Estado (DGCE) | 2000 | | | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Panama | Dirección General de Contrataciones Públicas | 2006 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Paraguay | Dirección Nacional de Contrataciones Públicas (DNCP) | 2007 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Peru | Organismo Supervisor de las Contrataciones del Estado (OSCE) | 2009 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

(continued on next page)

TABLE 8.2 FUNCTIONS OF THE LATIN AMERICAN PROCUREMENT AGENCIES (continued)

| Country | Agency | Year agency was created | Budget autonomy | Organizational autonomy | Update and manage procurement information systems, including e-procurement | Update and manage electronic registry of suppliers | Design procurement policies | Provide technical training to agencies | Provide technical training to suppliers | Mitigate public procurement disputes |
|-----------|---|-------------------------|-----------------|-------------------------|--|--|-----------------------------|--|---|--------------------------------------|
| Uruguay | Agencia de Compras y Contrataciones del Estado (ACCE) | 2011 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Venezuela | Servicio Nacional de Contrataciones | 1999 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Source: Authors' compilation, based on IDB (forthcoming).

At least five of these agencies have budgetary and financial autonomy (Chile, Colombia, Ecuador, Paraguay, and Peru) and this autonomy has likely contributed to maintaining sufficient investments to modernize electronic procurement in these countries during the last two decades. In terms of the other 12 countries in the region, although their agencies lack financial autonomy, many of them have had sufficient resources and government support to invest in electronic procurement modernization. As an example, the Secretary of Logistics and Information Technology (Secretaria de Logística e Tecnologia da Informação (SLTI)) in Brazil—using the fees paid by private businesses to register as a public supplier—has been able to improve the ComprasNet system.

Professionalization is critical to a well-functioning procurement system. As highlighted earlier in the chapter, the transformation of the nature of public procurement requires staff within procurement entities to have formal training, sufficient expertise, and discretionary power to carry out knowledge-based tasks, such as risk management; and to discern contracting strategies and market factors throughout the entire procurement cycle. Furthermore, the impact of ICT on procurement systems demands a highly technical staff that can work on the technological aspects of e-procurement systems within the regulatory agencies that develop and manage the systems and within the entities that must adopt the system. In Latin America, this kind of institutional capacity is limited.

Although procurement regulatory agencies have grown in number over the past couple of decades, and their contribution to the modernization of procurement systems in the region has been significant, there still exist substantial differences in the autonomy and functions performed by these agencies. In some countries, particularly those in Central America, future reforms aim to allow procurement agencies greater autonomy—legally and financially—a more professionalized staff, and the capacity to fully manage e-procurement systems.

e-Procurement

Electronic government procurement systems (e-GP or e-procurement) have been responsible for the main advancements in the area of public procurement in the region. Defined as the use of ICT in public procurement, e-procurement generally covers all stages of purchasing, from planning to bidding and awarding to contract management. The comprehensiveness of coverage has the potential to increase the efficiency of public procurement by simplifying procedures and fostering competition and transparency, resulting in

tangible financial savings. It can also increase the effectiveness of public procurement by linking a greater number of suppliers with purchasing entities and increase the volume and quality of goods and services provided. E-procurement systems also provide information to citizens.

Today, most Latin American countries have developed an e-procurement system that centralizes information at one single location on the Internet.⁶ This system, such as *ChileCompra*, and Brazil's *ComprasNet* (Box 8.3), display essential information and provide tools to automate procurement. In most cases, this information relates to procurement regulations, responsibilities of procuring and contracting entities, and ongoing bidding processes and contracts by modality and sector.

According to the unpublished 2013 OECD Survey on Public Procurement, to which 11 Latin American countries responded,⁷ users are also able to search and download tender documents and browse e-catalogues, defined as a listing of available products and services that can be viewed and bought in electronic format, including illustrations, prices, and descriptions of the product or service. As evidenced by the survey, Latin American e-procurement systems offer a greater share of services, on average, than OECD member countries. For instance, only 27 percent of OECD member countries have e-procurement systems that contain e-catalogues compared to 73 percent in Latin America. In addition, 82 percent of Latin American e-procurement systems also offer online training materials compared to 36 percent in OECD member countries.

Although not as widespread, some e-procurement systems have transactional capabilities that relate to the tendering phase, such as the electronic submission of bids, reverse auctions, and payment schemes; and they can generate significant savings to the public sector (Box 8.4). Considering the 12 most common services offered by e-procurement systems, identified in this survey (Figure 8.2), it is clear that in 10 of these services,

⁶ Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Uruguay.

⁷ The 2013 OECD Survey on Public Procurement (unpublished), conducted in Latin America and the Caribbean in coordination with the Inter-American Development Bank, was used as input for OECD and IDB (2014). The 11 Latin American countries that responded to the survey were Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Honduras, Mexico, Paraguay, and Peru. Data for the 34 OECD member countries correspond to the 2010 OECD Survey on Public Procurement.

BOX 8.3. ELECTRONIC FRAMEWORK AGREEMENT AND REVERSE AUCTIONS

The purchase of goods and services by government entities can be conducted in different ways, depending on a country's procurement strategy and market conditions. Understanding competition levels, market structures, suppliers, and the government's market power can assist officials to design purchasing strategies that observe procurement principles and avoid market distortions. In Latin America, the two most prominent methods of contracting are "framework agreements" and "reverse auctions."

A framework agreement is a general term for agreements with a provider(s), selected through public tender, that set out standardized terms and conditions under which specific purchases (call-offs) can be made throughout the term of the agreement. They are used for products, works, or services in which specifications and prices are needed on a repetitive basis.⁹ ChileCompra relies heavily on framework agreements for the bulk of its purchases. Once framework agreements have been made, entities in Chile can simply browse an e-catalogue for goods and services and place the order directly with the preapproved supplier. This method is particularly useful, because once a framework is established, the process for awarding individual call-offs is faster and less costly than would be the case if the purchase was procured separately. From the point of view of the suppliers, the larger the volume the better, because it reduces time and costs associated with conducting multiple bids.

