TECHNICAL NOTE Nº IDB-TN-3190

Investment Management in the Pension Systems of Social Security Institutions

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in Latin America and the Caribbean

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IDB

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1 Background

In most countries in Latin America and the Caribbean, pension systems include social security institutions (SSIs) that are responsible for paying old-age, disability, and survivors' benefits, as well as providing health services. These systems cover the general population that contributes to social security and their beneficiaries, or specific groups of workers, predominantly in the public sector.

It is important to note that the purpose of pension funds is to meet the benefit payments established by law, for which resources must be invested in the best interests of affiliates. This purpose should not be overlooked and must not be subordinated to other objectives that could be pursued with the resources accumulated in pension funds. Beyond this issue related to the sustainability of pension funds, other objectives pursued by social security systems include achieving the broadest possible coverage and ensuring the payment of benefits that are sufficient to cover expenses during retirement.

Pension funds managed by SSIs in the region operate predominantly under pay-as-you-go schemes, in which contributions from active workers finance the benefits of retirees and their beneficiaries. Although these systems can be sustainable with appropriate parameters, in practice many SSIs face growing financial pressures due to demographic changes and outdated parameters that create imbalances between contributions and benefit payments.

In this context, accumulated reserves are often insufficient relative to the liabilities incurred and function as a temporary support mechanism, complementing contributions to finance benefits while system parameters are adjusted or reforms are approved to strengthen sustainability,[1] particularly in the context of rapidly accelerating population aging. These resources must be invested to generate returns that help provide greater support for the pension benefits granted.

A common pattern can be observed in the corporate governance structure of SSIs in Latin America and the Caribbean. In general, the collegiate bodies that make up their governing structures, whether boards of directors, administrative councils, or similar entities, are composed of professionals linked to the health sector or to the groups they represent, such as the education sector, labor unions, and pensioners' associations. However, professionals specialized in pensions are underrepresented, and experts in investment portfolio management are even less common.

1. Pay-as-you-go systems face three critical periods: (1) a deficit of contributions relative to benefits; (2) insufficient total income to cover benefits; and (3) depletion of reserves. As the system progresses through these stages, the options for reform diminish and fiscal costs increase (IOPS, 2018).

This situation leads these representatives to opt for strategies that could be considered “ultraconservative,” characterized by a high concentration of investments in government bonds or fixed-income instruments. Although these decisions initially seek to minimize return volatility, they also respond to governments’ need to finance their deficits through public debt securities, given that the boards of SSIs are typically appointed by the executive branch. In practice, this dynamic results in a lack of diversification that entails a significant cost in terms of forgone returns and exposes the funds to specific risks, such as asset–liability mismatches.

In general, SSIs in the region have the authority to regulate themselves, including by establishing their own investment rules. As such, SSIs are subject to supreme audit institutions, such as national comptroller general offices, which in many cases function as external auditors and require compliance with general rules that apply to all public institutions in their respective countries. However, there is no oversight by a specific pension regulator that defines investment standards and monitors their implementation. This has exposed the funds to risks that run counter to the interests of affiliates.

The objective of this document is to describe the main mistakes SSIs make when deciding how to invest pension fund resources in accordance with the best interests of affiliates and to highlight some international best practices for managing pension fund investments.

At the regional level, we identify 15 mistakes that SSIs make when investing pension fund resources. As noted, these mistakes lead to the assumption of unnecessary risks that compromise the returns of pension fund investments. In other words, these mistakes result in a departure from the efficient investment frontier, meaning that lower returns are obtained for the level of risk assumed or that investments are made with higher risks for the level of return achieved.

2 The 15 Mistakes in Investment Management

Mistake 1. Suitability of the Members of the Governing Body

The governing body is the highest authority of the SSI and is responsible for defining all policies that govern the institution's operations. This includes the investment rules for pension funds, subject to the legal framework applicable in each country.

In SSIs, it is common for governing body members to be appointed without clearly defined qualifications or technical competencies. Requirements related to probity are often found in the various laws governing SSIs. However, with respect to technical knowledge, academic degrees are often not required and, more frequently, proven experience in administration, finance, investment, actuarial science, or pension fund management is not required. In other cases, these requirements are specified as desirable but not mandatory. These situations limit the efficient and professional management of a pension fund's investment portfolios.

The governing body of a pension fund is ultimately responsible for managing the resources of affiliates and pensioners. Therefore, its members must have specialized knowledge of financial, actuarial, investment, risk management, and economic matters, among others, in order to make the best decisions in accordance with their fiduciary duty. Good corporate governance practices establish that members of the governing body must possess, both individually and collectively, the knowledge and academic preparation necessary to manage a pension fund. Thus, it is advisable for SSI regulations to establish suitability requirements for members of their governing bodies, as well as appropriate and frequent training programs.

Mistake 2. Deficiencies in Investment Decision-Making Frameworks

From a corporate governance perspective, the administrative structure of SSIs grants significant discretion to the executive presidency or general management in allocating pension fund investments. In many cases, the executive president or general manager is part of the governing body and is responsible for appointing the members of technical committees, such as the investment committee and the risk committee, which in most SSIs either does not exist or is not clearly defined.

In addition, the executive presidency or general management often chairs these technical committees and, together with other members of the governing body, may hold a majority of committee votes. This circular structure exposes the pension fund to political risks and may give rise to conflicts of interest and suboptimal investment allocations that affect fund performance, thereby failing to comply with international investment best practices that seek an appropriate balance between security and return.

The result of these practices is that the investment decision-making structure becomes distorted. Instead of limiting themselves to approving investment policies aligned with long-term objectives and allowing investment decisions to be made by the technical investment and risk areas of SSIs, as will be explained later, governing bodies end up directly selecting the instruments or transferring that function to senior management. This dynamic is aggravated not only by the lack of financial expertise among members of the governing bodies, but also by the fact that these bodies do not meet the suitability requirements necessary to administer pension funds, contrary to the international governance standards for pension funds established by the OECD and IOPS (see IOPS 2011).

As a result, suboptimal investment decisions are adopted, often characterized by excessive concentration in public securities, which ultimately increases exposure to additional financial risks.

Mistake 3. Efficiency Gaps in the Corporate Governance of Investments

The governing body does not have a risk appetite policy. The objective of an investment plan is to pursue a return target subject to the establishment of risk parameters. However, the governing body's definition of risk tolerance or risk appetite for the investment portfolio is limited. Moreover, risks are often not managed at all or are addressed solely through compliance with regulatory parameters verified through checklists. In other cases, members of the governing body mistakenly believe that investing exclusively in public or domestic securities exempts them from assuming risks.

Given the absence of risk analysis, investment processes commonly include restrictions such as prohibitions on trading or early sales, with the stated objective of holding all financial assets to maturity. This runs counter to efficient portfolio management, as such decisions cannot be made a priori and reflect poor management of the investment portfolio. In other cases, the purchase of securities priced above par is prohibited, which lacks both technical and practical justification.

Investment departments lack adequate software to manage investments. This situation not only reduces the technical capacity of investment areas, but also exposes them to considerable operational risks and prevents proper management of the risks to which pension fund investments are exposed. Investment management is commonly carried out in Excel spreadsheets with limited controls, which heightens the risk of losing historical investment data due to the absence of adequate backup policies. These operational problems lead staff to spend time reconstructing data instead of devoting that time to risk analysis and the identification of investment opportunities.

The management of pension fund investments should involve a number of actors, each with specific functions and responsibilities. This structure must establish the objectives, the methods and means to achieve them, the mechanisms for monitoring compliance, and the way authority is assigned and decisions are made with respect to the managed funds. Generally, these relationships and authorities are established in the investment policy and the financial risk manual; however, the absence of such manuals and policies is recurrent in SSIs. Although SSIs have annual investment plans, these do not amount to an investment policy for a pension fund.

Mistake 4. Incomplete Definition of Responsibilities

Members of senior management assume a disproportionate level of personal risk. From a corporate governance perspective, the administrative structure of SSIs assigns excessive responsibility to the director general, executive president, or general manager in the allocation of pension fund investments.

As mentioned above, the decision-making process is inverted, so individual investment decisions ultimately fall under the responsibility of the governing body or senior management. In the absence of an explicit risk appetite statement for the pension fund, there is no guarantee that the investment areas and senior management will act in accordance with the mandate of the board of directors. This risk appetite statement refers to the internal limits that the governing body must establish, declaring the maximum levels of risk it is willing to assume for each risk indicator.

Thus, senior management is involved in developing policies, including the investment policy; receives recommendations from the investment area, which reports directly to it, regarding investment decisions; and ultimately makes those decisions.

Mistake 5. Lack of Independence

Technical investment committees and, when they exist, risk committees lack the independence necessary to fulfill the fiduciary mandate of maximizing investment returns for the benefit of affiliates and pensioners. In many cases, they depend hierarchically on the general management or executive presidency, which subordinates them to senior management, when they should instead act as advisory committees to the governing body. This lack of independence creates conflicts of interest, as the committees may end up validating decisions influenced by short-term administrative priorities rather than being guided by objective and specialized analysis aligned with the interests of affiliates and pensioners. To prevent this, it is essential that they have operating rules that ensure their technical autonomy and establish a direct reporting channel to the governing body.

