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# Why Is the Number of IDB Projects with Extensions beyond 24 Months Increasing? Should We Be Concerned?

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## Abstract<sup>6</sup>

The stock of IDB-supported projects with extensions longer than 24 months is increasing. This is creating concerns about mounting costs for both the Bank and the borrower country as well as unnecessary risks to achievement of the project objectives. The stock and flow inventory model used in this paper shows that an increase in the number of new projects with extensions and a decrease in the rate at which extended projects are closed are behind this new trend. The paper also presents an econometric model to estimate the likelihood that a project is extended by 24+ months. The model was able to correctly classify 67 percent of a sample of 418 completed investment projects between 2010 and 2017 as being with or without extensions. The results suggest that country effects as well as the time between project approval and first disbursement could explain the likelihood of a project having a 24+ month extension.

**JEL classification:** C2, C5, O22

**Keywords:** Microeconometrics, Project Analysis, Goodness of Fit

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## Key Takeaways

1. The number of IDB projects with extensions of 24+ months is increasing.
2. This is a critical issue because the average undisbursed balance when a project was extended for more than 24 months fluctuated between 27 and 45 percent from 2010 to 2017. This generated unforeseen supervision costs for the IDB and, most importantly, delayed meeting the projects' objectives.
3. The stock and flow inventory model presented in this paper shows that the increasing number of projects with extensions is the result of a rising number of new projects with extensions and a decline in the number of closed extended projects.
4. The above finding suggests that new projects are becoming more likely to have an extension, and that it takes longer to close projects once they are extended.
5. While there is heterogeneity across IDB sector departments, the rate at which new projects are being extended seems correlated with the size of those departments, as measured by their share of the total IDB loan portfolio.
6. The econometric model presented in this paper can correctly classify 67 percent of the total number of projects as being with or without extensions.
7. The econometric model identifies the following factors that affect the likelihood of an extension:
  - a. The longer the elapsed time between project approval and the first disbursement, the more likely that the project will have a 24+ month extension.
  - b. There are country effects that make projects more likely to have a 24+ month extension.
  - c. There are no differences in the probability of a 24+ month extension between IDB sector departments.
  - d. There are no differences in the probability of a project extension between investment loan instruments.
  - e. Whether or not a project is within a Conditional Credit Line for Investment Projects (CCLIP) makes no difference in the probability of a 24+ month extension for the Specific Investment Operation (ESP) lending modality.

## Introduction

Extensions increase project completion time significantly. Using a sample of 535 sovereign-guaranteed (SG) IDB investment projects that were completed between 2010 and 2017, this paper finds that the average execution time from approval to operational closing for 126 projects without extensions was 4.4 years. Execution time increased to 6.1 years for 193 projects with extensions of up to 24 months, and it increased further to 8.2 years for 216 projects with extensions of more than 24 months.

Extensions are costly. Supervision costs for projects up to the original disbursement expiration date are homogeneously distributed around US\$300,000 per project, regardless of whether they are subsequently extended. However, once extended, supervision costs per project differ significantly: the average marginal cost of extensions per project is US\$60,000 for projects with extensions of less than 24 months and US\$180,000 for projects with extensions of 24 months or more.

Since 2013, the number of projects with final disbursement extensions over 24 months has been increasing. This new trend is the opposite of what had been happening in the period between 2005 and 2012, when the IDB achieved constant reductions in such extensions (Figure 1).

The undisbursed balance for extended projects is significant. From 2010 to 2017, the undisbursed balance from projects when first extended over 24 months ranged from 27 to 45 percent of the original amount approved. Table 1 presents the descriptive statistics of this ratio for projects entering the group of projects with extensions of 24+ months. At the project level, higher undisbursed balances suggest that the project's execution and objectives are delayed, at best.

A closer look at the group of extended projects identifies the following stylized facts:

- **On average, the median age of projects (number of months from approval date to extension date) that enter the group of 24+ month extension projects is six years.** Table 2 shows the descriptive statistics for the distribution of this variable, and shows that its median and mean do not vary much across time.
- **The median time elapsed between approval and first eligibility for projects with extensions over 24 months is between 12 and 14 months.** The mean and median of this variable also fluctuates within a limited range. Table 3 presents the descriptive statistics related to this variable by year.

- **The complexity of a project proxied by its Environmental Safeguard Classification (ESG)<sup>7</sup> does not seem to be a key factor in explaining the number of projects extended for 24+ months.** Figure 2 presents the frequency of new 24+ month extended projects according to their environmental classification. The sample is characterized by only a small number of projects in environmental category “A” (Significant Negative Environmental and/or Social Impact Likely”). Hence, 24+ month extended projects are not more environmentally complex, as measured by their ESG rating.
- **Specific Investment Operations (ESG) constitute most of the group of 24+ month extended projects.** This could be the natural consequence of the fact that this modality is the most predominant investment loan. In other words, if the probability of having a 24+ month extension is purely random, one would expect that the main loan modality in the active portfolio would also be the most predominant in the group of extended projects. Figure 3 presents the distribution of projects with 24+ months extensions by loan modality or subtype by year.

## A Stock and Flow Inventory Model

A stock and flow inventory model is useful to analyze the dynamics of the number of projects with extensions longer than 24 months. This model decomposes the stock of extended projects as a result of the entrance of new extended projects and the exit (closed) of old ones. For this purpose, the annual growth rate of the number of extended projects is decomposed into entry and exit rates as follows:

$$S_t = S_{t-1} + E_t - X_t, \quad (1)$$

where  $S_t$  is the stock of projects with extensions longer than 24 months,  $E_t$  is the number of projects with an extension by the end of  $t$  that had no extensions by the end of  $t-1$  (entrants), and  $X_t$  is the group of projects with extensions as of  $t-1$ , but that are not in this group by the end of  $t$  (exits). Equation (1) can be divided by  $S_{t-1}$  on both sides and the terms rearranged such that:

$$\hat{S}_t = e_t - x_t, \quad (2)$$

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<sup>7</sup> The IDB classifies projects according to their environmental risks using a scale from A to C, where C is the lowest possible risk.

where  $e_t = \frac{E_t}{S_{t-1}}$  is the entry rate and  $x_t = \frac{X_t}{S_{t-1}}$  is the exit rate. Equation 2 shows that the annual growth rate of the number of projects with extensions at the end of  $t$ ,  $\widehat{S}_t$  is the difference between the entry ( $e_t$ ) and exit rates ( $x_t$ ). This difference is also called the net entry rate. This decomposition helps to understand whether the increase in the number of projects with extensions is the result of a higher entry rate or a decrease in the exit rate, or both. Table 4 presents the observed information for the equation 1 variables, entry rates, exit rates, net rates and percentage variations.

The increasing number of projects with extensions since 2013 is the result of a higher entry rate and a lower exit rate. During the period from 2013 to 2017, the entry rate of extended projects jumped to 40 percent, higher than rates observed in previous years. On the other hand, the number of projects with extensions longer than 24 months that were closed (also known as exits), decreased in comparison to previous years, reducing exit rates to 30 percent after 2014. Therefore, both entry and exit rates are at play in explaining the rise of projects with extensions over 24 months (Figure 4).

Entry and exit rates seem proportional to the size of the portfolios of IDB sector departments. As shown in Figures 5 and 6, the Institutions for Development Sector Department (IFD) and the Infrastructure and Energy Sector Department (INE) have the highest entry and exit rates.<sup>8</sup> To understand if those results might be co-related to the relative size of each sector (i.e., bigger sectors have higher entry or exit rates), Figures 7 and 8 plot the relationship between the entry and exit rates with the sector department's portfolio share. Both figures show that bigger sectors have higher entry and exit rates, although there are no significant differences between the IFD and INE entry and exit rates.<sup>9</sup> This relationship could be explained by the law of large numbers. If the probability that a project has a 24-month extension is purely random, then it is expected that sector departments with a bigger share of the total number of IDB projects would have more extended projects.