In Brazil, on the other hand, the primary method of purchase is through electronic reverse auctions (online, real-time dynamic auctions) that are completed within eight working days. This method, adopted in May 2000, is a process of "selling in reverse," in the sense that it is the purchasing entity that drives the event. Once the entity advertises to purchase a particular good or service in the online procurement portal, interested and qualified suppliers are allowed to submit and resubmit bids virtually by providing successively lower-priced or better ranked bids (Allen, Hemming, and Potter, 2013). The main advantages are to increase competition among suppliers, lower prices, and reduce procurement cycle time. Electronic reverse auctions also enhance objectivity and equal access to information during the course of tenders, given that the system provides a single channel of information and communication during the bidding process. Furthermore, the selection of suppliers is processed automatically, ensuring strict neutrality (Carter et al., 2000; Segal and Taylor, 2001; Wyld, 2001; Moon, 2005). From the perspective of the supplier, reverse auctions allow businesses to participate in a wide range of bids and to challenge incumbent suppliers. The short cycle also reduces the time and costs associated with the bidding process. Reverse auctions, however, require entities to plan better and provide accurate specifications upfront for the goods and services they want to buy.

⁹ See www.gov.uk/government/uploads/system/uploads/attachment_data/file/62059/guide-buying-framework-agreements.pdf.

Latin American countries have better country coverage than do OECD member countries.

The use of e-procurement can also help to reduce corruption and mismanagement of public resources by generating strategic information and allowing for systematic data mining that can be used to detect abnormal

BOX 8.4. SAVINGS ACHIEVED THROUGH PARAGUAY'S ELECTRONIC REVERSE AUCTION

Using Brazil's procurement system as an initial reference, Paraguay adopted the use of electronic reverse auctions in 2008 with the support of IDB.^a The adoption of this technology is part of the government's attempt to modernize the public procurement system.

Since the first purchase that was made through the electronic reverse auction system in November 2008, the absolute value of public procurement has increased significantly, reaching close to US\$2 billion in 2011, approximately 34.3 percent of total public expenditure.^b Of this, approximately 18.6 percent (US\$376 million) corresponds to goods and services procured through electronic reverse auctions, and more recent data of 2012 to 2014 indicates that the use of electronic reverse auctions is still increasing. In terms of categories, the primary purchases were of fuels and lubricants (29 percent), construction (15 percent), and medical equipment (14 percent).

Savings achieved through the use of electronic reverse auctions in Paraguay have been substantial. The government estimated in 2011 that these auctions reduced final prices by 19 percent compared to initial offerings, and 12 percent compared to the amount initially estimated in the call for tenders. These figures, however, may not reflect economic savings, since they compare the starting or estimated prices with the final price of acquisition or purchase. The comparison that would, however, provide an estimate of savings produced through electronic reverse auctions is that of prices with and without auction, for the same good or service, in a specific period in time.

To do so, Paraguay's procurement agency, Dirección General de Contrataciones Públicas, analyzed and compared prices for the four items that have the greatest weight in Paraguay's public procurement system: (i) fuels and lubricants; (ii) equipment, accessories, and computer programs for office, education, printing, communications, and signaling; (iii) medical and laboratory equipment, products and instruments, health care services and supplies; and (iv) paper, cardboard, and printed products. Together, these items make up approximately 50 percent of total procured goods and services. Results indicate that electronic reverse auctions reduced prices by approximately 7.5 percent compared with other purchases of the same product in the same period of time, when procurement was not conducted through electronic reverse auctions (IDB, 2012).

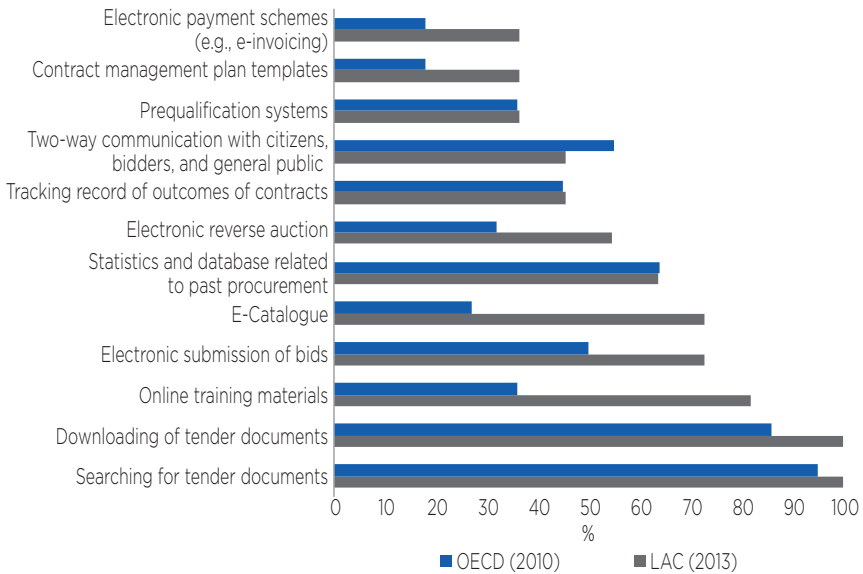
^a Decree No. 12.453 of July 14, 2008.

^b Total public expenditure excludes debt payments and payroll.

transactions. E-procurement can also reduce corruption by mitigating information asymmetries between purchasing entities and suppliers, since entities are provided access to wider information on options and market availability. In addition, the strategic information generated by e-procurement systems can be helpful in detecting market trends, measuring the effects of public procurement policies in promoting domestic industry, and preparing procurement strategies (Allen, Hemming, and Potter, 2013).

Despite advances made in the realm of e-procurement, there is still room for gain. In some countries, procurement regulatory frameworks must be updated to continue progressing with the implementation of e-procurement

FIGURE 8.2 MOST COMMON SERVICES OFFERED BY THE SINGLE-ENTRY PROCUREMENT WEBSITE (2013)



Source: OECD and IDB (2014).

Notes: Data for Chile and Mexico refer to 2010 and were published in OECD (2011).

systems. Entities may also resist transferring over to an unfamiliar, centralized procurement portal, given the costs associated with learning and adopting new technologies. In Chile, for example, a lack of participation on behalf of government entities and suppliers created severe problems in the initial phases of ChileCompra. To mitigate the problem, Chile's procurement agency conducted long-term dissemination efforts and provided technical assistance and training to entities and businesses.

Decentralization efforts over the past decade may have also hampered the success of a single e-procurement portal if a migration to a national procurement system is considered a violation of decentralization and autonomy efforts. Such is the case not only in Chile, but also in Guatemala (Ladipo, Sánchez, and Sopher, 2009).

To improve the way governments manage public resources, particularly along the expenditure side, the integration of e-procurement systems with other PFM systems, such as integrated financial management information systems (IFMIS) and treasury single accounts (TSA), is critical. The primary objectives of IFMIS are to allow the public sector to plan, execute, and

monitor the budget, facilitate treasury operations, and perform the necessary debt operations, while safeguarding the quality of financial information produced by the system. An IFMIS is thus made up of a set of subsystems of information that operate in an interrelated manner, and that take a comprehensive approach to financial management.