It is advisable to create independent risk and investment committees that serve as advisory bodies to the governing body and participate in defining the strategic allocation of investments. To this end, manuals should be developed for both the risk committee and the investment committee. The lack of independence of these technical committees may create confusion regarding the delineation of responsibilities and authorities in decision-making. Therefore, responsibilities must be clearly defined and validated in these documents to avoid duplication and clearly define areas of responsibility.

Senior management plays an important role in the management of pension funds, but its functions must be clearly defined to avoid undue interference in investment decisions. Responsibility for defining policies and providing strategic oversight lies with the governing body, while asset selection should rest with the technical investment and risk areas, supported by specialized committees. When senior management intervenes directly in investment decision-making, conflicts of interest arise that compromise technical objectivity and may lead to financial risks that affect the interests of affiliates and pensioners.

In social security institutions, this may translate into decisions aimed at showing short-term results that serve the interests of the administration, even though such decisions are not always compatible with the long-term objectives of security and profitability required for fund management.

Mistake 6. Self-Regulation

The laws establishing SSIs in Latin America and the Caribbean commonly grant them governance autonomy. In simple terms, most SSIs in the region self-regulate in regulatory matters. However, according to international best practices, regulations should be approved by an independent body, as self-regulation may lead to lax rules and conflicts of interest that could threaten the achievement of a pension fund's objectives (see OECD 2009).

Specifically, in the area of investments, social security institutions should be subject to a modern, clear, and technically grounded regulatory framework that ensures diversification, prudence, and risk management. Compliance with such regulations should be overseen by an independent and technically qualified pension supervisory authority whose role is not to replace the responsibility of administrators, but to verify that funds have adequate policies, procedures, and controls in place to protect the interests of affiliates and pensioners (IOPS 2010). Currently, many SSIs remain subject to the supervision of general audit institutions that lack specialized knowledge or specific mandates, reinforcing the need for an authority with technical competence in pensions.

Mistake 7. Absence of Procedures and Institutional Capacity

The functions of technical committees and support areas are not clearly defined. For example, the investment and risk areas, which do not always exist, do not have the full structure required to operate adequately. In many cases, there are no established procedures to ensure that discussions and risk analyses are recorded in meeting minutes. Moreover, as will be explained later, risk analyses are not conducted or, when they are, they are not guided by risk management criteria, but rather by compliance with regulations based on checking a list of characteristics.

In some cases, investment committees assume functions that should correspond to a risk committee and lack the independence and functional separation required by a sound corporate governance structure. Likewise, investment committees commonly mix functions with investment areas, meaning that strategic responsibilities overlap with operational ones, weakening control mechanisms and proper risk management. International literature emphasizes that independence, transparency, and accountability are fundamental principles for ensuring strong corporate governance in pension funds. This implies clearly defining roles, establishing clear lines of responsibility, and avoiding conflicts of interest (IOPS 2011), as will be explained later.

Mistake 8. Allocation of Investments for Social Purposes Other Than the Interests of Affiliates

It should be recalled that the primary objective of a pension fund must be to ensure the payment of future benefits. Thus, it is inappropriate for laws and investment regulations to require technical areas to recommend investment alternatives that contribute to the country's social development, economic activity, or job creation. Such restrictions may lead to investments in risky, low-return assets that could jeopardize the payment of benefits to contributors.

A fundamental principle of pension fund regulation is that resources must be managed prudently and in line with the essential purpose of the pension system: to protect the interests of affiliates and ensure adequate, sufficient, and sustainable pensions. According to OECD and IOPS guidelines, this objective implies safeguarding the security, return, and liquidity of investments under the principles of diversification, prudence, and comprehensive risk management. In defined-benefit schemes, which are commonly administered by SSIs, this requires ensuring the financial solvency and actuarial sustainability of the funds.

Within this framework, investments may incorporate environmental, social, and governance (ESG) criteria, provided that they help strengthen long-term risk management and protect the interests of affiliates and pensioners. The OECD (2022) emphasizes that ESG factors should be understood as tools to enhance information quality, transparency, and risk management, including risks arising from the climate transition, and should not be treated as objectives in their own right. Under all circumstances, the overriding objective must always be to guarantee adequate pensions, while other objectives should remain secondary to this purpose.

In fact, pension fund investments often fail to comply with the guiding investment principles established in their own policies. Investments are not made in accordance with the prudent investor standard, nor are they carried out at a reasonable level of risk with returns commensurate with the risk assumed. High concentration risks also exist, which may affect the future cash flow of SSIs.

There are also numerous cases in which a portion of pension fund reserves is directly allocated to personal and housing loans with maturities that exceed the liquidity needs for benefit payments. These loans are sometimes granted to SSIs employees and, in other cases, to affiliates and pensioners.

Mortgage lending increases the risks involved in managing a pension fund. The experience of pension funds that grant this type of credit has not been successful, in part because administrators lack the capabilities of specialized banking institutions. In addition, this type of scheme may generate perverse incentives, as affiliates may perceive that by defaulting on the loan they are simply ceasing payments to their own account, weakening payment discipline and increasing moral hazard. This dual effect, brought about by lack of institutional capacity and inadequate incentives, makes mortgage portfolios a significant risk to the sustainability of pension funds.

Loan delinquency rates are commonly higher among pension funds than among banking institutions. The reasons vary, but they are largely related to the type of credit regulation banks face and their access to credit bureaus, which are not available to pension funds.

Moreover, prudential regulations governing mortgage lending do not always exist. In addition to operational challenges and the inability to compete with the banking industry, pension fund managers are exposed to the absence of procedures and limitations in enforcing collateral on delinquent loans.

There is also strong evidence of cases in which loans have been granted based on political criteria, contrary to the objectives of the funds and the interests of affiliates. This risk can be mitigated through prudential investment regulation issued by a specialized supervisory authority that is independent of the social security institution and has sufficient technical autonomy to prevent interference from the fund's administration and ensure that decisions align with the fiduciary mandate to protect the interests of affiliates and pensioners.

Social security institutions may define their policies regarding the granting of loans, provided that these comply with the guidelines established in prudential investment regulations. This regulation should allow access to credit bureaus and establish procedures for credit allocation, since under current conditions there is a problem of adverse selection: the SSI may be exposed to borrowers rejected by the banking system for failing to meet minimum requirements, such as having no delinquent loans and sufficient repayment capacity.

In addition, a limit should be placed on the administrative expenses associated with managing the loan portfolio. The regulation should require an evaluation of the return obtained, net of administrative expenses and provisions for nonperforming loans, in order to determine whether a higher risk-adjusted return is actually being achieved.

Mistake 9. Lack of Separation of Reserve Funds for Each Risk and Program Managed by SSIs

Most SSIs in the region administer multiple social insurance programs, with pension and health insurance being the most relevant in terms of volume and financial sustainability. A frequent mistake is the absence of a separate governing body for each program, despite the fact that these programs have very different characteristics and require different levels of specialization. In particular, health insurance schemes usually operate under pure pay-as-you-go arrangements, while in many countries pension insurance generates modest savings that are incorporated into an investment reserve.

Given these characteristics, there are still cases in the region in which all funds are invested in the same manner, within a single reserve and under similar criteria. In other cases, because pension funds are often financially in surplus, although not actuarially, the pension fund is used as a liquidity provider for the health insurance program.

There are cases in which the health insurance program "sells" bonds, whether held in its reserves or provided by the government as payment for its contributions, to the pension insurance program. There are even cases in which cross-subsidies exist, creating contagion risks arising from financial crises in the health insurance program.

Mistake 10. Lack of Valuation at Market Prices

The discussion regarding the valuation of pension fund portfolios at market prices has largely been settled in most countries around the world. Valuation at market prices goes beyond the need to individualize contributions, credit returns, or transfer assets when an affiliate moves from one administrator to another in individual capitalization schemes.

All countries in Latin America with individual and mixed pension systems require valuation at market prices in their regulations, and cases in which this does not occur are truly exceptional, such as certain highly illiquid assets. Similarly, pension systems in OECD member countries also require the valuation of investments at market or fair value.

The absence of valuation at market prices creates a series of problems that affect the profitability of pension funds, as it limits proper risk management and encourages nontransparent practices in the management of investment portfolios. This issue is even more relevant in the case of real estate investments, where the absence of periodic and objective valuations can generate significant distortions in the reported value of assets and in the measurement of returns.

In some countries, SSIs value their assets at market prices, but these valuations are not reflected in financial statements, which reduces transparency in fund management. In addition, valuation at market prices presents an opportunity to develop the stock market, which in turn contributes to achieving higher returns for the pension fund itself.

Finally, valuation at market prices generally incorporates all information related to the risks of an asset, which helps improve the management of pension fund investment portfolios. The crucial point is that without valuation at market prices, it is not possible to properly analyze the financial risks of an investment portfolio, which is one of the central elements of fiduciary duty and sound portfolio management.

