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Mobilization Effects of Multilateral Development Banks

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Abstract

This study uses loan-level data on syndicated lending to a large sample of developing countries between 1993 and 2017 to estimate the mobilization effects of multilateral development banks (MDBs), that is, their ability to crowd-in capital from private creditors. Controlling for a large set of fixed effects, the paper shows evidence of positive and significant mobilization effects of multilateral lending on the size of bank inflows. The number of lenders and the average maturity of syndicated loans also increase. These effects are present not only on impact but last for up to three years and are not offset by a decline in bond financing. There is no evidence of anticipation effects, and the results are robust to numerous tests controlling for the role of confounding factors and unobserved heterogeneity. Finally, the results are economically sizable, indicating that MDBs can mobilize about seven dollars in bank credit over a three-year period for each dollar invested.

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1 Introduction

In 2015, 193 countries adopted the 2030 Sustainable Development Agenda, which set ambitious targets for poverty reduction and inclusive development. The United Nations estimates that achieving the Sustainable Development Goals (SDGs) will require investment up to USD 3.9 trillion per year. At current investment levels, the estimated annual investment gap in developing countries is at about USD 2.5 trillion (UNCTAD, 2014; Gaspar et al., 2019). At the same time, total official development assistance (ODA) amounted to USD 143 billion in 2016, one order of magnitude smaller than the needs. This leaves a key role for the private sector.

An important question—for both policy and research—is how the international community can mobilize those additional resources for investment. Multilateral Development Banks (MDBs) are international institutions that provide financial assistance (e.g., loans, grants, etc.) to develop-

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ing countries with the clear mandate of promoting economic and social development.[1] MDBs have different motivations than private lenders, to the extent to which they select projects that maximize the expected development impact.[2] In addition, their investment decisions are driven by the explicit aim of mobilizing domestic and foreign capital but, in the same way as commercial lenders, they are also constrained by the need to preserve financial sustainability. Because of their specific mandate, MDBs can play an important role to help fund the investment gap, directly providing financial assistance, but also mobilizing additional private sector resources to developing countries. The first role, direct financial support to member countries, is part of the mandate of MDBs, which are expected to step in when private financing is scarce (Humphrey and Michaelowa, 2013), possibly mitigating the pro-cyclicality of private capital inflows (Galindo and Panizza, 2018). But direct financing is constrained by the fact that MDBs' loan capacity is small compared to countries' needs: demand for financing exceeds supply well beyond what MDBs can finance directly (United Nations, 2015). For this reason, MDBs have recently reaffirmed their pledge to catalyze more investment from private investors (World Bank, 2018). There are multiple examples from around the world of projects with MDB participation that had important catalytic effects in different settings. A prominent example is the Panama Canal expansion. The project to expand the canal and allow larger ships to transit to avoid market losses followed a referendum in 2006 and was financed by the Inter-American Development Bank Group, the European Investment Bank, the Corporación Andina de Fomento, the International Finance Corporation and the Japan Bank for International Cooperation. It is the largest infrastructure investment in the country since the Canal opened—amounting to 30% of GDP—and in the 5 years after its announcement it is estimated to have attracted almost USD 10 billion in private investment, 1.8 times the project cost (Lanzalot et al., 2018).

We formally test whether MDBs can crowd-in private sector resources to finance investment by looking at MDB participation in syndicated lending, which is a key source of funding for private corporations in developing and emerging markets (Bruche et al., 2017; Cortina et al., 2018). There are different channels through which MDBs can leverage additional resources from the private

[1] See Table A1 for a list of the MDBs included in the analysis. See Engen and Prizzon (2018) for an overview of MDBs, their mandate, operations and financial activities.

[2] In 2012, MDBs endorsed the *Principles to Support Sustainable Private Sector Operations*—additionality, crowding-in, commercial sustainability, reinforcing markets, promoting high standards—which aim to guide their engagement with the private sector to achieve the development goals they pursue as part of their mandate. These principles were reinforced in the 2013 *DFI Guidance for Using Investment Concessional Finance in Private Sector Operations (Private Sector Development Institutions Roundtable, 2013)* , the 2017 *Enhanced Principles for Blended Finance (Multilateral Developlment Banks, 2018a)*, and the 2018 *Multilateral Development Banks' Harmonized Framework for Additionality in Private Sector Operations (Multilateral Developlment Banks, 2018b)*.

sector. For example, MDBs can mobilize private finance as their entrance in a given country-sector could signal future investment opportunities. Also, thanks to their long-term perspective, MDBs could promote macroeconomic stability, growth and an investment-friendly environment,[3] all factors that can attract private creditors (Eichengreen and Mody, 2000; Kidwelly, 2017). In a similar vein, the presence of MDBs itself can signal to the private market the donors' trust in the country's institutional capacity and its commitment to reform, raising creditworthiness and consequently private capital inflows (Morris and Shin, 2006; Basílio, 2014). MDBs can also mobilize private resources thanks to the reduction of political and credit risks. MDBs can use their leverage to influence governmental decisions and deter adverse events that would negatively affect the project outcome (Hainz and Kleimeier, 2012). Credit risk could be reduced through multilateral guarantees and the extension of the MDBs' preferred creditor status, which implies that their loans are excluded from debt reschedulings (Arezki et al., 2017; Pereira dos Santos and Kearney, 2018; Gurara et al., 2020). In addition, to overcome or mitigate information asymmetries, private creditors may be willing to co-invest in a loan syndication with an MDB to take advantage of its technical expertise, monitoring capacity and better knowledge of the country-sector (Chelsky et al., 2013; Ratha, 2001; Gurría et al., 2001).

However, MDB lending could be a substitute rather than a complement to private finance, leading to crowding-out rather than crowding-in of private capital inflows (Basílio, 2014; Bird and Rowlands, 2007). Lack of additionality could simply be the result of the fact that MDB lending may displace private investors which would have invested anyway. Moreover, private inflows might also be discouraged if multilateral lending creates incentives for moral hazard, with borrowing governments financing low-return projects, delaying reforms, or using lending to repay old debt (Ratha, 2001; Swaroop and Devarajan, 1999). Crowding-out could also originate from the fact that MDBs impose higher environmental, social, and governance standards, monitor development outcomes—which is costly—and may interfere with corporate strategy. Finally, countries may need to borrow from MDBs when they are excluded from private markets and MDB lending could signal severe economic distress, discouraging private investment.

As studies on the catalytic effect of international financial institutions make clear, estimating the effect of the presence of MDBs on private capital flows requires dealing with selection bias and the endogeneity of MDB lending (Carter et al., 2018). In particular, since an MDB's choice to invest

[3]Through advisory and knowledge work MDBs can help governments identify and implement reforms to improve the investment environment and remove barriers to investments. Moreover, by encouraging countries experiencing balance of payments crises to pursue an IMF-supported program, or offering emergency financing to address macroeconomic vulnerabilities only after the IMF has assessed that an appropriate macroeconomic framework is in place, they can help restore macroeconomic stability (Group of Twenty, 2018).

in a given country-sector is not exogenous, the identification of causal effects is impaired by the fact that macro data do not allow for determining if private lending would have happened even without MDB involvement. Our approach, based on more granular loan-level data, has the advantage of absorbing all time-varying country- and sector-specific factors which could drive MDB and private sector lending via a large set of fixed effects. In particular, by exploiting country-sector level data, we are able to control not only for country- and year- fixed effects, but also for country-sector, country-year, and sector-year fixed effects; hence, we greatly diminish the possibility of omitted variable bias and increase accuracy in the estimation of the mobilization effects.

Our results—based on regressions at the country-sector-year level—indicate that the volume of syndicated lending, the average number of lending banks per loan, and the average loan maturity increase in the years following the presence of a syndicated loan with MDB participation in a given country-sector pair.

To mitigate concerns of reverse causality, we show (i) descriptive evidence that MDBs tend to be among the first to enter a given country-sector, and (ii) formal evidence of the lack of anticipation effects. Then, we run a number of robustness tests to address lingering concerns about the omitted variable bias, which could potentially affect our results, as long as there are confounding factors driving both MDB and private bank lending. In particular, we show that including a large set of confounding factors in the baseline model—the presence of the largest global banks, Chinese lending, aid flows, corporate bond issuances, and value added growth in the country-sector pair—does not affect the significance or the size of the estimated MDB mobilization effects. In addition, we control for sector-specific linear and quadratic trends and identify the effects in deviation from trend, and we further control for unobserved heterogeneity computing the Oster (2019) bounds.

We perform a number of extensions. First, to have a better sense of the macroeconomic implications of our results, we exploit the information on the volume of MDB lending to estimate the MDB lending multiplier. We find that for each dollar that MDBs invest through syndicated loans, they are able to mobilize about seven dollars in syndicated lending by private banks over a three-year period. These are economically meaningful effects, which suggest that MDBs could actively contribute to mobilizing resources towards meeting the ambitious goals of the 2030 Development Agenda. Second, by estimating total mobilization effects, which include direct and indirect effects, we find evidence suggesting that MDBs can attract private flows both directly and indirectly.[4] Third, we deal with the concern that the mobilization effects on lending could be partially or com-

[4] We consider direct mobilization as the financing from a private entity that directly participates in a syndicated loan with the MDB, and indirect mobilization as the financing from a private entity mobilized in connection with a specific MDB activity but lent to the borrower through other syndicated loans.

pletely offset by a reduction in other debt flows, finding no evidence that corporate bond financing declines after an MDB starts lending in a given country-sector pair.[5] Fourth, the MDB mobilization effects estimated at the sector level (within a country) could be (partially) offset if the presence of MDBs in a given sector crowds-out private bank lending to other sectors. We show that this is not the case and our results hold even when aggregating the data at the country-year level. Finally, we find differences in the mobilization effects across countries. In particular, some of these effects are weaker in low-income countries, suggesting that MDBs still face challenges with mobilizing resources in weak macroeconomic contexts.[6]

The existing literature on mobilization effects is mostly focused on IMF lending, but its catalytic effect—the capacity to attract private investment after the provision of official assistance (Giannini and Cottarelli, 2002; Morris and Shin, 2006)—cannot be easily generalized to MDBs, given its nature of crisis lending.[7] A smaller strand of literature has explicitly focused on MDBs and, using aggregate macroeconomic data, finds mixed results. Rodrik (1995) tests whether net transfers from multilateral sources to a country are a predictor of subsequent net private capital inflows, controlling for past private flows. Using country data averaged over four periods of six years (from 1970 to 1993), he does not find a significant association between past multilateral lending and current private flows. With a similar framework, Dasgupta and Ratha (2000) and Ratha (2001) instead find evidence suggesting that private capital flows to a large sample of developing countries respond positively to multilateral lending.

Our contribution to this strand of literature is twofold. First, we depart from the literature on catalytic finance that has mainly discussed the catalytic role of the IMF by focusing specifically on the role of MDBs, which have been greatly overlooked to date and can instead be an important player in light of the 2030 Development Agenda. Second, while the literature has mainly focused on case studies or country-aggregate data, our analysis is based on loan-level data from the international market of syndicated loans and covers a large sample of more than 100 countries over 25

[5] We focus on the potential substitution between corporate bonds and syndicated loans, as they constitute two similar sources of financing from a firm's perspective (Altunbaş et al., 2010), while the role of the equity market in developing countries is still relatively limited (World Bank, 2015; Cortina et al., 2018). We also look at potential displacement effects on aid and other development finance flows, finding no evidence that MDB mobilization effects crowd-out these flows.

[6] The last set of results is discussed in Appendix A.

[7] Theoretically, Corsetti et al. (2006) and Morris and Shin (2006) show that IMF catalytic financing can reduce the incidence of panic-driven liquidity crises. Empirically, Eichengreen and Mody (2001), Mody and Saravia (2006) and Eichengreen et al. (2006) use transaction data of individual bond issuances and find the IMF programs can have a catalytic effect, conditional on country fundamentals being only moderately bad. In a review of economics and politics of the IMF, Bird (2007) warns against any generalization from the empirical evidence, as results do not appear robust and consistent across methodologies, samples and economic conditions. More recently, Erce and Riera-Crichton (2015) use aggregate data on gross capital flows to show that while the IMF does not appear able to catalyze foreign capital, there is substantial evidence that it does affect the behavior of resident investors, who are less likely to place their savings abroad and more likely to repatriate their foreign assets.

years. In this way, we can: (i) better isolate the effect of MDB participation on subsequent bank flows (as well as loan terms), (ii) run a series of additional tests to deal with the omitted variable bias to provide a convincing estimate of the mobilization effects, (iii) test for crowding-out effects to other flows, and (iv) estimate country-level mobilization effects. To the best of our knowledge, we provide the first assessment and quantification, fully based on loan-level data, of MDB mobilization effects, a key channel to catalyze the private sector and finance investment and growth in developing countries.

2 Data

Our main source of data is the Dealogic Loan Analytics database, which contains micro data at the level of tranches of all syndicated loans to 127 developing countries from 1993 to 2017. These data are widely used for studying the international syndicated loan market (see, for instance, Esty and Megginson, 2003; Carey and Nini, 2007; Giannetti and Laeven, 2011) and their coverage is comparable to flows coming from aggregate statistics: for instance, Cerutti et al. (2015) compare syndicated loan exposures with loan claims as reported by the Bank of International Settlements, finding a very good match between the two series between 1995 and 2012.

Syndicated loans are provided by a syndicate, e.g., a group of lenders, that share risks by pooling together capital. They have been used for decades and are now becoming a dominant way to tap banks, finance companies and institutional investors (Miller, 2006). Their relevance has been expanding dramatically and they have become a key source of funding for corporations in both developing countries and advanced economies (Bruche et al., 2017; Cortina et al., 2018).