There are apparently no clear patterns regarding the role of IDB sector departments in net entry rates. The contribution of IDB sector departments to the net entry growth rate of extended projects

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<sup>8</sup> It is worth mentioning that the Climate Change and Sustainable Development Sector Department (CSD) started operations in 2016 and had significantly growing entry rates in 2016 and 2017.

<sup>9</sup> Tables 8 and 9 present results for means  $t$ -tests for the entry and exit rates performed between each sector department. The results show that there is no significant difference between INE and IFD for both entry and exit rates. For the exit rate comparison, all other tests showed significant differences between other combinations of groups for a 5 percent of significance level. For the entry rates, except the comparisons between INE and IFD and the Institutions for Development Sector (IFD) and Social Sector (SCL) Departments, all other comparisons are significant at 10 percent. No tests were conducted for CSD because of the small number of observations.



is changing over time (Figure 9). Two facts are worth highlighting. First, before 2013 most of the sector departments were contributing to reducing the overall number projects with extensions. Second, although the IFD had positive net entries in 2014 and 2015, this sector department had negative net entry rates during 2013, 2016, and 2017, pushing down the IDB's overall net entry rate. Tables 6, 7 and 8 present the entry, exit and net entry rates for the group of projects with 24+ months extensions by sector and year.

### **An Econometric Model to Explain the Determinants of Projects with Extensions Longer than 24 Months**

So far, it has been shown that the entry and exit rates of extended projects might be associated with time and sectors. But execution issues that push an operation to be extended for more than 24 months could also be the result of country-specific conditions such as local execution capacity, legislative approval for loan projects to proceed with the first disbursement, or other factors. It is also important to assess whether additional information about a project at an early execution stage could help to predict the likelihood that the project will be extended for more than 24 months.

To analyze this issue in a more formal way, this section presents an econometric model in which the probability of extending a project for more than 24 months is a function of country and sector effects. This estimation allows for jointly controlling for factors that may systematically make certain projects more likely to have a 24-month extension.

Besides project characteristics, it is interesting to use the number of months elapsed between project approval and the first disbursement as an additional explanatory variable in order to check if this variable can provide an “early warning indication” of the likelihood that a project will be extended for more than 24 months in the future.<sup>10</sup> The model also includes a quadratic term of this variable to control for possible additional nonlinearities. Finally, a set of year dummy variables is included to control for the year in which the project was closed. The equation to estimate is:

$$y_i = f(\beta_1 mile3yr_i + \beta_2 mile3yrSQ_i + country'_i \delta + sector'_i \gamma + year'_i \varphi + \epsilon_i), \quad (3)$$

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<sup>10</sup> The IDB already tracks this time in the Progress Monitoring Report and classifies projects in three categories (problem, alert, and satisfactory) if the time exceeds country-specific thresholds when projects are in this stage phase (stage 1).

where  $y_i$  is a binary variable equal to 1 if the project has a 24-month extension and zero otherwise;  $mile3yr$  is the time in years between the approval date and the first disbursement; and  $mile3yrSQ$  is its square;  $country$  and  $sector$  are vectors of dummy variables that are equal to 1 for the country/sector related to the project and zero otherwise;  $year$  is a vector of dummy variables equal to 1 for the year in which the project is administratively closed; and  $\epsilon_i$  is the random disturbance term.

Equation (3) is estimated with both logit and probit models plus a linear probability model as a reference.

## Data

For the econometric exercise, the original sample of 535 projects is modified. Regional operations (two observations) are dropped, while observations for projects with investment instruments that are currently valid are retained. These include Specific Investment Operations (ESP), Global Credit Programs (GCR), Global Multiple Works Operations (GOM), Multiphase Operations (PFM), and Technical Cooperation Loans (TCR). One cannot estimate the coefficients for the country effects if there is not enough variation in the dependent variable,<sup>11</sup> so observations for Belize (seven observations), Mexico (34 observations), and Trinidad and Tobago (5 observations) are dropped.

The sample for this exercise is then the set of 418 completed investment projects. Among this group, 178 projects had an extension of more than 24 months. Table 10 shows the descriptive statistics for the different variables in the sample.

## Results

Table 11 reports the estimation results for the marginal effects evaluated at means. Columns 2-4 report results for the baseline specification. The results suggest that the effect of the time elapsed between project approval and the first disbursement is significant and similar for all three models. The logit and probit models indicate that the probability of having a 24+ month extension increases by 0.12 points if there is no disbursement in the first year. As a reference, the linear probability model estimates similar magnitudes. The estimation also suggests that there indeed might be some country effects that are increasing the probability that a project is extended more than 24 months: Argentina (+0.44), Brazil (+0.21), Costa Rica (+0.41), Jamaica (+0.52), Peru (+0.25), and

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<sup>11</sup> Belize and Mexico do not have projects with 24+ month extensions and Trinidad and Tobago only has one project in this category.

Uruguay (+0.32) increase the probability of an extension over 24 months.<sup>12</sup> There are no significant effects regarding IDB sector departments.<sup>13</sup>

It is possible that some sovereign-guaranteed investment loans are more likely than other loans to have an extension, and the results reported above could be affected, as countries/sectors may use these instruments with different intensity. To tackle this issue, the baseline specification is expanded with instrument-specific dummies.<sup>14</sup> Columns 5-7 in Table 11 present the results. There are no significant differences between the loan instruments regarding extension probabilities.<sup>15</sup> The results from the baseline estimation remain roughly unchanged, except for the country effect for Peru, which loses statistical significance.

As a next step, the sample is narrowed to just ESP projects, as they correspond to 78 percent of the estimation sample. This exercise allows for a heterogeneous effect of this loan modality not only in the intercept as done previously, but also on the coefficients of each explanatory variable. Columns 8-10 in Table 11 present the results, and there are some changes compared to the baseline estimation regarding country effects: Brazil and Costa Rica lose statistical significance, but Peru (+0.32) and Panama (+0.27) become statistically significant.

Finally, a test is conducted to determine whether being part of Conditional Credit Line for Investment Projects (CCLIP) reduces the likelihood of an extension of 24+ months for ESP projects. Investment projects that are part of a CCLIP are expected to be executed in a timely manner because of the conditions of the credit line. For this purpose, the last panel repeats the estimation for ESP but includes the dummy variable *CCLIP*, which is equal to one if the ESP loan is part of a CCLIP approach. Columns 11-13 present the results, which show that although being part of a CCLIP reduces the probability of a 24+ month extension, the coefficient is not statistically different from zero.

### **Goodness of Fit**

To evaluate the accuracy of the estimated models, it is necessary to analyze their capacity to correctly classify projects as having or not having 24 month extensions within the sample. In general, the accuracy of the logit and probit model is similar, but the model improves its accuracy as the sample specification narrows. Table 12 displays the data to evaluate the models' precision.

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<sup>12</sup> Ecuador is the omitted country and the reference level to compare the country effects.

<sup>13</sup> SCL is the omitted category and the reference level to compare the sector effects.

<sup>14</sup> The sample only uses investment instruments that are currently valid: ESP, GCR, GOM, PFM, and TCR operations.

<sup>15</sup> ESP is the reference level for the instrument effects.

The baseline specification and the model with loan-instrument-specific effects can correctly classify 67 percent of projects in the sample. The model for ESP projects correctly classifies 70 percent of the projects within the sample.

### **Application: Using the Model to Assess a Project's Extension Risk**

This section presents an application of the econometric model in order to determine, for example, the likelihood that a project approved in a given country will have an extension of the last disbursement beyond 24 months if the first project disbursement has not been made up to one year after the project's approval.