Mistake 11. Investment Rules Promote an Excessively Conservative Investment Strategy and Low Diversification; in Other Cases, They Allow Investments Oriented Toward Interests Unrelated to the Primary Objectives of Pension Funds

A conservative investment strategy usually implies investing almost exclusively in financial instruments issued by the government or by state institutions. However, this does not eliminate risk, as concentration in a single issuer exposes the fund to potential losses. In particular, the absence of diversification means that any material, market, or even reputational shock affecting that issuer would have a direct and disproportionate impact on pension reserves, affecting both portfolio returns and the fund's ability to meet its payment obligations.

In general, SSI investment rules in the region allow only the acquisition of a limited number of instruments, with investments in government and central bank bonds predominating. As a result, the wording of the regulations restricts investment to fixed-income instruments, which increases portfolio concentration risk. Therefore, a more dynamic approach to portfolio management is recommended, including equity instruments, particularly international ones.

There is very little diversification in pension fund investments. The structure of investments ultimately reflects the level of development of the country's capital market, which is dominated by public sector issuances, even though instruments exist in the financial market that would allow for greater portfolio diversification.

This reduces the possibility of promoting financial market deepening. Diversification is further restricted by investment limits imposed in SSI investment regulations and by central bank rules requiring investment only in local currency. In general, SSI pension funds are invested in three types of instruments: securities issued by the government, securities issued by the central bank, and certificates of deposit, commonly issued by private banks.

Mistake 12. Investment Evaluation Is Based on Compliance with Regulatory Requirements Rather Than the Risks of the Instruments

Risk analysis in SSI investment portfolios is still very incipient in the region. When risks are analyzed, the process usually consists of applying checklists of requirements whose compliance is verified without assessing whether these requirements actually address the most relevant risks to which pension funds are exposed.

In some jurisdictions, these checklists even include arbitrary weightings to assign an overall risk rating, which clearly contradicts sound risk analysis methodologies. In other cases, the types of risks are not reviewed regularly to assess whether they remain the most relevant for pension funds.

Best practices in risk management require the development of robust risk analysis methodologies that use statistical instruments to measure quantitative risks and methodologies that make it possible to evaluate qualitative risks. In addition, a review cycle should be established to allocate resources to managing the risks that have the highest probability of occurrence and the greatest potential impact on a pension fund.

Mistake 13. Asset–Liability Mismatch in Pension Funds

In many cases, the maturity of fund investments is not aligned with the payment of benefits. This creates liquidity risk that operates in two directions. First, some investments are made in very short-term central bank instruments or certificates of deposit to cover the fund's payment obligations. This situation entails a sacrifice in terms of returns.

Second, some investments mature long after the funds are needed to pay benefits. This situation may be even more problematic given the limited depth of financial markets and the near absence of secondary markets, which creates difficulties for the early sale of securities.

This limited depth also results from the low diversification of pension funds and from political pressure on fund managers to accept government securities under conditions that are not favorable to the fund.

Mistake 14. Absence of a Specialized Regulatory Authority

Pension regulators around the world are evolving toward risk-based supervision frameworks. In this regard, SSIs could improve investment management if they were subject to effective financial oversight by an independent external body that adopts this type of supervisory approach.

If this were the case, SSIs would be required to define risk maps or heat maps to direct their efforts toward areas of investment and general pension fund administration that present risks with a higher probability of occurrence and greater impact on the pension-related objectives of SSIs.

In addition, external and independent supervision provides greater transparency to the pension fund and improves public confidence in the system. One of the essential functions of a specialized regulatory authority is not only to ensure effective compliance with regulations, but also to promote a culture of risk management, accountability, and prevention of improper practices. Furthermore, this type of authority can contribute to the formulation of necessary reforms in pension funds and, more broadly, in pay-as-you-go systems.

Mistake 15. Lack of Independence of Internal Audit from Senior Management

Internal audit must be independent from senior management to ensure objective evaluations of all critical SSI processes, including investment management. To this end, it must have an annual audit plan to guide its work and ensure a direct reporting channel to the governing body or board of directors. These conditions strengthen its institutional autonomy and reinforce internal oversight mechanisms, while also ensuring the traceability of audit processes.

Violation of this principle would undermine the framework known as the three lines of defense in internal control, in which senior management constitutes the first line, technical committees represent the second line, and internal audit represents the third line. Later, this three-lines-of-defense framework will be revisited with a graphical representation to guide the reader.

3 Impact of Management on the Profitability of Pension Funds

Measuring returns across pension funds is not a simple task and does not always produce comparable results. In the case of investment portfolios of individual capitalization pension funds, the methodology followed is fairly standard across jurisdictions, as returns are obtained by calculating the increase in the fund's unit value. Even so, valuation rules for securities are not the same in all countries, which creates comparability problems.

In the case of collectively capitalized funds administered by SSIs, the figures are even more difficult to compare, as the established practice is to value instruments at amortized cost. This does not provide a true understanding of the returns generated through the investment of pension fund reserves. It means that the value of the securities held by SSIs does not reflect valuation changes generated by common risks such as market risk.

Taking these limitations into account, Box 1 attempts to compare the returns of different pension funds in the region. The light section of the box refers to the annual real returns of individual capitalization pension funds. The dark section provides examples of the real returns reported by the SSI pension funds of Guatemala and Panama.

The figures suggest that the real returns generated by pension funds managed by SSIs in these countries are lower than those observed in individual capitalization funds. The latter generally follow the corporate governance framework suggested in this document, which is based on portfolio management grounded in risk analysis and management. Without placing excessive emphasis on this comparison, there is evidence to conclude that opportunities exist to improve returns in SSI pension funds.

Box 1. Returns of Selected Pension Funds in Latin America

YEAR	COLOMBIA(1)	COSTA RICA	CHILE (2)	EL SALVADOR	MEXICO (3)	PANAMA
2011	-4.0%	4.1%	-3.8%	-2.1%	-2.8%	0.3%
2012	13.2%	5.0%	4.6%	4.4%	9.7%	1.3%
2013	-2.4%	8.9%	5.2%	1.5%	-1.1%	2.0%
2014	6.9%	2.0%	8.4%	4.4%	4.9%	2.7%
2015	-3.1%	12.4%	2.3%	1.3%	-0.7%	4.2%
2016	3.7%	6.8%	1.9%	4.7%	-0.6%	4.2%
2017	10.4%	4.1%	7.8%	3.4%	2.3%	5.4%
2018	-3.5%	4.1%	-1.0%	3.7%	-4.8%	3.9%
2019	13.1%	4.6%	15.5%	4.2%	12.3%	6.5%
2020	8.2%	8.6%	3.9%	4.7%	10.7%	4.6%
5-year average	6.4%	5.7%	5.6%	4.1%	4.0%	4.9%
10-year average	4.2%	6.1%	4.5%	3.0%	3.5%	3.5%

YEAR	PERU (4)	DOMINICAN REPUBLIC	URUGUAY (5)	GUATEMALA	PANAMA	
				(IVS)	CSS SEBD	CSS SM
2011	-11.3%	4.4%	-0.3%	2.5%	-1.0%	-0.7%
2012	8.9%	10.0%	9.5%	5.2%	2.3%	2.5%
2013	-2.8%	9.0%	-2.8%	4.4%	0.8%	0.8%
2014	5.5%	10.3%	4.8%	5.5%	1.3%	1.6%
2015	1.2%	8.3%	2.9%	5.2%	3.4%	3.5%
2016	6.5%	8.0%	0.2%	3.9%	2.5%	3.2%
2017	10.4%	6.3%	18.8%	2.1%	3.9%	3.6%
2018	-3.4%	6.5%	-0.5%	5.0%	4.6%	4.1%
2019	10.8%	6.9%	5.0%	3.5%	4.6%	4.2%
2020	8.4%	4.5%	10.1%	1.5%	3.5%	3.1%
5-year average	6.5%	6.4%	6.7%	3.2%	3.8%	3.6%
10-year average	3.4%	7.4%	4.8%	3.9%	2.6%	2.6%

(1) Colombia: Corresponds to the Moderate Fund.
(2) Chile: Corresponds to Fund C (Intermediate).
(3) Mexico: Corresponds to the weighted average real return of all Multifunds (Basic Siefores).
(4) Peru: Corresponds to Fund Type 2 (Mixed or Balanced).
(5) Uruguay: Corresponds to the Accumulation Subfund.
Source: FIAP, AIOS, IGSS, CSS, and authors' calculations.

4 Potential Risks Faced by Investments of Social Security Institutions (SSIs)

This section describes, in general terms, the main risks to which fund investments are exposed and analyzes the ways in which these risks may materialize in the investments of funds managed by SSIs in the region, along with their possible effects on the financial and capital markets sector.

Financial markets are a source of risk, particularly due to their volatile nature and the presence of asymmetric information among different participants. In the case of a pension fund that participates as a financial investor, the following main risks can be identified.

4.1 Investment Risks

Investment risk is the broadest category of financial risk and results from failures in the planning, management, or control of risks in a fund's investment portfolio, including credit, foreign exchange, liquidity, market, and operational risks, among others. These failures may lead to significantly lower long-term net returns and, therefore, to weaker fund solvency indicators.