In line with existing studies (e.g., Nini, 2004; Carey and Nini, 2007; Cortina et al., 2018), we exclude loans to public authorities, as they are likely driven by different factors compared to loans to non-sovereign entities (private and public sector firms). As a result, we are left with 21,373 syndicated loans to 117 countries: 51 percent of these loan deals are destined to Asia, 27 percent to the Americas, 15 percent to Europe, 7 percent to Africa, and 0.3 percent to Oceania. The countries with the majority of syndicated loans across the period are India, Brazil, Russia, Indonesia, Turkey and Mexico, as shown by the largest bubbles in Figure 1. The countries with the greatest share of loans supported by MDBs are Afghanistan, Tajikistan, Vanuatu, Belize, Kyrgyzstan and Moldova, as shown by the darker bubbles in the same chart. Over time the number of syndicated loans has increased, despite some drops during major financial crises, as shown in Figure 2.

The information in the data is comprehensive, including signing date, nationality of the bor-

rower, total value of the deal in USD, maturity of each tranche, the general industry group of the deal and the name of the lending banks. We also have information on deal type, specifically whether the syndicated loan is an investment grade, leveraged or highly leveraged loan.[8] Thanks to the information on the lender, we are able to distinguish the syndicated loans in which there is the participation of at least one MDB. The MDBs participate in the syndicated loans markets at commercial terms through their private sector windows to mobilize financing from domestic and foreign creditors. MDBs operate under a joint financial and development mandate, which differentiates them from commercial banks. In our sample, the largest players are the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD) and the International Finance Corporation (IFC)—see Table A1. Deals that involve MDBs are 9.2 percent of the sample and they are, on average, significantly larger, with longer maturities, and with fewer non-MDB banks involved (Table 1).

We group the information on the general industry of the syndicated loans into 9 sectors: agriculture, construction and real estate, finance, government, infrastructure, manufacturing, mining and metals, oil and gas, and services. The majority of loans belong to the finance, infrastructure, and manufacturing sectors, which are also the sectors with the majority of loans with MDB participation.

To prevent large countries from driving the results, we use nominal GDP in USD from the World Economic Outlook (WEO) as a scaling factor for the total value of the syndicated loan. Scaling by GDP also gives us a better understanding of the relative magnitude of the loan size with respect to the country's economy. For data cleaning purposes we winsorize the top and bottom 1 percent of the total amount of syndicated loans, scaled by GDP .

With this information we build a balanced panel at the country-sector-year level. In total, we have 26,325 observations corresponding to 1,053 country-sectors (117 countries and 9 sectors) that we observe for 25 years. By constructing a balanced panel, we impute zeros to country-sector-years where no syndicate lending takes place. Consequently, the averages of the main variables of interest become smaller in magnitude. For example, while the average number of participating banks per syndicate loan is around 6.2 (Table 1), the average number of banks participating in the syndicate lending market per country-sector-year is 1.6 (Table 2). To test whether syndicated loans with MDB participation crowd-out corporate bond financing, we also use the information

[8]This characterization refers to the borrower's credit rating, with investment grade loans being issued to higher-rated borrowers, while leveraged loans are for below-investment-grade borrowers. Most are investment grade loans (62.9 percent), the rest are leveraged. There is a small percentage (4.6 percent) of syndicated loans that are highly leveraged.

on corporate bond issuances provided by Dealogic for 67 developing countries over the period 1993-2017. As for loans, we transform the data into a balanced panel at the country-sector-year level.

Our main outcome variables of interest are: 1) the number of syndicated loans in the country-sector, excluding deals with MDB participation; 2) the total size of the syndicated loans (as a share of GDP), excluding both the amount lent by the MDBs and by their partners[9]; 3) the number of banks per loan, excluding those partnering only in deals with MDB participation; and 4) the average loan maturity.[10] To explore direct mobilization effects we also look at: 5) the number of banks that participate in syndicated lending per loan; and 6) the total size of the syndicated loans (as a share of GDP), excluding the amount lent by MDBs themselves, but including the amount lent by banks co-investing in a syndicated loan with MDB participation.

Descriptive statistics. Table 2 reports the summary statistics for the country-sector panel data. On average there are 0.7 syndicated loans in each country-sector-year (Panel A). The average total value of loans in a country-sector-year is 0.11 percent of GDP, which is only slightly higher than the average total value of loans excluding the ones supported by MDBs. The average number of banks (excluding MDBs) involved in syndicated loans is 1.6, similar to the average number of banks without counting the ones partnering in a syndicated loan with MDBs. The average maturity of loans, without counting loans with MDB participation, is 8.7 months. Panel B reports the summary statistics for corporate bond issuances, which refer to a smaller sample than that of syndicated loans. On average, bond issuances in the country-sector pair are more numerous than syndicated loans, but their size (as a percent of GDP) is smaller.

Consistent with the idea that mobilization effects could be driven by signaling and demonstration effects as well as better information, the descriptive evidence shows that MDBs are among the first to enter a given country-sector through the syndicated loan market. If, for each country-sector pair, we define the "first" lending year as the first year since 1995 in which a country-sector receives a syndicate loan, we find that in 32 percent of these "first" years there is at least an MDB joining the first syndicated loans; by contrast, this share becomes substantially lower (23 percent) in subsequent years.[11]

[9] That is, we exclude the full amount of any syndicated loan the MDB is involved in, i.e., we exclude the partners' contribution to all syndicated loans with an MDB.

[10] The dataset provides the maturity of each tranche of syndicated loans. We calculate the weighted average of the maturities of syndicated loans by weighting the maturity of each tranche by its relative size within the loan. Once we collapse the dataset at the country-sector-year level, we calculate the average of weighted maturities of syndicated loans in the country-sector-year.

[11] As our sample begins in 1993 and we do not have information of the presence of syndicated loans before that

3 Empirical Strategy

A key advantage of using loan-level data is that we can set up our dataset at the country-sector-year level and look at new loans in a given country-sector pair after an MDB has entered that country-sector co-financing a syndicate loan, controlling for time-varying unobservable factors both at the country and sector level. Thus, we evaluate whether the presence of an MDB attracts private capital by estimating the following equation:

$$y_{cs,t} = \theta y_{cs,t-1} + \sum_{k=0}^{2} \beta_k MDB_{cs,t-k} + \delta_{c,t} + \zeta_{s,t} + \alpha_{cs} + \varepsilon_{cs,t} \quad (1)$$

where $y_{cs,t}$ is the outcome variable in country-sector pair cs at time t. As anticipated in the previous section, in the paper we explore effects on different outcome variables defined at the country-sector-year level: 1) the number of syndicated loans; 2) the total size of syndicated loans, scaled by GDP; 3) the average number of banks involved per syndicated loan; and 4) the average loan maturity of syndicated loans, in years. When measuring the outcome variables, in the baseline analysis we focus on indirect mobilization and we always exclude the loans with MDB participation. In additional analyses, we exploit the richness of the dataset to disentangle direct and indirect mobilization effects by computing the number of banks and loan size including also the partners of the MDBs and the amount they lend in the loans with MDB participation; see Section 5.2.

We also include a lagged dependent variable, $y_{cs,t-1}$, as lagged syndicate lending in the country-sector cs could be an omitted variable that is time-varying within sector and that represents a threat to our identification strategy.

Our key explanatory variable ($MDB_{cs,t}$) is a dummy equal to one if there is at least one deal supported by MDBs in the country-sector pair cs at time t.[12] The coefficient β_0 of $MDB_{cs,t}$ measures the contemporaneous MDBs' (indirect) mobilization effect. However, to allow for the possibility that mobilization effects show up with a lag, we include up to two lags of $MDB_{cs,t-k}$ and then calculate the cumulative effect between year $t-2$ and t ($\beta_0 + \beta_1 + \beta_2$). To rule out that there is an increase in the outcome variables before MDB participation, in the robustness section we also test for the presence of any anticipation effect including up to two leads of the MDB dummy variable.

We saturate the model with a large set of fixed effects to absorb unobserved factors which

date, we compute the shares by allowing the "first" to begin in 1995, to leave at least two years with no syndicated loans before (under the assumption that there were no loans before 1993). If we relax this assumption, and we start considering any year between 1996 and 2000 as the "first" year, the results are qualitatively similar.

[12] However, we also employ a continuous indicator to measure the intensive margin of MDB participation and compute the MDB lending multiplier; see Section 5.1.

could drive lending by both MDBs and commercial banks and potentially bias the estimate of the β coefficients. In theory, the bias could go in both directions. On the one hand, since MDBs have a different mandate from private lenders, in the sense that project selection is aimed at maximizing the expected development impact (Engen and Prizzon, 2018), their lending would go to countries and sectors that are otherwise poorly served by private lenders. In this case, the omitted variable bias would be negative. On the other hand, MDBs have also taken explicit steps to mobilize domestic and foreign capital and make investment decisions subject to financial sustainability (World Bank, 2018). In this respect, both MDBs and private lenders would seek out country-sector pairs with strong investment opportunities and this profit-driven behavior would lead to overestimating the mobilization effect. Time-varying country ($\delta_{c,t}$) and sector ($\zeta_{s,t}$) fixed effects absorb any time-varying global shock, as well as country- and sector-specific unobserved factors, such as changes in credit demand and local economic conditions. The country$\times$sector fixed effects (α_{cs}) further reduce the threat of omitted variable bias by controlling for all time-invariant differences in observables and unobservables between country-sector pairs. Thus, our strategy relies on the assumption that there are no unobservable factors that vary over time within each country-sector pair and are also correlated with changes in the MDB dummy variable. That is, we have to assume that all the time-changing characteristics of country-sector pairs that we cannot observe are uncorrelated to the presence of syndicated loans with MDB participation. However, changes in local economic conditions, changes in global commodity prices, policy changes and reforms that affect some sectors in a country more than others could affect both MDB and private lending to a country-sector, potentially biasing our estimates. To deal with this threat to identification, in Section 4.2 we augment the baseline model to control for a set of variables which vary at the country-sector-year level, including the presence of the top 10 banks in the syndicate market, aid flows, Chinese lending, corporate bond issuances, and value added growth. In addition, we estimate the size of the potential omitted variable bias computing the Oster (2019) bounds. Finally, our results may pick up a spurious correlation if different country-sector pairs follow specific trends. We deal with this concern by augmenting our model with linear or quadratic trends specific to the country-sector pairs.

We follow Abadie et al. (2017) and cluster the standard errors ($\varepsilon_{cs,t}$) at the country level, under the conservative assumption that MDBs' support is assigned at the country level and that mobilization effects vary by country. As a robustness check we also cluster standard errors at the country-sector level, to account for the possibility that in reality MDBs' support is assigned at the country-sector level; see Section 4.2.

4 Results

4.1 Main Findings

Table 3 shows the results of estimating equation 1 for the different outcome variables in separate panels. Each panel reports the results adding sequentially a different set of fixed effects to document how the coefficients of the MDB dummy variables change as we control for unobserved heterogeneity at the country×sector, country×year, and sector×year level. As a general trend, we observe that saturating the model with fixed effects significantly increases its explanatory power (as illustrated by the increase in the R^2) and attenuates the estimated correlation between MDB participation and private lending. For instance, the R^2 more than doubles moving from a model without any fixed effects to the fully saturated one when looking at loan size (Panel B) and almost doubles when looking at loan maturity (Panel D). At the same time, the cumulative effect of the MDB dummies ($\sum_{k=0}^{2} MDB_{\text{cs,t-k}}$) is halved (for loan size) or reduced by two thirds (in case of loan maturity). We find a similar reduction for the cumulative effect on the number of banks (Panel C). Interestingly, the inclusion of the fixed effects does not only reduce the coefficients of the MDB dummies when explaining the number of loans (Panel A), but it also makes the cumulative effect no more statistically significant.

A similar pattern is present when looking at the coefficients of the lagged dependent variables, which become smaller as we add more granular fixed effects, but remain statistically significant even when they are identified within country-sector pairs and controlling for unobserved heterogeneity at the country and sector level. In particular, in the most demanding specification, the coefficient of the lagged dependent variable is 0.87 when looking at the number of loans (this high persistence could explain the lack of significant results for MDB participation), but it is close to 0.2 when considering loan size and the number of lending banks, and further decreases to 0.08 in the case of loan maturity.

Overall, these findings suggest that in a simple bivariate regression, estimated coefficients would be biased. In fact, the inclusion of granular fixed effects absorbs a large component of unobserved heterogeneity and leads to smaller effects of MDB participation on private lending. The fact that the size of cumulative effects only marginally decreases (if anything) adding the last set of sector-year fixed effects would suggest that the most saturated model absorbs most of the unobserved heterogeneity. In the rest of the analysis we take the specification saturated with country×year, sector×year and country×sector fixed effects as the preferred one and we

focus our attention on the size of the cumulative effects. However, in Section 4.2 we perform a set of additional tests to rule out that our estimates are biased by observed confounding factors, country-sector specific trends, and some residual unobserved heterogeneity.

Moving to the specific results, the first column shows that having at least one syndicated loan supported by at least one MDB is associated with an increase of 0.66 syndicated loans in the same year. The cumulative effect from t to t+2 is equal to 0.9. As discussed above, adding the fixed effects reduces the estimated coefficient β_t and reduces the cumulative effect by half and, more importantly, makes it not statistically different from zero. However, when considering the total amount lent to private borrowers in the country-sector pair (measured in percent of GDP and excluding the amount lent by the MDBs themselves and by their partners in the syndicated loans), results indicate that MDB participation is associated with more private sector lending, even when adding the full set of fixed effects (Panel B). Our preferred (most demanding) specification indicates that the cumulative *indirect* mobilization effect between year $t-2$ and year t is equal to 0.125% of GDP, which corresponds to about 120% of the average size of syndicated loans to private creditors in a country-sector-year (which is equal to 0.11% of GDP, see Table 2). If we scale this effect by the size of the average syndicated loan (also equal to 0.11% of GDP, see Table 1), we still observe that the cumulative effect is economically large.