Public procurement systems that are integrated with such systems can also help to increase the efficiency of procurement spending. For example, requiring paper documents from bidders to certify compliance with tax obligations is an area that could benefit substantially from systems integration. Transforming this certification into a real-time, electronic process can reduce the administrative costs associated with producing such documents on the part of businesses. This form of integration also precludes nontax compliant businesses from participating in tenders and facilitates the review and validation of official documents for those businesses that are eligible. Procurement systems can also be integrated with cost systems—such as the one described in Chapter 6 relating to the State of São Paulo—to maximize the use of available procurement information to ultimately improve budgeting and resource allocation decisions. Furthermore, integration through IFMIS—discussed in Chapter 7—can help to facilitate and make public contract payments and modifications.

Considering that many countries in the region have now developed their own IFMIS with particular emphasis on budgeting, treasury, accounting, and public debt management, the creation of appropriate interfaces between e-systems should be easier. The integration of procurement systems, however, has yet to fully materialize. In most Latin American countries, the lack of interoperability between procurement and IFMIS stems from the budget execution module.

It is important to note that difficulties in greater integration or interoperability of these systems are not caused by ICT complications; rather, they result from institutional and political reasons. It is common for procurement agencies to fight for greater autonomy, whereas ministries of finance tend to push for procurement modules and databases within their own systems. This kind of dispute generates problems when it comes to conflicting agendas and strategies for the modernization of e-procurement systems.

Access to Information

In the last decade, many Latin American countries have sought to reform public procurement systems to increase the availability, quality, reliability, and timeliness of procurement information. Efforts in this area have centered

on publishing information related to norms, operations, and outcomes to prevent waste and misconduct, which drain taxpayer resources, distort the market, and delegitimize procurement systems (OECD/IDB, 2014). At the same time, procurement information is essential to assess procurement systems' aggregate performance, ensure official compliance with procedure, and strengthen accountability.

Data collected in the Survey on Public Procurement of the Organisation of Economic Co-operation and Development (OECD) and Inter-American Development Bank (IDB) show that information regarding the pre-tendering and tendering phases of the procurement cycle is almost always proactively disclosed; that is, government officials make information publically available to citizens without any specific request. This information includes procurement norms, general information for potential bidders, tender documents, and selection and evaluation criteria. This information is critical to leveling the playing field for bidders and, ultimately, increasing market competition. Areas in which governments could more proactively provide information include procurement plans and post-award documents, such as justification for awarding contracts to selected contractors, tracking of procurement spending, and contract modifications during execution. Modifications of contracts are more common in infrastructure investment contracts and may result in substantive price increases if not closely monitored. In Argentina, for instance, corruption in the health sector was reduced by publishing prices of all purchases made throughout the hospital system, as corrupt deals that resulted in higher prices were quickly made evident (Klitgaard, 2014).

In comparison to OECD countries, Latin American countries disclose a higher share of procurement information at the central level. For example, 73 percent of surveyed Latin American countries disclose procurement plans of anticipated tenders in comparison to 50 percent of OECD member countries. With regard to general information for potential bidders, 91 percent of Latin American countries always provide this information in comparison to 76 percent of OECD member countries. In terms of the tracking of procurement spending, 73 percent of Latin American countries always provide this information in comparison to only 18 percent of OECD member countries (Table 8.3).

Most countries in Latin America publish procurement information through central e-procurement systems, providing easy access for citizens, CSOs, and businesses. Ecuador, which has made considerable efforts to modernize its procurement system, publishes 100 percent of the procurement information referenced in Table 8.3 through its central e-procurement system, Portal de Compras

TABLE 8.3 PUBLIC AVAILABILITY OF PROCUREMENT INFORMATION AT THE CENTRAL LEVEL OF GOVERNMENT (2010 AND 2013)

| | Laws and policies | General information for potential bidders | Specific guidance on application procedures | Procurement plan of anticipated tenders | Tender documents | Selection and evaluation criteria | Contract award | Justification for awarding contract to selected contractor | Contract modifications | Tracking procurement spending |
|--------------------|-------------------|---|---|---|------------------|-----------------------------------|----------------|--|------------------------|-------------------------------|
| Argentina | ● | ● | ● | ○ | ● | □ | ● | ○ | ○ | ● |
| Brazil | ● | ● | ■ | ○ | ● | ● | ● | ■ | ● | ● |
| Chile | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Colombia | ● | ○ | ● | ● | ● | ● | ● | ● | ● | ○ |
| Costa Rica | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Dominican Republic | ● | ● | ● | □ | ● | ● | ○ | ○ | ○ | ○ |
| Ecuador | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Honduras | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Mexico | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Paraguay | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Peru | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ |

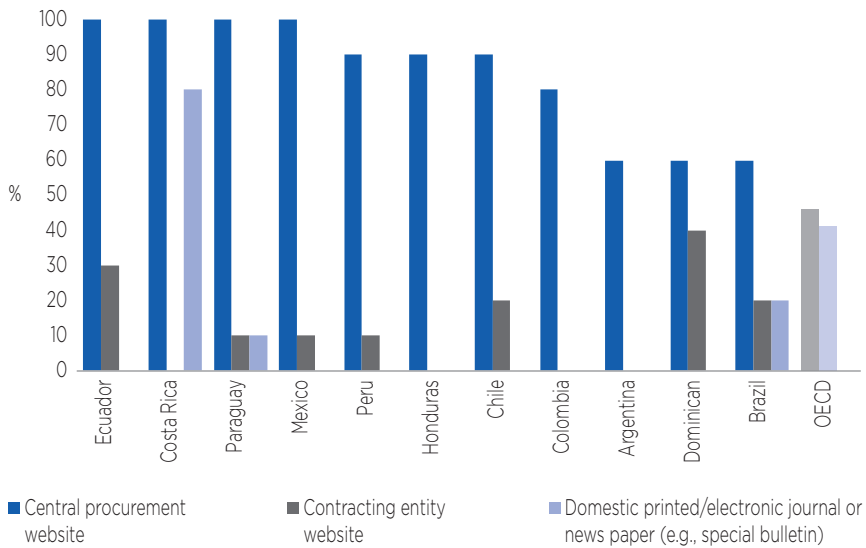
(continued on next page)