Investment risks can materialize in various ways. First, pension fund investments are concentrated in a limited number of instruments, such as certificates of deposit and bonds issued by the state or state-owned enterprises. One of the main changes that could be promoted to increase investment returns is to seek more options to allocate these investments to instruments with maturities longer than those offered by fixed-term deposits, which are issued with maturities that are not suitable for a pension fund. In general terms, this type of instrument is used in other countries only to manage a fund's liquidity in the very short term.

Second, although most countries in Latin America and the Caribbean do not have deep equity markets, pension funds could achieve greater diversification between debt securities, or fixed income, and equities, or variable income, by expanding the possibility of investing in international markets.

One way to control investment risk would be to establish corporate governance policies and design risk and investment committees with clearly defined responsibilities, including fiduciary responsibilities for some of the members who serve on them. In addition, a clear procedure should be established requiring the definition, in advance, of an investment policy that is consistent with the objectives of the pension fund and establishes a risk budget.

As mentioned, SSI senior management commonly assumes excessive responsibility due to its ability to define the structure of fund investments. Therefore, independent bodies should be established, and decision-making and investment execution processes should be separated.

For example, the investment committee and the risk committee must have sufficient independence to ensure that their decisions are strictly technical. This requires securing appropriately qualified technical members for these committees and allowing the participation of members external to the SSIs. This should be combined with the creation of communication channels so that information flows effectively to all members of the governing body.

The efficient investment frontier is reached when the risk–return trade-off is optimized. When investment risk materializes, for a given risk budget—that is, a desired level of risk—the return obtained is lower than what would have been possible with better planning, management, or control of risks.

A classic example of the presence and materialization of investment risk occurs when an administrator focuses on optimizing portfolio returns in the short term, which may conflict with the long-term objectives of a pension fund. Excessive concentration in short-term fixed-income securities is a typical characteristic of investment risk. Economic literature widely shows that equities generate higher returns over the long term than fixed income.

However, it has also been shown that the short-term volatility of equity returns is higher than that of fixed income. This concern may lead an inexperienced portfolio manager to invest a larger portion of the portfolio in short-term and fixed-income instruments, to the detriment of the fund's objectives. Despite this, greater portfolio diversification requires greater expertise in investment management, so these changes must go hand in hand with improvements in the technical capacity of the risk and investment areas.

4.2 Credit or Issuer Risk

Credit risk, also referred to as issuer risk in the case of pension fund investments that do not engage in retail lending, is the possibility of financial losses arising from a counterparty's failure to fulfill a contractual obligation; that is, when the issuer of a financial instrument is unable to honor previously agreed payments. In addition, even in the absence of an actual default, the mere perception of a higher risk of default can reduce the market value of the instrument. In the case of pension funds, if assets must be liquidated to cover benefit payments, this decline in prices may generate significant losses and compromise the fund's financial sustainability.

Credit risk is calculated using mathematical models that estimate the probability of default or nonpayment. This probability is affected by the issuer's ability to repay its debts, which is inversely related to the size of its financial liabilities. In the case of governments, sovereign credit risk depends on the size of public debt relative to the size of the economy, as measured by GDP, and on the government's ability to keep public finances under control, either by limiting expenditure growth or by improving its capacity to collect taxes.

In international financial markets, issuers that place public debt securities, including sovereign debt, are evaluated by agencies such as Moody's, Standard & Poor's, and Fitch, which assign risk ratings under standardized methodologies. Currently, countries such as Chile (A-), Mexico (BBB-), Panama (BB+), Peru (BBB), and Uruguay (BBB) have long-term sovereign ratings within the investment-grade range (BBB- or higher).

In contrast, other countries in the region, such as Brazil (BB), Colombia (BB+), Costa Rica (BB), El Salvador (B-), Guatemala (BB), Honduras (BB-), Paraguay (BB+), and the Dominican Republic (BB-), have sovereign risk ratings classified as speculative. Ecuador, for its part, is at a high speculative risk level, with a rating of CCC+ assigned by Fitch. This means that this latter group of countries is riskier, as the probability of default is higher and, consequently, investors will demand higher returns to invest in bonds issued by these governments. In the English-speaking Caribbean, Jamaica (BB-) is classified as speculative grade, Barbados (B+) remains in a mid-speculative category, and Trinidad and Tobago (BBB-) reaches the lower boundary of investment grade.[2]

In the case of investments made by SSI pension funds in Latin America and the Caribbean, most are invested in securities issued by the government or the state. This means that a strategy often referred to as conservative is not necessarily conservative in terms of risk in countries whose debt is classified as speculative grade, as the fund is assuming high credit risk compared with other, safer, and more diversified investments across issuers. Despite this, the returns obtained on these investments are also very modest, which affects the achievement of the fund's objectives.

In most cases, SSI fund investments are made without the governing body defining a risk appetite or risk budget. Therefore, more robust risk metrics must be developed. In addition, greater investment diversification should be encouraged to promote the development of the financial market.

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2. The credit ratings correspond to those in effect as of September 2025. Caution is advised in the interpretation of the credit ratings mentioned in this document.

4.3 Foreign Exchange Risk

Foreign exchange risk is the possibility of financial losses resulting from changes in the value of an investment due to fluctuations in exchange rates. Foreign exchange risk in an investment portfolio is measured in relation to the fund's liabilities.

In general, in first-pillar pension funds or collectively capitalized funds, all liabilities are denominated in local currency. However, in principle, investing in foreign currency is not necessarily disadvantageous for a first-pillar pension fund, as a portfolio manager may choose to expose a portion of the portfolio to foreign exchange risk. Nevertheless, these decisions must be made in accordance with a structured investment policy that is known and approved by the fund's governing bodies and participants.

One reason for SSIs to invest abroad is the absence of variable-rate debt securities in the relevant market. Since pension fund liabilities are generally indexed to inflation, portfolio managers are interested in holding variable-rate bonds to manage market risk. Thus, international investments may serve as an interest rate hedge through financial derivatives that perform this function and are not available in local markets. In countries that invest a significant portion of pension fund assets abroad, such investments are generally accompanied by the development of hedging mechanisms to control foreign exchange risk when these investments are made in currencies other than the local currency.

4.4 Liquidity Risk

Liquidity risk arises from the inability to sell or purchase an asset quickly enough to avoid or minimize a loss. On the one hand, it is associated with the inability to convert investment securities into cash in the short term and without significant losses in order to respond to potential cash flow needs.

It also applies to the sale of nontraditional assets, such as real estate properties, when there are not enough buyers to liquidate the investment. On the other hand, it refers to the inability to acquire securities with the maturities desired by the investor, which forces the investor to hold cash and purchase securities with undesired maturities, increasing portfolio risk and generating returns below the desired level.

In the case of SSI investment portfolios, liquidity risk arises when there is a mismatch between the fund's assets and liabilities, which may occur in two ways. First, it may arise in contexts where programs require liquidity because benefit payments exceed contribution revenues, as will occur in the pension funds of several countries if parametric adjustments are not implemented soon. Second, it may arise when the program is in surplus because contribution revenues exceed benefit payments.

In the first case, liquidity risk consists of maintaining long-term investments when liquidity is needed in the short term to pay benefits, which will force administrators to go to the market to sell those positions. In the second case, liquidity risk consists of having to turn more frequently to the securities market to purchase short-term instruments or to hold cash, even though the fund's net obligations will occur over the long term.

In other sectors of the financial industry, liquidity risk is more significant than in pensions and health, as it can evolve into reputational risk or a loss of confidence in a financial institution and trigger a bank run or a run on the securities sector. In the case of social security programs, such runs do not occur because participation in the program is mandatory, although liquidity pressures may encourage labor informality. Thus, the main effect of the materialization of liquidity risk is on the fund's net returns and, eventually, its actuarial solvency.

Liquidity risk is one of the main risks affecting SSI investment portfolios, since when cash is needed to pay benefits, it may be difficult to find buyers at appropriate prices, especially given that stock markets are very shallow and it is difficult to liquidate securities in the secondary market due to the limited liquidity provided by that market.

4.5 Market Risk or Price Risk

Market risk is the possibility of financial losses resulting from changes in the price of an asset due to factors that affect the overall performance of financial markets. This is one of the most studied and important risks in investment portfolio management.[3]

Market risk is highly relevant for SSI investments, since in most cases all investments are in fixed-income securities with fixed interest rates. Moreover, SSI investments are usually not valued at market prices, even though the value of these securities is affected by movements in market interest rates, under the technically weak justification that there is an established policy to hold investments to maturity. This type of policy is inappropriate from a risk management perspective in an investment fund and has a negative effect on portfolio returns.

3. The price of a fixed-income financial asset varies inversely with the market interest rate. The interest rate changes according to the supply and demand for loanable funds, which are influenced by the country's macroeconomic conditions. In the case of variable-income assets, such as stocks or shares in mutual funds, the price varies in accordance with the evolution of the earnings or returns of the underlying instruments, that is, profits in the case of companies, or the values or activities that back mutual funds.