Results shown in Panel C assess whether MDB lending attracts other banks as lenders to the country-sectors. The preferred specification shows that MDB participation is associated with an average increase of 0.46 banks participating in syndicated lending to the country-sector pair in the same year. The effect is persistent over time, with similar magnitudes each year. Thus, the cumulative effect over three years—equal to 1.6 additional lending banks per loan—is economically large, given that, on average, there are 1.5 banks per syndicated loan per year at the country-sector level and that the average syndicated loan in the sample is formed by 6.1 banks (Table 1).

Finally, the results of the preferred model on loan maturity (Panel D, column 8) indicate that when MDBs participate in syndicated loans, the average weighted loan maturity in a country-sector pair increases by 0.64 years in the same year. The cumulative effect is precisely estimated and is slightly larger than 1 year. Again, these results are economically meaningful, given the average loan maturity of 5.5 years (Table 1).

4.2 Robustness

Anticipation effects. Even though our empirical setting controls for a large set of unobserved factors that could drive syndicated lending, reverse causality remains a concern, as MDBs could follow private lending and enter country-sector pairs which have been receiving more and larger syndicated loans. To mitigate this concern, we test for anticipation effects by adding up to 2 leads of the variable $MDB_{cs,t}$ to equation 1, so that we estimate the following model:

$$y_{cs,t} = \theta y_{cs,t-1} + \sum_{k=-2}^{+2} \beta_k MDB_{cs,t-k} + \delta_{c,t} + \zeta_{s,t} + \alpha_{cs} + \varepsilon_{cs,t} \tag{2}$$

Our results are robust to the inclusion of leads of the MDB participation dummy and there are no anticipation effects. The coefficients of $MDB_{cs,t+1}$ and $MDB_{cs,t+2}$, reported in Table 4, are never significantly different from zero for all four dependent variables, indicating that MDBs do not enter in markets where the number, value of loans, number of banks per loan, and maturity are already increasing. However, some caution should be used when interpreting these results, as some of the point estimates, while not significant, are positive and large in magnitude (although much smaller than the contemporaneous and lagged coefficients, with the exception of loan size). Moreover, even though cumulative anticipation effects are mostly not significantly different from zero, when we estimate equation 2 on size, the cumulative anticipation effects are marginally significant.

The lack of significant anticipation effects suggests that MDBs do not enter country-sectors following private lenders. By contrast, our results indicate that MDBs are the first to enter a given country-sector pair, in line with the descriptive evidence discussed in Section 2. This evidence could be explained in part by the fact that MDBs and the private sector have different objective functions: while commercial banks maximize profits, MDBs select projects that maximize expected development impact subject to financial sustainability at the project and portfolio level.

Trends. The inclusion of country-year and sector-year fixed effects allows us to control for trends common to all countries or to all sectors. But this specification might still be vulnerable to a different problem. Let us consider, for example, the same sector (e.g., oil and gas) in two countries. In one country, because of a recent oil discovery, both private and MDB lending trend up exogenously, while in the other country, where oil reserves are depleting, they both trend down exogenously. As these trends are specific to the country-sector pair, the set of fixed effects included in the baseline specification does control for this possibility and the estimated β coefficients would spuriously pick up these trends. To control for this possibility, we add parametric trends in each country-

sector pair and identify the effect of MDB participation as a deviation from trend. As shown in Table 5, results are robust to the inclusion of linear or quadratic trends. Interestingly, we also find that the cumulative effect on the number of loans becomes positive and significantly different from zero, suggesting that MDB participation has a mobilization effect also on the number of loans.[13]

Sensitivity to outliers. Given that our dependent variables are characterized by a skewed distribution with a large share of zeros, we run several tests to make sure that our results are not driven by outliers. We start by identifying countries or sectors where there are few syndicated loans and exclude them from the analysis. First, we calculate the number of syndicated loans per country in the 1993-2017 period and exclude countries that have fewer than 100 syndicated loans in total. This selection leaves us with a sample of 32 countries. Even though the number of observations in the sample drops significantly, the results—shown in Table A2—are mostly robust: the estimated cumulative effects when the outcome variable is the number of loans are not significantly different from zero (column 1), and the effects on loan size (column 2), banks per loan (column 3), and loan maturity (column 4) are not significantly different from the ones presented in Table 3 either. Second, we exclude from the sample sectors with fewer than 1,000 syndicated loans in 1993-2017. We are left with 5 sectors: oil and gas, construction and real estate, manufacturing, infrastructure, and finance. As shown in Table A3, results are generally not significantly different from Table 3. Finally, we combine the previous two exercises and exclude the outliers defined both in terms of countries and sectors. As shown in Table A4, even though the sample size is about 15% of the whole sample, results are consistent with the baseline, suggesting that a large presence of zeros in the balanced dataset is not biasing our results.

Clustering of standard errors. In our fixed effects setting, a clustering adjustment is necessary if the treatment assignment mechanism is clustered and if there is heterogeneity in the treatment effects (Abadie et al., 2017). Throughout the paper we cluster standard errors at the country level, in line with the idea that MDB support is assigned at the country level and that mobilization effects are heterogeneous across countries. However, if the decision to provide MDB syndicated loans is made at the country-sector level, clustering at a more aggregate level gives estimates that are too conservative. As the level at which MDB support is assigned cannot be determined with certainty, we opted for the most conservative approach and clustered at the country level. Table A5 provides a robustness check with standard errors clustered at the country-sector level, in line with MDB

[13] As the identification is in deviation from trend, the effect of the lagged dependent variable is significantly smaller than in the baseline (Table 3, panel A), a fact which could explain why the effect of MDB participation turns significant.

support assigned at the country-sector level. Coefficients are more precisely estimated and more likely to be significantly different from zero compared to the baseline results in Table 3.[14]

Confounding factors. In all our estimates we are able to control for unobserved time-varying country- and sector- level unobserved variables that can drive private lending. Although we also include country×sector fixed effects, our baseline set of fixed effects cannot control for the possibility that other time-varying factors attract resources from both MDBs and private creditors in a given country-sector pair. To address this concern, we run a set of additional tests, reported in Appendix A.1, in which we augment the baseline model with a set of variables that vary over time and between country-sector pairs. Specifically, we show that our results are not driven by the presence of large global banks, Chinese lending, official development assistance, corporate bond financing, and value added growth. The idea that controlling for a large set of fixed effects reduces the scope for omitted variable bias is further reinforced by the estimation of Oster (2019) bounds.

5 Extensions

5.1 The MDB Lending Multiplier

So far we have focused our attention on the presence of MDBs in a given sector through their participation in a syndicated loan. However, we can exploit all the available information on the size of MDB lending to capture a sort of multiplier, which could give a better sense of the economic relevance of the mobilization effects of MDBs.

To this end, we regress total dollar lending at the country-sector-year level (excluding the loans in which MDBs take part) on the dollar amount of MDB lending, and we run two exercises, which should be interpreted keeping in mind the limitations of our research design in terms of identification. In the first exercise, we take the logarithms of the dollar flows and directly estimate the elasticity of private bank lending to MDB lending (Table 6, columns 1-3). Scale factors are absorbed by country-sector fixed effects, so that we are looking at the mobilization effects within a country-sector pair. However, we further strengthen our identification with the inclusion of linear and quadratic country-sector trends. The results are robust to the inclusion of trends and consistently show that the cumulative elasticity is about 0.17. Given the average values of total and MDB lending (reported at the bottom of the table), the implied marginal effect is around 7, that is, for

[14] We run an additional exercise and use the two-way clustering (Cameron et al., 2011) to account for cross-country correlation within sector in addition to cross-sector correlation within country. Results are reported in Table A6 and show that our baseline results are robust to this alternative treatment of the correlation structure of the standard errors.

each dollar that the MDB puts in a country-sector in the previous 3 years, the private sector lends about 7 dollars.

Alternatively, in the second exercise we scale the bank flows by (country-level) population and regress total dollar lending per capita at the country-sector-year level on the dollar amount per capita of MDB lending (Table 6, columns 4-7). In the full sample (column 4), we do not find significant cumulative effects, even though the p-value is 0.2. However, once we reduce the noise and restrict the sample to countries with at least 50 (column 6) or 100 (column 7) loans over the sample period, the cumulative marginal effect becomes significantly different from zero. Moreover, the point estimates are very close to those found through the log-log regressions shown in columns 1-3, confirming that the MDB lending multiplier is in the order of 7.

5.2 Direct and Indirect Effects

Thanks to the richness of the data, we are able to observe the total mobilization effects, which include both the direct and indirect mobilization effects (see footnote 4 for their definition). To disentangle indirect from direct effects, we re-estimate equation 1, but the outcome variables now measure total mobilization effects and include the volume of the loan in which MDBs participate (excluding their share) and the number of private creditors partnering in the loan itself. Results are reported in the first two columns of Table 7, while columns 3 and 4 report only the indirect mobilization effects as estimated in the baseline, where the outcome variables exclude the loans with MDB participation. The table reports mobilization effects at time *t* only to make a clearer comparison between direct and indirect effects, as anything that happens from *t+1* onward is pure indirect mobilization. Results on total mobilization effects in columns 1 and 2 show that a country-sector with MDB lending experiences a volume of syndicated loans— including both the amount lent by MDB partners (direct mobilization) and the amounts lent through other loans (indirect mobilization)—which is 0.3% of GDP higher than in country-sectors without MDB participation.[15] Moreover, in country-sectors with MDB participation there are 2.6 more banks, either partnering with the MDB (direct mobilization) or forming part of other deals (indirect mobilization). Comparing these findings with the indirect mobilization effects as estimated in the baseline (columns 3 and 4, where outcome variables exclude the loans with MDBs' participation) shows that the total

[15]We cannot isolate direct mobilization effects, as direct mobilization effects will also include part of the indirect effects if an MDB was previously present in the country-sector. Indeed, when we restrict our analysis to 2000-2017, and we control for MDB participation in syndicated loans in the country-sector in 1993-1999, we find that MDB mobilization effects are even stronger if MDBs were already present. Findings are robust to reducing the sample period to 2005-2017 and controlling for MDB presence in the country-sector in 1993-2004.

mobilization effects are larger than the indirect effects, indicating that MDBs can attract private lending both directly and indirectly.

5.3 Infrastructure Lending

We also assess whether mobilization effects take place in the infrastructure sector alone. We focus on infrastructure given its relevance for development and the urgent need for resources in this sector (Dobbs et al., 2013; Gurara et al., 2018; World Bank, 2018). According to UN estimates, total investment in economic infrastructure is currently under USD 1 trillion per year, but will need to reach between USD 1.6-2.5 trillion a year over the period 2015-30 (UNCTAD, 2014). Infrastructure investments can provide relatively high total returns with low correlations to traditional asset classes (e.g., equities, real estate), but are characterized by high perceived risks (JPMorgan, 2017; Blended Finance Taskforce, 2018). Moreover, given its long-term financing needs, the sector is more vulnerable to resource scarcity (Chelsky et al., 2013), making the effect of MDB lending on attracting private flows particularly relevant. Hence, we limit our analysis to a subsample of syndicated loans in infrastructure only (Table A7). Perhaps due to a loss of power, we do not observe any significant effects on the number of loans or size of loans. The effect on the number of creditors is similar to our baseline results. Given that investments in infrastructure are long-term, what is perhaps most interesting to note is the larger mobilization effect on maturity: MDB participation in the infrastructure sector of a country increases the average maturity of syndicated loans by 0.81 years, and results are substantial even in the following years.

5.4 Is There a Crowding-Out of Corporate Bond Financing?

Our baseline analysis looks exclusively at syndicated lending. In this respect, one may argue that the positive mobilization effects that we have documented so far could be partially (or fully) offset by a reduction in other capital inflows. To address this concern, we look at corporate bond issuances, which represent the closest substitute to syndicated loans, as they have similar size and maturity (Altunbaş et al., 2010). Aggregate flows to developing countries show that corporate bonds and syndicated loans are the largest source of long-term finance in developing countries, given the still relatively limited size of equity markets (World Bank, 2015; Cortina et al., 2018).

To test for any substitution effect, we estimate equation 1 by taking the number of bond issuances and the total amount of bond issuances (in percent of GDP) in the country-sector pair *cs* at

time t as dependent variables.[16] Results are reported in Table 8 and show no significant effect on the number of bonds or in the size of corporate bond financing at the same time as, and in the two years after, MDB participation in a syndicated loan (columns 1 and 5). In the remaining columns we show that results are robust to the inclusion of controls for the presence of the top 10 banks and ODA in the previous 2 years. Only when we control for Chinese lending (columns 3 and 7) do we observe a marginally significant increase in the size of bond financing at *t+1*. The cumulative effects are never significantly different from zero.[17] Overall, there is no evidence of crowding-out in the corporate bond market.

A further concern could be that MDBs' entrance in a given country-sector pair may attract the private sector, but at the same time, crowd-out other sources of development financing. To mitigate this concern, we run the same exercise explained above but using either the number of projects financed by ODA flows or the number of officially-financed Chinese projects as dependent variables. In both cases, we do not find any statistical association between MDB participation and changes in official aid flows by OECD's Development Assistance Committee (DAC) countries and official Chinese lending (see Table A9).

6 Conclusions

Filling the investment gap to achieve the SDGs by 2030 is a major development challenge. As foreign aid and domestic revenue mobilization alone cannot meet the target, leveraging private investment is essential to make progress towards inclusive growth. In this respect, MDBs can play an important role in attracting private capital flows towards investment in developing countries.

We use granular data on international syndicated lending to evaluate whether MDBs can mobilize private capital flows. Our results indicate that once an MDB enters a country-sector pair through the participation in a loan syndication, the number of total syndicated loans and the associated bank lending flows increase. In addition, access to credit improves, since the average number of lending banks per loan and the average loan maturity also increase. These effects last over time and are economically sizable: for each dollar that MDBs invest in a country-sector pair over a three-year period, commercial banks lend almost 7 dollars.

These results are robust to a large set of tests controlling for the potential role of several con-

[16] As for the size of syndicated loans, we winsorize the bond size variable at 1%.