TABLE 8.3 PUBLIC AVAILABILITY OF PROCUREMENT INFORMATION AT THE CENTRAL LEVEL OF GOVERNMENT (2010 AND 2013) *(continued)*

| | Laws and policies | General information for potential bidders | Specific guidance on application procedures | Procurement plan of anticipated tenders | Tender documents | Selection and evaluation criteria | Contract award | Justification for awarding contract to selected contractor | Contract modifications | Tracking procurement spending |
|----------------------------|-------------------|---|---|---|------------------|-----------------------------------|----------------|--|------------------------|-------------------------------|
| Total Latin America (2013) | | | | | | | | | | |
| l Always | 11 | 10 | 10 | 8 | 11 | 10 | 10 | 8 | 9 | 8 |
| n Upon request | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ▫ Sometimes | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| m Not available | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 2 | 3 |
| OECD total (2010) | | | | | | | | | | |
| l Always | 34 | 26 | 19 | 17 | 18 | 21 | 21 | 13 | 11 | 6 |
| n Upon request | 0 | 1 | 1 | 0 | 5 | 1 | 0 | 10 | 7 | 6 |
| ▫ Sometimes | 0 | 7 | 13 | 14 | 10 | 11 | 13 | 7 | 10 | 5 |
| m Not available | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 4 | 6 | 17 |

Source: OECD/IDB (2014).

Notes: Data for Chile and Mexico pertain to the year 2010 and were published in OECD (2011).

FIGURE 8.3 ONLINE AVAILABILITY OF SELECT PROCUREMENT INFORMATION (2013)

Source: OECD/IDB (2014).

Notes: Data for Chile and Mexico refer to 2010 and were published in OECD (2011).

Públicas del Ecuador. Similarly, Mexico publishes 100 percent of its procurement information through CompraNet. In this regard, Latin American countries differ substantially from OECD member countries, where the central procurement website does not play such a significant role. Furthermore, the share of information published through a contracting entity website is much higher, on average, in OECD member countries than in Latin America (Figure 8.3).

Anticorruption Measures

On average, general government spending via public procurement in Latin America is significant. Given the magnitude of these expenditures, bribery or the mismanagement of public resources could be very high and, similarly, potential savings achieved through the prevention of such behavior could be substantial.

Corruption can manifest itself throughout the different phases of the procurement cycle and in many different ways. In the needs assessment phase, goods or services may be unjustifiably overestimated to favor a particular provider. Later in the procurement cycle, agents may design a process that favors a particular bidder in the preparation phase. During the selection and award



phase, legally confidential information regarding bidders may be leaked. While a contract is being implemented, false or inexistent claims may be filed. Finally, during the project close-out phase, accountants and auditors may be willing to support false certificates (OECD, 2007). Most commonly, corruption in procurement takes the form of bribery, in which monetary compensation is provided to public officials in return for favorable decisions, or cartels, in which bidders try to manipulate award decisions in favor of one of their members.

Although the degree and form of corruption in public procurement is by nature complex and varies widely, some countries in Latin America currently have measures in place to preserve the integrity of their procurement systems. Based on various MAPS, Latin American countries fare moderately well under the pillar of integrity, which examines the nature and scope of a country's anticorruption control measures and mechanisms in procurement, though not at their actual application and effectiveness at deterring and managing cases of corruption.

According to MAPS assessments, Latin American countries tend to have a legal system that includes reference to other laws that specifically deal with anticorruption legislation, in general, and the same treatment is given to its consequences. The surveyed countries,⁸ on average, have yet to define responsibilities, accountabilities, and penalties for individuals and firms within the procurement framework that have been found to have engaged in fraudulent or corrupt practices. In many cases—although sanctions are usually included in such frameworks—few countries enforce them in practice.

With regard to regulatory frameworks properly addressing corruption, fraud, conflicts of interest, and unethical behavior, surveys show that in most cases, procurement norms specify this as a mandatory requirement. However, they do not stipulate in a precise manner how to incorporate the matter in tender documents, leaving this up to the procuring entities. Tender documents generally cover this, although they are inconsistent.

There is substantial room for improvement in the creation of codes of conduct or ethics for participants involved in public procurement, and which call for the disclosure of those in decision-making positions. Of the surveyed countries, only two (Colombia and the Dominican Republic) have codes that meet minimum requirements; however, they are only recommended codes on “good practices,” with no consequences for violations unless covered by criminal codes.

⁸ Colombia, Costa Rica, the Dominican Republic, Ecuador, Honduras, Paraguay, and Peru.

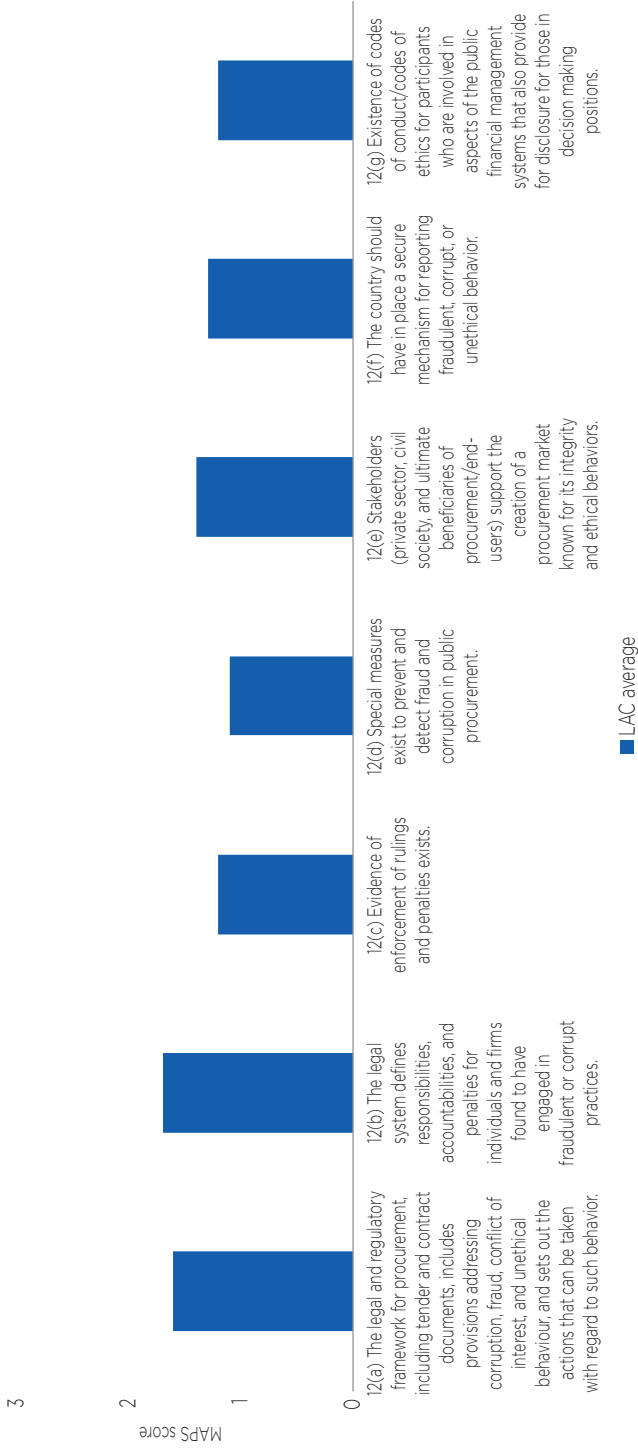
Data suggests that surveyed countries, on average, have isolated anti-corruption activities that are not properly or sufficiently coordinated to be considered an effective, integrated program (Figure 8.4). In the region, governments can seek to implement a comprehensive anticorruption program that includes all stakeholders in public procurement, assigning clear responsibilities to them and assigning a high-level body with sufficient standing and authority to coordinate and monitor the program (OECD, 2010). As part of this comprehensive approach, the function that internal and external control systems and audits play with regard to deterring, unearthing, or facilitating corruption in procurement must also be addressed.

