The Political Economy of World Bank Lending:

An empirical analysis of environmental and social safeguards at the World Bank

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ABSTRACT

This paper examines the incidence and impact of environmental and social safeguards (ESS) in projects financed by the World Bank. We measure the determinants of ESS project selection, the extent to which ESS are related to delays in project preparation and disbursement, whether projects with safeguards perform differently from projects without safeguards with respect to stated World Bank development criteria, and links between ESS and Inspection Panel requests. Since their introduction almost three decades ago, safeguards have been assigned to more than half of all World Bank investment projects. Consistent with practitioner complaints about the hassle associated with safeguard procedures, we find significant delays for ESS categorized projects and limited evidence that ESS improve project outcomes. Projects are less likely to have safeguards when the borrower holds one of the geopolitically important nonpermanent seats on the United Nations Security Council. Inspection Panel requests (that need to demonstrate both harm and procedural violations) are substantially more frequent for projects with ESS, apparently due to additional procedural requirements triggered by ESS.

1. Introduction

After years of policy debate and advocacy, the World Bank and other multilateral development banks (MDBs) have developed a series of policies commonly referred to as "Environmental and Social Safeguards" (ESS) aimed at preventing and mitigating social and environmental harm related to projects they finance. ESS have become commonplace since the late 1980s, originally in response to a number of widely publicized cases about the negative social and environmental consequences of World Bank development projects. ESS has taken on more importance over time as the development community's notion of economic development has broadened beyond simply raising levels of national income, to include issues of social inclusion, climate change, air pollution, public health, and beyond. The Millennium Development Goals and the Sustainable Development Goals, both embraced by the MDBs, have put additional emphasis on social and environmental concerns.

As issues such as global climate change and inequality become more pervasive, there is an increasing need to calibrate development finance toward these broader goals. To this end, MDBs have pledged to shift at least one-third of their portfolios toward financing for climate mitigation and adaptation, to sharply curb financing for coal-fired power plants, and to divest from upstream oil and gas investment into the future (CITATION). What is more, the MDBs and the World Bank in particular have also pledged to make their investments not only lower carbon, but more pro-poor and socially inclusive (CITATION). To that end, in 2012 the World Bank started a process to reform and improve its ESS framework, culminating in a new framework that went into effect in 2018 (World Bank 2016).

Yet heated policy debate continues despite these changes. Since the inception of safeguards, developing country finance ministries and some analysts have complained that ESS are onerous impositions by developed country shareholders that do not significantly improve the development outcomes of the projects involved (Birdsall and Morris 2016). Policy analysts and advocates in the social and environmental activist communities have remained equally frustrated, claiming that the ESS of the MDBs are not properly designed to safeguard against adverse environment and social consequences of development finance (Bank Information Center 2018).

To date, there has been little systematic analysis on the timeliness and effectiveness of ESS in the MDBs. This paper attempts to fill that gap by examining the role of safeguards across the project cycle, focusing on the World Bank where data are now prevalent enough to perform such an analysis. We first examine how projects are selected for safeguard status. Next, we look at how long it takes to prepare a project, i.e., the length of time from project identification to board approval. After approval, we examine the speed of disbursement. We then consider project outcomes as assessed by World Bank operations staff through project ratings in Implementation Completion and Results (ICR) reports. Finally, we look at Inspection Panel requests on behalf of people who claim harm from these projects. ESS policies are closely linked to World Bank Inspection Panel cases, both because similar issues are at stake (protection of vulnerable groups and of the environment) and because failure to follow ESS policies may be the procedural basis for Inspection Panel requests. In each setting above, we account for safeguards but also project, country, and World Bank characteristics that are likely relevant for the outcome in question. We

also allow for geopolitical influences that are prominent in the literature on international financial institutions.

To preview our results, the empirics largely confirm anecdotal reports but also point to patterns that have gone as yet undocumented.[1] Regarding the selection of projects for safeguards, we find that projects are less likely to have safeguard measures when the borrowing government holds a nonpermanent seat on the UN Security Council (UNSC), and is thus strategically important to the major shareholders of the World Bank. Projects are 9 percentage points less likely to be placed in category B (as compared to no safeguards) when the country holds a nonpermanent seat on the UNSC at project approval, ceteris paribus. With respect to timeliness, the duration of preparation is 120 days longer for projects with safeguards than for comparable projects without safeguards, even longer for category A projects. Projects with safeguards also disburse significantly more slowly. After implementation is complete, the probability of a satisfactory ICR rating is four percentage points lower for projects with safeguards, ceteris paribus. Category A and B projects drive this result, which holds if we look at pre-2015 evaluation cohorts. However, much of the effect appears driven by project characteristics, not the safeguard procedures themselves In addition, the negative results disappear if we include recent projects. UNSC status is again a significant covariate, with higher ratings if the country held a nonpermanent seat on the UNSC at the time the project was evaluated. Looking at the World Bank Inspection Panel mechanism, requests are more likely for projects with ESS; this appears to be due to the additional ESS procedural requirements rather than the nature of the projects themselves. Inspection Panel requests do not have a systematic impact on preparation duration but do temporarily slow disbursement mid-project and are associated with a dramatically higher chance of an unsatisfactory performance rating, even after controlling for ESS.

The rest of this paper proceeds as follows. Section 2 reviews the history of social and environmental safeguards at the World Bank and elsewhere and surveys the existing literature. Section 3 presents a brief overview of the data. Section 4 presents empirical results. Section 5 concludes with a summary of results and a discussion of policy implications.

2. ESS: Introduction and Literature Review[2]

ESS policies date back to the late 1980s and early 1990s as local communities affected by MDB development projects partnered with international non-governmental organizations (INGOs) to press governments and the banks themselves to incorporate social and environmental concerns into development financing. Numerous books and articles have discussed the history and origins of these policies, and it is beyond the scope of this paper to go into them in great detail. Mikesell and Williams' 1992 *International Banks and the Environment* provides an overview of the lack of adequate environmental consideration in project design by MDBs during the 1970s and 1980s, specifically noting the importance of the Polonoroeste project in Brazil and the Narmada dam project in India in raising global awareness of environmental concerns in project financing (see also Rich 1994; Wade 1997, 2016). Such projects unified environmental activists worldwide to lobby for changes in MDB policies in the 1980s (Aufderheide and Rich 1988; Fox and Brown

[1] We focus exclusively on investment project lending since safeguards rarely apply to adjustment loans.
[2] This section borrows heavily from Yuan and Gallagher (2015).

1998, 51-80; Horberry 1985; Mikesell and Williams 1992). Aufderheide and Rich (1988) emphasized how international advocacy networks formed to advocate for the incorporation of safeguards in the project cycle—between local communities in host countries and INGOs such as the Environmental Defense Fund. These global advocacy campaigns have been noted as the key drivers in changing World Bank policy on projects and the environment (Trócaire 1990).

During that era the U.S. Congress held hearings that eventually led to the passage of the "Pelosi Amendment" in 1989 to address concerns regarding the environmental impact of development aid projects by the World Bank (Aufderheide and Rich 1988; Babb 2009, 186-196; Horberry 1985; Mikesell and Williams 1992). This provision in the International Development and Finance Act of 1989 tied funding to an MDB's commitment to "review the potential environmental impacts of development projects for which they provide funding and to make these environmental assessments publicly available" (Bank Information Center 2018). With the United States as a controlling shareholder and major contributor of funding to MDBs, this requirement led to significant restructuring of international financial institution (IFI) practices and has been credited with refocusing MDBs toward more sustainable development practices (Babb 2009, 186-196; Park 2010; Rich 1994, 2013).

When designed properly, ESS can bring significant benefits to many of stakeholders engaged in development bank projects. ESS may also help development banks and host countries alike meet their broader development goals.

Table 1: Benefits of Environmental Safeguards

Stakeholder	Benefit
Global	Equitable use of resources Enhancement of global public goods
Development banks	Greater project effectiveness Mitigation of environmental and social risk Management of reputation risk Realization of broader development goals
Borrower governments	Better management of natural resources Strengthening of institutional capacities Mitigation of environmental and social risk Realization of broader development goals
Local communities	Enhanced voice and ownership Reduced vulnerability Improved livelihoods

Source: Authors adaptation from World Bank (2010)

ESS can bring benefits to a variety of actors in the development banking process. Of course, development banks that conduct projects with minimal harm to the environment and communities can better provide public goods and help allocate scarce natural and economic resources in a more efficient manner. For the development banks themselves, ESS can create better project effectiveness by mitigating the social and environmental risks of a project and helping to address the broader development goals of their charters. Identifying ahead of time that a particular project could cause environmental degradation and/or create mass social conflict is important to maintaining project schedules and creating more certainty regarding future costs. When such risk is not accounted for the costs can be unexpectedly high, resulting in project overruns and

sometimes project cancellation. Moreover, problem projects can tarnish the image of a development bank and decrease its ability to provide future services in a country or region. These same benefits hold for national governments that need to manage debt burdens and political constituencies in a manner that will maximize national benefit. ESS can help developing countries build institutions to address market failures such as environmental externalities and meet their own broader development goals and international obligations. Engaging local communities and civil society through ESS can also bring benefits by helping communities assume ownership of projects through letting their voices and concerns be heard and incorporated. Designed properly, ESS can also reduce the vulnerability of communities from certain projects and thus improve their livelihoods of such communities.

This paper draws on and builds on the literature that evaluates the political economy of the IFIs in general, and ESS in particular. Here we briefly survey the most relevant literature with respect to lending, the timeliness of various stages of the project cycle, and the development outcomes.

The articles of agreement in both the IMF and the World Bank (as well as most other MDBs) state that those institutions must follow a 'doctrine of economic neutrality' (Swedberg 1986) whereby decisions are made on economic grounds alone. Nonetheless literature finds case study and statistical evidence of lending decisions (including loan conditionality) that reflect the geopolitical and economic interests of G7 countries in general and the U.S. in particular. Looking at the IMF Thacker (1999), Stone (2002, 2011) and Copelovich (2010a,b) find this pattern, whether looking at countries known to be important to the U.S. at the time or analyzing key United Nations General Assembly (UNGA) votes. Inspired by Kuziemko and Werker's (2006) analysis of bias in U.S. bilateral aid and UNICEF funding in favor of countries holding a nonpermanent seat on the UN Security Council (UNSC), Dreher et al. (2009a, 2010, 2015) find this favoritism extends to IMF lending and Dreher et al. (2018) are able to tie it specifically to UNSC voting records.