[17] Since the sample used to analyze effects on bonds is smaller, we test whether the absence of effects is driven by the sample construction, and re-estimate mobilization effects on syndicated loans in this same sample. Results are robust—see Table A8.

founding factors and unobserved heterogeneity that may drive lending by MDBs and private banks at the same time. We also find that MDB mobilization effects in the syndicated loan market do not crowd-out corporate bonds and other sources of external financing. Furthermore, our main results are confirmed when we aggregate the data at the country level, suggesting that there are no crowding-out effects across sectors.

Finally, our findings indicate that the mobilization effects are not homogeneous across countries. In particular, MDB lending could be less effective in mobilizing private bank flows to low-income countries, suggesting that MDBs may still face significant constraints to attract private resources, especially in countries with larger financing needs.

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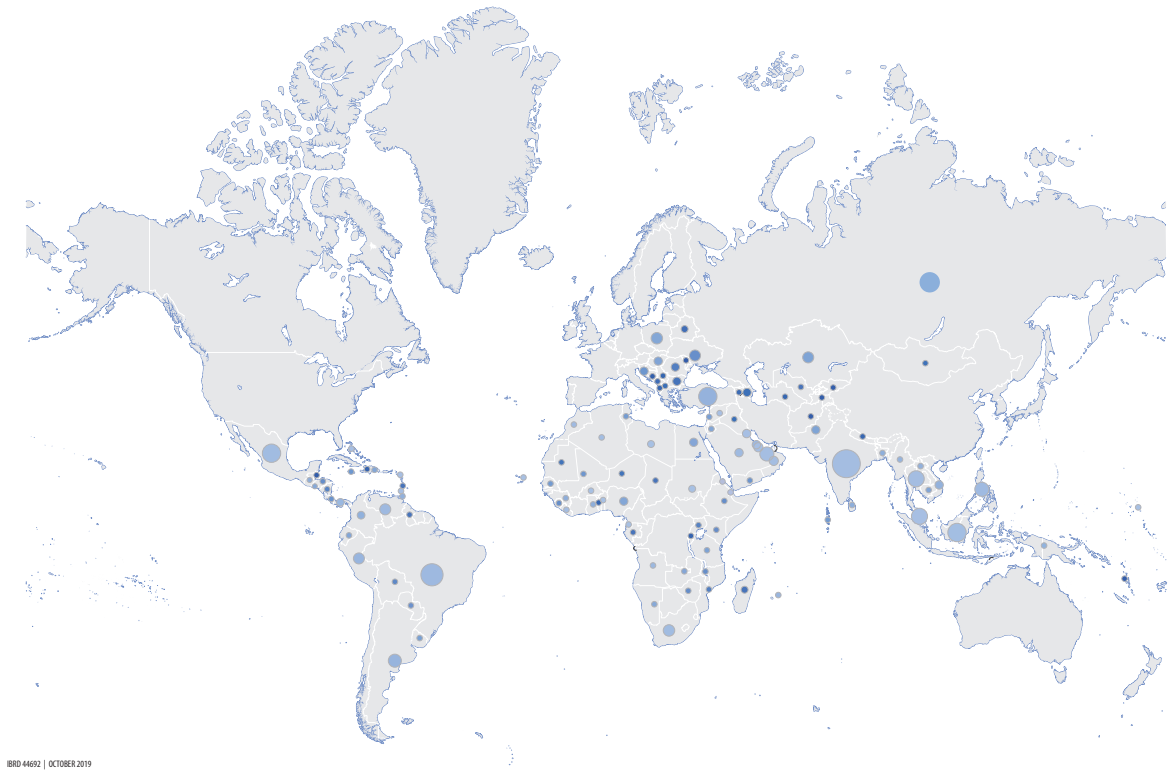
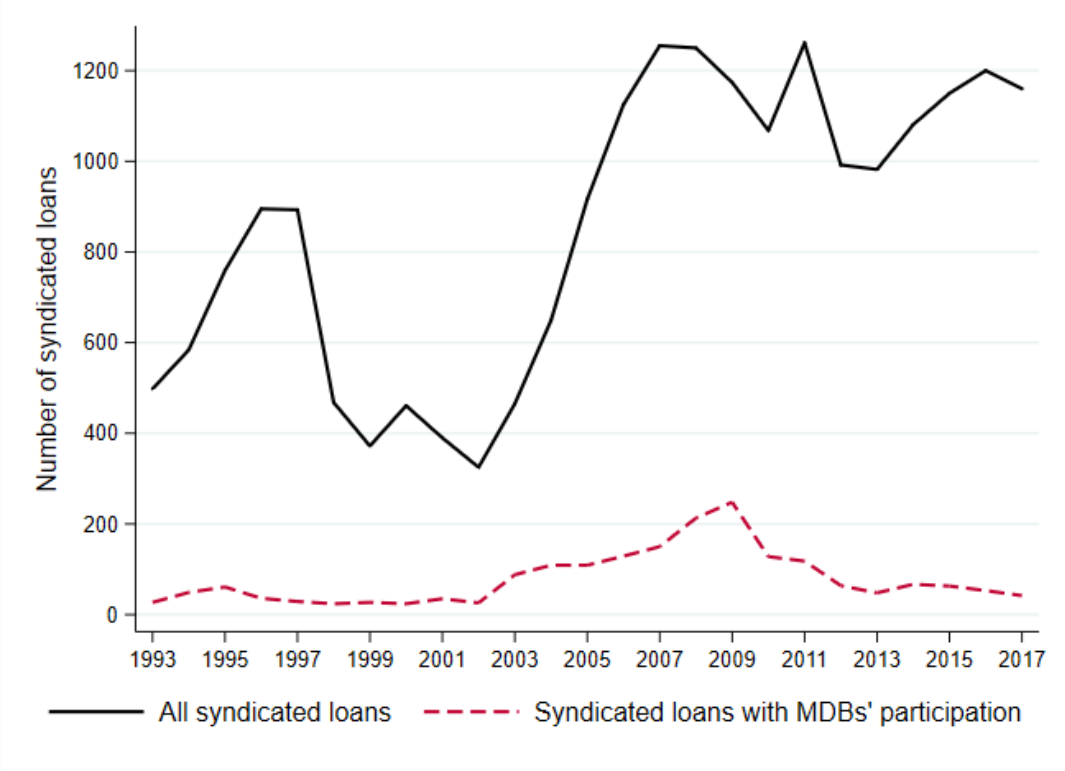
Figures

Figure 1: Number of Syndicated Loans and Share with MDB Support by Country, 1993-2017



Notes: The bubbles in the map represent the number of syndicated loans by country in 1993-2017. The area represents the number of total syndicated loans in the period: the larger the bubble, the more syndicated loans. The color represents the share of syndicated loans supported by at least one MDB in the period: the darker the blue, the more the syndicated loans receive MDB support.

Figure 2: Number of Syndicated Loans



Notes: The chart shows the trend in total number of syndicated loans over time. Source: Dealogic Loan Analytics.

Tables

Table 1: Summary Statistics of Syndicated Loans

	Mean	SD	Min	Max	N
Panel A. *All Syndicated Loans*					
Size (% GDP)	0.108	0.319	0.001	4.295	21,164
Number of participating banks	6.153	7.498	1	80	21,373
Maturity (years)	5.458	4.476	0.083	35.083	18,603
Loans with MDB participation (%)	9.202	28.908	0	100	21,373
Panel B. *Syndicated Loans with MDB Participation*					
Size (% GDP)	0.169	0.403	0.001	3.938	1,946
Number of participating banks	4.487	5.976	1	59	1,967
Maturity (years)	7.489	4.499	0.2	30	1,111
Panel C. *Corporate Bonds*					
Size (% GDP)	0.030	0.060	0.001	0.304	18,760

Notes: The table provides loan-level (bond-level in Panel C) summary statistics for the main outcome variables in the analysis: (i) size of syndicated loans (% of GDP), (ii) number of banks participating in syndicated loans, and (iii) average weighted maturity (in years, averaged across tranches, where weights are the relative sizes of the tranches) of syndicated loans. Panel A refers to the full sample of syndicated loans at the individual level. Panel B refers only to those syndicated loans where there is at least one MDB that supports a syndicated loan. Panel C refers to corporate bonds.

Table 2: Summary Statistics in the Aggregate Data

	Mean	SD	Min	Max	N
Panel A. *Syndicates Loans*					
Number of Loans	0.737	4.518	0	188	26,325
Size (% GDP)	0.109	0.693	0	41.514	26,325
Size w/o Loan w/MDB (% GDP)	0.101	0.672	0	41.514	26,325
Banks	1.474	5.185	0	80	26,325
Banks w/o MDB partners	1.562	5.309	0	80	26,325
Maturity (years)	0.724	2.174	0	35	26,096
Panel B. *Corporate Bonds*					
Number of Bonds	1.245	8.801	0	336	15,075
Bond Size (% GDP)	0.037	0.18	0	6.187	15,075

Notes: The table provides summary statistics for the main outcome variables in the analysis in the full sample of country-sector-years. Panel A reports summary statistics for: (i) number of loans, (ii) size of syndicated loans (% of GDP) including the amount brought by MDB partners, (iii) size of syndicated loans (% of GDP) excluding the amount brought by MDB partners, (iv) average banks per loan including MDB partners, (v) average banks per loan excluding MDB partners, and (vi) maturity of syndicated loans (in years) in country-sector-years. Loan size is winsorized at the 1% level. Loan maturity is the average weighted maturity (averaged across tranches, where weights are the relatives sizes of the tranches) of syndicated loans. Panel B reports summary statistics for number and the size of corporate bonds (% of GDP) at the country-sector-year level. Bond size is winsorized at the 1% level.

Table 3: MDB Mobilization Effects: Baseline Results

	Panel A. Number of Loans				**Panel B.** Size (% GDP)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	0.6553***	0.5502**	0.3791**	0.3846**	0.1099***	0.0835***	0.0656***	0.0637***
	(0.222)	(0.224)	(0.169)	(0.161)	(0.025)	(0.022)	(0.022)	(0.020)
$MDB_{cs,t-1}$	0.3006*	0.2396	0.1245	0.1235	0.0493*	0.0349	0.0192	0.0125
	(0.156)	(0.161)	(0.152)	(0.158)	(0.025)	(0.023)	(0.024)	(0.024)
$MDB_{cs,t-2}$	-0.0528	-0.1072	-0.0583	-0.0508	0.0792***	0.0559***	0.0509***	0.0492***
	(0.106)	(0.179)	(0.155)	(0.159)	(0.020)	(0.015)	(0.016)	(0.018)
Number of $Loans_{cs,t-1}$	0.9521***	0.8712***	0.8688***	0.8685***				
	(0.053)	(0.073)	(0.078)	(0.078)				
Size $(\%GDP)_{cs,t-1}$					0.4382***	0.2282***	0.2214***	0.2155***
					(0.078)	(0.069)	(0.071)	(0.071)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.903***	0.683	0.445	0.457	0.238***	0.174***	0.136***	0.125***
Wald test : p value	0.008	0.124	0.228	0.214	0.000	0.000	0.002	0.005
Observations	24,219	24,219	24,219	24,219	24,219	24,219	24,219	24,219
R-squared	0.779	0.792	0.833	0.835	0.197	0.319	0.401	0.410
Average MDB	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048
Average Dep. Var.	0.760	0.760	0.760	0.760	0.105	0.105	0.105	0.105
	Panel C. Banks				**Panel D.** Maturity			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	1.5789***	0.8945***	0.4796**	0.4634**	1.3678***	0.8443***	0.6855***	0.6371***
	(0.259)	(0.262)	(0.206)	(0.200)	(0.149)	(0.133)	(0.133)	(0.125)
$MDB_{cs,t-1}$	1.3708***	0.8162***	0.5634***	0.6026***	0.7080***	0.3605***	0.1762	0.1345
	(0.238)	(0.249)	(0.188)	(0.180)	(0.149)	(0.121)	(0.125)	(0.125)
$MDB_{cs,t-2}$	1.2071***	0.5697**	0.4287*	0.5157**	0.9294***	0.5888***	0.3672***	0.3096***
	(0.218)	(0.219)	(0.223)	(0.226)	(0.114)	(0.095)	(0.095)	(0.092)
Banks per $Loan_{cs,t-1}$	0.6377***	0.3016***	0.2310***	0.2221***				
	(0.031)	(0.033)	(0.032)	(0.031)				
$Maturity_{cs,t-1}$					0.4430***	0.1310***	0.0856***	0.0751***
					(0.032)	(0.022)	(0.017)	(0.017)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	4.157***	2.280***	1.472***	1.582***	3.005***	1.794***	1.229***	1.081***
Wald test : p value	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000
Observations	24,219	24,219	24,219	24,219	23,439	23,439	23,439	23,439
R-squared	0.479	0.592	0.670	0.676	0.284	0.439	0.522	0.531
Sector-country FE	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Country-year FE	No	No	Yes	Yes	No	No	Yes	Yes
Sector-year FE	No	No	No	Yes	No	No	No	Yes
Average MDB	0.048	0.048	0.048	0.048	0.038	0.038	0.038	0.038
Average Dep. Var.	1.526	1.526	1.526	1.526	0.752	0.752	0.752	0.752

Notes: The table presents the estimates of equation 1. The dependent variables are: (i) the number of loans (Panel A, columns 1-4), (ii) the size of syndicated loans (% of GDP, Panel B, columns 5-8), (iii) the average number of banks per loan (Panel C, columns 1-4), and (iv) the average maturity of syndicated loans (in years) (Panel D, columns 5-8). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. At the bottom of each panel, the table reports the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and *t*, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table 4: MDB Mobilization Effects: Controlling for Anticipation Effects