Public Procurement: A Tool to Promote Social, Economic, and Environmental Policies

Given its scope and share of GDP in the region, public procurement is increasingly viewed as a strategic policy tool. The design of procurement policies is no longer a technical matter; it is now one that seeks to incorporate social, economic, and environmental objectives. In doing so, governments can align procurement with strategic policy objectives. In the case of economic policy, promoting the participation of SMEs in procurement contracts can be a way to increase their contribution to aggregate output. In the case of social policies, public procurement can be a tool to promote gender equality and women-owned businesses. Finally, public procurement can help to strengthen national policies that seek to protect and promote the environment.

The use of public procurement as a strategic policy tool, however, involves a major challenge insofar as it could violate the principles of efficiency, value for money, and transparency. Policies in favor of awarding contracts to businesses owned by women—irrespective of their bid price—would, for instance, result in an award contract that does not uphold the principles of value for money. Sustainable public procurement (SPP), therefore—defined as “the process whereby organizations meet their needs for goods, services, public works, and utilities in a way that achieves high performance based on an analysis of the entire life cycle that results in benefits not only for the organization but also for society, the economy, and the environment” (UK, 2006)—must strive to align economic, social, and environmental policy objectives at a national level with the principles of public procurement. If such policies violate principles of public procurement, such as value for money, the effect of such policies should be explicitly calculated and taken into account.

FIGURE 8.4 METHODOLOGY FOR ASSESSING PROCUREMENT SYSTEMS, INDICATOR 12: ETHICS AND ANTICORRUPTION MEASURES



Sources: MAPS assessment of each country.

Note: The years for the data are as follows: Peru: 2008; Colombia and Costa Rica: 2009; El Salvador, Guatemala, Honduras, and Nicaragua: 2010; Ecuador: 2011; and Dominican Republic and Paraguay: 2012.

SMEs can play an important role in the growth and development of countries. They have the potential to become significant exporters, to promote economic growth, and to alleviate poverty among various groups in a society (Badrinath, 1997; Badrinath and Kirpal, 1997). There are, however, various barriers that SMEs face with regard to public procurement, such as (i) lack of access to information regarding public tenders; (ii) insufficient production capacity to satisfy tender requirements; (iii) lack of sufficient financing; (iv) delays in contract payments that affect SMEs with limited financial capacity; (v) collateral requirements/guarantees for specific contracts that limit participation of SMEs that do not have those particular instruments; and (vi) informality (Rozenwurcel and Drewes, 2012).

Governments can correct biases against SMEs and remove barriers to their participation in public procurement through (i) transparent legal frameworks that “enforce contract and property rights and that alleviate information problems” (UNCTAD/WTO, 2002); (ii) subdividing contracts into different lots to help alleviate production limitations; (iii) facilitating coordination and association among SMEs to take advantage of joint economic, financial, and technical capacity; (iv) requiring proportionate guarantees and preventing their excessive retention; and (v) providing technical assistance—subsidized or unsubsidized—that aims to facilitate the understanding of procurement procedures, systems, and methods (Rozenwurcel and Drewes, 2012). These methods can help to promote SME participation, although they neither constitute a direct subsidy or preference nor do they violate the principles of public procurement. Governments, however, may choose to give direct price preference to SMEs or mandate, target, or set-aside public tenders specifically for SME involvement (UNCTAD/WTO, 2002).

In the case of Brazil, public procurement is a vehicle for the promotion of SMEs. According to Brazil’s Differentiated Procurement Regime (to promote regional and local economic development), a SME receives direct preference once a reverse auction is concluded if its closing bid price is up to 10 percent higher than that of its non SME competitor. Furthermore, should the SME’s bid price exceed the 10 percent price differential, the SME can lower its price.⁹ In this way, SMEs are not only able to effectively compete for public contracts through open and transparent auctions; they are also afforded a second opportunity once the reverse auction is concluded.

⁹ Lei Complementar 123/2006 and Decreto 6.204/2007. In the case of reverse auctions, this differential is 5 percent.



In Chile, SMEs participate actively in the country's public market, *ChileCompra*, with over 38 percent of business transactions attributed to them compared to only 18 percent participation in national economic activity. With the objective of leveling the playing field, Chile's procurement agency has created centers (Centros ChileCompra) to promote SME involvement in procurement tenders through free and easy access to web-friendly computers, board rooms, and technical assistance. ChileCompra also provides advanced payment schemes, or credit against purchase orders, through partnerships with financial institutions to help SMEs satisfy resource needs for public procurement contracts (Concha and Anrique, 2011).

Research shows that there is a positive correlation between gender equality and a country's GDP per capita, competitiveness, and rank in the Human Development Index (ITC, 2014). According to the *World Development Report* (World Bank, 2012), "when women's labour is underused or misallocated—because they face discrimination in markets or societal institutions that prevents them from completing their education, entering certain occupations, and earning the same incomes as men—economic losses are the result." Public procurement is increasingly viewed by Latin American countries as a way to address some of the barriers faced by women, helping not only to promote gender equality but also to engender inclusive growth.