4.6 Operational Risk

Operational risk is the possibility of financial losses arising from failures or deficiencies related to processes, people, information technologies, internal controls, or external events. This category of risk is the most recent to be recognized as relevant in investment processes and has received significant attention following the 2008 global financial crisis.

For SSI fund investments, operational risk management involves the design of work procedures, the way in which the risk committee and the investment committee are structured, and the definition of the investment policy. However, operational risk encompasses broader aspects, such as fraud and corruption, which may be present throughout fund administration. The day-to-day identification of these risks corresponds to administrators in their daily work, as they constitute the first line of defense through the establishment of appropriate controls. In turn, the second and third lines of defense, including risk management areas, internal audit, and external audit, play a complementary and essential role by independently evaluating the effectiveness of these controls and ensuring integrity in the management of pension funds.

The foregoing implies that operational risk management is specific to each institution, and only administrators, in their day-to-day work, will be able to identify and monitor these risks through the establishment of appropriate controls.

The corporate governance of SSIs can be strengthened to reduce risks associated with investments. A key improvement is the clear allocation of responsibilities for investment decisions, so that the basic principles of the prudent investor are adopted. In practice, these decisions are often concentrated in senior management, without adequate delegation to independent technical investment and risk committees. These committees should operate under a mandate or investment policy that respects the work of technical teams and establishes defined risk budgets.

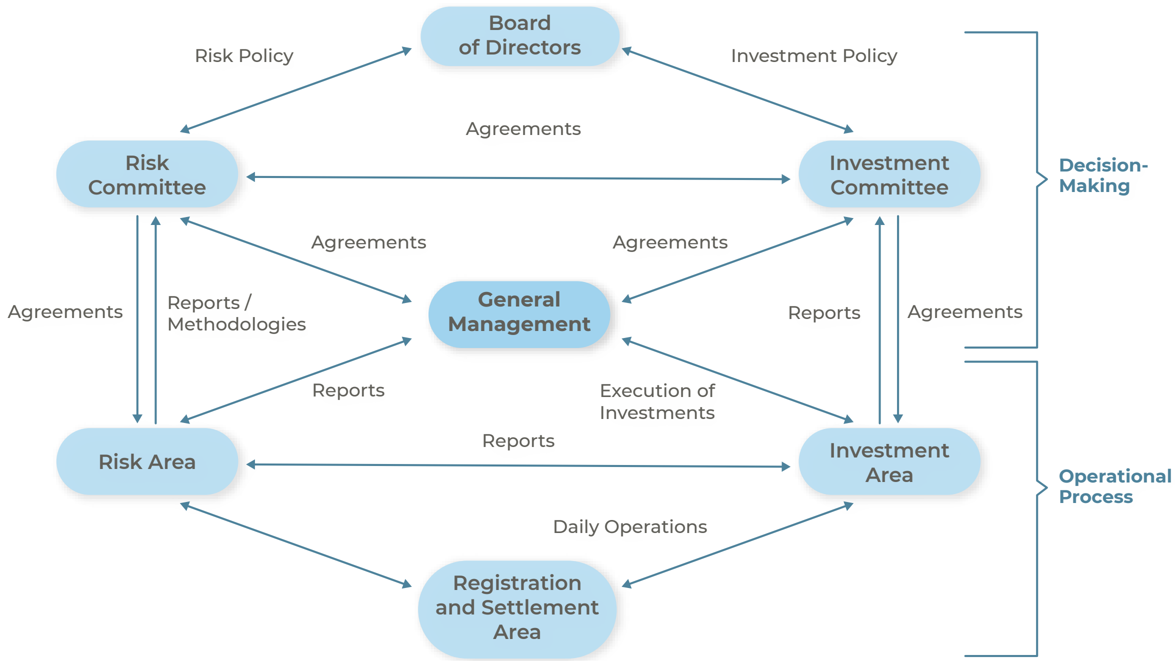
Currently, there is excessive discretion in defining the structure of investments, and modern investment limit policies and consistent risk valuation methodologies are not applied. Therefore, it is necessary to establish a corporate governance structure in which technical committees and oversight bodies provide the specialization and counterbalance required to ensure that investment decisions follow the principles of the prudent investor.

In addition, it may be advisable to invest in the development of technological platforms that allow processes within SSIs to be automated in order to limit operational errors associated with manual tasks. The design of technological platforms also enables the development of better risk measurement models related to pension fund investments and allows for more informed and timely decision-making.

5 Toward Efficient Investment Management

The management of pension fund investments requires the definition of two independent structures: a decision-making structure and an operational structure, as well as the communication lines between them, as shown in Figure 1. The decision-making structure should include the governing body or board of directors, a risk committee, an investment committee, and senior management or general management. The operational structure should involve three independent areas: the investment area, or Front Office; the risk area, or Middle Office; and the registration and settlement area, or Back Office.

Figure 1. Ideal Decision-Making Structure and Operational Structure of a Pension Fund



Source: Authors' elaboration

The governing body, or board of directors, must approve an investment policy and a risk policy that serve as the reference framework for investment management. The investment policy should include, among other aspects, the authorized markets, requirements for securities and issuers, the types of securities and instruments permitted in fund management, and the investment limits authorized by sector, instrument, and issuer, which determine the framework within which the investment area operates.

This framework constitutes the external limits; that is, the limits established based on the external regulation issued by law and on the rules each SSI issues in its investment regulations.

Figure 1 identifies senior management, or general management, as an important component of the decision-making structure in pension fund management. However, its responsibilities should be more clearly defined. Among the most relevant responsibilities of senior management should be to:

- Manage the institution's activities in a manner consistent with the risk appetite and the policies approved by the governing body.
- Implement the risk management framework for the pension fund.
- Provide the governing body with the information necessary to fulfill its functions.
- Approve the necessary controls to ensure that investment decisions are made and executed in accordance with the policies approved by the governing body, as well as for the management of the fund's financial and operational risks.
- Establish and implement procedures to prevent, identify, and report to the governing body any irregularities in the generation of financial information or fraudulent activities.
- Ensure the hiring of personnel with the appropriate competencies, moral integrity, independence, and knowledge.
- Ensure the implementation of appropriate information systems.

With regard to investment operations, three distinct and independent areas should be defined: the investment area, or Front Office; the registration and settlement area, or Back Office; and the risk area, or Middle Office. This functional separation complies with the principle of independence required in the management of the fund's investments. The investment area is responsible for selecting the securities in which resources will be invested, subject to the policies approved by the governing body and the applicable laws. The risk area, for its part, must have a clearly defined role in investment management, providing an independent assessment of risk exposure and ensuring its proper visibility within the pension fund's corporate governance. Although all these areas report hierarchically to senior management, independence refers to the separation of functions among the areas, the implementation of cross-controls, and the absence of conflicts of interest in the investment process.

In terms of corporate governance, elements established in the principles issued by international organizations should be incorporated, such as those set out by the OECD (2009) in its specific guidelines for the governance of pension funds. These guidelines include:

- Definition of the functions and responsibilities of the governing body, or board of directors.
- Definition of the functions and responsibilities of senior management, or general management.
- Definition and structure of comprehensive risk management, composed of the governing body, senior management, the risk committee, and a risk area, each with independent composition and clearly assigned functions and responsibilities.
- Delineation of the functions of internal and external audit.
- Establishment of principles of accountability and transparency.
- Definition of a code of conduct and conflict-of-interest policies.
- Establishment of policies for communication with and service to affiliates and pensioners.

In addition, in the area of investments, the governance structure must establish that responsibilities flow from the governing body to the risk and investment committees, and then to the trading area, the risk area, and the registration and settlement area. Throughout this allocation of responsibilities, roles should not overlap; rather, each entity must remain independent from the others.

The risk committee is responsible for monitoring and controlling risks, as well as defining the risk profile of the pension fund. In social insurance systems, it is considered an international best practice to have a risk committee specifically dedicated to the pension fund, since its nature differs from that of health insurance and requires specific functions for measuring and controlling risks. Likewise, as new investment instruments are incorporated into the portfolio, more frequent meetings of this committee will be required, as well as differentiated competencies, in order to review the methodologies proposed by the risk area for valuing the new instruments, monitor their application, approve the new issuers suggested by the investment area, and recommend to the governing body the levels of risk appetite, tolerance, and capacity for each financial risk inherent in pension funds.

The risk area is responsible for proposing to the risk committee the policies, procedures, and systems for comprehensive risk management. This should include tolerance levels, methodologies, tools, models, prudential limits, and other mechanisms to control the pension fund's exposure by type of risk. In addition, a risk manual should be in place establishing methodologies for the valuation of, for example, solvency risk, parametric VaR, the risk–return relationship, concentration levels, credit risk, counterparty risk, net asset value, scenario analysis, the setting of risk appetite, tolerance, and capacity limits, liquidity risk, and maturity matching, among others. As mentioned earlier, in SSIs, the levels of risk appetite, tolerance, and capacity for the risks assumed by the fund are commonly not defined through a risk appetite statement.