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.4378***	0.0628***	0.4477**	0.6169***
	(0.144)	(0.024)	(0.217)	(0.136)
$MDB_{cs,t-1}$	0.3278**	0.0112	0.5824***	0.0868
	(0.135)	(0.024)	(0.183)	(0.132)
$MDB_{cs,t-2}$	0.1437	0.0515***	0.4831**	0.2512***
	(0.107)	(0.018)	(0.236)	(0.092)
$MDB_{cs,t+1}$	0.1878	0.0277	0.2271	0.0986
	(0.258)	(0.029)	(0.202)	(0.109)
$MDB_{cs,t+2}$	0.1553	0.0450	0.2789	0.1153
	(0.135)	(0.048)	(0.257)	(0.106)
Number of $Loans_{cs,t-1}$	0.7307***			
	(0.077)			
Size $(\%GDP)_{cs,t-1}$		0.2036***		
		(0.072)		
Banks per $Loan_{cs,t-1}$			0.2151***	
			(0.032)	
$Maturity_{cs,t-1}$				0.0706***
				(0.018)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.909***	0.126***	1.513***	0.955***
$Wald\ test: p\ value$	0.000	0.008	0.003	0.000
$\sum_{k=1}^{2} MDB_{cs,t+k}$	0.343	0.072*	0.506	0.214
$Wald\ test: p\ value$	0.356	0.083	0.178	0.168
Observations	22,113	22,113	22,113	21,388
R-squared	0.829	0.404	0.680	0.531
Sector-country FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Average MDB	0.049	0.049	0.049	0.039
Average Dep. Var.	0.730	0.105	1.545	0.736

Notes: The table presents the estimates of equation 2. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table also reports, in the bottom rows, the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table 5: MDB Mobilization Effects: Including Sector-Level Trends

	Panel A. Number of loans			**Panel B.** Size (% GDP)		
	(1)	(2)	(3)	(4)	(5)	(6)
$MDB_{cs,t}$	0.3846**	0.4931***	0.5126***	0.0637***	0.0693***	0.0665***
	(0.161)	(0.149)	(0.154)	(0.020)	(0.025)	(0.024)
$MDB_{cs,t-1}$	0.1235	0.2825**	0.3205**	0.0125	0.0171	0.0145
	(0.158)	(0.137)	(0.127)	(0.024)	(0.027)	(0.026)
$MDB_{cs,t-2}$	-0.0508	0.1246	0.1656	0.0492***	0.0537***	0.0518***
	(0.159)	(0.129)	(0.113)	(0.018)	(0.019)	(0.019)
Dep. $Var._{cs,t-1}$	0.8685***	0.7006***	0.6519***	0.2155***	0.1334*	0.1366*
	(0.078)	(0.068)	(0.062)	(0.071)	(0.071)	(0.070)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.457	0.900***	0.999***	0.125***	0.140**	0.133**
$Wald\ test: p\ value$	0.214	0.002	0.000	0.005	0.016	0.015
Observations	24,219	24,219	24,219	24,219	24,219	24,219
R-squared	0.835	0.858	0.865	0.410	0.453	0.452
Average MDB	0.0483	0.0483	0.0483	0.0483	0.0483	0.0483
Average Dep. Var.	0.760	0.760	0.760	0.105	0.105	0.105
	Panel C. Banks			**Panel D.** Maturity		
	(1)	(2)	(3)	(4)	(5)	(6)
$MDB_{cs,t}$	0.4634**	0.5331***	0.4522**	0.6371***	0.5609***	0.5386***
	(0.200)	(0.203)	(0.205)	(0.125)	(0.127)	(0.127)
$MDB_{cs,t-1}$	0.6026***	0.7400***	0.6596***	0.1345	0.0966	0.0693
	(0.180)	(0.208)	(0.200)	(0.125)	(0.131)	(0.131)
$MDB_{cs,t-2}$	0.5157**	0.7416***	0.6660***	0.3096***	0.2784***	0.2605***
	(0.226)	(0.199)	(0.198)	(0.092)	(0.090)	(0.090)
Dep. $Var._{cs,t-1}$	0.2221***	0.1193***	0.1244***	0.0751***	-0.0097	-0.0117
	(0.031)	(0.035)	(0.034)	(0.017)	(0.018)	(0.018)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	1.582***	2.015***	1.778***	1.081***	0.936***	0.868***
$Wald\ test: p\ value$	0.001	0.000	0.000	0.000	0.000	0.000
Observations	24,219	24,219	24,219	23,439	23,439	23,439
R-squared	0.676	0.708	0.706	0.531	0.570	0.571
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-sector Trends	No	Yes	Quadratic	No	Yes	Quadratic
Average MDB	0.0483	0.0483	0.0483	0.0483	0.0483	0.0483
Average Dep. Var.	1.526	1.526	1.526	0.752	0.752	0.752

Notes: The table presents the estimates of equation 1 controlling for linear and quadratic country-sector trends. The dependent variables are: (i) the number of loans (Panel A, columns 1-3), (ii) the size of syndicated loans (% of GDP, Panel B, columns 4-6), (iii) the average number of banks per loan (Panel C, columns 1-3), and (iv) the average maturity of syndicated loans (in years) (Panel D, columns 4-6). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. For each panel, the table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table 6: The MDB Lending Multiplier

	Size (ln $ lent)			**Size ($ per capita)**			
				Full Sample	Countries with at least 25 loans	Countries with at least 50 loans	Countries with at least 100 loans
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
MDB $size_{cs,t}$	0.0873***	0.0862***	0.0824***	1.8918	2.4487*	3.5868***	3.8881***
	(0.020)	(0.018)	(0.018)	(1.224)	(1.400)	(1.157)	(1.138)
MDB $size_{cs,t-1}$	0.0415**	0.0484**	0.0451**	2.3253	2.9621	3.4742	3.8701
	(0.020)	(0.021)	(0.021)	(1.963)	(2.336)	(2.507)	(2.595)
MDB $size_{cs,t-2}$	0.0353	0.0443*	0.0414	0.2704	0.3248	-0.0370	0.0121
	(0.025)	(0.025)	(0.025)	(0.405)	(0.592)	(0.283)	(0.384)
$Size_{cs,t-1}$	0.1860***	0.0472**	0.0515***	0.0818***	0.0695***	0.1949***	0.1736***
	(0.022)	(0.018)	(0.018)	(0.019)	(0.005)	(0.048)	(0.045)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.164***	0.179***	0.169***	4.487	5.736	7.024*	7.770*
$Wald\ test: p\ value$	0.000	0.000	0.000	0.203	0.176	0.0697	0.0563
Marginal Effect	6.862***	7.490***	7.071***	4.487	5.736	7.024*	7.770*
Observations	24,219	24,219	24,219	24,147	13,230	8,469	6,606
R-squared	0.714	0.748	0.747	0.339	0.346	0.471	0.483
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-sector Trends	No	Yes	Quadratic	No	No	No	No
Average Size (ln $/per capita)	0.859	0.859	0.859	18.000	30.700	24.300	44.800
Average MDB size (ln $/per capita)	0.175	0.175	0.175	0.2450	0.3610	0.3860	0.680
Average Size ($ lent)	158.5	158.5	158.5				
Average MDB size ($ lent)	3.788	3.788	3.788				

Notes: The table presents the estimates of equation 1. In columns 1-3, the dependent variable is the natural logarithm of the total size of syndicated loans (USD) in country-sector *cs* at time *t*, excluding the size of loans in which MDBs participate. The main variable of interest is the natural logarithm of the total size of syndicated loans (USD) provided by MDBs in country-sector *cs* at time *t*. In columns 4-7, the dependent is the total size of syndicated loans (USD) per capita in country-sector *cs* at time *t*, excluding the size of loans in which MDBs participate. In columns 5, 6 and 7 the sample is limited to countries with at least 25, 50, and 100 loans over the sample period, respectively. The main variable of interest is the total size of syndicated loans (USD) per capita provided by MDBs in country-sector *cs* at time *t*. The last rows show the sample averages of the $MDB_{cs,t}$ and outcome variables (average loan size is meaured per 1,000,000 individuals). Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table 7: Direct and Indirect MDB Mobilization Effects

	Direct + Indirect Effects		**Indirect Effects**	
	Size (%GDP) including MDB loan (1)	Banks including MDB loan (2)	Size (%GDP) excluding MDB loan (3)	Banks excluding MDB loan (4)
MDB $_{cs,t}$	0.2952***	2.6323***	0.0651***	0.5328**
	(0.043)	(0.275)	(0.021)	(0.207)
Size (%GDP) $_{cs,t-1}$	0.2151***			
	(0.069)			
Banks per Loan $_{cs,t-1}$		0.2205***		
		(0.029)		
Size (%GDP) $_{cs,t-1}$			0.2252***	
			(0.072)	
Banks per Loan $_{cs,t-1}$				0.2394***
				(0.031)
Observations	25,272	25,272	25,272	25,272
R-squared	0.407	0.675	0.405	0.672
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.0478	0.0478	0.0478	0.0478
Average Dep. Var.	0.109	0.112	0.103	1.503

Notes: The table presents the estimates of equation 1, without additional lags of $MDB_{cs,t}$. Columns 1-2 report total mobilization effects (direct + indirect); columns 3-4 report indirect mobilization effects only. The dependent variables are: (i) the size of syndicated loans (% of GDP, columns 1-3), and (ii) the average number of banks per loan (columns 2-4). In columns 1-2 the outcome variables include the amount lent by MDBs' partners and the number of those partners, respectively. In columns 3-4 the outcome variables exclude the amount brought by MDBs' partners and the number of the banks. $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The bottom rows show the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table 8: MDB Mobilization Effects on Corporate Bonds

	Number of Bonds				Bond Size (% GDP)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	-0.0768	-0.0772	0.1422	-0.0498	0.0082	0.0080	0.0201	0.0112
	(0.257)	(0.257)	(0.282)	(0.213)	(0.010)	(0.010)	(0.017)	(0.012)
$MDB_{cs,t-1}$	0.1208	0.1187	0.2141	0.0681	0.0096	0.0085	0.0226**	0.0086
	(0.227)	(0.230)	(0.230)	(0.249)	(0.007)	(0.006)	(0.009)	(0.007)
$MDB_{cs,t-2}$	-0.4152	-0.4171	-0.7618	-0.5706	0.0049	0.0038	0.0062	0.0090
	(0.473)	(0.475)	(0.755)	(0.635)	(0.008)	(0.008)	(0.013)	(0.009)
Top 10 Banks		0.0195				0.0107		
		(0.095)				(0.008)		
Chinese lending			0.1453				0.0053	
			(0.230)				(0.007)	
ODA				0.0160				0.0035
				(0.073)				(0.004)
$\text{Number of Bonds}_{cs,t-1}$	0.8966***	0.8966***	0.8046***	0.8958***				
	(0.057)	(0.057)	(0.092)	(0.061)				
$\text{Bond Size (\%GDP)}_{cs,t-1}$					0.5562***	0.5550***	0.5109***	0.5582***
					(0.061)	(0.061)	(0.078)	(0.065)
$\sum_{k=0}^{2} MDB\_Support_{cs,t-k}$	-0.371	-0.376	-0.406	-0.552	0.0227	0.0203	0.0489	0.0289
$Wald\ test: p\ value$	0.584	0.585	0.672	0.451	0.237	0.279	0.134	0.221
Observations	13,869	13,869	6,318	11,718	13,869	13,869	6,318	11,718
R-squared	0.904	0.904	0.905	0.898	0.693	0.693	0.743	0.690
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0713	0.0713	0.0954	0.0621	0.0713	0.0713	0.0954	0.0621
Average Dep. Var.	1.331	1.331	1.934	1.080	0.0396	0.0396	0.0538	0.0368

Notes: The table presents the estimates of equation 1 on corporate bonds. The dependent variables are: (i) the number of corporate bonds (columns 1-4), and (ii) the size of corporate bonds (% of GDP, columns 5-8) in the country-sector-year. $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. To control for the top 10 banks, we include a dummy equal to 1 if at least 1 of the top banks was present in the country-sector in the previous 2 years. To control for Chinese official financing and official development assistance (ODA) we include a dummy equal to 1 if the country-sector received these flows in the previous 2 years. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

A Appendix

A.1 Confounding Factors and Oster Bounds

Confounding factors. First, we want to rule out the possibility that the mobilization effects that we capture are not driven by MDBs, but by the fact that some large global bank, very active in the syndicate loan market, starts lending to a given country-sector pair. In that case, the presence of a large global player is what really drives subsequent private sector financing, as well as the presence of MDBs. To this end, we re-estimate our baseline model controlling for the presence of the top 10 largest private banks according to S&P.[18] We do so by including in equation 1 a dummy variable equal to 1 if at least one of the top 10 banks was present in the country-sector in the previous 2 years.[19] Results are shown in Table A10. Even though, as one would expect, the presence of top banks has a positive predictive power for all our outcomes except the number of loans, the estimate of the mobilization effects of MDBs are not affected. In particular, the cumulative effects remain statistically significant and qualitatively similar to those of the baseline (Table 3). To mitigate the concern that any of the largest banks is the real catalytic investor, and that MDBs are simply following the top bank's lead, we present a set of 10 variants of our baseline specification. In each one, we pick one of the top 10 banks, we introduce the dummy variables for the presence of that bank (using the contemporaneous and the two lagged variables), and we net out the loans by those banks from the outcome variables, in exactly the same way as we do for the MDBs. Results are presented in Tables A11-A12. Reassuringly, all the coefficients on the MDB dummies remain significantly different from zero, as the cumulative effects. By contrast, the cumulative effects of the top banks instead are mostly non-significant, except for JPMorgan, HSBC and BNP Paribas.

Second, we further control for other sources of financing that might affect the participation of private creditors at the country-sector level, zooming in on the role of Chinese lending and, more generally, on aid flows. In this way, we address lingering concerns that we are not capturing growth opportunities at the country-sector level which may jointly attract MDBs and private lenders.