Currently, women-owned businesses have been largely excluded from the sizeable public procurement market (ITC, 2014). Because they tend to be smaller, often less experienced, have less access to human financial and social capital, and tend to be in less profitable sectors (ITC, 2014), the barriers faced by women-owned businesses are similar to those faced by SMEs; namely, insufficient tender information, demanding technical and financial qualifications, large contract sizes, and delayed payments.

To overcome these barriers, governments can start by defining women-owned businesses and the necessary criteria, such as ownership and control by women, to facilitate the certification and registration of their businesses. Furthermore, procurement policies can seek to level the playing field as much as possible by requiring the publication of all procurement opportunities in e-procurement systems, tailoring the technical and financial qualification requirements to the size and complexity of the opportunity, deconstructing large procurement contracts into smaller ones, and providing technical and capacity assistance to women-owned businesses.

Public procurement can also play an important role in the preservation and protection of the environment if governments use their purchasing power to choose environmentally friendly goods, services, and public works. Green

Public Procurement (GPP)—defined as “a process whereby public authorities seek to procure goods, services, and works with a reduced environmental impact throughout their life cycle when compared to goods, services, and works with the same primary function that would otherwise be procured” (EU, 2008)—can, therefore, contribute to more sustainable production and consumption.

Current literature highlights various benefits associated with GPP. First, it allows public authorities to more easily reach environmental targets, such as deforestation rates, through “the purchase of wood and wood products from legally harvested and sustainably managed forests;” greenhouse gas emissions through “the purchase of products and services with a lower CO₂ footprint throughout their life-cycle;” and sustainable agriculture through the purchase of “organically produced food.”¹⁰ GPP can also help to raise awareness of environmental issues by publishing information on the benefits of GPP policies and identifying the impact of certain goods and services on the environment. Furthermore, GPP can provide an incentive for industries to develop innovative “green” technologies and products.

A number of challenges and barriers exist to GPP, however. These challenges include (i) a lack of political support; (ii) the perception that “green” goods, services, and public works can cost more; and (iii) a lack of legal expertise in applying economic and environmental criteria when purchasing a particular good or service.¹¹

Overall, the practice of using public procurement as a tool to promote economic, social, and environmental policy objectives is still nascent in the region. As of 2012, only five countries have incorporated environmental sustainability principles in procurement policies and contracts. Environmental criteria have been added to general tender evaluation criteria in the Dominican Republic, Honduras, and Mexico. Venezuela is the only country to have established a social responsibility commitment within its procurement framework (Table 8.4).

There are several challenges that face the region in terms of incorporating elements of economic, social, and environmental sustainability into public procurement frameworks. A survey in nine Latin American countries suggests that the most common concern is the lack of information and knowledge on SPP (Table 8.5). Furthermore, government officials cite a lack of sufficient offers from suppliers as another barrier to sustainable

¹⁰ Available at: http://ec.europa.eu/environment/gpp/benefits_en.htm.

¹¹ Available at: http://ec.europa.eu/environment/gpp/barriers_en.htm.

TABLE 8.4 **NORMATIVE FRAMEWORK OF SUSTAINABLE PUBLIC PROCUREMENT IN LATIN AMERICAN COUNTRIES (2012)**

| | Prohibition/ regulation in the acquisition of determined goods | Incorporation of environmental sustainability principles in procurement policies and contracts | Obligatory use of environmental impact assessments | Environmental criteria in tender evaluation criteria | Establishment of a social responsibility commitment |
|--------------------|---|--|--|---|--|
| Brazil | ✓ | ✓ | | | |
| Costa Rica | | | ✓ | | |
| Dominican Republic | | | | ✓ | |
| Ecuador | | ✓ | | | |
| El Salvador | | | ✓ | | |
| Granada | | | | | |
| Haiti | | | | | |
| Honduras | | | | ✓ | |
| Mexico | ✓ | ✓ | | ✓ | |
| Nicaragua | | ✓ | ✓ | | |
| Peru | | ✓ | | | |
| Uruguay | ✓ | | | | |
| Venezuela | | | | | ✓ |
| Total | 3 | 5 | 3 | 3 | 1 |

Source: Bezchinsky and López Fernández (2012).

procurement. The lack of offers from suppliers, however, can stem from the inability to determine the demand of goods and services from the government that fulfills economic, social, and/or environmental objectives. In addition, little information is available to governments regarding the range of goods and services and production capacity of the businesses they seek to promote or preference, such as SMEs and women-owned businesses.

Civil Society Oversight

Given that a substantial amount of public funding is spent to acquire goods and services, and that citizens are directly affected by corruption and

TABLE 8.5 BARRIERS TO SUSTAINABLE PUBLIC PROCUREMENT IN LATIN AMERICA (2011)

| Barriers | Total number of countries in agreement with statement |
|---|--|
| Lack of information and knowledge on sustainable public procurement | 9 |
| Lack of sufficient offer from suppliers | 6 |
| Lack of legislation or internal rules | 5 |
| Higher prices for sustainable goods, services, and public works | 4 |
| Main selection criterion is price | 3 |
| Lack of interest and commitment from procurement system users | 3 |
| Resistance from suppliers | 2 |
| Supply is only available in international markets | 1 |
| Procurement system is inadequately equipped to handle sustainable procurement | 1 |
| Lack of general regard for the environment | 1 |
| Difficulty in gaining approval from auditing/ accounting officials | 0 |

Source: Beláustegui, V. (2011).

Note: The barriers to sustainable procurement stem from a survey (coordinated by author V. Beláustegui) that was administered to countries through a thematic task group. The survey was complemented by interviews and consultations with key actors in the procurement process. The 9 out of 11 countries that responded to the survey were Chile, Colombia, Costa Rica, Ecuador, El Salvador, Nicaragua, Paraguay, Peru, and Uruguay.

mismanagement of resources through poor-quality goods or inefficient service delivery, the monitoring of public procurement by civil society is paramount. By helping to prevent, detect, and expose corruption, CSOs can help not only to prevent the theft and diversion of public funds, but also to engender reforms through the dissemination of their findings. On the other hand, governments are now recognizing that CSO participation in procurement monitoring can also help to increase the legitimacy and credibility of procurement systems.

In Latin America, the degree of civil society participation in monitoring government is inconsistent and generally weak across countries. CSOs in the region face challenges in the form of legal mandates and technical deficiencies (Tranparencia Mexicana, 2012).