5.1 Recommended Structure and Interaction of Committees

5.1.1 Composition of the Investment Committee

An investment committee should be established, appointed by the governing body, and should include independent directors, which constitutes a good governance practice in investment management. It is also recommended that this committee include an external member who is not linked to the activities of the SSI through employment or the provision of other services to the institution, in order to provide a more independent perspective in investment decisions.

In addition, individuals involved in the execution of the investment policy, those responsible for the compliance function, and those belonging to the risk area should not participate with voting rights in the investment committee, in order to avoid potential conflicts of interest. In this regard, it is advisable for the head of the investment area to participate as a member with voice but without voting rights.

Members of the investment committee must have extensive experience and knowledge in economic, financial, and capital market matters. If the fund invests in foreign markets, at least one member must have experience or knowledge of those markets, which should be properly documented and verified.

5.1.2 Composition of the Risk Committee

It is considered an international best practice to have a risk committee specifically dedicated to the pension fund, appointed by the SSI governing body. As with the investment committee, it should include at least one independent external member with no employment or contractual ties to the SSI. No member of the investment committee should serve as a member of the risk committee, meaning that individuals who have voting rights in the investment committee should not participate with voting rights in the risk committee, nor should those involved in executing the investment policy or in valuing the fund's risks. These individuals may participate with voice but without voting rights. The presence of external members on both committees strengthens the independence and objectivity of decisions, avoids conflicts of interest, and ensures that senior management does not interfere in technical decision-making.

Members of the risk committee must have demonstrable education and experience in economic, financial, risk management, accounting, legal, capital market, or pension matters, so that collectively they possess a balanced set of skills, competencies, and knowledge that allows them to analyze the financial and operational risks of the managed funds. The SSI governing body must verify that the members of the committee and of the risk area meet these requirements and must retain the corresponding documentation.

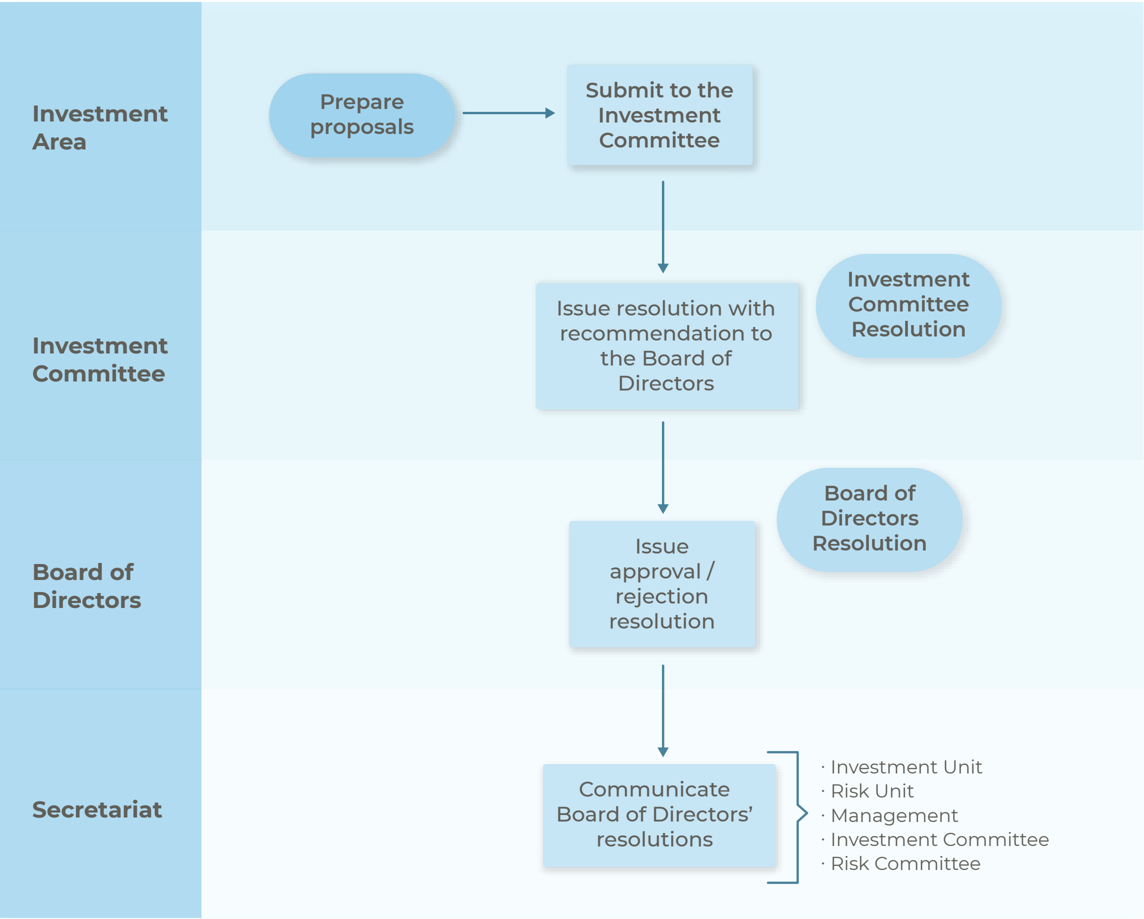
5.1.3 Interaction Between the Committees and Senior Management

As shown in Figure 2, the management of SSI fund investments requires the definition of two structures that are independent from one another: (i) the decision-making structure, composed of the board of directors or governing body, the risk committee, the investment committee, and general management, or senior management; and (ii) the operational structure, composed of the investment area, or Front Office; the risk area, or Middle Office; and the registration and settlement area, or Back Office).

For the funds to be properly managed, these two structures must interact frequently in both directions. On the one hand, the operational structure must provide the information necessary for decision-making. On the other hand, the governing body must communicate to the operational areas the decisions adopted based on the advice provided by the committees, so that operations are carried out in accordance with those decisions. Figures 2 and 3 present the action flows for the operation of the investment and risk valuation processes, showing the interaction among the different areas, committees, and the governing body.

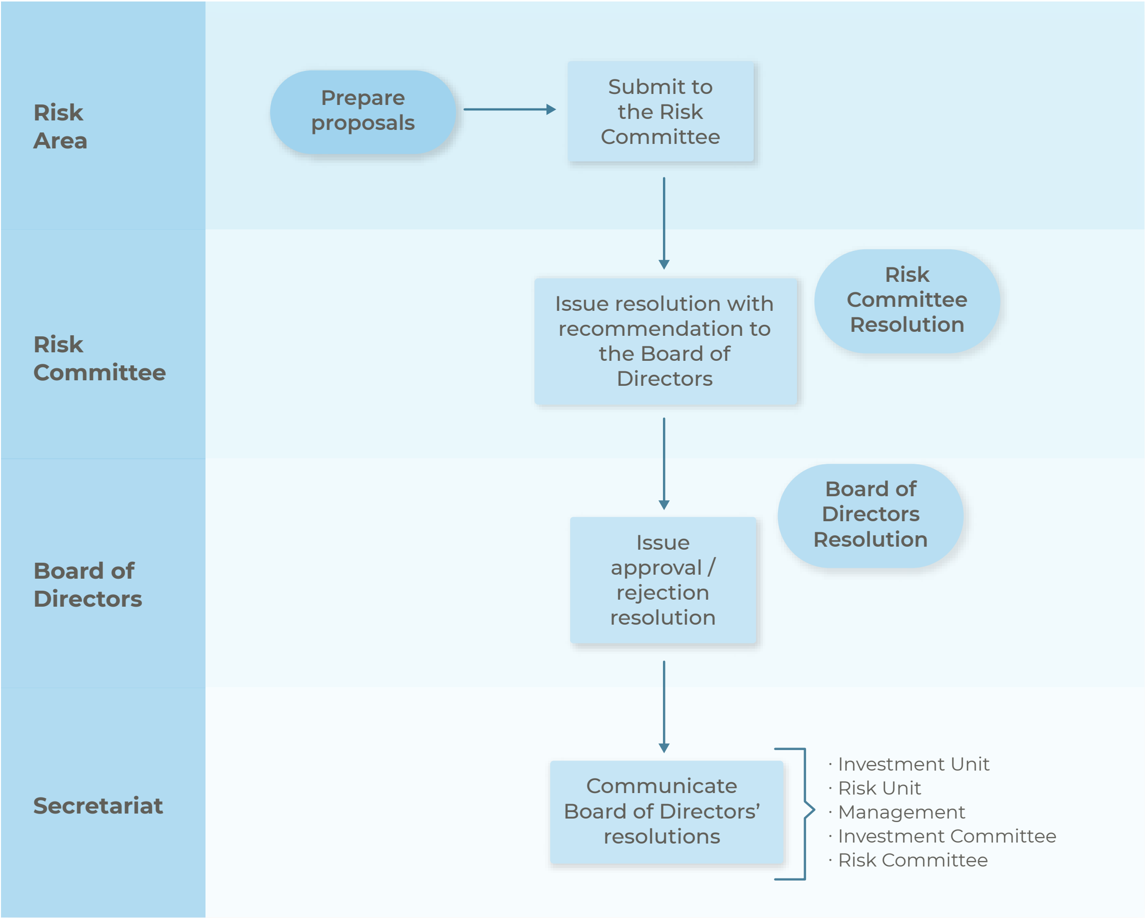
In addition, Boxes 2 and 3 present the proposals prepared by the investment area and the risk area.