Chinese lending to developing countries has grown considerably since the 2000s, reaching close to USD 40 billion per year between 2011 and 2014, more than US overseas flows (Dreher

[18] We consider the top 10 banks by assets as classified by S&P. Banks in a ranking by total assets as of December 31, 2017. The top 10 include: the Industrial $ Commercial Bank of China, china Construction Bank Corp., Agricultural Bank of China Ltd., Bank of China Ltd., Mitsubishi UFJ Financial Group Inc., JPMorgan Chase & Co., HSBC Holdings PLC, BNP Paribas, Bank of America Corp., Credit Agricole Group.

[19] We control for participation in the previous 2 years to avoid double counting, as the presence of the private banks at time t is included in our outcome variables on the left hand side of equation 1.

et al., 2017). Since Chinese lending is primarily driven by economic interests and is correlated with higher economic growth (Dreher et al., 2017, 2018), the presence of Chinese-funded projects could also be associated with subsequent private sector lending (as well as MDBs' participation). We can test this hypothesis thanks to the detailed project-level data collected by AidData on Chinese concessional and non-concessional official financing between 2000 and 2014 (Dreher et al., 2017). Although most of the projects are in African countries and in infrastructure, Chinese official finance targets several countries and many sectors, from health and education to emergency response, agriculture, and social and physical infrastructures, making these data suitable for our purposes. As in the previous exercise, we re-estimate equation 1 including a dummy equal to 1 if the country-sector received a project financed by China in the previous 2 years. Results, reported in Table A13, columns 1-4, show that there is no evidence that past Chinese lending is associated with an increase in syndicated lending, in the number of loans and lenders, and in the average maturity of syndicated loans (if anything, in column 4 the coefficient on the Chinese lending dummy is negative and significant). More important, the estimates of the MDB mobilization effects are significant and similar in magnitude to those of the baseline (Table 3).

A similar argument could be made for official aid flows, which could signal future growing opportunities, with possible catalytic effects on the private sector. We use OECD (2018) sectoral data on official development assistance from donor countries part of the Development Assistance Committee (DAC) between 1993 and 2015 to construct a dummy equal to 1 if the country-sector received aid flows in the previous 2 years, and zero otherwise. Augmenting our baseline model with this variable leaves again the estimates of the MDB mobilization effects statistically significant and qualitatively similar to the baseline. At the same time, we observe significant and positive—although small—effect of aid flows on the number of loans, but no other mobilization effects on volumes, number of lenders and loan maturity (Table A13, columns 5-8).[20]

Third, we consider private sector flows and we focus on the number and size of corporate bonds, assuming that they are likely to depend on the same variables that affect MDB and commercial bank lending. In this case, controlling for corporate bond financing could further strengthen our research design absorbing potential unobserved confounding factors. Notwithstanding the reduction in sample size, due to the limited data on corporate bonds, the results show that our main findings are unaffected by the inclusion of either the number or the volume of bond issuances (included with zero, one and two lags, see Table A14).

[20]These findings are qualitatively similar if we jointly control for the top 10 banks, Chinese lending and sectoral foreign aid; the results not shown for the sake of brevity but are available upon request.

Finally, we look at sector-level growth of value added, which could be interpreted as a direct measure of growth potential and attractiveness of a given country-sector pair. However, we have to deal with severe limitations to data availability. The World Bank's World Development Indicators collect data on value added for agriculture, industry, manufacturing, construction and public utilities, manufacturing, and services. Although this classification does not perfectly match the one of syndicated loans, we are still able to match about 30% of the original sample. The results, shown in Table A15, indicate that the cumulative effects of MDB participation remain positive and significant (with a positive effect also for the number of loans) even controlling for value added growth (which is not significant), and notwithstanding the sharp reduction in sample size.

Oster Bounds. So far, we have explored the sensitivity of mobilization effects to the inclusion of observed controls. To test to what extent these effects are due to unobserved heterogeneity, we follow Oster (2019) and estimate bounds on the mobilization effects allowing for selection on unobservables. The assumption behind the adoption of the Oster bounds is that the selection on observables (top 10 banks, Chinese lending, aid) and unobservables is proportional.

We start by calculating an identified set for the mobilization effects, imposing a value for the R-squared from a hypothetical regression of the outcome on treatment (MDB's participation) and both observed and unobserved controls, that we define as R_{max}. Following Oster (2019) and McConnell and Rasul (2018), we set R_{max} equal to the minimum between 1 and 1.3 $\times$ the unadjusted R-squared.[21] Following the authors, we also set the bounds on the degree of selection on observed variables relative to unobserved variables, τ, to 0 (no selection on unobservables) and 1 (equal selection on unobservables and observables). As shown in Table A16, even when allowing for selection on unobservbles, none of the bounds around point estimates at time t or t+2 includes zero. That is, the adjusted mobilization effects have the same sign as the mobilization effects in the regressions with controls if there is equal selection on unobservables and observables (τ=1). For example, once we allow for selection on unobservables, the increase we observe in the number of loans at time t is estimated to be between 0.433 and 23.201. The few bounds that cannot exclude a zero as point estimate refer for the most part to coefficients that were not significantly different from zero from the beginning.

Then, we calculate the coefficient of proportionality τ for which the MDB mobilization effects would be zero. For example, as Table A16 shows, a value of τ=-0.22 indicates that the unob-

[21] The upper bound 1.3 $\times$ the unadjusted R-squared for R_{max} is derived by Oster (2019) as the cut-off value that would allow at least 90% of randomized results from top journals to survive.

servables would need to be 0.22 times as important as the observables and that there should be opposite correlation to the observables to produce mobilization effects on the number of loans at time t equal to zero. Similarly, the selection on unobservables should show opposite correlation to the observables when considering the size, banks, and maturity margins.

This evidence seems to suggest that our results are robust to the possibility of selection on unobservable characteristics. The Oster bounds rely on the assumption that the selection on observables and unobservables is proportional. However, in our context it seems that once the various fixed effects are included, the additional control variables considered do not increase the explanatory power of the model by much, which might explain why the Oster bounds are so far away from the initial point estimates. This interpretation reinforces the idea that the inclusion of a large set of fixed effects reduces the scope for omitted variable bias.

A.2 Country-Level MDB Mobilization Effects

In Section 5.4 we have verified that the MDB mobilization effects do not crowd-out other sources of financing. Here, we exploit the sectoral dimension of the data to explore whether MDB lending in one sector could crowd-out syndicated lending in other sectors, leading to small or null effects at the country level. If private resources are limited, a sector that attracts investment—also because of the presence of MDBs—might crowd-out investment to other sectors. Cecchetti and Kharroubi (2015), for example, show that industries that are in competition for financial resources are particularly damaged during credit booms. Specifically, they find that manufacturing sectors that are dependent on external finance can suffer disproportionate reductions in productivity growth. On the contrary, if investment in a sector increases opportunity in other sectors, there might be positive spillovers. Investments to build a road, for example, might attract new workers and the demand for new services or real estate in the location could increase. Lanzalot et al. (2018), for instance, find that the expansion of the Panama Canal supported by MDBs increased private investment in the construction sector, but also in machinery and equipment, in the transport sector, and in real estate.

We test for the presence of crowding-out (or crowding-in) effects in two ways. First, we augment the baseline model with a dummy that identifies the contemporaneous presence of MDBs in any other $(n - s)$ sector in country c, at time t. Table A17 reports the MDB mobilization effects within the same country-sector-year (cs, t) of MDB participation and also those due to the potential contemporaneous MDB participation in any other $(n - s)$ sector in the same country c. The results show that the presence of MDBs in other sectors leaves mobilization effects in the given sector al-

most unchanged, suggesting that MDB participation in other $(n - s)$ sectors does not significantly crowd-out private banking inflows to sector s. In addition, when MDBs participate in other sectors, there is evidence of a positive spillover effect on the number of lending banks participating in syndicated loans in sector s. This result would indicate that the participation of MDBs in a sector might create new opportunities in other sectors too, which, however, are not reflected in the number of loans or in total lending.

Second, we estimate our baseline model aggregating the data at the country level. If there are crowding-out effects of MDB lending on private flows, we should observe a limited or non-significant effect of MDB participation on lending and loan terms. In this case, our research design cannot exploit the granular set of fixed effects that we use in the baseline analysis to control for unobserved heterogeneity across sectors, countries and time. However, we absorb the effect of global shocks and country-level heterogeneity with year and country fixed effects. The results, shown in Table A18, indicate that MDB participation is significantly associated with more lending banks, larger flows and longer maturities, even at the country level. A similar picture emerges when looking separately at direct and indirect mobilization effects (see Table A19). Overall, the estimated cumulative effects are similar (and sometimes larger) in size to those estimated at the country-sector level, suggesting the lack of crowding-out effects across sectors.

A.3 Cross-Country Heterogeneity

Finally, we test whether MDB mobilization effects are limited to countries that are already attractive to private sector creditors, or if MDBs can also catalyze private sector resources in less attractive countries. To this end, we restrict our attention to low income countries, as defined by the World Bank[22].

Table A20 shows mobilization effects separately for low income countries and other developing countries. Cumulative mobilization effects on the size of the flows are fully driven by the sample of other developing countries, as in low income countries we do not find any positive effect on loan size. However, the results for the number of banks and for loan maturity are similar in the two samples.

Overall, these findings could be taken as a signal to exert some caution when interpreting our results, as they suggest that MDBs could be less successful in mobilizing resources to low income countries. This piece of evidence is in line with the latest joint report by MDBs on mobilization,

[22]See: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups. The list of countries in the sub-samples of low income and other developing countries is reported in Table A21.

which shows that larger amounts are mobilized to higher income countries, as most of private investors have little or no interest to take country risk, which is higher in less developed and low performing countries (World Bank, 2018).

Table A1: Amounts lent in 1993-2017 by Multilateral Organizations

Multilateral Development Bank	USD (million)
European Investment Bank - EIB	45,528
European Bank for Reconstruction and Development - EBRD	45,064
International Finance Corporation - IFC	41,062
International Bank for Reconstruction & Development - World Bank	35,228
IDB Invest[1]	25,158
African Development Bank	13,070
Asian Development Bank	8,293
Islamic Development Bank	7,274
Corporación Andina de Fomento - CAF Development Bank of Latin America	4,115
Eurasian Development Bank	3,989
Nordic Investment Bank	2,888
African Export-Import Bank - Afreximbank	2,783
International Islamic Trade Finance Corp - ITFC	1.169
Clean Technology Fund	769
International Investment Bank - IIB	709
International Development Association - IDA	645
Africa Finance Corp - AFC	554
Asian Infrastructure Investment Bank	462
CABEI	422
Banco del Desarrollo	377
Andean Development Corp	350
East African Development Bank	181
Islamic Corp for the Development of the Private Sector - ICD	169
West African Development Bank - BOAD	115
Multilateral Investment Guarantee Agency	112
Caribbean Development Bank - CDB	107
Banque de Developpement des Etats de I'Afrique Centrale - BDEAC	60
Islamic Corp for Insurance of Investments & Export Credits - ICIEC	10
Nordic Development Fund	8
Eurasian Bank	4

Notes: The table lists the MDBs providing syndicate loans to developing countries in 1993-2017, and the amount they lent (USD million) across the period.
[1] Corresponds to Inter-American Development Bank (IADB) and Inter-American Investment Corporation (IIC) before 2016.

Table A2: Robustness: No Outliers by Country

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.5989**	0.0781***	0.6061*	0.4851***
	(0.238)	(0.027)	(0.311)	(0.146)
$MDB_{cs,t-1}$	0.1940	0.0387	0.8559***	0.1067
	(0.256)	(0.030)	(0.267)	(0.154)
$MDB_{cs,t-2}$	-0.0590	0.0599***	0.7458**	0.2803**
	(0.278)	(0.018)	(0.346)	(0.107)
Number of $Loans_{cs,t-1}$	0.8746***			
	(0.077)			
Size $(\%GDP)_{cs,t-1}$		0.2544***		
		(0.047)		
Banks per $Loan_{cs,t-1}$			0.2165***	
			(0.033)	
$Maturity_{cs,t-1}$				0.1032***
				(0.021)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.734	0.177***	2.208***	0.872***
$Wald\ test : p\ value$	0.204	0.002	0.005	0.000
Observations	6,624	6,624	6,624	6,331
R-squared	0.835	0.538	0.663	0.542
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.116	0.116	0.116	0.108
Average Dep. Var.	2.593	0.206	4.919	2.129

Notes: The table presents the estimates of equation 1 in countries with more than 100 syndicated loans in 1993-2017: Qatar, Bahrain, Kuwait, Bulgaria, Croatia, Egypt, Vietnam, Panama, Pakistan, Nigeria, Saudi Arabia, Hungary, Romania, Colombia, Peru, Kazakhstan, Ukraine, Venezuela, South Africa, Poland, United Arab Emirates, Philippines, Malaysia, Argentina, Thailand, Mexico, Turkey, India, Indonesia, Russian Federation and Brazil. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A3: Robustness: No Outliers by Sector

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.4223**	0.0631**	0.2487	0.6541***
	(0.182)	(0.024)	(0.236)	(0.146)
$MDB_{cs,t-1}$	0.1312	0.0075	0.4798**	0.0174
	(0.198)	(0.029)	(0.201)	(0.147)
$MDB_{cs,t-2}$	-0.0596	0.0534***	0.4693**	0.2952***
	(0.188)	(0.020)	(0.232)	(0.110)
Number of $Loans_{cs,t-1}$	0.8743***			
	(0.083)			
Size $(\%GDP)_{cs,t-1}$		0.2206***		
		(0.079)		
Banks per $Loan_{cs,t-1}$			0.2013***	
			(0.037)	
$Maturity_{cs,t-1}$				0.0609***
				(0.019)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.494	0.124**	1.198**	0.967***
Wald test : p value	0.233	0.013	0.017	0.000
Observations	13,455	13,455	13,455	12,849
R-squared	0.861	0.477	0.722	0.578
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.0763	0.0763	0.0763	0.0619
Average Dep. Var.	1.227	0.164	2.357	1.139

Notes: The table presents the estimates of equation 1 in sectors with more than 1,000 syndicated loans in 1993-2017: oil and gas, construction and real estate, manufacturing, infrastructure, and finance. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A4: Robustness: No Outliers by Sector nor Country