The logit model in the baseline specification is used to answer this question and to compute the average adjusted extension probability for each country, evaluating all covariates at their mean values except for *mile3yr*, which is equal to 0 (at approval), and the relevant country effect, which is equal to 1. The exercise is repeated twice, changing *mile3yr* to 0.5 and to 1 in order to estimate the average adjusted probability of a 24+ month extension if the first project has not been made six months and one year after approval, respectively. The difference between these probabilities is then computed in order to estimate the marginal effect of a six-month delay in the first disbursement for each country. Figure 10 presents the results for this exercise. Projects approved for Jamaica have the highest probability of a 24+ month extension (84 percent) if there is no disbursement during the first year, while Dominican Republic is the country with the lowest probability (15 percent). The median country has a baseline probability of 17 percent of a project extension of 24 months or more. This probability increases to 34 percent if there is no disbursement one year after approval.

This exercise also reveals that there is a group of projects in countries for which the probability of having a 24+ month extension could statistically be greater than 50 percent at approval (Figure 11). These projects are executed in Argentina, Barbados, Bahamas, Costa Rica, Guyana, Haiti, Jamaica, Peru, and Uruguay.<sup>16</sup> Given the higher risk of extension at approval, it could be useful for the IDB to step up any mitigating actions during project formulation to prevent costly extensions later.

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<sup>16</sup> Nevertheless, these estimates may not be significant for The Bahamas, Barbados, Costa Rica, and Guyana, as one cannot reject the hypothesis that the marginal effect is zero. However, given the dispersion of the estimate, it is recommended that the positive risk be considered as a factor to analyze during project preparation.

## **Final Remarks and Future Work**

The group of IDB projects with at least a 24 month extension is expanding. The extension of projects is costly. Therefore, understanding the factors that at an early stage predict whether a project will have such an extension is important. The estimation results show that indeed there are some predetermined features in projects that make them systematically more likely to have an extension. These include the execution capacity within the country (captured by country effects) and the complexity of projects (captured by sector effects). However, there remain some 30 percent of projects with extensions that the model cannot capture.

This unexplained fraction might decrease – and the explanatory power of the model might increase – if measures were put in place to control for project attributes related to the design phase that could provide additional information on the likelihood of a 24+ month extension. A key finding of this paper is that the IDB should undertake efforts to identify systematic evidence before a project's approval date that could help to explain why some projects are extended for too long, and then put in place relevant measures during project formulation to prevent those costly extensions later. The IDB is working on this ongoing task.

**Table 1: Descriptive Statistics of Projects' Undisbursed Balance as a Share of the Original Number of Approved Projects Entering the Group of Projects with 24+ Months of Extension (percent)**

	2010	2011	2012	2013	2014	2015	2016	2017
Median	16.9%	40.2%	30.3%	22.7%	26.0%	28.3%	23.2%	24.9%
Mean	28.2%	45.1%	35.7%	29.8%	30.3%	33.3%	26.7%	27.8%
Std. Dev.	26.3%	27.8%	25.9%	28.2%	23.7%	25.3%	24.3%	24.9%
Min	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Max	90.8%	96.7%	93.3%	100.0%	84.0%	90.9%	81.2%	87.8%
N	33	20	32	33	33	41	28	43

**Table 2: Age at Entry (Approval Date to Entry Date) of All Projects with 24+ Month Extension (months)**

	2010	2011	2012	2013	2014	2015	2016	2017
Median	72.5	67.0	71.8	72.5	71.8	72.1	72.8	73.1
Mean	72.0	65.1	74.4	74.0	73.0	70.1	74.7	73.5
Std. Dev.	18.4	14.6	25.4	16.3	25.3	16.2	19.7	16.9
Min	23.5	24.5	29.3	38.1	28.7	38.9	38.9	35.6
Max	116.8	87.3	158.8	111.3	132.8	107.7	122.5	139.1
N	33	20	32	33	33	41	28	43

**Table 3: Time Elapsed between Approval and First Eligibility Dates for Projects Entering the Group of Projects with +24 Months of Extension (months)**

	2010	2011	2012	2013	2014	2015	2016	2017
Median	12.1	13.5	13.9	15.0	13.0	13.1	14.4	14.3
Mean	13.8	17.7	17.5	18.9	16.7	16.0	15.4	19.8
Std. Dev.	6.2	13.0	11.81	15.0	11.9	10.0	8.0	15.3
Min	3.2	2.8	2.3	2.2	2.6	2.0	3.8	3.3
Max	30.6	45.0	58.0	66.5	56.2	56.6	39.2	83.2
N	33	20	32	33	33	41	28	43

**Table 4: Data Description**

Year	$S_t$	$S_{t-1}$	$E_t$	$X_t$	$S_t \Delta \%$	$S_{t-1} \Delta \%$	$E_t \Delta \%$	$X_t \Delta \%$	Entry Rate	Exit Rate	Net Rate
2009	138	.	.	.	.	.	.	.	.	.	.
2010	116	138	33	55	-15.9%	.	.	.	23.9%	39.9%	-15.9%
2011	94	116	20	42	-19.0%	-15.9%	-39.4%	-23.6%	17.2%	36.2%	-19.0%
2012	81	94	33	46	-13.8%	-19.0%	65.0%	9.5%	35.1%	48.9%	-13.8%
2013	84	81	34	31	3.7%	-13.8%	3.0%	-32.6%	42.0%	38.3%	3.7%
2014	93	84	34	25	10.7%	3.7%	0.0%	-19.4%	40.5%	29.8%	10.7%
2015	110	93	41	24	18.3%	10.7%	20.6%	-4.0%	44.1%	25.8%	18.3%
2016	107	110	29	32	-2.7%	18.3%	-29.3%	33.3%	26.4%	29.1%	-2.7%
2017	121	107	43	29	13.1%	-2.7%	48.3%	-9.4%	40.2%	27.1%	13.1%

**Table 5: Entry Rate into the Set of Projects with 24+ Months Extensions by Sector Department and Year (percent)**

	2010	2011	2012	2013	2014	2015	2016	2017
CSD							3.6%	11.2%
IFD	8.7%	8.6%	11.7%	16.0%	19.0%	12.9%	5.5%	5.6%
INE	9.4%	6.0%	17.0%	21.0%	13.1%	24.7%	10.0%	16.8%
INT	2.2%	0.9%	0.0%	1.2%	0.0%	2.2%	1.8%	0.9%
SCL	3.6%	1.7%	6.4%	3.7%	8.3%	4.3%	5.5%	5.6%
Total	23.9%	17.2%	35.1%	42.0%	40.5%	44.1%	26.4%	40.2%

Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Table 6: Exit Rate from the Set of Projects with 24+ Months Extensions by Sector Department and Year (percent)**

	2010	2011	2012	2013	2014	2015	2016	2017
CSD							0.0%	1.9%
IFD	15.9%	8.6%	17.0%	23.5%	11.9%	8.6%	15.5%	8.4%
INE	17.4%	18.1%	19.1%	11.1%	11.9%	15.1%	9.1%	11.2%
INT	0.0%	1.7%	2.1%	0.0%	1.2%	1.1%	0.0%	1.9%
SCL	6.5%	7.8%	10.6%	3.7%	4.8%	1.1%	4.5%	3.7%
Total	39.9%	36.2%	48.9%	38.3%	29.8%	25.8%	29.1%	27.1%

Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Table 7: Net Entry Rate of the Set of Projects with 24+ Months Extensions by Sector Department and Year (percent)**

	2010	2011	2012	2013	2014	2015	2016	2017
CSD							3.6%	9.3%
IFD	-7.2%	0.0%	-5.3%	-7.4%	7.1%	4.3%	-10.0%	-2.8%
INE	-8.0%	-12.1%	-2.1%	9.9%	1.2%	9.7%	0.9%	5.6%
INT	2.2%	-0.9%	-2.1%	1.2%	-1.2%	1.1%	1.8%	-0.9%
SCL	-2.9%	-6.0%	-4.3%	0.0%	3.6%	3.2%	0.9%	1.9%
Total	-15.9%	-19.0%	-13.8%	3.7%	10.7%	18.3%	-2.7%	13.1%

**Table 8: Entry Rate into the Set of Projects with 24+ Months Extensions t-test between Sector Departments**

	INE	IFD	SCL	INT
INE	-	0.586	0.0468	0.0085
IFD	-	-	0.1461	0.0245
SCL	-	-	-	0.0602
INT	-	-	-	-

Note: The values presented are the significance level ( $Pr(|T| > |t|)$ ) for each test. IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Table 9: Exit Rate from the Set of Projects with 24+ Months Extensions t-test between Sector Departments**

	INE	IFD	SCL	INT
INE	-	0.443	0.0242	0.0061
IFD	-	-	0.0121	0.0001
SCL	-	-	-	0.0404
INT	-	-	-	-

Note: The values shown are the  $P$  values for each test. IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.