Figure 2. Flowchart for the Establishment of Investment Policies and Guidelines



Fource: Authors' elaboration.

Figure 3. Flowchart for the Establishment of Investment Risk Policies and Guidelines



Source: Authors' elaboration.

Box 2

PROPOSALS UNDER THE RESPONSIBILITY OF THE INVESTMENT AREA
• Investment Plan / Strategic Asset Allocation • Investment Policy

Source: Authors' elaboration.

Box 3

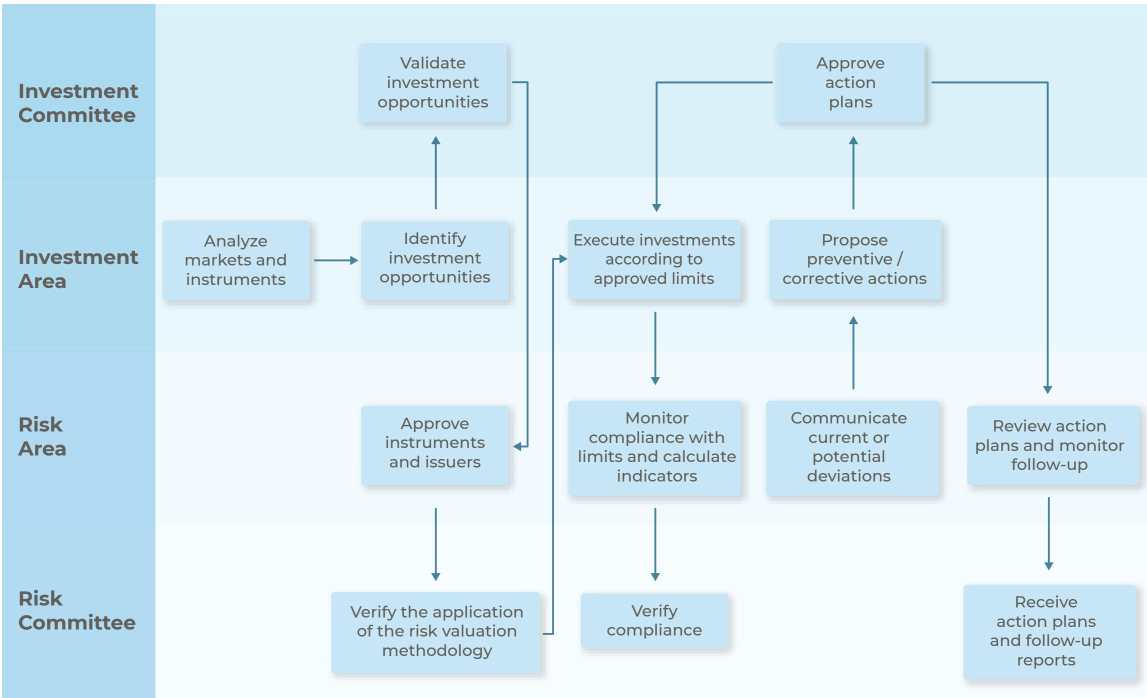
PROPOSALS UNDER THE RESPONSIBILITY OF THE RISK AREA
• Risk Policy • Risk Appetite Statement • Risk Management Framework (policies, procedures, methodologies) • Approval mechanisms required for deviations from the Investment Policy and Risk Appetite

Source: Authors' elaboration.

All resolutions of the governing body reflecting the approval or rejection of proposals issued by the investment area and the risk area must be communicated to the respective area, senior management, the investment committee, and the risk committee.

Once the framework for managing investments has been defined, the investment and risk areas, under the supervision of the committees, must execute the mandate assigned by the governing body. Figure 4 presents the flowchart for the execution of investment operations, showing the interaction among the investment area, the risk area, the investment committee, and the risk committee.

Figure 4. Flowchart of the Operational Investment Process



Source: Authors' elaboration.

As in the previous case, regarding decision-making flows, all decisions of both committees must be recorded in formal resolutions, detailing the committee members who vote in favor of and against the decisions. These resolutions must be communicated to all relevant parties, as appropriate, and to senior management. The resolutions must be recorded in the minutes of the corresponding meeting, including the details of all matters discussed and the comments made by each committee member.

In order to ensure that committee sessions are efficient and streamlined, the following practices should be considered:

- The area, whether risk or investment, prepares reports with detailed analyses of each item on the meeting agenda, including conclusions and recommendations.
- The area sends the reports to committee members at least two days in advance for review.
- The area prepares a presentation for each topic, summarizing the contents of the report and including a draft resolution.
- Committee members review the reports prior to the session.

- The area presents the summarized topics to the committee and clarifies any specific questions raised by members.
- Once the presentation is completed, the draft resolution is reviewed and the corresponding vote is held, which is recorded in the resolution.
- The secretariat sends copies of the resolutions to the areas indicated in the resolution.

5.2 Relationship Among the Investment, Risk, and Audit Areas: The Three Lines of Defense

The relationship among the investment, risk, and audit areas in financial institutions should be governed by the corporate governance principles for banks issued by the Basel Committee on Banking Supervision, according to which a risk governance framework includes clearly defined organizational responsibilities for risk management, commonly referred to as the "three lines of defense" (see Bank for International Settlements 2015, 10–12):

- The business line, broadly understood, which in the case of pensions refers to investments.
- A risk management and compliance function independent from the first line of defense.
- An internal audit function independent from the first and second lines of defense.

Although these principles were designed for banks, in practice they have also been applied to pension fund management organizations, as they constitute good practices for the management of administered funds. According to these principles, the structural details of the three lines of defense may vary depending on the nature and size of the entities, but the responsibilities of each must be clearly defined and communicated, as established in Figure 5.

To fulfill the assigned responsibilities, each line of defense requires a close relationship and communication with the other two. This relationship includes the timely and reliable provision of information from the business units and the risk area to internal audit, as well as between the business units and the risk area.

In the case of pension funds, the investment area, as the first line of defense, must implement appropriate internal controls to mitigate both operational and financial risks in its processes, as well as report any breaches or deviations, that is, the materialization of a risk, to the risk area for registration and follow-up. The risk area, as the second line of defense, must verify that the investment area complies with the risk appetite approved by the governing body and with internal controls, as well as with applicable regulations, whether these are the SSI's own regulations or those established by law.

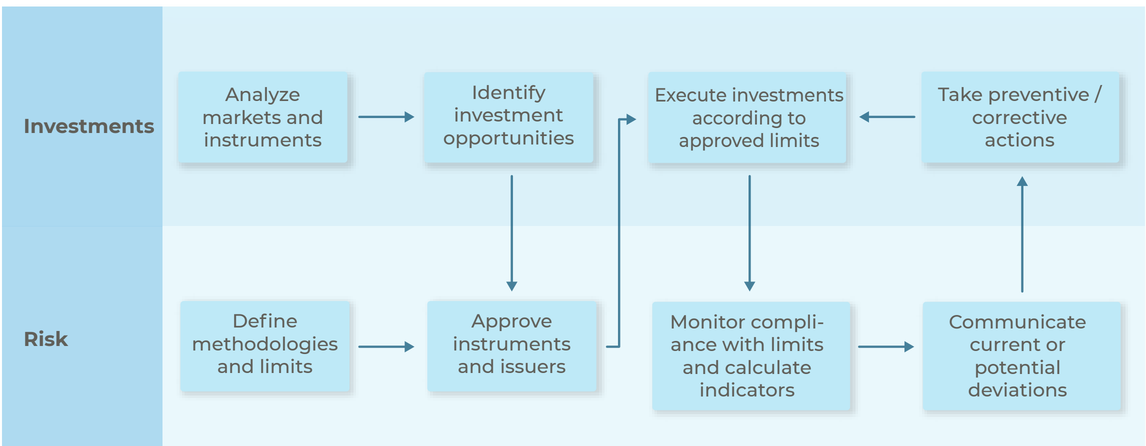
Figure 5. Responsibilities of the Lines of Defense

First Line of Defense **Business Units**	Assume risks and must manage them. Identify, assess, and report exposures in accordance with risk appetite, policies, procedures, and controls.
Second Line of Defense **Risk and Compliance**	Complement the risk activities of the business lines through monitoring and reporting. Oversee activities that involve risk-taking and evaluate them. Emphasize the role of Senior Management and business line heads in the identification and critical assessment of risks. Conduct routine monitoring of compliance with legislation, corporate governance standards, regulations, codes, and policies to which the fund is subject.
Third Line of Defense **Internal Audit**	Provide an independent and objective review of the quality and effectiveness of the internal control system, the first and second lines of defense, and the risk governance framework, including links to organizational culture, as well as strategic and business planning, remuneration, and decision-making processes. .

Source: Authors' elaboration.

For adequate risk management under the defined framework, the investment area and the risk area must maintain a close relationship and two-way communication. On the one hand, the investment area must provide the risk area with the results of movements carried out in the investment portfolios so that the risk area can verify compliance with limits and calculate financial risk indicators. On the other hand, the risk area must provide compliance reports and risk indicators to the investment area so that it can manage the portfolio according to the established limits and, if necessary, take preventive or corrective actions in response to potential deviations from or breaches of the risk appetite. The process flow that should exist between the areas is shown in Figure 6.