Precise legal mandates that call for civil society participation in monitoring government procurement provide strong incentives for CSO oversight.



Not only do the mandates guarantee that reliable and timely information be granted to CSOs, but they also guarantee that their involvement will be respected by government officials and bidders, making monitoring easier and safer, in general (Transparencia Mexicana, 2012). In Latin America, however, few countries have legislation that explicitly allows procurement monitoring by CSOs. Although substantial progress has been made in Mexico with regard to formalizing CSO participation in procurement monitoring, other countries still struggle to implement legal mandates enacted in 2003 (as in the case of Colombia, with regard to its Law No. 850) on the role, rights, and obligations of CSOs. In Argentina, CSOs such as Poder Ciudadano are invited to participate in monitoring major procurement processes or when the impact of procurement projects have important social implications (Box 8.5).

Many CSOs in the region also lack the technical capacity to conduct basic social oversight activities. Procurement is a highly technical topic that requires knowledge of laws, regulations, and monitoring and evaluation techniques, as well as sector-specific information. Although many Latin American countries have a clear norms that require government officials to disclose and disseminate procurement information—primarily through e-procurement systems—CSOs may not be able to easily understand information contained in reports, given their technical complexity. Furthermore, if information is fragmented, CSOs may lack the resources to monitor all systems, increasing the likelihood that procurement processes go unnoticed and unmonitored.

To overcome limitations in technical capacity, CSOs can work together to aggregate individual efforts associated with monitoring and evaluating public procurement. In Colombia, for example, a program—Columbiémonos—has linked and empowered local CSOs to increase their oversight of procurement in the health sector. Coordination among CSOs can also occur across countries. Open Government Partnership (OGP), launched in 2011, is an initiative that seeks to achieve a greater degree of efficiency through the adoption of strategies related to transparency, access to information, citizen participation, and the use of ICT to tackle five major challenges: improve the quality of public goods and services, increase public integrity, improve the management of public resources, create safe communities, and increase corporate-social responsibility and accountability. Though the OGP is sponsored by the governments of the participatory countries, it also relies heavily on CSOs for its structure, purpose, and decision making. In Colombia, for example, the Plan of Action that was approved for a period of two years by the OGP was elaborated by government officials in partnership with eight

BOX 8.5. PARTICIPATION OF CIVIL SOCIETY ORGANIZATIONS IN MONITORING PUBLIC PROCUREMENT

Poder Ciudadano in Argentina and Observatório Social de Maringá in Brazil are two civil society organizations (CSO) that actively monitor public procurement contracts, publish procurement-related information and facilitate dialogue between public officials and citizens.

Poder Ciudadano, based in Buenos Aires, Argentina, is a nonprofit, nonpartisan organization that was started in 1988. In a country that is currently in the midst of an institutional legitimacy crisis, as evidenced by its significant drop in rankings in Transparency International's Corruption Perception Index (from 57 in 2001 to 104 in 2014), Poder Ciudadano's work focuses on promoting civil society oversight, transparency, and access to information to strengthen democratic institutions through collective action.

Procurement has proven to be a field in which Poder Ciudadano has managed to generate a high degree of influence. Through its program, Transparent Public Procurement (Programa de Contrataciones Públicas Transparentes), the organization focuses on promoting two key components, integrity pacts and public audiences, to generate best practices in terms of transparency and social control. Integrity pacts are designed to curb irregular or corrupt practices via explicit agreements between the state and all bidders for the selection, evaluation, and awarding of a specific contract.

The hearings, on the other hand, are organized and advertised by government authorities and provide a venue for businesses, CSOs, experts, community members, and the media to voice opinions and concerns relating to public procurement transactions. Over the years, these discussions have ranged from hearings relating to the different aspects of the bidding process for the construction of Argentina's "H" subway line (1999) to hearings on community support and justification of an international tender for municipal waste management in the municipality of Morón (2006).

The Observatório Social de Maringá (OSM) is a CSO that operates out of Maringá, Brazil. OSM was created in 2006 to provide society with opportunities that promote social cohesion through transparency and diligence in the management of public resources. Today, OSM is comprised of professionals from different fields, such as lawyers, economists, businessmen, and students. OSM's volunteers first undergo training, provided by the municipal Comptroller General and the Court of Auditors, and then conduct educational campaigns and monitor spending through procurement.

To promote citizen participation and fiscal responsibility, OSM conducts educational campaigns through its Ethnically Responsible Society program (Sociedade Eiticamente Responsável) on the benefits of taxation and the use of public resources. Their formal and informal campaigns are carried out in innovative ways through plays, essay contests, tax fairs, poetry, and seminars. One of SER's first projects, for example, was the Seminar on Fiscal Education of Paraná (Seminário Paranaense de Educação Fiscal) that took place in 2004 and focused on the socioeconomic benefits of taxation and importance of overseeing the use of public resources.

OSM also monitors public procurement in Maringá in three different phases: publication of bidding documents, analysis of processes, and delivery of products and services. Over the past decade, OSM has been able to detect and report bidding irregularities that have resulted in substantial savings. One of the most striking achievements of OSM, however, has been the creation of Maringá's Control and Inventory Law that has helped to reorganize supply warehouses, computerize inventory management, reduce the waste of stored goods, and improve the planning of future acquisitions.



Colombian CSOs that, together, have formed the OGP Civil Society Platform. The Plan of Action, approved in 2012 and subsequently revised in 2012 and 2013, contained 27 concrete action items and commitments, such as the improvement of Colombia's e-procurement system, Colombia Compra Eficiente (Klitgaard, 2014).

CONCLUSIONS

Public procurement is a vital part of PFM and can have long-term effects on society and the economy. As one component of PFM, procurement both influences and is influenced by other components of PFM. On the one hand, procurement affects whether budgets are efficiently and effectively executed, generating reliable and timely information that can facilitate internal audits and controls. On the other hand, a lack of integration between public procurement and treasury can result in late payments and contract delays, compromising the efficiency of procurement systems.

The nature of public procurement has undergone a significant transformation over the last two decades, prompted by ICT, an increase in economic integration, trade liberalization and institutional developments. The development of ICT tools have helped to modernize public procurement through framework agreements and reverse auctions, as well as the online adoption of e-catalogues and online supplier repositories. The creation of a single common market within the EU has highlighted the need to align procurement systems under a single directive to facilitate trade and integration and serve as an inspiration to other regions. In Latin America, the creation of Mercosur and CAFTA-DR has also influenced the development of common procurement principles, though to a lesser extent.