**Table 10: Descriptive Statistics: Estimation Sample**

Dependent Variable		Freq.	Variable	
			mile3yr	
No extension >24 months		240	Obs	418
Extended >24 months		178	Mean	1.24
<b>Total</b>		418	Std. dev.	0.84
			Min	0.02
			Max	6.09

Country	No extension >24 months	Extended >24 months	Total Freq.	Department	No extension >24 months	Extended >24 months	Total Freq.	Modality	No extension >24 months	Extended >24 months	Total Freq.
BA	4	2	6	IFD	64	63	127	GCR	7	4	11
BH	2	1	3	INE	113	76	189	GOM	14	12	26
BO	19	8	27	INT	4	4	8	PFM	26	18	44
BR	27	30	57	SCL	46	28	74	TCR	3	6	9
CH	7	3	10								
CO	17	10	27								
CR	2	3	5								
DR	13	3	16								
EC	16	5	21								
ES	5	1	6								
GU	3	5	8								
GY	8	4	12								
HA	8	7	15								
HO	19	12	31								
JA	3	7	10								
NI	22	10	32								
PE	7	11	18								
PN	16	11	27								
PR	8	5	13								
SU	8	2	10								
UR	9	12	21								
VE	6	4	10								
<b>Total</b>	240	178	418	<b>Total</b>	240	178	418	<b>Total</b>	240	178	418

Note: Sector departments: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector. Modalities: ESP: Specific Investment Operations; GCR: Global Credit Programs; GOM: Global Multiple Works Operations; PFM: Multiphase Operations; TCR: Technical Cooperation Loans.

**Table 11: Estimation Results, Marginal Effects**

Marginal Effects: Countries, Mile3yr and CCLIP

	Baseline			Modality			Specific Investment Loans			CCLIP		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit	OLS
mile3mth	0.1231*** (0.0420)	0.1256*** (0.0416)	0.1204*** (0.0436)	0.1226*** (0.0415)	0.1255*** (0.0413)	0.1198*** (0.0438)	0.1197** (0.0480)	0.1226*** (0.0471)	0.1160** (0.0514)	0.1195** (0.0479)	0.1220*** (0.0469)	0.1156** (0.0514)
cclip										-0.0497 (0.0881)	-0.0477 (0.0858)	-0.0406 (0.0969)
<b>Country</b>												
AR	0.4389*** (0.1219)	0.4412*** (0.1190)	0.4493*** (0.1267)	0.4311*** (0.1231)	0.4357*** (0.1195)	0.4428*** (0.1277)	0.4006*** (0.1333)	0.4066*** (0.1311)	0.4037*** (0.1407)	0.4131*** (0.1338)	0.4183*** (0.1318)	0.4138*** (0.1425)
BA	0.1309 (0.1918)	0.1226 (0.1949)	0.1191 (0.1929)	0.1262 (0.1936)	0.1189 (0.1961)	0.1115 (0.1972)	0.177 (0.2019)	0.1737 (0.2095)	0.1694 (0.2177)	0.1724 (0.2006)	0.1695 (0.2084)	0.1683 (0.2182)
BH	0.0394 (0.3674)	0.071 (0.3233)	0.0348 (0.3866)	0.0305 (0.3421)	0.0519 (0.3072)	0.0181 (0.3717)						
BL												
BO	0.031 (0.1292)	0.027 (0.1256)	0.028 (0.1272)	0.0108 (0.1288)	0.0091 (0.1252)	0.0071 (0.1279)	0.0063 (0.1442)	0.009 (0.1407)	0.0026 (0.1448)	0.0064 (0.1428)	0.0091 (0.1395)	0.0032 (0.1454)
BR	0.2060* (0.1221)	0.2030* (0.1177)	0.2096* (0.1193)	0.2050* (0.1228)	0.2039* (0.1181)	0.2068* (0.1199)	0.1997 (0.1310)	0.1991 (0.1287)	0.2056 (0.1323)	0.2143 (0.1318)	0.2137 (0.1300)	0.2176 (0.1349)
CH	-0.0844 (0.1528)	-0.086 (0.1472)	-0.1258 (0.1911)	-0.0941 (0.1523)	-0.0938 (0.1466)	-0.1356 (0.1911)	-0.1218 (0.1621)	-0.1164 (0.1536)	-0.1708 (0.2075)	-0.1208 (0.1598)	-0.1154 (0.1517)	-0.1704 (0.2082)
CO	0.0907 (0.1397)	0.0969 (0.1345)	0.0923 (0.1381)	0.065 (0.1405)	0.0757 (0.1352)	0.0669 (0.1412)	0.0743 (0.1632)	0.0894 (0.1547)	0.08 (0.1652)	0.0901 (0.1662)	0.1034 (0.1573)	0.0935 (0.1694)
CR	0.4075 (0.2619)	0.4085* (0.2480)	0.4179 (0.2632)	0.4148 (0.2579)	0.4143* (0.2445)	0.4256 (0.2655)	0.4161 (0.2723)	0.416 (0.2560)	0.4361 (0.2766)	0.4368* (0.2575)	0.4383* (0.2471)	0.4553* (0.2741)
DR	-0.1037 (0.1288)	-0.1154 (0.1239)	-0.1061 (0.1306)	-0.1244 (0.1261)	-0.1341 (0.1214)	-0.1284 (0.1282)	-0.1817 (0.1435)	-0.1752 (0.1361)	-0.1849 (0.1515)	-0.1763 (0.1436)	-0.1697 (0.1364)	-0.1745 (0.1552)
EC												
ES	-0.0533 (0.2046)	-0.0513 (0.1947)	-0.0637 (0.1917)	-0.0823 (0.1912)	-0.0813 (0.1835)	-0.0925 (0.1881)						
GU	0.2679 (0.2312)	0.2762 (0.2139)	0.2764 (0.2184)	0.2702 (0.2342)	0.2793 (0.2153)	0.2737 (0.2228)	0.2803 (0.2297)	0.2921 (0.2197)	0.3037 (0.2425)	0.2818 (0.2302)	0.2946 (0.2197)	0.3074 (0.2438)
GY	0.0807 (0.1633)	0.0781 (0.1599)	0.0746 (0.1630)	0.0893 (0.1643)	0.0873 (0.1605)	0.0804 (0.1632)	0.0932 (0.1607)	0.0909 (0.1595)	0.0861 (0.1628)	0.0921 (0.1584)	0.0897 (0.1577)	0.0864 (0.1630)
HA	0.2497 (0.1632)	0.2497 (0.1591)	0.2397 (0.1701)	0.2483 (0.1618)	0.2493 (0.1583)	0.2388 (0.1697)	0.2177 (0.1786)	0.2245 (0.1703)	0.2035 (0.1839)	0.2203 (0.1780)	0.2281 (0.1698)	0.2071 (0.1842)
HO	0.0768 (0.1253)	0.0717 (0.1228)	0.0709 (0.1274)	0.075 (0.1255)	0.0709 (0.1228)	0.0698 (0.1276)	0.0296 (0.1315)	0.0268 (0.1289)	0.0192 (0.1365)	0.0323 (0.1305)	0.0299 (0.1281)	0.0225 (0.1372)
JA	0.5183*** (0.1387)	0.5273*** (0.1390)	0.5245*** (0.1635)	0.5109*** (0.1410)	0.5197*** (0.1411)	0.5194*** (0.1664)	0.5500*** (0.1430)	0.5659*** (0.1428)	0.5547*** (0.1723)	0.5473*** (0.1441)	0.5634*** (0.1439)	0.5520*** (0.1727)
ME												
NI	0.0052 (0.1215)	0.0001 (0.1184)	0.0021 (0.1202)	0.0021 (0.1233)	-0.0029 (0.1193)	-0.0015 (0.1214)	0.0322 (0.1289)	0.0313 (0.1275)	0.0346 (0.1296)	0.0335 (0.1278)	0.0327 (0.1266)	0.0364 (0.1302)
PE	0.2567* (0.1494)	0.2560* (0.1473)	0.2483* (0.1447)	0.2278 (0.1544)	0.2288 (0.1501)	0.2205 (0.1488)	0.3222* (0.1795)	0.3155* (0.1744)	0.3040* (0.1711)	0.3318* (0.1823)	0.3233* (0.1760)	0.3111* (0.1730)
PN	0.1611 (0.1357)	0.1664 (0.1324)	0.1579 (0.1346)	0.1395 (0.1396)	0.1473 (0.1346)	0.1356 (0.1380)	0.2668* (0.1516)	0.2741* (0.1494)	0.2656* (0.1579)	0.2663* (0.1507)	0.2739* (0.1487)	0.2668* (0.1583)
PR	-0.0013 (0.1619)	-0.0025 (0.1568)	-0.0124 (0.1863)	0.0162 (0.1614)	0.0136 (0.1583)	0.0069 (0.1821)	-0.0087 (0.1739)	-0.0081 (0.1765)	-0.0178 (0.2105)	-0.0088 (0.1724)	-0.0071 (0.1754)	-0.0171 (0.2119)
SU	-0.0085 (0.1578)	-0.0189 (0.1536)	0.002 (0.1382)	0.0007 (0.1610)	-0.0084 (0.1564)	0.01 (0.1391)	-0.0097 (0.1609)	-0.0122 (0.1567)	-0.0013 (0.1446)	-0.0109 (0.1588)	-0.0135 (0.1549)	-0.0026 (0.1453)
TT												
UR	0.3217** (0.1370)	0.3219** (0.1360)	0.3151** (0.1408)	0.3224** (0.1378)	0.3230** (0.1361)	0.3129** (0.1412)	0.2918** (0.1488)	0.2955** (0.1466)	0.2782* (0.1526)	0.3034** (0.1506)	0.3073** (0.1480)	0.2880* (0.1550)
VE	0.0732 (0.1822)	0.0717 (0.1770)	0.0697 (0.1867)	0.0716 (0.1854)	0.0723 (0.1787)	0.0687 (0.1895)	0.1137 (0.2012)	0.1109 (0.1929)	0.1108 (0.2021)	0.1088 (0.1993)	0.1072 (0.1913)	0.1097 (0.2026)