Figure 6. Process Flow



Source: Authors' elaboration.

In addition, as part of the process, the risk area must analyze the instruments and issuers proposed by the investment area to determine whether they meet the appropriate risk criteria to be included in the pension fund's investments. The risk manual must define these first two lines of defense required within the governance framework for risk management. The responsibilities assigned in the manual to the investment and risk areas must comply with the obligations defined for the lines of defense in the Corporate Governance Principles for Banks issued by the Basel Committee on Banking Supervision, as shown in Figure 5.

With respect to the third line of defense, the Basel Committee on Banking Supervision (Bank for International Settlements 2002) indicates that the internal audit function should independently evaluate:

- The effectiveness and efficiency of internal control, risk management, and governance in the context of current and potential future risks.
- The reliability, effectiveness, and integrity of management information systems and processes, including the relevance, accuracy, completeness, availability, confidentiality, and comprehensiveness of data.
- Oversight of compliance with laws and regulations.
- The safeguarding of assets.

The internal audit function of SSIs must include, within its annual audit plan, a review of the investment process, including the related activities carried out by the risk area. In addition, it should include other relevant processes, such as the affiliation process, verification of financial statements, granting of loans to affiliates, and other pension fund activities. In all cases, it verifies compliance with the regulations applicable to each process.

To carry out its functions, the internal audit function must have access to the necessary information generated by both the investment area and the risk area. As a result of the audits, findings reports are produced, and the progress of the audit plan, the findings, and the status of management's response are presented quarterly to the audit committee. As with the first and second lines of defense, the tasks performed by SSI internal audit must comply with the responsibilities defined for the third line of defense in the Corporate Governance Principles for Banks issued by the Basel Committee on Banking Supervision.

In summary, the necessary processes must be established to ensure a direct and collaborative relationship among the investment area, the risk area, and internal audit, so that the investment process for the administered funds is carried out in compliance with applicable regulations and laws.

6 International Standards on Pension Fund Investment Management

International organizations such as the Organisation for Economic Co-operation and Development (OECD), the International Organisation of Pension Supervisors (IOPS), and the International Association of Pension Supervisors (AIOS) have defined standards and principles to improve the management of pension funds. For its part, the Inter-American Development Bank (IDB) has developed technical recommendations and studies that serve as references for strengthening the management of pension systems in the region (see IDB 2022).

For example, IOPS (2011) defined eight good practices for adequate risk management in pension funds. These good practices begin by defining appropriate mechanisms for pension funds to build an effective risk management system, developing an institutional framework that enables oversight and fosters a risk culture within pension fund management organizations. They include issues such as the control of funding and solvency risks in order to ensure the necessary flow of resources to meet the pension fund's liabilities.

In addition, with regard to investments, good practices extend to the control of investment risks, including market risk, as well as the control of operational and outsourcing risks. The guidelines also promote the development of mechanisms for monitoring and controlling the various risks to which pension funds are exposed, establishing transparency standards related to the flow of information, the reports that must be produced, and communication processes within institutions and with affiliates. Finally, the good practices emphasize the need for strong supervision and oversight of risk management systems for pension funds.

Strictly in relation to investment processes, this chapter lists the international standards that exist for pension fund investments. The definition of these principles and good practices is led by the OECD and, in general, the regulatory frameworks governing pension fund investments in most Latin American countries seek to follow these standards, taking into account the particularities of each jurisdiction.

The objective of pension fund investments is to generate the best possible return consistent with the liabilities and liquidity needs of the plan, in accordance with the risk appetite of the affected parties. The OECD (2006) defined five guidelines or good practices for the management of pension fund assets, which are described below.

These principles are very general, and the intention is for them to be adapted as much as possible to the legislation or regulations governing investments in the pension sector. The purpose of this framework is to establish a minimum standard of security so that pension funds can fulfill their founding mandate, regardless of whether the system is public or private.

6.1 Retirement Income Objective and Prudential Principles

The guideline indicates that the regulation of pension fund investments should be based on a target replacement rate and should ensure that investment management follows the prudential principles of security, return, and liquidity. To achieve this, risk management concepts such as diversification and asset–liability matching should be used.

Although this principle may seem to fit better with defined contribution schemes, it also applies to defined benefit schemes. In the latter, the replacement rate is defined based on salary history and the base monthly salary at the time the pension is granted, regardless of the return generated by the fund.

However, the replacement rate guarantee applies only to affiliates who have vested their right to a pension, and pension conditions could gradually deteriorate in the future. Convention 102 of the International Labour Organization (ILO) itself establishes that pension conditions are respected only for individuals who vest their rights within the 18 months following any parametric reform. In practice, reforms usually modify conditions progressively, but if return objectives are not safeguarded, future benefits will tend to deteriorate as longevity risk materializes. Likewise, pensions already in payment may see their purchasing power reduced if adjustments remain below the inflation rate.

6.2 The Prudent Person Standard

The prudent person standard establishes that investments must be made with care, expert knowledge, prudence, and due diligence. If these characteristics are lacking when investment decisions are made, external assistance from an expert should be sought.

In this regard, the governing body or board of directors of the pension fund and the parties involved in investment processes must exercise fiduciary duty over the funds entrusted to their management on behalf of members and beneficiaries. Therefore, the governing body must act in the best interests of members and beneficiaries in matters related to the investment activities of the pension fund's assets and must exercise due diligence in the investment process.

Laws and regulations must require the governing body of the pension fund to establish a rigorous process for carrying out investment activities, including the appropriate establishment of internal controls and procedures to effectively implement and monitor the investment management process.

6.3 Investment Policy

The good practice guideline indicates that the parties responsible for managing pension fund investments must establish a written investment policy that is consistently followed.

This policy must establish clear investment objectives that are consistent with the fund's target replacement rate, its liabilities, and an acceptable level of risk for the fund, the sponsor, and the beneficiaries. The approach to achieving these objectives must satisfy the prudent person standard, taking into account the need for adequate diversification, risk management, the maturity of liabilities, liquidity needs, and the legal constraints of the investment portfolio.

An investment policy is necessary for both defined benefit and defined contribution schemes. The key requirement is that this policy be clear and consistent with the objectives and nature of each pension scheme. In defined benefit schemes, the policy must reflect the relationship among actuarial projections, funding requirements, and investment management. In defined contribution schemes, by contrast, it must focus on ensuring adequate diversification and risk management to achieve sufficient and sustainable pensions for affiliates.

In both cases, these particularities must be adequately reflected in the investment policy. For example, the possibility of freely transferring between managers in individual capitalization systems requires investment accounting based on the market price of instruments; otherwise, a redistribution of balances among affiliates may occur, which does not happen in defined benefit systems. Nevertheless, mark-to-market valuation is essential in all investment portfolios, since without it, it is not possible to conduct sufficient risk analyses to measure and monitor all the risks involved.

The investment policy must include, at a minimum, the asset allocation strategy, including short- and long-term allocation and investment categories; target performance; monitoring mechanisms; actions to be taken in response to market changes; asset selection processes; and the execution of asset purchases and sales. All parties responsible for executing the investment policy must be identified.

In addition, the policy must indicate whether internal or external investment managers will be used, the scope of their activities and authority, and the processes through which they are selected and their performance evaluated. Procedures and criteria must also be established through which the oversight body and other responsible parties periodically review the effectiveness of the investments to determine whether changes to the investment policy are required.

6.4 Investment Limits

The guideline states that regulation may include maximum limits by investment category, provided that they are consistent with and promote the prudential principles of security, return, and liquidity. It may also include an approved list of assets recommended by or subject to approval by the regulator.

However, minimum investment limits for any investment category should not be prescribed, except on a temporary basis and for prudential reasons. In addition, investment limits that inhibit adequate diversification or proper asset–liability management should be avoided. Investments in related parties should be prohibited or limited, and investments abroad should not be prohibited.

6.5 Asset Valuation

The fifth principle of good practices for investing pension fund assets states that an appropriate and transparent methodology for asset valuation must be established. The methodology must be communicated to the governing body, to all parties involved in the investment process, and to members and beneficiaries.

Even when laws do not require mark-to-market or fair value valuation, it is advisable to present the results that would have been obtained under such a methodology. Special methodologies may be required to value illiquid assets, such as real estate or infrastructure funds. However, these methodologies should incorporate the inherent risk and liquidity premiums.

Some countries allow the use of special methods to smooth the value of certain assets over time in accordance with the actuarial context of the scheme and the funding requirements of defined benefit and defined contribution plans with guaranteed replacement rates. However, when these methods are used, regulators must ensure that they do not have significant effects on the final structure of the portfolio or on the performance of any specific type of investment. Because asset-smoothing techniques can have an important impact on actuarial and funding projections, regulators that allow them must understand all potential effects. In addition, smoothing the value of assets may be unnecessary if funding requirements for actuarial gains and losses can be spread over time.

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