Other studies find similar effects with respect to development finance from MDBs. Frey and Schneider (1986) and Fleck and Kilby (2006) find a bias in World Bank lending in favor of U.S. trading partners. Dreher et al. (2009b) demonstrate that UNSC membership also matters at the World Bank. Kilby (2009, 2013a) find evidence of U.S. informal influence over enforcement of conditionality and disbursement speed, while Kilby (2013b) demonstrates that geopolitics impact how quickly World Bank projects are prepared. Kersting and Kilby (2016) examine the speed of disbursement with more granular monthly data, which confirm a general pattern of faster disbursement for U.S. friends (again identified through UNGA voting) but also uncover an electioneering angle supporting the (re)election of U.S.-friendly governments.

The literature on the timeliness of MDB lending goes well beyond the above geopolitical analysis. As mentioned earlier there is broad perception that safeguards contribute to costly project delays and they can be seen as impositions on borrowing countries that rely on project support. A recent study by Humphrey (2015, 15) based on over 100 interviews with staff from various MDBs finds that ESS requirements are:

> … extremely difficult for borrowers and even staff to fully understand. Requirements often include time-consuming, lengthy studies to be undertaken by third-party experts (usually at the government's cost), lengthy consultations with affected parties (sometimes including

> unelected non-governmental organizations), extensive mitigation measures, and lengthy mandatory prior public disclosure and comment periods during which time the project cannot move ahead. These requirements supersede whatever national laws may be in place in the borrowing country—a particularly troubling point of principle for many borrowing countries, beyond the practical impacts of safeguards.

The World Bank's own Independent Evaluation Group partly confirms these perceptions in a comprehensive assessment of World Bank safeguard policies published in 2010. In a large survey of stakeholders, the World Bank (2010, 46) found that, in LAC, clients avoided 60 percent of initially proposed large scale World Bank projects because of ESS systems and

> ...38 percent of task team leaders, 72 percent of social specialists, and 55 percent of environmental specialists had encountered clients who wanted to avoid all or part of a project because of safeguard policies. The impact of this chilling effect was reported by a majority of team leaders from Latin America and the Caribbean and over 40 percent from East Asia and Pacific and South Asia, which have the most active safeguards portfolios.

In another study, Humphrey (2016, 159) was told by IADB environmental staff that "[t]here was a point when some folks at the IADB were trying to court Brazil to finance that project, and the immediate response from the Brazilians was: 'Not on our life, you'll come running in here with your safeguards,' the staffer said, in others borrowing countries." Another cost is project delay: Humphrey (2016, 147) estimates the length of approval time for projects on a whole (including ESS) and estimates that approval time for the World Bank is 14-16 months.

Long approval times may not necessarily be costly if they improve development outcomes. Referring back to Table 1, properly designed ESS may lead to the avoidance of harmful projects and the expansion of project benefits. There is also a literature on the impact of various MDB policies on actual development outcomes. Kilby (2015 and discussed in more detail below) finds that, ceteris paribus, World Bank projects with longer preparation periods are much more likely to have satisfactory development outcome ratings.[3] In fact, longer preparation periods are what many INGOs advocate, arguing that more time allows for more diligent third party review and consultation, which in turn can result in better project outcomes (Larsen and Ballesteros 2014; Bank Information Center 2018). That said, Kilby (2015) does not specifically examine the independent impact of ESS project preparation on project outcomes.

The first major assessment to specifically focus on ESS and outcomes was by Hicks, Parks, Roberts, and Tierney in *Greening Aid (*2008). Their study explores how ESS and other measures have impacted development financing and project selection in leading development banks. Analyzing data from 1980 to 1999, the authors found that funding for environmentally friendly aid projects grew significantly in both relative and dollar terms. However, according to the authors, the value of environmentally unfriendly projects still outweighed the value of friendly ones by a factor of three in 1999. Yuan and Gallagher (2018) find that environmentally friendly development financing tends to flow to governments with higher human development scores and left-of-center parties in government. Buntaine's (2011, 2016) work finds that the Asian Development Bank, at least, has become more attuned to 'reputational risks' and has used ESS to

[3] This result depends on using exogenous variation in project preparation duration (due to differences in geopolitical importance prior to project approval) to avoid an endogeneity problem such as that reported by Deininger et al. (1998).

steer clearer of projects that have performed poorly in the past; and that, at the World Bank, ESS that include accountability mechanisms led to awarding less environmentally risky projects.

In terms of evaluating ESS and actual environmental outcomes, a recent working paper finds that World Bank projects do not have an independent and negative impact on biodiversity, suggesting that it is possible to design such projects to do less harm (Buchanan et al., 2018). Relatedly, recent econometric work by Ray (2018) finds that MDB-funded projects with ESS were associated with less deforestation than projects without ESS in the Andean Amazon.

This paper builds on that previous work in the four ways. First, we adapt the discussion of the geopolitics of project selection to the ESS literature and examine the extent to which temporary UNSC membership influences the World Bank selection process for safeguards. Second, we apply econometric techniques to the process of ESS to examine whether ESS themselves are dragging the timeliness of World Bank project processes or some other factor. Third, we deploy econometric techniques to examine the extent to which ESS impact project outcomes. Finally, we explore the link between ESS and Inspection Panel requests and any links between such requests and project process measures and project outcomes.

3. Data

Our primary data source is the World Bank projects database, which covers all projects funded or supervised by the World Bank (World Bank 2018). The World Bank put safeguard policies in place in 1989 (OD 4.00, Annex A) and these policies—with changes over time—apply to projects approved from fiscal year1990 onward.[4] For this reason, our sample starts with fiscal year 1990, later if other data limitations apply.

The World Bank has used a number of safeguard categories: A, B, C, D, F, and U. Categories A to D reflect declining levels of environmental and social risk, with projects in category A requiring full environmental assessment, projects in category B partial assessment, and projects in C or D no further assessment. Category B is described as a "very broad category," with some projects that are "almost A" and require a detailed Environmental Impact Assessment (EIA) but do not trigger special category A procedural requirements. The category also includes projects described as "solid B" projects where there is a partial Environmental Assessment (EA) or an Environmental Management Plan (EMP). Finally, some category B projects are described as "almost C" and only require a checklist EMP.[5] Category F (also labeled FI for Financial Intermediary loans where World Bank provides funds for on-lending) may fund subprojects that fall into categories A or B and requires environmental assessments or partial assessments if this is the case.

The left panel of Table 2 gives the breakdown by category in the largest available sample (combining categories with no environmental assessment and covering all World Bank-managed projects—including adjustment lending—approved between July 1, 1989 and June 28, 2018). Category A projects are rare (7.5% of all projects) while category B projects are common (43%).

[4] See Roessler (2000) for details. Categories have been added (F) and dropped (D) over time but the basic division between A, B and other categories has remained constant.

[5] Description of category B and quotes from http://web.worldbank.org/archive/website01419/WEB/IMAGES/INTROD-5.PPT

Financial intermediate projects are also rare (2.3%) while projects not requiring any environmental assessment (C, D, U, and unrated/blank) account for 47% of the post-1989 sample. The right panel limits the sample to investment projects, dropping all program loans. This reduces the sample by about 1,500 observations. The vast majority of these are from the last group, those not requiring environmental assessment, because of the budget support nature of these activities. The analysis below drops these loans from the sample so that 60% of the projects in the estimation sample have some form of ESS designation.

4. Results

As described above, we perform several different analyses. First, we examine how project and country characteristics determine selection for safeguard status. Second, we analyze how preparation duration depends on project and country characteristics, including safeguard status. Third, we explore the factors that influence disbursement speed, again including the project's safeguard status. Next, we estimate a performance equation and whether there is a link between safeguard status and project performance ratings. Finally, we consider how Inspection Panel requests are related to ESS status and possible links between Inspection Panel requests and preparation duration, disbursement speed, and project outcome ratings.

4.1 Safeguard selection

Our first analysis explores correlates of safeguard designation, drawing on project data from the World Bank projects database. The estimation sample runs from fiscal year 1990 to fiscal year 2018. The dependent variable is an indicator variable for safeguard status; the unit of observation is the project. Appendix Table A1 provides descriptive statistics for the variables in the full sample (9,243 projects). Sixty-one percent have safeguards, 8.7% category A, 49.4% category B, and 2.7% category F. Nearly eight percent of the projects are for countries serving as nonpermanent members of the UNSC at the time of project approval. Fourteen percent of projects are supplemental loans that provide additional financing for already approved projects.[6] Forty-three percent of the projects have IDA funding; the table also reports the distribution of projects geographically, across functional sectors, and by type of financial instrument.[7]

Estimations using the safeguard dummy as the dependent variable draw on the full sample (comparing categories A, B, and F to all other projects). Estimations using the safeguard category A indicator as the dependent variable exclude projects in categories B and F from the estimation sample, thus comparing safeguard type A projects to projects without safeguards. Likewise when the dependent variable is a dummy for category B, the estimation sample excludes projects in categories A and F; when the dependent variable is a dummy for category F, the estimation sample excludes projects in categories A and B.

[6] The first supplemental loan was in 1951. The practice remained uncommon (~1% of lending activity) until 2007 when it increased dramatically. See Kersting and Kilby (2018) for an in-depth analysis, including political economy of supplemental lending.

[7] The sector dummies are based on sector board codes reported in the World Bank projects database; projects can have 0 to 5 sectors listed (average of 1.68 in our sample).

Table 3 reports marginal effects at sample means from our probit estimation. All specifications include approval fiscal year dummies to control for variation in the use of safeguards over time; reported statistical significant is based on country-clustered standard errors. Results are similar with a conditional logit estimator that includes country fixed effects. Column (1) treats all categories with safeguards the same (comparing categories A, B, and F to all other projects). As expected, there are no significant differences across regions (once we control for loan size or financial instrument type). Also as expected, there are substantial differences in the incidence of safeguards across sectors. Safeguards are less common in Education, Finance, Health, Information & Communications Technology, and Public sectors than in Agriculture; they are more common in Energy, Industry, Transportation, and Water and Sanitation. The incidence of safeguards also varies with financial instrument type. Safeguards are less common for Learning and Innovation Loans, Technical Assistance Loans, and "Unidentified" loans than for Adaptable Program Loans; they are more common in Financial Intermediary Loans, Investment Project Financing, Sector Investment and Maintenance Loans, and Specific Investment Loans.