**Marginal Effects: Sector Departments and Financing Modalities**

	Baseline			Modality			Specific Investment Loans			CCLIP		
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit	OLS
<b>Department</b>												
CSD	0.0298 (0.1209)	0.0235 (0.1190)	0.0162 (0.1232)	0.0653 (0.1251)	0.0599 (0.1221)	0.0487 (0.1262)	-0.0791 (0.1415)	-0.0829 (0.1340)	-0.0898 (0.1392)	-0.0788 (0.1452)	-0.0798 (0.1355)	-0.0886 (0.1416)
IFD	0.0981 (0.0708)	0.097 (0.0691)	0.0872 (0.0735)	0.1079 (0.0719)	0.1059 (0.0700)	0.0977 (0.0756)	0.0983 (0.0816)	0.0939 (0.0795)	0.0826 (0.0855)	0.1042 (0.0806)	0.1003 (0.0789)	0.0855 (0.0847)
INE	-0.0004 (0.0672)	-0.0037 (0.0651)	-0.0106 (0.0704)	0.0073 (0.0685)	0.0047 (0.0671)	-0.0015 (0.0736)	-0.0218 (0.0780)	-0.0232 (0.0762)	-0.0358 (0.0844)	-0.0224 (0.0779)	-0.0232 (0.0761)	-0.0376 (0.0850)
INT	0.1662 (0.1452)	0.1657 (0.1517)	0.1615 (0.1593)	0.1842 (0.1445)	0.1836 (0.1509)	0.1807 (0.1608)	0.1683 (0.1492)	0.1683 (0.1551)	0.1629 (0.1684)	0.1587 (0.1514)	0.1593 (0.1569)	0.1545 (0.1702)
SCL												
<b>Modality</b>												
ESP				-0.0734 (0.1047)	-0.0681 (0.1001)	-0.062 (0.1080)						
GCR				-0.1669 (0.1774)	-0.1598 (0.1689)	-0.1597 (0.1988)						
GOM												
PFM				0.0011 (0.1249)	0.0049 (0.1209)	0.0087 (0.1291)						
TCR				0.1193 (0.1679)	0.1307 (0.1695)	0.1471 (0.1834)						
Observations	418	418	418	418	418	418	323	323	323	323	323	323
Log likelihood	-243	-243		-242	-241		-184	-184		-184	-184	

Note: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01. Standard errors in parenthesis.

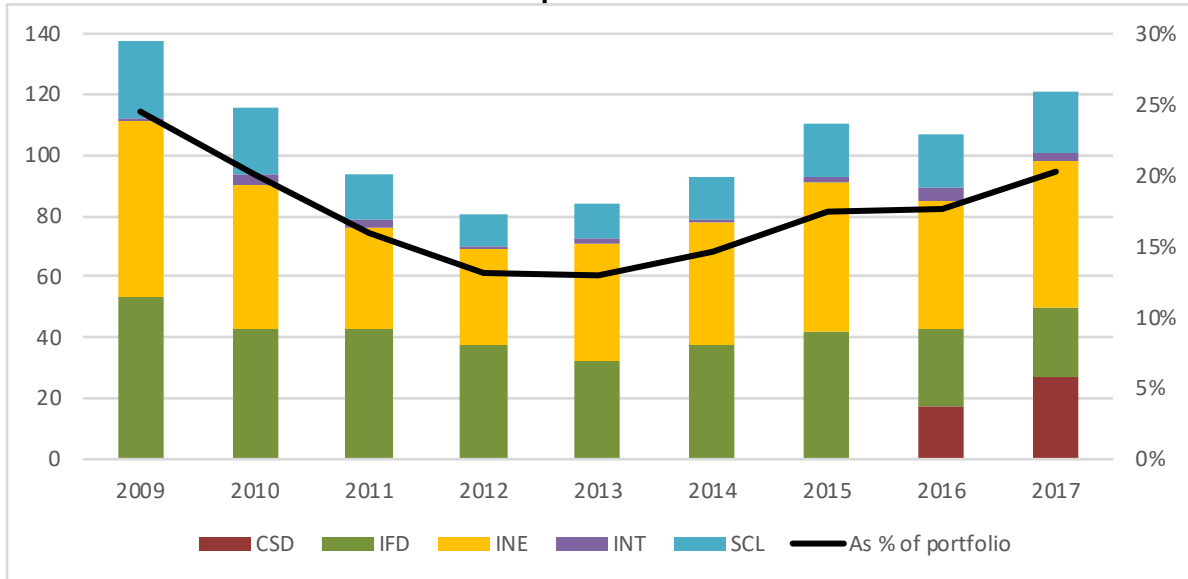
Note: Marginal effects evaluated at means. Ecuador (EC), Social Sector (SCL) and Multiple Works Programs (GOM) are the reference categories. Cells in blank correspond to coefficients that cannot be estimated because there is not enough variation in the dependent variable. \* p<0.10, \*\* p< 0.05, \*\*\* p<0.01. Standard errors in parentheses. CCLIP: Conditional Credit Line for Investment Projects; OLS: ordinary least squares. Sector departments: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector. Modalities: ESP: Specific Investment Operations; GCR: Global Credit Programs; GOM: Global Multiple Works Operations; PFM: Multiphase Operations; TCR: Technical Cooperation Loans.