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.6712**	0.0695**	0.2459	0.5039***
	(0.275)	(0.034)	(0.405)	(0.175)
$MDB_{cs,t-1}$	0.2562	0.0401	0.6735*	0.0090
	(0.335)	(0.038)	(0.331)	(0.171)
$MDB_{cs,t-2}$	-0.0323	0.0702***	0.7745**	0.2766**
	(0.338)	(0.020)	(0.365)	(0.117)
Number of $Loans_{cs,t-1}$	0.8812***			
	(0.084)			
Size $(\%GDP)_{cs,t-1}$		0.2432***		
		(0.051)		
Banks per $Loan_{cs,t-1}$			0.1924***	
			(0.039)	
$Maturity_{cs,t-1}$				0.0765***
				(0.022)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.895	0.180***	1.694**	0.789***
Wald test : p value	0.190	0.007	0.042	0.001
Observations	3,680	3,680	3,680	3,477
R-squared	0.856	0.565	0.674	0.527
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.183	0.183	0.183	0.176
Average Dep. Var.	4.204	0.341	7.631	3.185

Notes: The table presents the estimates of equation 1 in sectors with more than 1,000 syndicated loans in 1993-2017 (oil and gas, construction and real estate, manufacturing, infrastructure, and finance) and countries with more than 100 syndicated loans (Qatar, Bahrain, Kuwait, Bulgaria, Croatia, Egypt, Vietnam, Panama, Pakistan, Nigeria, Saudi Arabia, Hungary, Romania, Colombia, Peru, Kazakhstan, Ukraine, Venezuela, South Africa, Poland, United Arab Emirates, Philippines, Malaysia, Argentina, Thailand, Mexico, Turkey, India, Indonesia, Russian Federation and Brazil). The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A5: Robustness: Standard Errors Clustered at Country-Sector Level

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.3846**	0.0637***	0.4634*	0.6371***
	(0.164)	(0.021)	(0.246)	(0.116)
$MDB_{cs,t-1}$	0.1235	0.0125	0.6026***	0.1345
	(0.175)	(0.023)	(0.193)	(0.117)
$MDB_{cs,t-2}$	-0.0508	0.0492***	0.5157**	0.3096***
	(0.171)	(0.018)	(0.207)	(0.098)
Dep. $Var._{cs,t-1}$	0.8685***	0.2155***	0.2221***	0.0751***
	(0.071)	(0.068)	(0.028)	(0.016)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.457	0.125***	1.582***	1.081***
Wald test: *p value*	0.233	0.004	0.001	0.000
Observations	24,219	24,219	24,219	23,439
R-squared	0.835	0.410	0.676	0.531
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.048	0.048	0.048	0.038
Average Dep. Var.	0.760	0.105	1.526	0.752

Notes: The table presents the estimates of equation 1, but with standard errors clustered at the country-sector level. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country-sector level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A6: Robustness: Two-Way Clustering of the Standard Errors

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.3846***	0.0637**	0.4634***	0.6371***
	(0.084)	(0.024)	(0.121)	(0.154)
$MDB_{cs,t-1}$	0.1235**	0.0125	0.6026	0.1345
	(0.045)	(0.026)	(0.352)	(0.198)
$MDB_{cs,t-2}$	-0.0508	0.0492**	0.5157**	0.3096**
	(0.112)	(0.019)	(0.189)	(0.123)
Dep. $Var._{cs,t-1}$	0.8685***	0.2155***	0.2221***	0.0751***
	(0.079)	(0.044)	(0.070)	(0.021)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.457**	0.125*	1.582**	1.081**
Wald test: *p value*	0.012	0.075	0.028	0.033
Observations	24,219	24,219	24,219	23,439
R-squared	0.835	0.410	0.676	0.531
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.048	0.048	0.048	0.038
Average Dep. Var.	0.760	0.105	1.526	0.752

Notes: The table presents the estimates of equation 1, but with two-way clustering of standard errors at the country level and at the sector level. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors, clustered at the country and sector levels, are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A7: MDB Mobilization Effects in Infrastructure

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.5007	0.0624	0.4194	1.0688***
	(0.338)	(0.042)	(0.538)	(0.271)
$MDB_{cs,t-1}$	0.2328	-0.0041	0.8457**	0.8406***
	(0.391)	(0.053)	(0.402)	(0.270)
$MDB_{cs,t-2}$	-0.0850	-0.0113	0.4164	0.8865***
	(0.264)	(0.044)	(0.353)	(0.230)
Number of $Loans_{cs,t-1}$	1.0015***			
	(0.051)			
Size $(\%GDP)_{cs,t-1}$		0.2341**		
		(0.102)		
Banks per $Loan_{cs,t-1}$			0.2152***	
			(0.043)	
$Maturity_{cs,t-1}$				0.0987***
				(0.032)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.649	0.0470	1.682*	2.796***
$Wald\ test: p\ value$	0.342	0.585	0.061	0.000
Observations	2,691	2,691	2,691	2,539
R-squared	0.877	0.304	0.503	0.448
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	No	No	No	No
Average MDB	0.123	0.123	0.123	0.111
Average Dep. Var.	1.865	0.363	2.151	2.919

Notes: The table presents the estimates of equation 1 for the infrastructure sector only. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A8: Robustness: MDB Mobilization Effects, Corporate Bonds Sub-Sample

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.4680**	0.0841***	0.5387**	0.6401***
	(0.187)	(0.024)	(0.237)	(0.134)
$MDB_{cs,t-1}$	0.1320	0.0116	0.7335***	0.1271
	(0.195)	(0.028)	(0.209)	(0.139)
$MDB_{cs,t-2}$	-0.0678	0.0301	0.5751**	0.2588**
	(0.198)	(0.021)	(0.270)	(0.099)
Number of $Loans_{cs,t-1}$	0.8706***			
	(0.078)			
Size $(\%GDP)_{cs,t-1}$		0.2833***		
		(0.047)		
Banks per $Loan_{cs,t-1}$			0.2190***	
			(0.031)	
$Maturity_{cs,t-1}$				0.0770***
				(0.019)
$\sum_{k=0}^{2} MDB_{cst-k}$	0.532	0.126**	1.847***	1.026***
Wald test : p value	0.227	0.013	0.002	0.000
Observations	13,869	13,869	13,869	13,321
R-squared	0.835	0.477	0.669	0.526
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.071	0.071	0.071	0.061
Average Dep. Var.	1.303	0.160	2.585	1.244

Notes: The table presents the estimates of equation 1 in the sub-sample used in Table 8, limited to country-years for which there are data on corporate bond issuances. The dependent variables are: (i) the number of loans, (ii) the size of syndicated loans (% of GDP), (iii) the average number of banks per loan, and (iv) the average maturity of syndicated loans (in years). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A9: Robustness: MDB Mobilization Effects on Chinese and Foreign Aid

	Chinese Projects (1)	ODA Projects (2)
$MDB_{cs,t}$	0.0332	0.3243
	(0.032)	(1.158)
$MDB_{cs,t-1}$	-0.0157	-0.9761
	(0.026)	(0.890)
$MDB_{cs,t-2}$	0.0275	0.5337
	(0.026)	(0.875)
Dep. Var. $_{cs,t-1}$	0.0838***	0.8038***
	(0.026)	(0.050)
$\sum_{k=0}^{2} MDB_{cst-k}$	0.0450	-0.118
$Wald\ test : p\ value$	0.346	0.945
Observations	12,852	21,168
R-squared	0.521	0.957
Sector-country FE	Yes	Yes
Sector-year FE	Yes	Yes
Country-year FE	Yes	Yes
Average MDB	0.060	0.043
Average Dep. Var.	0.268	68.27

Notes: The table presents the estimates of equation 1, in which the dependent variables are: (i) the number of officially financed Chinese projects (column 1), and (ii) the number of ODA projects (column 2). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A10: MDB Mobilization Effects: Controlling for Top 10 Banks

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.3941**	0.0632***	0.4557**	0.6300***
	(0.157)	(0.020)	(0.201)	(0.125)
$MDB_{cs,t-1}$	0.1846	0.0092	0.5356***	0.0811
	(0.156)	(0.023)	(0.182)	(0.121)
$MDB_{cs,t-2}$	0.0041	0.0462***	0.4578**	0.2659***
	(0.161)	(0.017)	(0.230)	(0.091)
Top 10 Banks	-0.6419***	0.0345	0.7738***	0.4959***
	(0.182)	(0.037)	(0.231)	(0.112)
Number of $Loans_{cs,t-1}$	0.8727***			
	(0.077)			
Size $(\%GDP)_{cs,t-1}$		0.2130***		
		(0.072)		
Banks per $Loan_{cs,t-1}$			0.2050***	
			(0.033)	
$Maturity_{cs,t-1}$				0.0578***
				(0.017)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.583	0.119***	1.449***	0.977***
$Wald\ test: p\ value$	0.105	0.006	0.004	0.000
Observations	24,219	24,219	24,219	23,439
R-squared	0.836	0.410	0.677	0.533
Sector-country FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380
Average Dep. Var.	0.760	0.105	1.526	0.752

Notes: The table presents the estimates of equation 1 controlling for the top 10 banks. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. To control for the top 10 banks, we include a dummy equal to 1 if at least 1 of the top banks was present in the country-sector in the previous 2 years. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A11: Robustness: Controlling for Top Banks (1)

	Industrial and Commercial Bank of China				**Bank of China**			
	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
$\sum_{k=0}^{2} MDB_{\text{cst-k}}$	0.415	0.115***	1.488***	1.051***	0.456	0.120***	1.547***	1.088***
$Waldtest: pvalue$	0.228	0.00748	0.004	0.000	0.202	0.007	0.001	0.000
$\sum_{k=0}^{2} TopBank_{\text{cst-k}}$	1.079	0.199	0.610	0.630	0.771	0.211	0.195	-0.198
$Waldtest: pvalue$	0.491	0.134	0.624	0.224	0.486	0.0344	0.907	0.536
Observations	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439
R-squared	0.835	0.406	0.669	0.532	0.835	0.408	0.671	0.530
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380
Average Top Bank	0.00855	0.00855	0.00855	0.00870	0.0105	0.0105	0.0105	0.0107
Average Dep. Var.	0.748	0.103	1.478	0.745	0.747	0.102	1.460	0.743
	China Construction Bank				**Agricultural Bank of China**			
	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
$\sum_{k=0}^{2} MDB_{\text{cst-k}}$	0.476	0.121***	1.546***	1.071***	0.456	0.113***	1.445***	1.095***
p value	0.202	0.005	0.002	0.000	0.189	0.00416	0.004	0.000
$\sum_{k=0}^{2} TopBank_{\text{cst-k}}$	-1.165	0.366	-0.967	0.681	-2.729	0.947*	3.582	-0.910
$Waldtest: pvalue$	0.273	0.216	0.740	0.281	0.320	0.0945	0.197	0.149
Observations	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439
R-squared	0.835	0.411	0.676	0.531	0.837	0.408	0.676	0.532
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380
Average Top Bank	0.00351	0.00351	0.00351	0.00358	0.00173	0.00173	0.00173	0.00179
Average Dep. Var.	0.756	0.104	1.503	0.750	0.758	0.106	1.515	0.752

Notes: The table presents the estimates of equation 1 on syndicated loans in the sample used to estimate mobilization effects on corporate bonds. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $\text{MDB}_{\text{cs,t}}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. $\text{TopBank}_{\text{cs,t}}$ is a dummy equal to 1 if the top bank listed at the top of the panel participates in a syndicated loan in country-sector *cs* at time *t*. The table reports the cumulative effects of $\text{MDB}_{\text{cs,t}}$ and $\text{TopBank}_{\text{cs,t}}$ between year $t-2$ and t, with the associated p-values of a Wald test, and, in the bottom rows, the sample averages of the $\text{MDB}_{\text{cs,t}}$, $\text{TopBank}_{\text{cs,t}}$, and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A12: Robustness: Controlling for Top Banks (2)

	Mitsubishi				**JP Morgan**				**HSBC**			
	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
$\sum_{k=0}^{2} MDB_{\text{cst-k}}$	0.430	0.104***	1.725***	1.071***	0.367	0.0576*	1.016**	0.999***	0.350	0.0870**	1.004**	0.944***
p value	0.212	0.00172	0.000	0.000	0.266	0.0667	0.0237	0.000	0.321	0.0152	0.0122	0.000
$\sum_{k=0}^{2} TopBank_{\text{cst-k}}$	-0.365	0.0928	1.909***	0.229	-0.0588	0.166*	1.575*	0.651**	-0.295	0.117*	1.381	0.768***
$Waldtest: pvalue$	0.489	0.183	0.00427	0.231	0.924	0.0526	0.0857	0.0375	0.482	0.0744	0.105	0.00326
Observations	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439
R-squared	0.825	0.397	0.631	0.522	0.832	0.390	0.651	0.529	0.834	0.388	0.652	0.520
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380
Average Top Bank	0.0404	0.0404	0.0404	0.0413	0.0222	0.0222	0.0222	0.0226	0.0434	0.0434	0.0434	0.0439
Average Dep. Var.	0.681	0.0844	1.199	0.708	0.723	0.0960	1.375	0.742	0.680	0.0878	1.252	0.713
	BNP				**Bank of America**				**Credit Agricole**			
	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
$\sum_{k=0}^{2} MDB_{\text{cst-k}}$	0.437	0.0960**	1.398***	1.031***	0.444	0.103**	1.537***	1.138***	0.442	0.128***	1.522***	1.009***
p value	0.166	0.0231	0.00128	0.000	0.187	0.0132	0.000	0.000	0.215	0.003	0.001	0.000
$\sum_{k=0}^{2} TopBank_{\text{cst-k}}$	0.0390	0.153*	0.701	0.508**	-0.465	0.102	0.709	0.238	-0.169	0.0744	0.281	-0.00704
$Waldtest: pvalue$	0.843	0.0734	0.182	0.0278	0.312	0.297	0.580	0.409	0.654	0.194	0.601	0.982
Observations	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439	24,219	24,219	24,219	23,439
R-squared	0.830	0.427	0.652	0.526	0.833	0.394	0.647	0.529	0.832	0.394	0.676	0.527
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380	0.0483	0.0483	0.0483	0.0380
Average Top Bank	0.0413	0.0413	0.0413	0.0417	0.0204	0.0204	0.0204	0.0208	0.0195	0.0195	0.0195	0.0195
Average Dep. Var.	0.689	0.0842	1.243	0.694	0.722	0.0981	1.375	0.743	0.732	0.0970	1.415	0.727