Projects with IDA funding are no more likely to have safeguards than projects with no IDA funding, ceteris paribus. Supplemental loans (also called Additional Financing) are 12% more likely to have safeguards. The probability of safeguards also increases with loan amount; a doubling of the loan amount is associated with a 6 percentage point higher probability of safeguards, ceteris paribus.

Finally, there is an apparent geopolitical dimension to the application of safeguards. The probability of a safeguard designation is 8 percentage points lower (dropping from 61% of projects to 53%) when countries hold a nonpermanent seat on the UNSC, ceteris paribus. This result holds also in a conditional logit specification that nets out time invariant country-specific effects and so is not the indirect effect of other, fixed country characteristics that impact election to the UNSC.

Columns (2), (3), and (4) consider each safeguard category separately, always comparing against the case of no safeguards. Column (2) reports results of selection into safeguard category A (high risk) versus no safeguards; the sample shrinks to 4409 because safeguard category B and F projects are excluded. Recall that relatively few projects are classified as risky (9% of the observations in Column (1)) so results are likely to differ from those in Column (1). This is reflected in some heterogeneity by region (with the high risk designation 2% less common in Latin America and the Caribbean), one change at the sector level (Social Sector projects now less likely to have safeguards), and many differences by financial instrument. Also striking is the change for UNSC membership; the "high risk" designation appears unrelated to UNSC membership. Compared to Column (1), the coefficient estimate shrinks by an order of magnitude and is far from statistically significant.

Column (3) reports results of selection into safeguard category B (moderate risk) versus no safeguards; the sample shrinks to 8190 without projects in safeguard categories A and F. As expected since category B represents the majority of safeguard projects, results are similar to the overall results in Column (1). The estimated marginal effect for projects in East Asia and Pacific is farther from zero so that the effect now registers as statistically significant. A project's probability of category B safeguards rather than no safeguards is 8.94 percentage points lower while the borrowing country is a nonpermanent member of the UNSC.

Column (4) reports results for selection into safeguard category F (financial intermediary with possible risks) versus no safeguards; the sample shrinks to only 2883 observations. As with Column (2), there are a good number of differences from the estimation using the overall sample and again UNSC membership is not linked to safeguard status.[8]

Recall the description of category B safeguards as heterogeneous, including some "almost C" projects and thus suggesting a degree of discretion. The results in Column (3) suggest that this discretion is exercised in the case of nonpermanent UNSC members, with some borderline projects avoiding a safeguard designation in these circumstances. A quick "back of the envelope" calculation finds 50 to 60 projects that would have been category B if the country was not on the UNSC were "spared" safeguards when the country was on the UNSC.[9]

We also considered other geopolitical variables used in the aid allocation literature: World Bank Executive Board membership, UN General Assembly voting alignment, bilateral aid flows, and trade flows. While all have the expected negative sign (i.e., closer ties with the U.S. or institutional importance are weakly associated with a lower probability of safeguards, ceteris paribus), none of the coefficient estimates are statistically significant whether included individually, together with UNSC membership—which remains significant in all cases—or in other specifications that control for country fixed effects.

4.2 Preparation Duration

The second analysis investigates whether projects with safeguards take longer to prepare. Preparation is the period between project identification and project approval. Identification involves discussions between World Bank staff and borrowing government officials to identify high priority projects, typically starting with the priorities laid out in the World Bank's Country Assistance Strategy. This includes a discussion of project impacts and risks, as well as possible alternatives and a timetable. It is at this phase that the safeguard designation is first assigned. The next step is detailed work by the borrowing government (though often with World Bank assistance and usually including design and impact studies). World Bank staff then assess all aspects of the proposed project (via a project appraisal including technical soundness and economic, environmental, financial, institutional, and social impact) before recommending the project to the World Bank's board of executive directors. The preparation period officially ends when the board approves the project.

World Bank data record the board approval date but not when preparation began. However, there is a work-around to estimate the start of preparation. World Bank staff use project identification numbers for internal accounting purposes, such as billing staff time and travel, and paying for consultants and external reports. Such activities begin immediately during the identification phase of project preparation and so staff should request a project identification

[8] Samples for Columns (2), (3), and (4) are further reduced by cases where a binary explanatory variable perfectly predicts the outcome, causing the relevant observations and the dummy variable to drop due to the nature of the probit estimation. For example, in Column (4), none of the 19 projects with an unidentified financial instrument has category F safeguards. Re-estimating via a linear probability model which does not drop observations or variables in this setting yields similar results for the key variables (negative and significant coefficient estimates for UNSC @ approval).

[9] One might also imagine geopolitical influence causing an ESS B categorization rather than an A categorization (recall the description of some category B projects as "almost category A") but we find no evidence of this.

number as soon as any project-related work begins. The World Bank started issuing bank-wide sequential project identification numbers in 1994. Because these numbers are sequential and bank-wide, the project id numbers provide a noisy measure of the identification date.

Kilby (2013b) demonstrates that this data generating process fits the Stochastic Frontier Model (SFM). Here, we use a SFM to estimate preparation duration, including safeguard status as an explanatory variable and covering the period from 1994 (the start of usable project id data) to 2016.[10] As suggested above, the model treats sequentially issued project identification numbers as noisy measures of the project identification date and, given the project approval date, can estimate the time elapsed between identification and approval (i.e., preparation duration), as well as the impact of project and country characteristics on that duration. The unit of observation is again the project.

Figure 1 illustrates how the SFM works in this setting. Plotting the project identification number against the project approval date, the (fuzzy) lower edge of the data set defines the identification date (when World Bank staff and administrative expenses were first billed to the project).[11] The vertical distance between the lower line and data points (representing individual projects—with a number of countries marked for concreteness) reflects the time elapsed between identification and approval, which the SFM models as a function of project and country characteristics. Appendix Table A2 provides descriptive statistics covering 7023 projects for which all data were available. Approval dates range from March 31, 1994 to December 30, 2016. Project id numbers run from 31,828 to 153,154, a difference of over 120,000. This is substantially more than the number of projects covered because these id numbers are used for a wide range of internally "billable" activities within the World Bank, from economic and sector work to studies for the research department (DEC). The descriptive statistics for other variables—percentages of the various project types and categories, etc.—are similar to the first sample despite the somewhat different time period covered.

Table 4 reports estimation results from two specifications. Column (1) includes a single safeguard dummy; Column (2) includes separate dummies from categories A, B, and F. In both cases, the omitted category is no safeguards. Both specifications include the same project characteristics as in the previous analysis (log loan amount, funding source (IDA or IBRD), a supplemental loan dummy, and sector and financial instrument dummies). The results show that larger loans take longer to prepare, while supplements and projects funded with IDA money are significantly faster to prepare. No region is slower than Sub-Saharan Africa while project

[10] The criteria for including a project in the sample are meant to ensure its project identification number is one of those from a centralized sequential system so that it captures the identification day. Projects fall in this group if they were approved on or after January 1, 1994, have project ids greater than P020000, and less than P170000. Prior to 1994, the process was decentralized with each country having its own range of project id numbers. Under that system, project ids were issued sequentially by country within its designated range only. The SFM used includes an exponential distribution to model preparation duration and is of the "cost function" variety (the SFM has its roots in estimating production functions (fuzzy upper bound) and cost functions (fuzzy lower bound)).

[11] The lower edge is fuzzy for a number of reasons, e.g., the occasional repurposing of project ids issued for previous projects that did not proceed beyond identification, requesting a project id late (and billing staff time before that point to other activities), etc. All observations falling far below the line are linked to trust funds, external funding sources, or loan guarantees that may sometimes follow non-standard procedures. If we limit the sample to the standard IBRD/IDA "product line" (and thereby eliminate the observations falling far below the line), the sample falls to 4,648 observations but key results are unchanged.

preparation in East Asia & Pacific, Middle East & North Africa, and South Asia is significantly faster. Compared to Agriculture, preparation is significantly quicker in Education, Finance, Health, Social sector, and Transportation projects and significantly slower in Energy, Industry, and Public sector projects. Compared to Adaptable Program Loans, preparation is significantly quicker in Emergency Recovery Loans, Financial Intermediary Loans, and Technical Assistant Loans while no other financial instrument types have significantly slower preparation times.

Turning to our key variables of interest, Column (1) includes the single safeguard dummy. This variable enters with a positive and significant coefficient estimate, indicating that projects with safeguards take longer to prepare. Translating this into more useful terms, the estimates indicate a typical preparation time of 293 days with no safeguards and 416 days with safeguards, i.e., a safeguard-related delay of 123 days. Column (2) gives the breakdown by safeguard category, with a larger positive effect for category A, and similar effects (still positive and significant) for categories B and F. Again translating these into extra preparation days, the figure is 194 extra days for safeguard category A and 116 extra days for other safeguard categories. This differential makes good sense since category A has stricter requirements than categories B and F.[12]

Finally, for completeness we also look at the geopolitical variables included in the previous analysis. For duration, the estimation finds that when countries are aligned with the U.S. in UNGA voting, project preparation is significantly shorter (i.e., UNGA voting alignment with the U.S. enters with a negative and significant coefficient). If we compare the theoretical extremes (always vote against the U.S. versus always vote with the U.S.), project preparation accelerates by 182 days. World Bank Executive Board membership, UNSC membership, and US bilateral aid flows also enter with a negative sign (shorter preparation for countries geopolitically important to the U.S.); the estimated coefficient for UNSC membership is marginally significant while the other two variables are not statistically significant. U.S. trade flows enter with a positive sign (controlling also for world trade overall) but results are not statistically significant.[13]

4.3 Disbursement Speed

The third analysis explores the speed of disbursement, examining cumulative disbursement as a function of the number of months since project approval. This makes use of monthly World Bank disbursement data assembled by Kersting and Kilby (2016) which cover 1990 to 2012.[14] Figure 2 shows cumulative disbursement curves for safeguard and non-safeguard investment projects separately. The upper curve reflects non-safeguard projects while the lower curve reflects projects with safeguards. This indicates that projects with safeguards typically disburse more slowly. The question remains whether this relationship is due to compositional differences between projects with safeguards and those without (e.g., project size, sector, funding source) and

[12] Predicted values use the sample mean for all variables except the variable in question, i.e., we report the marginal effect at the average.

[13] This confirms findings in Kilby (2013b; 2015) that geopolitics impact World Bank project preparation but in those studies UNSC membership and executive board membership are also significant. The current study includes six additional years of data as well as additional covariates.