**Table 12: Goodness of Fit**

	Logistics Model				Probit Model			
	Baseline	Modality	Specific Investment Loans	CCLIP	Baseline	Modality	Specific Investment Loans	CCLIP
Sensitivity	56.18%	55.06%	60.14%	60.14%	56.18%	55.06%	59.42%	60.14%
Specificity	75.00%	76.25%	77.84%	78.38%	75.00%	75.83%	76.22%	76.76%
Positive predictive value	62.50%	63.23%	66.94%	67.48%	62.50%	62.82%	65.08%	65.87%
Negative predictive value	69.77%	69.58%	72.36%	72.50%	69.77%	69.47%	71.57%	72.08%
Correctly classified	66.99%	67.22%	70.28%	70.59%	66.99%	66.99%	69.04%	69.66%

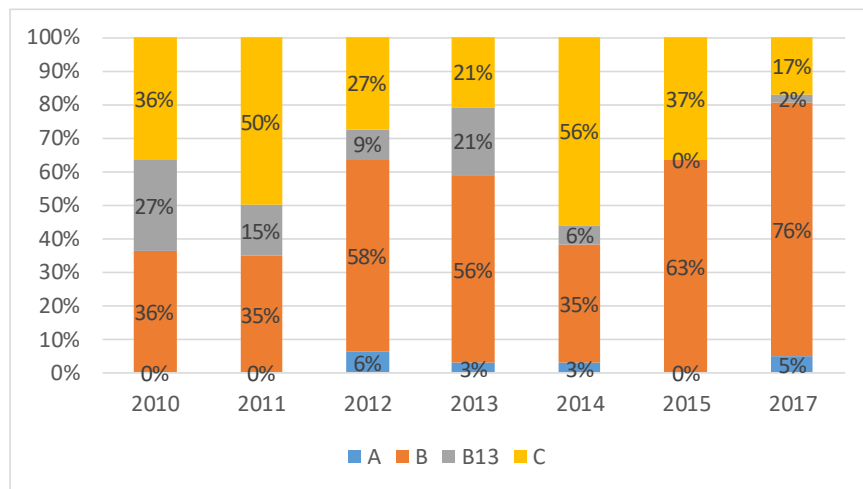
Note: Sensitivity refers to the probability that the model predicts an extension given that the project is extended. Specificity gives the probability that the model does not predict an extension given that the project is not extended. Positive predictive value is the probability that the project is extended given that the model predicts it is extended. Negative Predicted value is the probability that the project is not extended given that the model says it is not extended. CCLIP: Conditional Credit Line for Investment Projects.

**Figure 1: Sovereign-Guarantee Investment Projects with 24+ Month Extensions, by Sector Department and Year**



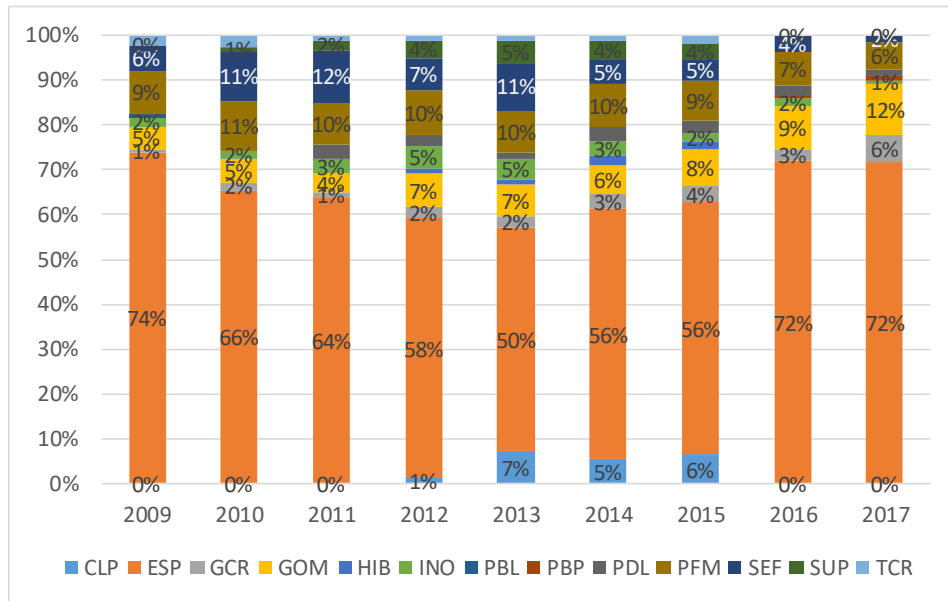
Note: The left hand side axis shows the number of projects with extension longer than 24 months by sector departments and the right hand side axis shows the share of project with 24+ months extension in proportion to the total portfolio. Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Figure 2: Environmental Classification of Projects Entering the Group of Projects with 24+ months of Extension (percent)**



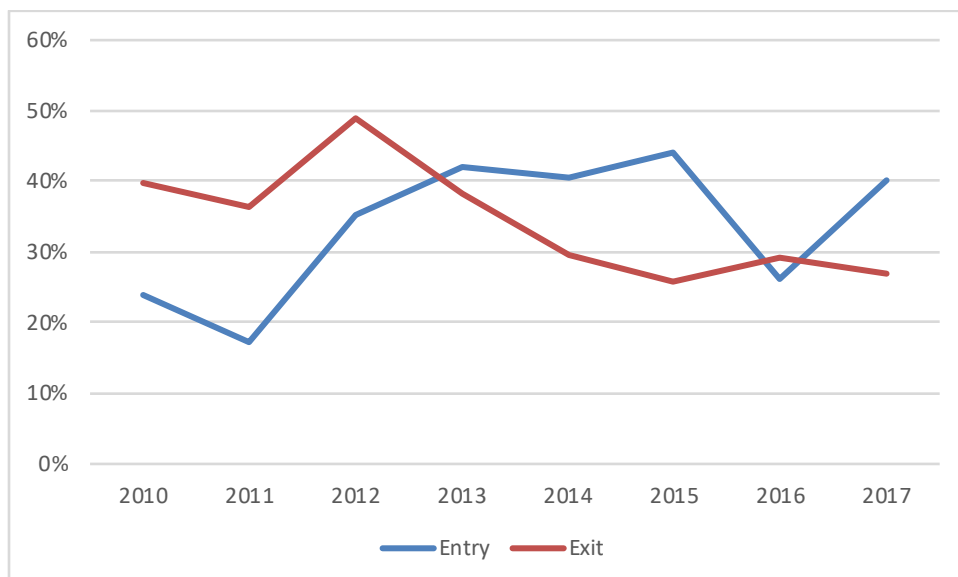
Note: Classification description are A (Significant Negative Environmental and/or Social Impact Likely), B (Moderate Negative Environmental and/or Social Impact), B13 (Uncategorized Directive), and C (Minimal or no Negative Environmental and/or Social Impact).