Latin American countries have made considerable progress in the realm of public procurement systems in the last two decades. Aided substantially by ICT tools and the creation of procurement regulatory agencies, many countries in the region have adopted e-procurement systems that aim to increase the efficiency, value for money, and transparency of public procurement by simplifying processes and fostering competition. As a result, entities are able to purchase a wider variety of goods and services in a more timely and cost-efficient manner. E-procurement has also facilitated the collection of timely and reliable information regarding regulatory frameworks, processes, manuals, and guides for agencies and businesses. Furthermore, some e-procurement systems also generate analyses and reports on open

tenders, existing contracts, and procurement statistics, which can be used to assess adherence to budget allocations, facilitate internal audits, and aid the role of CSOs.

The procurement agencies created in the region—some of them with institutional and financial autonomy—to some extent, have allowed the countries to push significant reforms in the area of public procurement. In addition, these agencies have helped to mitigate the proliferation of policies and procedures by overseeing the development of more integrated ones and standardizing those already in place. To facilitate and increase the adoption of new ICT tools, many of these agencies have also institutionalized technical capacity trainings for entities and suppliers, online and in training centers, which have increased significantly the success of e-procurement systems. The lack of technical capacity exhibited by procurement officials, however, can pose significant challenges to the success of agencies in pushing for the modernization of procurement systems.

In establishing better regulatory frameworks and control mechanisms, however, some countries in Latin America have focused on processes as opposed to results. As a consequence, procedural formality has superseded efficiency, with control agencies focusing on compliance as opposed to risk identification and mitigation, value for money, and the impact and results of procurement operations. It is fundamental to develop methodologies, standards, and indicators to measure and analyze performance and results (Allen, Hemming, and Potter, 2013).

Sub-indicator 5(d) in the MAPS assessment verifies the “existence, relevance and comprehensiveness of the quality assurance and standards for processing procurement actions, and ensures their systematic application to provide for monitoring of performance” (OECD, 2010). At a minimum, these types of standards should “Provide quality assurance standards and a monitoring system for procurement processes and products, provide for a staff performance evaluation based on outcomes and professional behaviors, and ensure that operational audits are carried out regularly to monitor compliance with quality assurance standards” (OECD, 2010). In the region—and to a limited extent—only Ecuador, El Salvador, and Paraguay have adopted quality control standards. Although these standards can vary across countries and levels of government, examples might include response times to process inquiries or a length of time to prepare tender documents.

Budget planning, cash forecasting, allocation and procurement systems need to work in tandem to improve the management of public resources (Allen, Hemming, and Potter, 2013). In many countries in the region, public

procurement systems are scantily integrated with other PFM systems. This misalignment increases time and resources spent by entities procuring goods and services. Furthermore, the lack of integration between procurement systems and cash management systems can substantially affect the efficiency of procurement when cash forecasts or cash rationing forces agencies to delay or break up procurement contracts.

To incorporate economic, social, and environmental elements into public procurement systems, while at the same time respecting the fundamental three principles of procurement, remains a continuing challenge in most Latin American countries. Currently, data show that few countries have exploited public procurement as a tool to promote SMEs and address gender and environmental issues. This is due to a lack of information and knowledge on sustainable procurement, offers from suppliers, legislation, or internal policies on the matter.

Increasing the role of civil society oversight in public procurement is a powerful incentive to promote political accountability. In the area of public procurement, CSOs have the potential to independently prepare proposals for reforms, mediate and promote strategic alliances between the private and public sectors, and compile databases through research and surveys. Although some CSOs (e.g., in Argentina and Mexico) participate in procurement activities, overall, their participation in the region is still limited. The obstacles faced by CSOs vary across countries; however, in many cases, they stem from the fact that only a few countries have formalized their role in monitoring procurement operations and ensuring efficient delivery of goods and services. As a result, CSOs enjoy limited access to procurement information and financial and technological support.

The progress of Latin American countries in public procurement during the last two decades has been significant. This progress, however, has centered mainly on the procurement of goods and general services; not on the procurement of large infrastructure projects. As infrastructure investment becomes critical to the competitiveness and economic growth of the region, governments also must focus on improving the efficiency, value for money, and transparency of procurement in infrastructure projects as well. One of the main problems governments can seek to address is to ensure that businesses bidding for public infrastructure projects meet preestablished qualification criteria, such as price, quality, and delivery time of the construction itself, and the acquisition of related goods and services. Reliable financial flows should be established and subsequently guaranteed for large infrastructure projects to avoid price escalation due to budget shortfalls.

Furthermore, contracts should also specify information that must be disclosed (e.g., selection of projects and their design, implementation, monitoring, amendments, and evaluation), to increase transparency and competition in the procurement process in terms of infrastructure investment. By requiring contractors to provide and publically disclose such information, regulators also will be better positioned to cope with information asymmetries (Fay and Morrison, 2007).

Another option to be considered in this case is to further explore PPPs for large infrastructure investment projects. There are various designs for PPPs that can better distribute risks between contractors, operators, and the government. For instance, when the contractor that builds the infrastructure work is the same firm that will operate and will receive payment for the use of the work—as an investment return—it should complete the work as soon as possible to start receiving payments for its use. Such a practice would be a good incentive for efficiency and value-for-money.

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The efficiency, effectiveness, and transparency of public financial management in Latin America are crucial aspects for monitoring public resources, fiscal stability, and sustainable economic development. In recent years, Latin American countries have adopted reforms in public financial management and have made significant progress. Challenges remain, however.

This book is a joint initiative of the IDB and the IMF, in cooperation with the Latin American Treasury Forum (FOTEGAL), to document some of these reforms and examine concrete experiences. In particular, it gathers lessons learned from effective practices, extensive research, and exchanges of knowledge from 16 countries in the region. This book is a valuable information source and an inspiration for researchers and policymakers in the field of public financial management.

Contents

- Chapter 1: Public Financial Management in Latin America: The Key to Efficiency and Transparency
- Chapter 2: Treasury Management Efficiency Indicators
- Chapter 3: Cash and Debt Management: Interaction, Coordination, and Integration
- Chapter 4: The Treasury Single Account in Latin America: An Essential Tool for Efficient Treasury Management
- Chapter 5: Public Accounting and Fiscal Credibility
- Chapter 6: Finding the Costs of Public Services: The Experience of the State of São Paulo in Implementing a Cost System
- Chapter 7: Integrated Financial Management Information Systems in Latin America: Strategic Aspects and Challenges
- Chapter 8: Public Procurement in Latin America