[14] This sample only includes projects funded through IBRD or IDA (i.e., PRODUCTLINE "PE"). It does not cover those funded through trust funds or other sources.

would disappear or even reverse if we control for other project differences. A multiple regression framework provides a good approach to address this question.

Consider drawing a horizontal line at some point across Figure 2, indicating a particular level of cumulative disbursements. Faster disbursement means fewer months to reach that level of disbursement. We explore this by using the number of months to reach 25%, 50% and 75% disbursed. In this analysis, the unit of observation is the project (with 4,510 observations) and the dependent variable is the number of months since project approval to reach the given threshold.[15]

Appendix Table A3 presents descriptive statistics for the disbursement analysis. Despite the different units of observation and the somewhat shorter set of years covered by the data sets, the summary statistics for variables such as safeguard dummies, the IDA dummy, etc., are similar to those in previous tables. The approval period is measured in months since January, 1960—Stata's approach to measuring time—and ranges from 354 (July 1989) to 628 (May 2012).

Table 5 presents results for the number of months to reach a given disbursement threshold. Columns (1) to (3) use 25%, 50%, and 75% disbursed thresholds using a single safeguard dummy; Columns (4) to (6) use separate dummies for the different types of safeguards. All specifications include country fixed effects and control for the project approval date. Negative coefficients indicate fewer months to reach the given threshold, i.e., faster disbursement.

Across all columns, relative to the country's average, larger projects, higher inflation, lower GDP, and lower population are associated with faster disbursement, ceteris paribus. Relative to Agriculture, disbursement is significantly faster in Education, Social Sector, and Transportation projects and significantly slower in Public Sector and WASH projects. Looking only at time to 25% disbursed, disbursement is also significantly faster in the Finance sector. Compared to Adaptable Program Loans, disbursement was significantly faster in Emergency Recovery Loans, Learning & Innovation Loans, and Technical Assistance Loans.

The single safeguard dummy is positive and statistically significant (at least marginally) across the board. Projects with safeguards take 1.1 additional months to reach 25% disbursed (as compared to projects with no safeguard designation), 2.1 additional months to reach 50% disbursed, and 2.8 additional months to reach 75% disbursed, ceteris paribus. When we break safeguard measure into Types A, B and F, all have positive coefficients across the board, indicating slower disbursement. For projects with Type A safeguards, this effect is significant for the time to reach each disbursement threshold, running 2.8 to 5.2 months behind an equivalent project with no safeguards. For category B, the effects are somewhat smaller and only statistically significant for the 50% and 75% disbursed thresholds. For category F projects, again there is no statistically significant effect at the 25% disbursed threshold but there is a large and significant effect for other thresholds. Thus, by this metric, safeguards slow disbursement.

Our results are a bit more complex when one also considers geopolitical factors. As Kilby (2013a) and Kilby and Kersting (2016) demonstrate, alignment with the U.S. in UNGA voting has a substantial acceleration effect on the speed of loan disbursement. In addition as shown above, geopolitically important countries are less likely to face safeguards on their projects. When we

[15] More limited year coverage in the Kersting and Kilby (2016) data set accounts for the reduced sample size.

include geopolitical variables in the regression, the effects of safeguards are somewhat reduced; if we include a wide battery of such variables simultaneously (UNSC membership, UNGA alignment, bilateral aid from the U.S., and trade with the U.S.), results hold only for the 75% threshold and are driven largely by category A projects. We can take this a step further and consider an interaction effect between safeguard status and UNGA voting alignment. The estimates show that UNGA voting alignment with the U.S. is associated with faster disbursement but the effect is smaller for projects with safeguards. For example, a 0.1 shift in voting alignment toward the U.S. (on a 0 to 1 scale, in a specification that controls for other geopolitical factors as well as the basic project and country characteristics) is associated with a 11.7 month reduction in time to 75% disbursed if the project does not have safeguards but only a 9.7 month reduction if the project does have safeguards. More puzzling is that the safeguard dummy itself enters with a negative and significant coefficient estimate in this interacted specification. Taken together, for cases where UNGA alignment falls below 0.3575 (about 40% of the sample), the net predicted effects of safeguards is to accelerate disbursement. This complex interaction warrants more investigation.

4.4 Project Performance

The fourth analysis examines the performance of World Bank-managed projects, making use of World Bank project outcome ratings. The analysis uses two different outcome rating measures produced by World Bank operations staff involved with the project, a dichotomous rating (Outcome_ICR) of 0 (Unsatisfactory) or 1 (Satisfactory) and a six-point rating (OutcomeRaw _ICR) running from 1 (Highly Unsatisfactory) to 6 (Highly Satisfactory). In the former case, we use a probit estimator; in the latter case, estimation proceeds via least squares. In either case, the sample is reduced (to 3504 observations) since ratings are not available for ongoing or recently completed projects. This smaller sample size also reflects restricting the sample to projects evaluated before fiscal year 2015, as there is a notable change in the role of safeguards in determining performance starting in July of 2014.[16]

Appendix Table A4 presents descriptive statistics for the estimation sample. Outcome _ICR averages 74%, while the mean score for OutcomeRaw_ICR is a 4. Fifty-eight percent of available observations are projects with safeguards, and again category B accounts of the bulk of these.

Table 6 reports results from estimating project performance equations. Columns (1) and (2) report marginal effects (evaluated at the mean) from a probit model that uses the dichotomous overall ICR outcome rating (Outcome_ICR) as the measure of project performance. This specification includes region dummies (since estimating country fixed effects in a probit setting is problematic); we find a higher probability of satisfactory outcomes in all regions as compared with Sub-Saharan Africa, a well-documented pattern for World Bank projects. There is some sectoral variation (Health doing worse and Transportation doing better than Agriculture) as well as variation by financial instrument type (Emergency Recover Loans doing better and Financial

[16] Looking for meaningful breaks using instead the year of project approval rather than the ICR year finds no similar break. This might represent a procedural shift in how projects with safeguards are evaluated but other explanations are also consistent with these findings.

Intermediary Loan and Learning and Innovation Loans doing worse than Adaptable Program Loans).

The first column includes a single safeguard indicator; the second column breaks this in category A, B, and F. Projects with safeguards have a 4.1% lower probability of a satisfactory ICR rating, ceteris paribus. This is driven by safeguard category A and B projects; the effect for the former is larger but not statistically significant (perhaps because of the small number of projects in this category). Thus, controlling for a host of other factors, we find significantly worse performance for projects with safeguards.

We also explore the role of geopolitics and find that nonpermanent UNSC membership at the time the ICR rating is given matters. Projects in countries that are UNSC members at the time of the ICR rating are significantly more likely to receive a satisfactory rating, ceteris paribus. At 7.7 percentage points (versus the sample mean of 74% satisfactory ratings), the effect is sizeable. This implies a bias in the rating process. This result also holds in specifications that include country fixed effects (conditional logit or linear probability models).

Columns (3) and (4) use the raw outcome rating (on a 1 to 6 scale) as the dependent variable and estimate a linear model. Results for the key variables are comparable. The most notable difference is that the negative effect for safeguard category A projects is now statistically significant (likely because the increased variation in the 1 to 6 rating allows us to identify the effect even for the relatively few category A projects). The geopolitical result persists in this specification.

As noted above, these results are for evaluations completed prior to fiscal year 2015. If we expand the sample through 2017 (adding 838 projects), the marginal effect of safeguards drops by almost half and ceases to be statistically significant. This suggests a major shift in recent years in how the World Bank evaluates projects with safeguards.[17] The impact of UNSC membership, however, remains the same.

A second issue with the above results is that they ignore the possible endogeneity of safeguards. Although we include a large number of control variables—project size, source of funds, sector, loan type—if we did not capture all project characteristics that impact ICR outcome ratings and if at least some of these omitted variables also trigger safeguard procedures, then the estimated coefficient reflects not just the impact of safeguard *procedures* but also the impact of omitted project characteristics. Thus, the negative and significant effect could simply reflect problems inherent in the type of projects that need safeguards rather than the impact of the safeguard procedures themselves.

To address this, we capitalize on the political economy of safeguards. Recall from Table 3 that nonpermanent UNSC membership at project approval (UNSC @ approval) is associated with a lower probability of safeguards. This means we can identify variation in the application of safeguard procedures that is independent of project characteristics. While the usual approach to addressing endogeneity in probit estimation (e.g., in Table 6, Column 1) using a control function approach cannot be applied with an binary endogenous variable, we can estimate a recursive

[17] We interpret this as a change in evaluation because the change in results is cleaner using evaluation (a structural break for projects evaluated in fiscal year 2015 or later) rather than approval (the year the project was approved).

bivariate probit via maximum likelihood, a special regression (Dong and Lewbel 2015), or a switching model (where all coefficients are allowed to differ with safeguards) to identify the impact of safeguard procedures. The usual instrumental variables approach, of course, is applicable for the least squares estimate based on the 1 to 6 rating in Column (3). Since we have only one instrument, we cannot extend this to the case with multiple safeguard categories (Columns 2 and 4).

Table 7 summarizes estimation results, reporting marginal effects for the safeguard variable. Column (1) is the recursive bivariate probit. The estimated effect (marginal effects at the mean) of safeguards switches from negative and significant (Table 6, Column 1) to positive (8.2 percentage points higher probability of a satisfactory ICR outcome rating) but is not statistically significant. Column (2) presents the marginal effect of safeguards in terms of the average index function from Dong and Lewbel's (2015) simple regression (using Baum 2012), which requires a weaker set of assumptions than the maximum likelihood-based bivariate probit.[18] The estimated marginal effect is again positive but not statistically significant. Column (3) represents results from a panel estimation using UNSC @ approval as an instrument for safeguard status; the coefficient estimate for safeguards is again positive but not statistically significant. Finally, the average treatment effect (ATE) of safeguards from a probit switching model (that includes UNSC @ approval in the safeguard equation only (identification) and allows different coefficient estimates for each variable for safeguard=0 and safeguard=1) is 15%.

While none of these estimates are statistically significant at the 95% confidence level, all are positive. This suggests the negative, significant effect of safeguards on project outcomes in Table 6 was indeed due to omitted variable bias. The type of project that triggers safeguard procedures tends to perform less well by the metrics used to assign outcome ratings but the safeguard procedures themselves do not appear to impact those ratings. That said, because the results identified using geopolitical variation are not statistically significant we cannot confidentially conclude that safeguard procedures reduce the negative impact of such project characteristics on project outcomes.