**Figure 3: Modalities or Subtypes of Operations with 24+ Month Extensions, by Year (percent)**

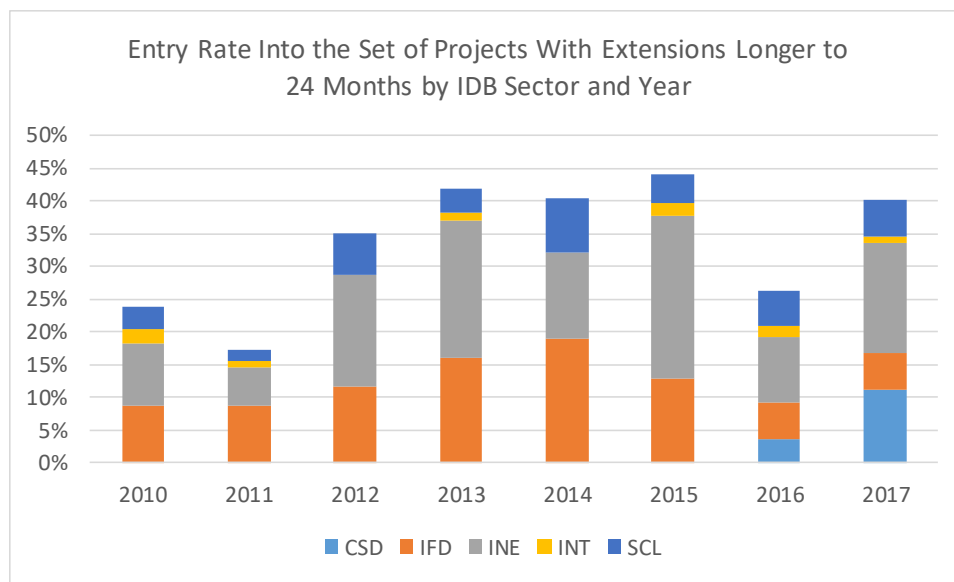


Note: CLP: Project using a conditional line for investment (CCLIP); ESP: Specific Investment Operations; GCR: Global Credit Programs; GOM: Global Multiple Works Operations; HIB: Hybrid Project; INO: Innovation; PBL: Policy-based Loan; PBP: Programmatic policy-based loan ; PDL: Performance-driven loan; PFM: Multiphase Operations; SEF: Sector facility loan; SUP: Supplementary Loan ; TCR: Technical Cooperation Loans.

**Figure 4: Entry and Exit Rates into the Group of Projects with 24+ Month Extensions, by Year (percent)**

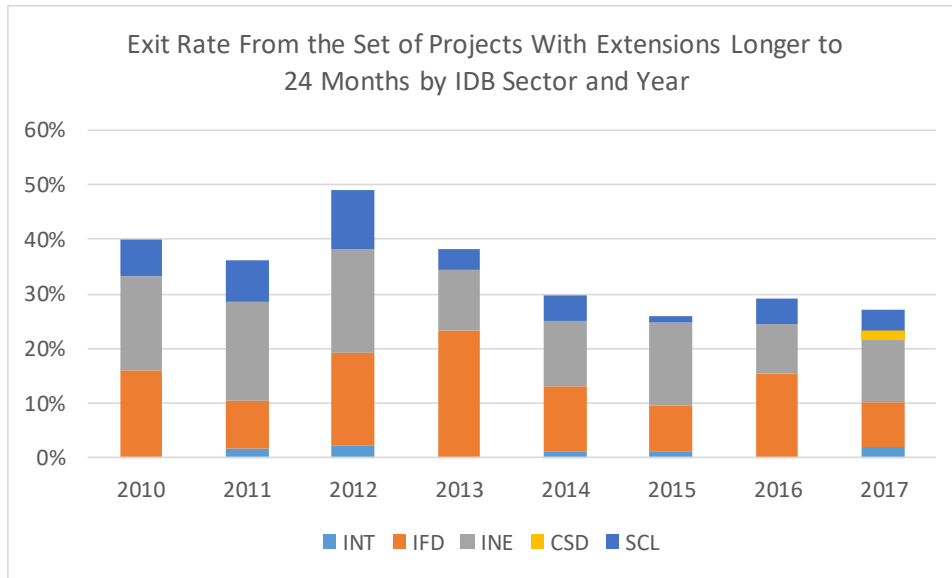


**Figure 5: Entry Rate into the Group of Projects with 24+ Month Extensions, by Sector Department and Year**



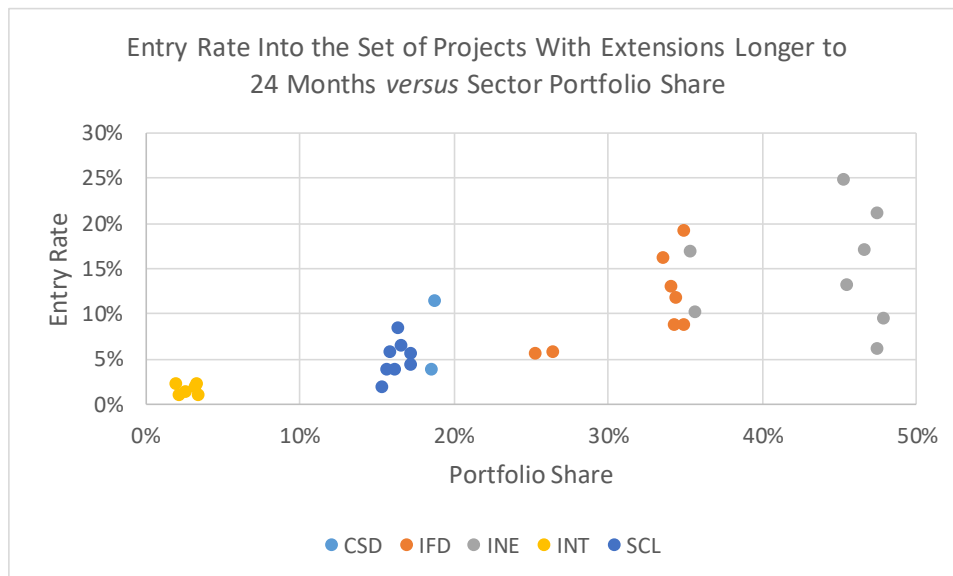
Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Figure 6: Exit Rate from the Group of Projects with 24+ Month Extensions, by Sector Department and Year (percent)**



Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

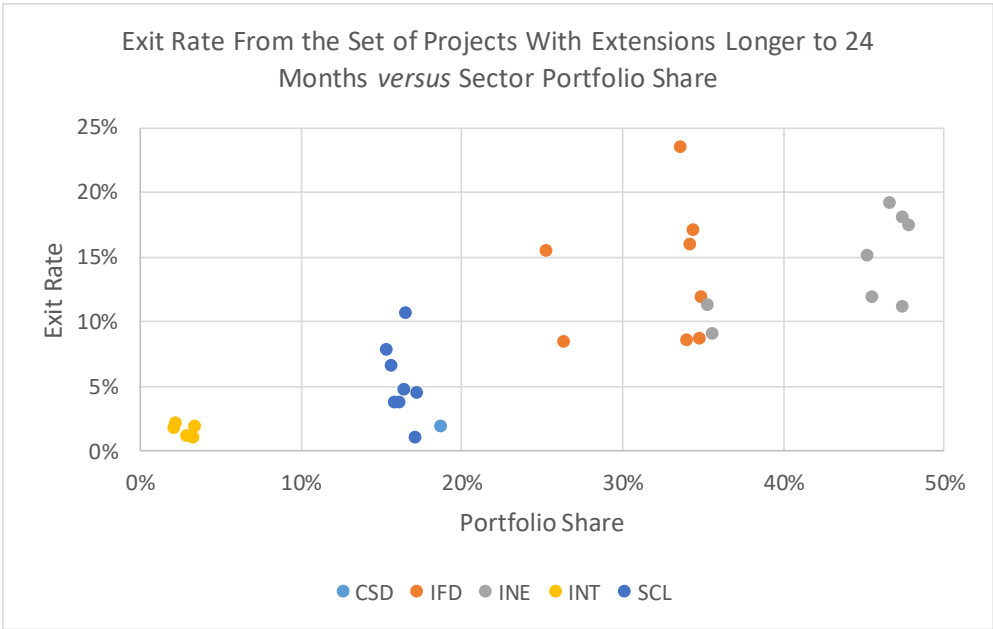
**Figure 7: Relationship between the Entry Rate into the Group of Projects with 24+ Month Extensions and the Portfolio Share by Sector Department (sector projects as a share of the total number of projects)**



Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

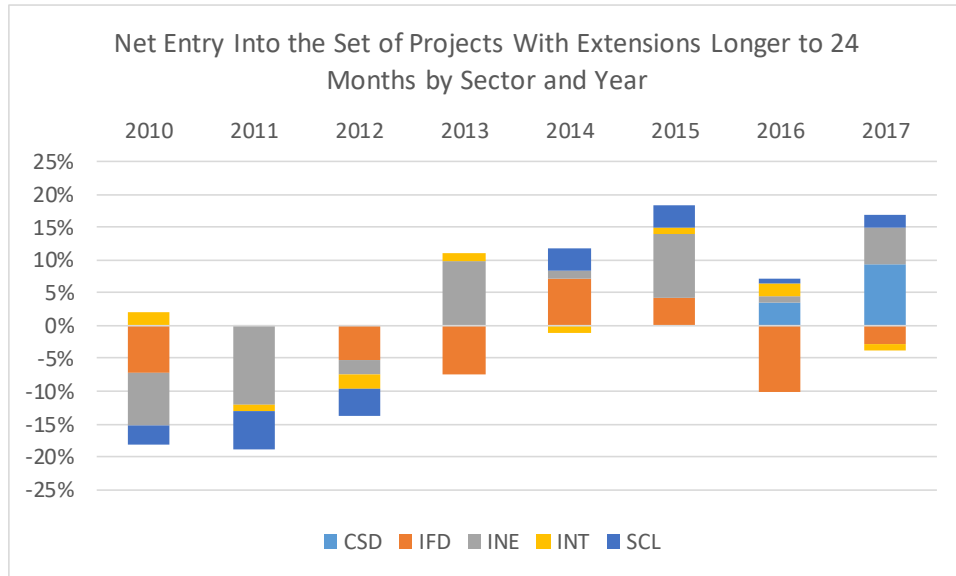


**Figure 8: Relationship between the Exit Rate from the Group of Projects with 24+ Month Extensions and the Portfolio Share by Sector Department (sector projects as a share of the total of number of projects)**



Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

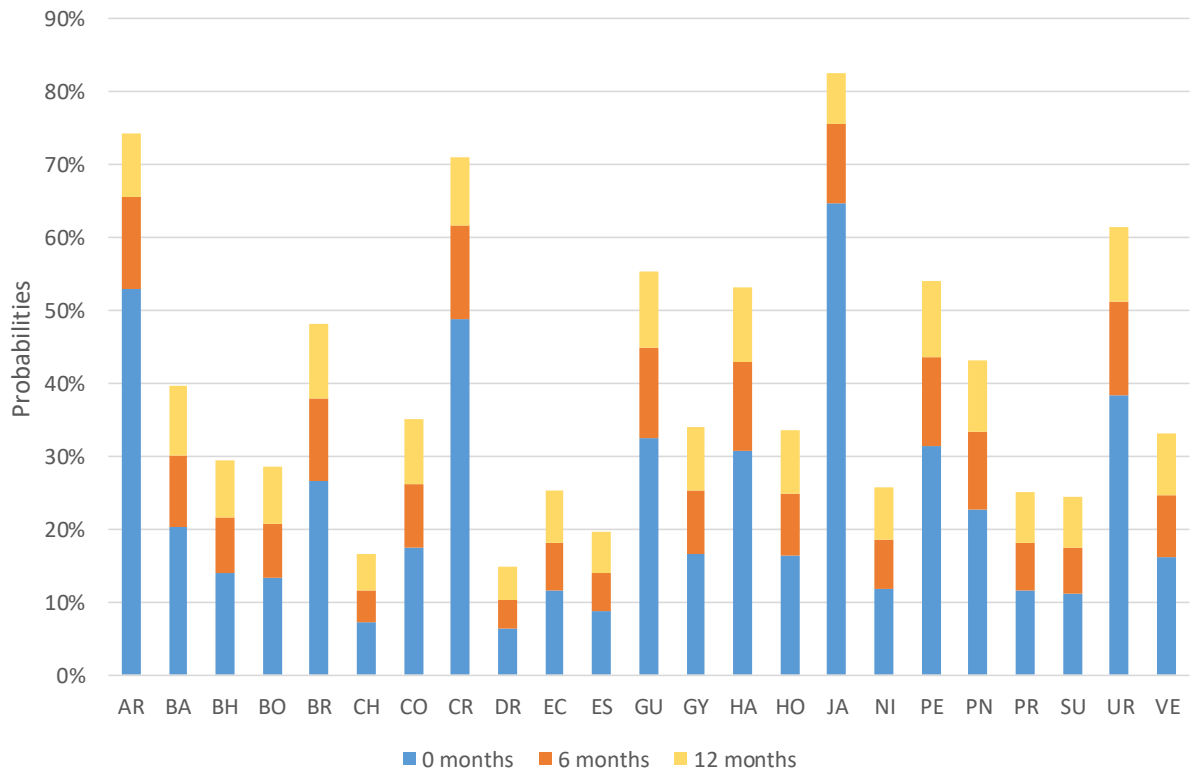
**Figure 9: Net Entry into the Group of Projects with 24+ Month Extensions, by Sector Department and Year**



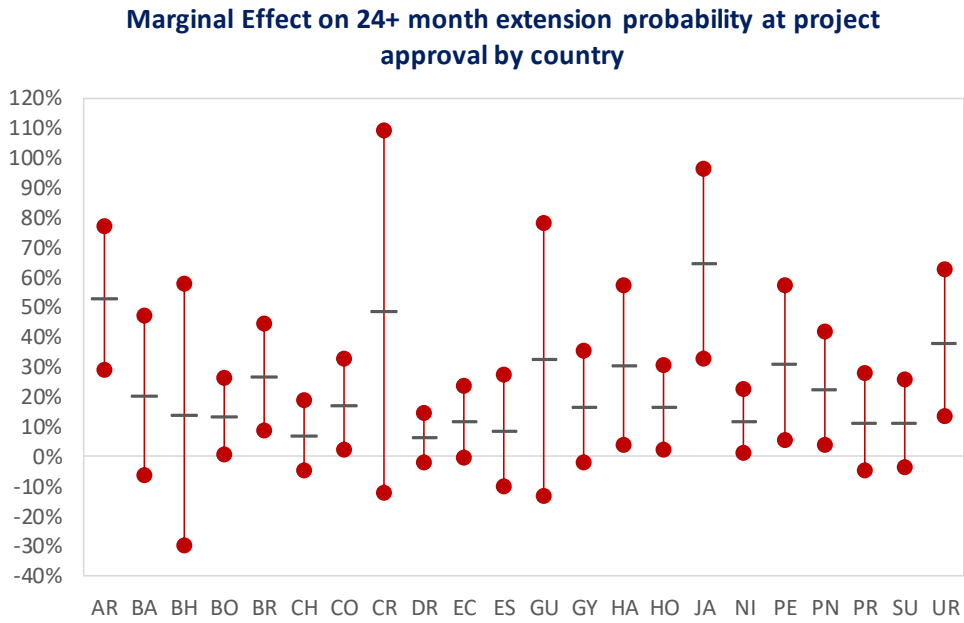
Note: CSD: Climate Change and Sustainable Development Sector; IFD: Institutions for Development Sector; INE: Infrastructure and Energy Sector; INT: Integration and Trade Sector; SCL: Social Sector.

**Figure 10: Marginal Effect of Delays in the First Disbursement on the Probability of a 24+ Month Extension, by Country**

### Marginal Effects of delaying the first disbursement on the probability of a 24+ months extension per country



**Figure 11: Marginal Effect at Project Approval on the Probability of a 24+ Month Extension, by Country**



Note: the line depicts the point estimate for the marginal effect and the range with the red dots represent the 95% confidence interval of the estimate