4.5 Inspection Panel requests

As noted earlier, ESS are related to Inspection Panel requests from groups within borrowing countries. If not appropriately handled, projects with ESS designation have a higher risk of negative environmental and social impacts. In addition, ESS designation introduces more stringent rules and so opens up additional questions about whether World Bank staff adhered to those rules. This section explores covariates of Inspection Panel requests and links between Inspection Panel requests and project preparation, duration, and performance. As with safeguards, in some settings it is an open question whether the coefficient estimates reflect the effect of Inspection Panel requests or of omitted project characteristics that drive such requests.

Table 8 presents marginal effects in an Inspection Panel selection equation. Here Inspection Panel requests are the dependent variable (1 if an Inspection Panel request is recorded

[18] We use project size (specifically, the demeaned negative log of total amount) as the special regressor with trimming set at 7.5% (yielding a kurtosis of 3 for the special regressor). Standard errors are generated via bootstrap (250 repetitions); results are not sensitive to the seed value with this number of repetitions (but are with small numbers of repetitions).

for the project, 0 otherwise). The Inspection Panel was set up in 1994 but some requests are for projects previously approved, the earliest in 1983. Looking at projects approved between 1983 and 2018 yields a sample of 11,598 projects, 114 of which have at least one Inspection Panel request.[19] Column (1) presents marginal effects evaluated at the sample mean from a probit estimation including a single safeguard dummy. Based on this sample, the probit estimation finds that Inspection Panel requests are more likely for projects with larger loans and in the Energy Sector (as compared to Agriculture) and less likely for Industry Sector and in East Asia-Pacific (as compared to Sub-Saharan Africa).

The probability of an Inspection Panel request is strongly related to the safeguard status of the project. The probability of a project without safeguards receiving at least one Inspection Panel request is 0.159%, ceteris paribus. This rises by 0.765 percentage points to 0.92% for the same project with safeguards (see Column (1) of Table 8). Looking at the different categories of safeguards in Column (2), the figures are an increase of 0.573 percentage points for category B projects (resulting in a 0.73% chance of at least one Inspection Panel request) and an increase of 2.66 percentage points for category A projects (resulting in 2.81% chance of at least one Inspection Panel request). Thus, the chances of an Inspection Panel request are 18 times greater in a category A project than for a project without safeguards, ceteris paribus. Finally, Column (3) addresses the potential endogeneity of safeguards by following the recursive bivariate probit procedure used in Table 7, Column (1). The exclusion restriction is that nonpermanent UNSC membership impacts safeguard designation but not the decision to file an Inspection Panel request. Projects with safeguard procedures are 1% more likely to have Inspection Panel requests filed, ceteris paribus; this is significant at the 90% confidence level. This suggests that it is the perceived violation of World Bank safeguard procedures that leads to the higher incidence of Inspection Panel requests, rather than greater harm per se of the type of projects needing safeguards.

Table 9 summarizes results when the Inspection Panel request indicator is included in the previous estimations alongside the safeguard indicators. Previous results for coefficient estimates are essentially unchanged (including coefficient estimates for safeguard indicators). Looking at the coefficient estimates for the Inspection Panel request dummy, there is no apparent link with preparation duration, perhaps indicating that most requests come after project preparation is completed. Disbursement is significantly slower (about 5.5 weeks) when looking at the 50% disbursed threshold, suggesting that project implementation is only temporarily derailed by such requests (consistent with recent work on accountability mechanisms at a range of MDBs). Turning to project outcomes, the chances of a satisfactory outcome ICR rating are 20% lower for projects with Inspection Panel requests—generally in addition to the 6% reduction due to category A safeguards.

5. Conclusions and Suggestions for Future Research and Policy

Through the Sustainable Development Goals, developed and developing country governments and civil society alike seek a global economy that raises the standard of living of the world's people in a manner that is low carbon and socially inclusive. Given a consensus that the private sector lacks the proper signals to steer the economy in such a direction, there is now an

[19] Inspection Panel request data are from https://inspectionpanel.org/panel-cases (accessed 1/10/2019).

alignment across these multiple stakeholders that development finance is paramount to meeting the world's broad sustainable development goals. Environmental and Social Safeguards have the potential to be important tools in ensuring that development finance not only prevents harm, but does good.

There is great concern about the efficacy of ESS from a variety of places and parties. Many developing country finance ministers see ESS as onerous and ultimately not performing well enough to justify project cancellation and delay. INGOs and environmental experts see longer project preparation as the proper due diligence that will improve or at least not worsen the environmental and social ramifications of development projects. Indeed, as noted earlier, Kilby (2015) has found that project level due-diligence at the World Bank has led to better development outcomes. Nevertheless, INGOs and local community organizations have also been critical of the MDBs in general and the World Bank in particular, arguing that these entities have not done enough to safeguard projects from social and environmental harm.

Our analysis confirms that World Bank projects with safeguards take longer to prepare and disburse than those projects without safeguards. Moreover, we find evidence that the World Bank at times forgoes safeguard procedures for borrowers when they hold one of the nonpermanent seats on the UNSC. This violates the 'doctrine of economic neutrality' embodied in the articles of agreement of the World Bank and could result in the World Bank funding projects with high social and environmental risk. Furthermore, the type of project that has ESS is less likely to lead to positive development outcomes but ESS themselves neither cause nor solve these problems. Finally, Inspection Panel requests are 17 times more likely for projects in the high-risk ESS category; the increased incidence of such requests appears driven by perceived violations of the procedures triggered by ESS rather than by increased harm.

Our results suggest a change in ex post evaluation of ESS projects beginning in fiscal year 2015. This may be a result of the increased scrutiny that the World Bank experienced as it worked through its four-year process of ESS reform. Further research will be needed to examine the extent to which this has been a permanent change (and not just a question of evaluation standards), or whether a result of a global spotlight put on the institution during its reform and consultation process.

Given that the World Bank is the flagship MDB, these findings are of grave concern. Future research is needed in order to explain why ESS policies have largely fallen short of achieving their stated goals. Given the urgency of the development challenges ahead of us, utmost emphasis should be put on ensuring that development finance is steered toward projects that enhance social and environmental performance without placing undue burden on borrowing governments and World Bank staff that could undermine interest in such projects.

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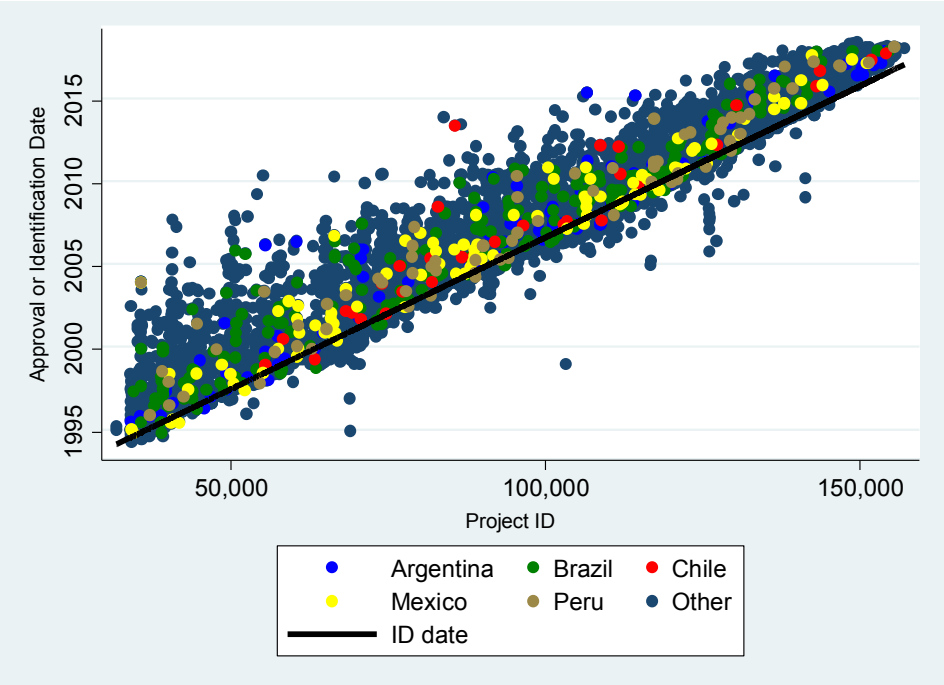

Figure 1: World Bank Stochastic Frontier Model

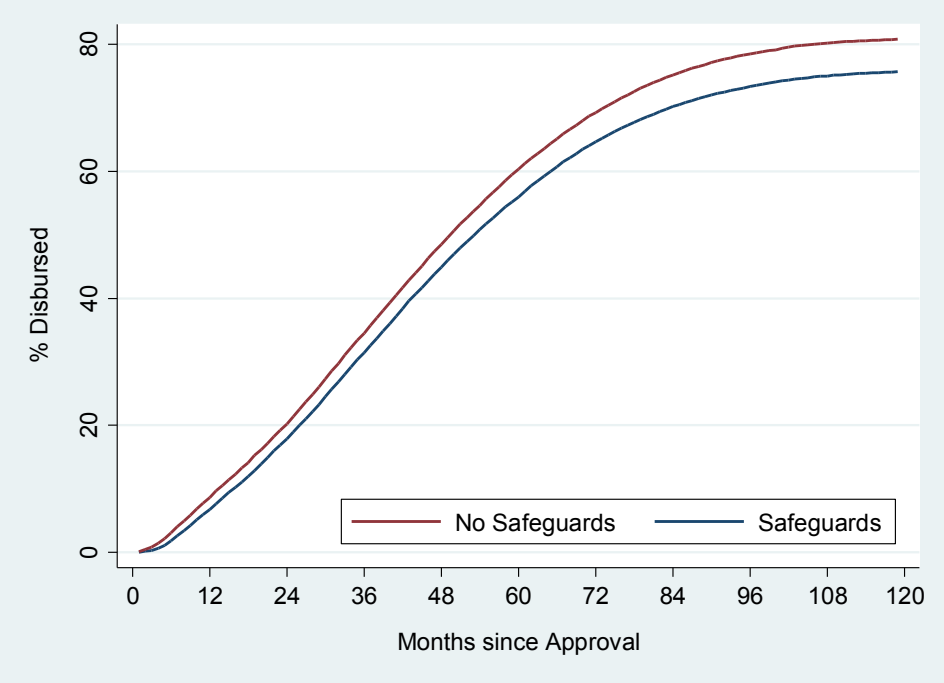

Figure 2: Cumulative Disbursements by Safeguard Status

Table 2: Environmental and Social Safeguard Categories

All Loans

Category	Count	Percent
A	827	7.5%
B	4,756	42.9%
F	257	2.3%
C/D/U/blank	5,250	47.3%
Total	11,090	100.0%

Investment Projects Only

Category	Count	Percent
A	825	8.6%
B	4,709	49.2%
F	255	2.7%
C/D/U/blank	3,773	39.5%
Total	9,562	100.0%

Projects approved from fiscal year 1990 to 2018.

Table 3: Safeguard Selection

	(1)	(2)	(3)	(4)
UNSC @ approval	-0.0802***	-0.00637	-0.0894***	0.00422
	(-3.48)	(-0.78)	(-3.50)	(0.42)
Project Size	0.0635***	0.0266***	0.0578***	0.0142***
	(9.41)	(5.64)	(8.48)	(6.48)
supplement	0.122***	0.0255*	0.129***	0.0251
	(5.79)	(1.75)	(5.51)	(1.57)
IDA	0.0174	-0.0159*	0.0401*	0.00458
	(0.79)	(-1.78)	(1.82)	(0.45)
Regional Dummies (Omitted Category: Sub-Saharan Africa)				
East Asia & Pacific	-0.0335	0.0183	-0.0517**	0.0112
	(-1.40)	(1.30)	(-2.22)	(0.63)
Europe & Central Asia	-0.0328	-0.0165*	-0.0492	0.114***
	(-1.18)	(-1.92)	(-1.64)	(6.01)
Latin American & Caribbean	-0.0187	-0.0206**	-0.000322	-0.0214
	(-0.79)	(-2.40)	(-0.01)	(-1.48)
Middle East & North Africa	-0.0463	0.00950	-0.0497	0.0221
	(-1.49)	(0.61)	(-1.54)	(1.04)
South Asia	-0.0186	0.00438	-0.0208	-0.00437
	(-0.94)	(0.44)	(-1.01)	(-0.20)
Sector Dummies (Omitted Category: Agriculture)				
Education	-0.204***	-0.0544***	-0.190***	-0.0161**
	(-9.53)	(-6.43)	(-8.99)	(-2.00)
Energy	0.122***	0.0789***	0.103***	0.0746***
	(5.93)	(4.78)	(4.34)	(3.97)
Finance	-0.144***	-0.0444***	-0.174***	0.0988***
	(-4.63)	(-5.09)	(-5.43)	(5.22)
Health	-0.0820***	-0.0423***	-0.0646***	-0.0151
	(-3.53)	(-5.56)	(-2.81)	(-1.08)
Industry	0.108***	0.0195*	0.124***	0.0196
	(5.87)	(1.83)	(6.21)	(1.09)
ICT	-0.165***	-0.0312***	-0.151***	-0.0498***
	(-4.47)	(-4.60)	(-4.01)	(-4.10)
Public	-0.0972***	-0.0261***	-0.0910***	-0.0415***
	(-5.92)	(-3.21)	(-4.95)	(-4.23)
Social	0.0244	-0.0267***	0.0302	0.0154
	(1.12)	(-3.62)	(1.30)	(1.11)
Transportation	0.218***	0.133***	0.225***	0.0548**
	(14.14)	(6.82)	(12.53)	(2.52)
WASH	0.210***	0.121***	0.212***	0.101***
	(14.57)	(3.92)	(13.26)	(4.31)
Financial Instrument Dummies (Omitted Category: Adaptable Program Loan)				
Emergency Recovery Loan	-0.0183	-0.0331***	0.00592	-0.0554***
	(-0.50)	(-4.63)	(0.15)	(-3.31)
Financial Intermediary Loan	0.219***	-0.0337***	0.227***	0.193***
	(6.36)	(-4.83)	(4.72)	(3.06)
Investment Project Financing	0.221***	0.134***	0.240***	0.0396**
	(6.18)	(3.79)	(6.23)	(2.21)
Learning & Innovation Loan	-0.263***	-0.0309***	-0.252***	-0.0499***
	(-4.69)	(-3.59)	(-4.77)	(-2.84)

Sector Investment & Maintenance Loan	0.106***	0.0123	0.124***	0.00640
	(2.64)	(0.46)	(2.76)	(0.12)
Specific Investment Loan	0.0699**	0.0169	0.0783**	0.00247
	(2.40)	(1.25)	(2.42)	(0.16)
Technical Assistance Loan	-0.466***	-0.0575***	-0.439***	-0.0730***
	(-15.17)	(-6.16)	(-15.07)	(-5.75)
Unidentified	-0.189*		-0.148	
	(-1.76)		(-1.42)	
Observations	9243	4409	8190	2883

Marginal effects at sample mean from Probit Model. *z*-statistics in parentheses based on country-clustered SEs. Unit of observation: project. World Bank investment projects approved from 1990 to 2018. All specifications include approval year dummies. * p<0.1 ** p<0.05 *** p<0.01

(1) Dependent variable: =1 if safeguard category A, B or F; full sample

(2) Dependent variable: =1 if safeguard category A; sample excludes B & F

(3) Dependent variable: =1 if safeguard category B; sample excludes A & F

(4) Dependent variable: =1 if safeguard category F; sample excludes A & B

Table 4 - Stochastic Frontier Model of Preparation Duration Impact of Safeguards

	(1)	(2)
Safeguard	0.701***	
	(9.35)	
Safeguard type A		1.024***
		(8.34)
Safeguard type B		0.670***
		(8.81)
Safeguard type F		0.699***
		(3.89)
UNGA alignment with USA	-1.042***	-1.005***
	(-5.14)	(-4.95)
Project Size	0.151***	0.137***
	(8.22)	(7.32)
supplement	-1.529***	-1.529***
	(-15.43)	(-15.39)
IDA	-0.303***	-0.272***
	(-4.11)	(-3.66)
Regional Dummies (Omitted Category: Sub-Saharan Africa)		
East Asia & Pacific	-0.228**	-0.241**
	(-2.39)	(-2.53)
Europe & Central Asia	-0.118	-0.109
	(-1.18)	(-1.07)
Latin American & Caribbean	-0.0859	-0.0632
	(-0.86)	(-0.63)
Middle East & North Africa	-0.342**	-0.338**
	(-2.54)	(-2.52)
South Asia	-0.254**	-0.265**
	(-2.44)	(-2.54)
Sector Dummies (Omitted Category: Agriculture)		
Education	-0.254***	-0.227***
	(-2.93)	(-2.62)
Energy	0.197**	0.193**
	(2.26)	(2.20)
Finance	-0.391***	-0.378***
	(-3.34)	(-3.19)
Health	-0.259***	-0.236**
	(-2.67)	(-2.43)
Industry	0.335***	0.341***
	(3.63)	(3.69)
ICT	-0.125	-0.120
	(-0.77)	(-0.74)
Public	0.493***	0.504***
	(7.54)	(7.68)
Social	-0.166**	-0.154**
	(-2.13)	(-1.97)
Transportation	-0.348***	-0.382***
	(-4.24)	(-4.61)
WASH	-0.0148	-0.0342
	(-0.19)	(-0.44)

Financial Instrument Dummies (Omitted Category: Adaptable Program Loan)		
Emergency Recovery Loan	-3.451***	-3.443***
	(-11.22)	(-11.26)
Financial Intermediary Loan	-0.867**	-0.808**
	(-2.46)	(-2.23)
Investment Project Financing	-0.0546	-0.0575
	(-0.47)	(-0.49)
Learning & Innovation Loan	-0.419*	-0.429*
	(-1.73)	(-1.78)
Sector Investment & Maintenance Loan	-0.0127	0.0203
	(-0.05)	(0.08)
Specific Investment Loan	0.00809	0.0130
	(0.08)	(0.12)
Technical Assistance Loan	-1.822***	-1.823***
	(-11.72)	(-11.73)
Unidentified	0.373	0.383
	(0.84)	(0.87)
Observations	7023	7023

z-statistics in parentheses. Unit of observation: project. * p<0.1 ** p<0.05 *** p<0.01
Estimation via Stochastic Frontier Model using exponential distribution and cost function. Sample restricted to investment projects.

Table 5: Time to 25%, 50%, & 75% Disbursement

	(1)	(2)	(3)	(4)	(5)	(6)
Safeguard	1.132*	2.138***	2.828***			
	(1.76)	(2.86)	(3.33)			
Safeguard type A				2.846**	3.864***	5.161***
				(2.29)	(3.12)	(3.59)
Safeguard type B				1.016	1.925**	2.461***
				(1.58)	(2.54)	(2.92)
Safeguard type F				1.302	4.463**	7.818***
				(0.68)	(2.19)	(3.35)
Approval Period	-0.253***	-0.402***	-0.534***	-0.253***	-0.404***	-0.536***
	(-8.70)	(-10.18)	(-11.35)	(-8.70)	(-10.21)	(-11.40)
IDA	1.588	3.029*	4.365**	1.963	3.365*	4.776**
	(1.32)	(1.67)	(2.00)	(1.55)	(1.77)	(2.05)
Project Size	-1.360**	-1.424**	-0.860	-1.454***	-1.511**	-0.971
	(-2.58)	(-2.38)	(-1.43)	(-2.67)	(-2.44)	(-1.60)
Inflation	-22.72***	-42.37***	-64.15***	-22.58***	-41.97***	-63.19***
	(-3.11)	(-3.66)	(-4.01)	(-3.08)	(-3.63)	(-3.98)
GDP	30.12***	44.37***	56.54***	30.03***	44.26***	56.24***
	(8.53)	(8.25)	(8.11)	(8.52)	(8.24)	(8.10)
Population	46.72***	73.77***	98.04***	46.80***	74.53***	99.46***
	(3.57)	(4.12)	(4.62)	(3.58)	(4.18)	(4.72)
Sector Dummies (Omitted Category: Agriculture)						
Education	-1.901***	-2.500***	-2.341***	-1.798***	-2.460***	-2.341***
	(-2.98)	(-3.31)	(-2.75)	(-2.83)	(-3.28)	(-2.77)
Energy	0.800	0.102	-0.0746	0.717	-0.00846	-0.245
	(1.02)	(0.11)	(-0.07)	(0.92)	(-0.01)	(-0.22)
Finance	-2.072**	-0.724	-0.328	-2.013**	-0.765	-0.470
	(-2.38)	(-0.65)	(-0.27)	(-2.25)	(-0.68)	(-0.39)
Health	0.255	1.081	1.108	0.358	1.178	1.234
	(0.38)	(1.14)	(1.06)	(0.54)	(1.25)	(1.19)
Industry	-0.482	-1.373	-2.704**	-0.456	-1.321	-2.611**
	(-0.54)	(-1.33)	(-2.46)	(-0.50)	(-1.27)	(-2.37)
ICT	0.745	0.787	0.894	0.792	0.845	0.978
	(0.59)	(0.63)	(0.63)	(0.63)	(0.68)	(0.69)
Public	5.245***	7.318***	8.155***	5.278***	7.394***	8.301***
	(8.52)	(10.09)	(10.34)	(8.58)	(10.22)	(10.53)
Social	-2.064***	-1.429**	-0.935	-2.032***	-1.406**	-0.912
	(-3.83)	(-2.32)	(-1.46)	(-3.82)	(-2.29)	(-1.41)
Transportation	-2.126***	-2.705***	-2.812***	-2.227***	-2.840***	-3.021***
	(-3.20)	(-3.73)	(-3.30)	(-3.34)	(-3.85)	(-3.45)
WASH	2.087***	1.968***	1.558**	1.994***	1.830**	1.337*
	(3.37)	(2.81)	(2.12)	(3.13)	(2.53)	(1.74)
Financial Instrument Dummies (Omitted Category: Adaptable Program Loan)						
Emergency Recovery Loan	-11.71***	-12.27***	-11.14***	-11.55***	-11.98***	-10.65***
	(-6.62)	(-6.01)	(-4.78)	(-6.45)	(-5.87)	(-4.58)
Financial Intermediary Loan	-2.585	-3.811	-4.597	-2.380	-4.206	-5.646*
	(-0.91)	(-1.31)	(-1.50)	(-0.76)	(-1.33)	(-1.75)
Learning & Innovation Loan	-6.597***	-7.353***	-6.832***	-6.746***	-7.475***	-6.974***
	(-3.21)	(-3.77)	(-3.61)	(-3.27)	(-3.78)	(-3.64)
Sector Investment & Maintenance Loan	-2.409	-2.161	-2.213	-2.321	-2.039	-2.017

	(-1.48)	(-1.14)	(-1.04)	(-1.40)	(-1.06)	(-0.93)
Specific Investment Loan	-0.0311	0.636	1.201	-0.000337	0.709	1.338
	(-0.03)	(0.60)	(1.08)	(-0.00)	(0.67)	(1.18)
Technical Assistance Loan	-5.999***	-4.893***	-2.518	-5.993***	-4.865***	-2.461
	(-4.10)	(-2.98)	(-1.27)	(-4.09)	(-2.95)	(-1.24)
Observations	4510	4510	4510	4510	4510	4510

t-statistics in parentheses based on country-clustered standard errors. All specifications include country fixed effects. * p<0.1 ** p<0.05 *** p<0.01
(1&4) Dependent variable is number of months to reach 25% disbursement for investment projects
(2&5) Dependent variable is number of months to reach 50% disbursement for investment projects
(3&6) Dependent variable is number of months to reach 75% disbursement for investment projects

Table 6: Project Outcomes

	(1)	(2)	(3)	(4)
Safeguard	-0.0409**		-0.119**	
	(-2.43)		(-2.43)	
Safeguard type A		-0.0631		-0.317***
		(-1.35)		(-2.93)
Safeguard type B		-0.0420**		-0.115**
		(-2.42)		(-2.27)
Safeguard type F		0.0468		0.143
		(0.92)		(1.05)
UNSC @ ICR	0.0766***	0.0750***	0.288***	0.284***
	(2.75)	(2.71)	(3.62)	(3.62)
Project Size	-0.00967	-0.00879	-0.0296	-0.0204
	(-1.30)	(-1.11)	(-1.55)	(-1.00)
GDP	-0.0126	-0.0132	-0.438**	-0.435**
	(-0.71)	(-0.75)	(-2.14)	(-2.11)
Population	0.0270	0.0275	0.454	0.521
	(1.57)	(1.59)	(0.92)	(1.05)
IDA	0.0501*	0.0470	0.0816	0.0383
	(1.67)	(1.51)	(1.32)	(0.57)
Regional Dummies (Omitted Category: Sub-Saharan Africa)				
East Asia & Pacific	0.146***	0.146***		
	(3.97)	(4.01)		
Europe & Central Asia	0.180***	0.175***		
	(6.68)	(6.49)		
Latin America & Caribbean	0.174***	0.175***		
	(5.71)	(5.72)		
Middle East & North Africa	0.0713*	0.0717*		
	(1.83)	(1.85)		
South Asia	0.0910***	0.0917***		
	(3.11)	(3.16)		
Sector Dummies (Omitted Category: Agriculture)				
Education	0.0310	0.0278	0.0947*	0.0759
	(1.44)	(1.27)	(1.72)	(1.36)
Energy	-0.0419	-0.0413	-0.0509	-0.0433
	(-1.45)	(-1.44)	(-0.75)	(-0.64)
Finance	0.000777	-0.00204	0.0320	0.0137
	(0.03)	(-0.08)	(0.46)	(0.20)
Health	-0.0614**	-0.0636**	-0.110**	-0.124**
	(-2.27)	(-2.33)	(-1.99)	(-2.17)
Industry	0.0188	0.0194	0.00362	0.00301
	(0.77)	(0.79)	(0.05)	(0.04)
ICT	-0.0229	-0.0230	-0.0269	-0.0356
	(-0.57)	(-0.57)	(-0.24)	(-0.32)
Public	-0.0204	-0.0192	-0.0569	-0.0575
	(-1.03)	(-0.97)	(-1.07)	(-1.10)
Social	0.0266	0.0259	0.0417	0.0347
	(1.26)	(1.24)	(0.84)	(0.70)
Transportation	0.119***	0.119***	0.402***	0.407***
	(6.94)	(6.85)	(8.14)	(7.98)
WASH	-0.00651	-0.00776	-0.0531	-0.0524
	(-0.32)	(-0.37)	(-1.02)	(-0.98)

Financial Instrument Dummies (Omitted Category: Adaptable Program Loan)				
Emergency Recovery Loan	0.102***	0.105***	0.387***	0.392***
	(2.71)	(2.85)	(3.49)	(3.47)
Financial Intermediary Loan	-0.164**	-0.188**	-0.543**	-0.610***
	(-1.99)	(-2.09)	(-2.56)	(-2.94)
Investment Project Financing			0.154	0.306
			(0.30)	(0.57)
Learning & Innovation Loan	-0.150**	-0.145**	-0.323**	-0.300**
	(-2.48)	(-2.41)	(-2.35)	(-2.19)
Sector Investment & Maintenance Loan	-0.0418	-0.0418	-0.0790	-0.0810
	(-1.04)	(-1.05)	(-0.72)	(-0.73)
Specific Investment Loan	-0.0148	-0.0132	-0.0440	-0.0374
	(-0.49)	(-0.44)	(-0.59)	(-0.50)
Technical Assistance Loan	-0.0340	-0.0334	-0.103	-0.0982
	(-0.85)	(-0.84)	(-1.04)	(-0.98)
Observations	3504	3504	3518	3518

t/*z*-statistics in parentheses based on country-clustered SEs. Unit of observation: project. World Bank investment projects approved after fiscal year 1989 & evaluated before fiscal year 2015.
* p<0.1 ** p<0.05 *** p<0.01
(1&2) Probit Model. Dependent variable: =1 ICR Outcome Rating is Satisfactory. Marginal effects at sample mean.
(3&4) Country Fixed Effects Model. Dependent variable: ICR Outcome Rating on 1(Highly Unsatisfactory) to 6 (Highly Satisfactory) scale.

Table 7: Project Outcomes with Geopolitics-based Identification Strategy

	(1)	(2)	(3)
Safeguard	.0819	0.114	0.727
	(0.78)	(1.58)	(0.51)
N	3518	3011	3518

z-statistics in parentheses. * .1 ** .05 *** .01
(1) Dependent variable: 0/1 ICR outcome rating. Marginal effects at means from recursive bivariate probit model; *z*-statistics based on country-clustered SEs.
(2) Dependent variable: 0/1 ICR outcome rating. Marginal effects at means, average index function from special regression. Sample size reduced due to trim algorithm.
(3) Dependent variable; 1-6 ICR outcome rating. Coefficient estimate from panel IV; *z*-statistics based on country-clustered SEs.
All three approaches use variation in the application of safeguards driven by nonpermanent UNSC membership at project approval to identify the effect of safeguards on project outcome ratings.

Table 8: Inspection Panel requests

	(1)	(2)	(3)
Safeguard	0.00765***		0.0104*
	(4.38)		(1.93)
Safeguard type A		0.0266***	
		(3.50)	
Safeguard type B		0.00573***	
		(3.65)	
Safeguard type F		0.00321	
		(0.79)	
Project Size	0.00187***	0.00149***	0.00150***
	(4.04)	(3.28)	(3.96)
GDP	-0.00128	-0.00121	-0.00107
	(-1.57)	(-1.54)	(-1.52)
Population	0.00102	0.000930	0.000823
	(1.14)	(1.10)	(1.09)
IDA	-0.000713	0.000111	-0.000804
	(-0.47)	(0.08)	(-0.59)
DPL	0.00471	0.00523	0.00206
	(0.92)	(0.99)	(0.60)
Regional Dummies (Omitted Category: Sub-Saharan Africa)			
East Asia & Pacific	-0.00268*	-0.00293*	-0.00220*
	(-1.70)	(-1.95)	(-1.74)
Europe & Central Asia	-0.000266	0.000313	-0.000309
	(-0.12)	(0.13)	(-0.17)
Latin America & Caribbean	0.00259	0.00340	0.00207
	(0.88)	(1.07)	(0.84)
Middle East & North Africa	-0.00195	-0.00200	-0.00157
	(-1.18)	(-1.30)	(-1.14)
South Asia	0.00157	0.00144	0.00158
	(0.67)	(0.63)	(0.74)
Sector Dummies (Omitted Category: Agriculture)			
Education	0.0000242	0.000683	0.000370
	(0.02)	(0.41)	(0.25)
Energy	0.00589**	0.00481**	0.00456**
	(2.30)	(2.11)	(2.19)
Finance	0.000841	0.00173	0.00148
	(0.53)	(0.95)	(0.89)
Health	-0.00152	-0.00116	-0.00122
	(-1.02)	(-0.75)	(-0.97)
Industry	-0.00290***	-0.00274***	-0.00243***
	(-3.05)	(-2.89)	(-2.84)
ICT	-0.00181	-0.00183	-0.00130
	(-1.18)	(-1.22)	(-0.93)
Public	0.0000533	0.000147	0.0000573
	(0.06)	(0.17)	(0.08)
Social	0.00130	0.00172	0.000995
	(0.99)	(1.23)	(0.91)
Transportation	0.000963	0.000503	0.000388
	(0.80)	(0.48)	(0.43)
WASH	0.00119	0.000717	0.000491

	(0.83)	(0.54)	(0.39)
Financial Instrument Dummies (Omitted Category: Adaptable Program Loan)			
Emergency Recovery Loan	-0.000901	-0.000362	-0.00204
	(-0.34)	(-0.13)	(-1.25)
Financial Intermediary Loan			-0.00408***
			(-4.32)
Investment Project Financing	0.00474	0.00453	0.00119
	(1.16)	(1.16)	(0.41)
Learning & Innovation Loan	0.0195	0.0180	0.0104
	(0.87)	(0.83)	(0.71)
Sector Investment & Maintenance Loan	-0.00281*	-0.00239	-0.00293***
	(-1.78)	(-1.29)	(-2.84)
Specific Investment Loan	0.00420	0.00440	0.000914
	(1.53)	(1.58)	(0.34)
Technical Assistance Loan	0.00147	0.00135	0.000123
	(0.32)	(0.31)	(0.04)
Unidentified			-0.00327***
			(-4.30)
Fiscal Year	0.0000146	0.0000249	-0.0000374
	(0.23)	(0.38)	(-0.57)
Observations	11598	11598	11598

z-statistics in parentheses based on country-clustered SEs. Marginal effects at sample average reported. Unit of observation: project. Dependent variable: =1 if Inspection Panel request made. World Bank investment projects approved 1983-2018. * p<0.1 ** p<0.05 *** p<0.01
(1&2) Probit Model.
(3) Recursive Bivariate Probit Model. Exogenous variation in safeguards identified through nonpermanent UNSC membership at project approval.

Table 9: Impact of Inspection Panel requests

Dependent Variable		Specification Details	Inspection Panel Marginal Effect	Notes
Preparation Duration		controlling for Safeguards	0.200	
			(0.82)	
		controlling for Safeguards A/B/F	0.139	
			(0.57)	
Disbursement Speed	25%	controlling for Safeguards	2.805	
			(1.47)	
	25%	controlling for Safeguards A/B/F	2.366	
			(1.20)	
	50%	controlling for Safeguards	5.829**	
			(2.61)	
	50%	controlling for Safeguards A/B/F	5.422**	
			(2.42)	
	75%	controlling for Safeguards	3.548	
			(1.61)	
	75%	controlling for Safeguards A/B/F	2.942	
			(1.34)	
Outcome Rating	0/1	controlling for Safeguards	-0.212**	
			(-2.52)	
	0/1	controlling for Safeguards	-0.197**	recursive bivariate probit
			(-2.43)	
	0/1	controlling for Safeguards A/B/F	-0.208**	
			(-2.45)	
	1-6	controlling for Safeguards	-0.456***	
			(-2.63)	
	1-6	controlling for Safeguards A/B/F	-0.412**	
			(-2.34)	

t/*z*-statistics in parentheses based on country-clustered SEs. * p<0.1 ** p<0.05 *** p<0.01
Marginal effects at means.

Appendix

Table A1: Descriptive Statistics for investment project selection for Safeguards

	mean	sd	min	max
Safeguard	0.608	0.488	0	1
Safeguard type A	0.087	0.282	0	1
Safeguard type B	0.494	0.500	0	1
Safeguard type F	0.027	0.162	0	1
UNSC @ approval	0.077	0.266	0	1
Project Size (log of loan amount in millions)	2.659	1.983	0	8.230
supplement	0.139	0.346	0	1
IDA	0.434	0.496	0	1
Sub-Saharan Africa	0.296	0.456	0	1
East Asia & Pacific	0.180	0.384	0	1
Europe & Central Asia	0.158	0.365	0	1
Latin American & Caribbean	0.167	0.373	0	1
Middle East & North Africa	0.080	0.271	0	1
South Asia	0.119	0.324	0	1
Agriculture	0.215	0.411	0	1
Education	0.161	0.367	0	1
Energy	0.155	0.362	0	1
Finance	0.091	0.287	0	1
Health	0.121	0.326	0	1
Industry	0.123	0.329	0	1
ICT	0.042	0.200	0	1
Public	0.497	0.500	0	1
Social	0.184	0.387	0	1
Transportation	0.201	0.401	0	1
WASH	0.194	0.395	0	1
Adaptable Program Loan	0.043	0.204	0	1
Emergency Recovery Loan	0.054	0.227	0	1
Financial Intermediary Loan	0.013	0.114	0	1
Investment Project Financing	0.252	0.434	0	1
Learning & Innovation Loan	0.016	0.124	0	1
Sector Investment & Maintenance Loan	0.028	0.166	0	1
Specific Investment Loan	0.448	0.497	0	1
Technical Assistance Loan	0.118	0.323	0	1
Unidentified	0.003	0.054	0	1
Observations	9243			

Table A2: Descriptive Statistics for Preparation Duration estimation

	mean	sd	min	max
World Bank Board Approval date	11/2/2007		3/31/1994	12/30/2016
ProjNum	99360.050	31785.803	31828	153154
Safeguard	0.618	0.486	0	1
Safeguard type A	0.085	0.279	0	1
Safeguard type B	0.501	0.500	0	1
Safeguard type F	0.033	0.178	0	1
UNGA voting alignment with U.S.	0.401	0.178	0	0.955
Project Size (log of loan amount in millions)	2.464	2.015	0	8.230
supplement	0.162	0.369	0	1
IDA	0.426	0.494	0	1
Sub-Saharan Africa	0.297	0.457	0	1
East Asia & Pacific	0.180	0.384	0	1
Europe & Central Asia	0.165	0.371	0	1
Latin American & the Caribbean	0.167	0.373	0	1
Middle East & North Africa	0.069	0.253	0	1
South Asia	0.122	0.328	0	1
Agriculture	0.216	0.411	0	1
Education	0.158	0.365	0	1
Energy	0.158	0.365	0	1
Finance	0.090	0.286	0	1
Health	0.124	0.330	0	1
Industry	0.117	0.322	0	1
ICT	0.039	0.195	0	1
Public	0.457	0.498	0	1
Social	0.197	0.398	0	1
Transportation	0.200	0.400	0	1
WASH	0.198	0.399	0	1
Adaptable Program Loan	0.055	0.227	0	1
Emergency Recovery Loan	0.062	0.241	0	1
Financial Intermediary Loan	0.009	0.096	0	1
Investment Project Financing	0.271	0.444	0	1
Learning and Innovation Loan	0.020	0.140	0	1
Sector Investment and Maintenance Loan	0.012	0.109	0	1
Specific Investment Loan	0.408	0.492	0	1
Technical Assistance Loan	0.134	0.341	0	1
Unidentified	0.004	0.062	0	1
Observations	7023			

Table A3: Descriptive Statistics for investment project speed of disbursement, months to threshold

	mean	sd	min	max
# Months to 25%	34.961	18.524	1	154.000
# Months to 50%	48.347	23.272	1	154.000
# Months to 75%	59.671	27.321	1	193.000
Safeguard type A	0.108	0.311	0	1
Safeguard type B	0.500	0.500	0	1
Safeguard type F	0.029	0.169	0	1
Approval Period	488.146	75.866	354.000	628.000
IDA	0.571	0.495	0	1
Project Size (log of loan amount in millions)	3.771	1.231	-0.639	8.134
Inflation	0.098	0.098	-0.164	0.959
GDP (log)	24.206	2.206	17.067	29.065
Population (log)	17.091	1.977	9.195	21.019
Agriculture	0.194	0.395	0	1
Education	0.183	0.387	0	1
Energy	0.136	0.343	0	1
Finance	0.106	0.308	0	1
Health	0.138	0.345	0	1
Industry	0.138	0.345	0	1
ICT	0.037	0.190	0	1
Public	0.671	0.470	0	1
Social	0.189	0.391	0	1
Transportation	0.239	0.427	0	1
WASH	0.204	0.403	0	1
Adaptable Program Loan	0.080	0.271	0	1
Emergency Recovery Loan	0.049	0.216	0	1
Financial Intermediary Loan	0.024	0.152	0	1
Learning & Innovation Loan	0.026	0.159	0	1
Sector Investment & Maintenance Loan	0.053	0.224	0	1
Specific Investment Loan	0.679	0.467	0	1
Technical Assistance Loan	0.090	0.286	0	1
Observations	4510			

IBRD/IDA investment projects approved between July 1989 and December 2012. # of Months measured from approval date.

Table A4: Descriptive Statistics for Project Performance estimation (Probit sample)

	mean	sd	min	max
Outcome_ICR	0.745	0.436	0	1
OutcomeRaw_ICR	4.079	1.149	1	6
Safeguard	0.578	0.494	0	1
Safeguard type A	0.086	0.280	0	1
Safeguard type B	0.468	0.499	0	1
Safeguard type F	0.025	0.156	0	1
UNSC @ ICR	0.080	0.271	0	1
Project Size (log of loan amount in millions)	3.330	1.502	0	6.919
IDA	0.512	0.500	0	1
Sub-Saharan Africa	0.255	0.436	0	1
East Asia & Pacific	0.169	0.375	0	1
Europe & Central Asia	0.191	0.393	0	1
Latin American & Caribbean	0.196	0.397	0	1
Middle East & North Africa	0.082	0.275	0	1
South Asia	0.107	0.309	0	1
Agriculture	0.200	0.400	0	1
Education	0.185	0.389	0	1
Energy	0.129	0.335	0	1
Finance	0.109	0.312	0	1
Health	0.144	0.351	0	1
Industry	0.142	0.349	0	1
ICT	0.035	0.185	0	1
Public	0.729	0.445	0	1
Social	0.198	0.399	0	1
Transportation	0.224	0.417	0	1
WASH	0.185	0.388	0	1
Adaptable Program Loan	0.064	0.245	0	1
Emergency Recovery Loan	0.058	0.234	0	1
Financial Intermediary Loan	0.023	0.148	0	1
Learning & Innovation Loan	0.030	0.170	0	1
Sector Investment & Maintenance Loan	0.059	0.236	0	1
Specific Investment Loan	0.666	0.472	0	1
Technical Assistance Loan	0.098	0.298	0	1
Observations	3504			