Notes: The table presents the estimates of equation 1 on syndicated loans in the sample used to estimate mobilization effects on corporate bonds. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $\text{MDB}_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector cs at time t. $\text{TopBank}_{cs,t}$ is a dummy equal to 1 if the top bank listed at the top of the panel participates in a syndicated loan in country-sector cs at time t. The table reports the cumulative effects of $\text{MDB}_{cs,t}$ and $\text{TopBank}_{cs,t}$ between year $t-2$ and t, with the associated p-values of a Wald test, and, in the bottom rows, the sample averages of the $\text{MDB}_{cs,t}$, $\text{TopBank}_{cs,t}$, and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A13: MDB Mobilization Effects: Controlling for Chinese Lending and Aid Flows

	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	0.3809***	0.0627	0.7119**	0.6793***	0.4917***	0.0750***	0.5286**	0.6797***
	(0.133)	(0.041)	(0.278)	(0.146)	(0.167)	(0.027)	(0.252)	(0.149)
$MDB_{cs,t-1}$	0.4378**	0.0423	0.8823***	0.2603*	0.2375**	0.0007	0.4519**	0.1014
	(0.179)	(0.036)	(0.249)	(0.153)	(0.119)	(0.026)	(0.194)	(0.150)
$MDB_{cs,t-2}$	0.2100	0.0598**	0.5468**	0.1895*	0.1328	0.0481**	0.3214	0.2315**
	(0.134)	(0.024)	(0.234)	(0.099)	(0.118)	(0.020)	(0.261)	(0.100)
Chinese lending	-0.0669	-0.0202	0.0449	-0.1847***				
	(0.066)	(0.035)	(0.113)	(0.065)				
ODA					0.0335*	-0.0150	-0.0817	-0.0389
					(0.020)	(0.014)	(0.116)	(0.049)
$\text{Number of Loans}_{cs,t-1}$	0.6143***				0.7461***			
	(0.106)				(0.083)			
$\text{Size (\%GDP)}_{cs,t-1}$		0.0982				0.2055***		
		(0.109)				(0.073)		
$\text{Banks per Loan}_{cs,t-1}$			0.1888***				0.2006***	
			(0.048)				(0.034)	
$\text{Maturity}_{cs,t-1}$				0.0327				0.0644***
				(0.027)				(0.019)
$\sum_{k=0}^{2} MDB_{cst-k}$	1.029***	0.165*	2.141***	1.129***	0.862***	0.124**	1.302**	1.013***
Wald test : p value	0.000	0.059	0.000	0.000	0.000	0.022	0.027	0.000
Observations	11,934	11,934	11,934	11,468	21,168	21,168	21,168	20,505
R-squared	0.837	0.418	0.731	0.576	0.834	0.404	0.675	0.530
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0631	0.0631	0.0631	0.0469	0.0425	0.0425	0.0425	0.0324
Average Dep. Var.	0.855	0.104	1.522	0.799	0.670	0.104	1.415	0.691

Notes: The table presents the estimates of equation 1 controlling for Chinese lending (columns 1-4) and aid flows (columns 5-8). The dependent variables are: (i) the number of loans (columns 1 and 5), (ii) the size of syndicated loans (% of GDP, columns 2 and 6), (iii) the average number of banks per loan (columns 3 and 7), and (iv) the average maturity of syndicated loans (in years) (columns 4 and 8). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. To control for Chinese official financing and official development assistance (ODA), we include a dummy equal to 1 if the country-sector received these flows in the previous 2 years. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A14: Mobilization Effects Controlling for Corporate Bonds

	Number of loans	Size (%GDP)	Banks	Maturity	Number of loans	Size (%GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	0.4550**	0.0832***	0.5089**	0.6435***	0.4512**	0.0775***	0.4940**	0.6426***
	(0.178)	(0.023)	(0.230)	(0.135)	(0.187)	(0.021)	(0.216)	(0.135)
$MDB_{cs,t-1}$	0.1302	0.0112	0.7408***	0.1300	0.1200	0.0054	0.6949***	0.1268
	(0.195)	(0.028)	(0.207)	(0.139)	(0.192)	(0.025)	(0.197)	(0.140)
$MDB_{cs,t-2}$	-0.0347	0.0320	0.6009**	0.2613**	-0.0689	0.0245	0.5439**	0.2564**
	(0.214)	(0.022)	(0.272)	(0.100)	(0.199)	(0.020)	(0.264)	(0.100)
Chinese lending	-0.0669	-0.0202	0.0449	-0.1847***				
	(0.066)	(0.035)	(0.113)	(0.065)				
ODA					0.0335*	-0.0150	-0.0817	-0.0389
					(0.020)	(0.014)	(0.116)	(0.049)
$Number\ of\ Loans_{cs,t-1}$	0.8700***				0.8707***			
	(0.077)				(0.078)			
$Size\ (\%GDP)_{cs,t-1}$		0.2834***				0.2776***		
		(0.047)				(0.048)		
$Banks\ per\ Loan_{cs,t-1}$			0.2192***				0.2104***	
			(0.031)				(0.026)	
$Maturity_{cs,t-1}$				0.0765***				0.0770***
				(0.019)				(0.019)
$Number\ of\ Bonds_{cs,t}$	0.0779**	0.0051**	0.0586**	0.0004				
	(0.036)	(0.002)	(0.028)	(0.004)				
$Number\ of\ Bonds_{cs,t-1}$	-0.0360	-0.0023*	0.0066	-0.0068*				
	(0.022)	(0.001)	(0.024)	(0.004)				
$Number\ of\ Bonds_{cs,t-2}$	-0.0394	-0.0021	-0.0744***	-0.0006				
	(0.031)	(0.002)	(0.018)	(0.004)				
$Bond\ Size\ (\%GDP)_{cs,t}$					1.6469***	0.4815**	3.1314**	-0.1879
					(0.614)	(0.187)	(1.223)	(0.191)
$Bond\ Size\ (\%GDP)_{cs,t-1}$					-0.8310*	0.0420	0.5883	0.1285
					(0.434)	(0.112)	(0.714)	(0.244)
$Bond\ Size\ (\%GDP)_{cs,t-2}$					-0.7379	-0.1522	-1.3735**	0.1967
					(0.552)	(0.116)	(0.577)	(0.215)
$\sum_{k=0}^{2} MDB_{cst-k}$	0.550	0.126**	1.851***	1.035***	0.502	0.107**	1.733***	1.026***
$Wald\ test: p\ value$	0.213	0.012	0.002	0.000	0.249	0.011	0.002	0.000
Observations	13,869	13,869	13,869	13,321	13,869	13,869	13,869	13,321
R-squared	0.837	0.477	0.671	0.526	0.836	0.482	0.673	0.526
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0713	0.0713	0.0713	0.0613	0.0713	0.0713	0.0713	0.0613
Average Dep. Var.	1.303	0.160	2.585	1.244	1.303	0.160	2.585	1.244

Notes: The table presents the estimates of equation 1 controlling for the number of corporate bonds (columns 1-4) and corporate bond size (% of GDP, columns 5-8). The dependent variables are: (i) the number of loans (columns 1 and 5), (ii) the size of syndicated loans (columns 2 and 6), (iii) the average number of banks per loan (columns 3 and 7), and (iv) the average maturity of syndicated loans (in years) (columns 4 and 8). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A15: Mobilization Effects Controlling for Sector-Level Value Added

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.5608**	-0.0063	0.3926	0.3261*
	(0.252)	(0.025)	(0.339)	(0.191)
$MDB_{cs,t-1}$	0.4263*	-0.0080	0.2688	0.0470
	(0.237)	(0.021)	(0.285)	(0.204)
$MDB_{cs,t-2}$	0.7741**	0.0845***	0.9385**	0.3071*
	(0.337)	(0.025)	(0.388)	(0.157)
Value Added Growth $_{cs,t}$	0.0087	0.0053	0.0202	0.0441
	(0.031)	(0.006)	(0.050)	(0.032)
Dep. $Var._{cs,t-1}$	0.6350***	0.1972***	0.1260***	0.0347
	(0.055)	(0.064)	(0.039)	(0.029)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	1.761***	0.0701**	1.600**	0.680**
$Waldtest : pvalue$	0.006	0.044	0.018	0.028
Observations	7,248	7,248	7,248	6,990
R-squared	0.877	0.551	0.767	0.669
Sector-country FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Average MDB	0.040	0.040	0.040	0.030
Average Dep. Var.	0.691	0.0555	1.169	0.617

Notes: The table presents the estimates of equation 1 controlling for the annual growth rate of sector-level value added. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time t. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A16: MDB Mobilization Effects: Oster Bounds

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.4326***	0.0699	0.6988**	0.6345***
	(0.148)	(0.047)	(0.309)	(0.161)
[Bounds: $\delta_{B(0)}$,$\delta_{B(1)}$]	[0.433, 32.201]	[0.070, 2.315]	[0.699, 22.948]	[0.635, 1.797]
τ for coefficient of 0	-0.222	-0.064	-0.106	-0.806
$MDB_{cs,t-1}$	0.3606**	0.0279	0.6424**	0.2209
	(0.180)	(0.038)	(0.252)	(0.168)
[Bounds: $\delta_{B(0)}$,$\delta_{B(1)}$]	[0.361, 11.281]	[-1.367, 0.028]	[-15.694, 0.642]	[-2.552, 0.222]
τ for coefficient of 0	-0.076	0.045	0.099	0.094
$MDB_{cs,t-2}$	0.2298	0.0553**	0.3803	0.1453
	(0.150)	(0.027)	(0.243)	(0.102)
[Bounds: $\delta_{B(0)}$,$\delta_{B(1)}$]	[0.230, 14.548]	[0.055, 3.891]	[0.380, 22.820]	[0.129, 0.145]
τ for coefficient of 0	-0.021	-0.075	-0.062	2.267
Top 10 Banks	-0.3449**	0.0230	0.2492	0.3063*
	(0.155)	(0.050)	(0.324)	(0.176)
Chinese lending	-0.0602	-0.0218	0.0091	-0.2112***
	(0.067)	(0.037)	(0.113)	(0.067)
ODA	0.0015	-0.0034	0.0155	-0.0127
	(0.030)	(0.016)	(0.116)	(0.071)
Dep. $Var._{cs,t-1}$	0.6173***	0.0980	0.1651***	0.0163
	(0.130)	(0.109)	(0.057)	(0.027)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	1.023***	0.153	1.722***	1.001***
Wald test : p value	0.000	0.121	0.005	0.000
Observations	11,583	11,583	11,583	11,148
R-squared	0.839	0.418	0.721	0.576
R^{max}=min(1,1.3 $\times$ unadjusted R-squared)	1	0.543	0.937	0.749
Sector-country FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Average MDB	0.055	0.055	0.055	0.040
Average Dep. Var.	0.769	0.103	1.402	0.768

Notes: The table presents the estimates of equation 1 controlling for the top 10 banks according to S&P, Chinese lending and official development assistance. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. Bounds on the estimates accounting for selection on unobservables as in Oster (2019) are reported in brackets; the bounds are derived by assuming that the coefficient of proportionality τ is zero or one. Below the bounds the table shows the coefficient of proportionality required for the estimates to be equal to zero. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A17: Sector-Level Crowding-Out

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{cs,t}$	0.3373*	0.0673**	0.7002**	0.6222***
	(0.181)	(0.028)	(0.269)	(0.163)
$MDB_{cs,t-1}$	0.1258	0.0123	0.5916***	0.1351
	(0.160)	(0.023)	(0.175)	(0.124)
$MDB_{cs,t-2}$	-0.0490	0.0491***	0.5070**	0.3101***
	(0.162)	(0.018)	(0.225)	(0.092)
MDB in other $sector_{c\bar{s},t}$	-0.1047	0.0080	0.5233*	-0.0336
	(0.396)	(0.045)	(0.283)	(0.236)
Number of Loans $_{cs,t-1}$	0.8685***			
	(0.078)			
$Size\ (\%GDP)_{cs,t-1}$		0.2155***		
		(0.071)		
Banks per Loan $_{cs,t-1}$			0.2216***	
			(0.031)	
Maturity $_{cs,t-1}$				0.0751***
				(0.018)
$\sum_{k=0}^{2} MDB_{cs,t-k}$	0.414	0.129**	1.799***	1.067***
$Wald\ test : p\ value$	0.210	0.011	0.001	0.000
Observations	24,219	24,219	24,219	23,439
R-squared	0.835	0.410	0.676	0.531
Sector-country FE	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes
Average MDB	0.0483	0.0483	0.0483	0.0380
Average Dep. Var.	0.760	0.105	1.526	0.752

Notes: The table presents the estimates of equation 1, controlling for the presence of MDBs in another sector. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*. MDB in other $sector_{c\bar{s},t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in another sector *n-s* of country *c* at time *t*. The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and *t*, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A18: Mobilization Effects at the Country Level

	Number of loans	Size (% GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)
$MDB_{c,t}$	1.2828*	0.1754**	0.7682**	0.5685***
	(0.744)	(0.070)	(0.384)	(0.202)
$MDB_{c,t-1}$	0.4034	0.1003	0.4015	0.5396**
	(0.376)	(0.099)	(0.387)	(0.217)
$MDB_{c,t-2}$	-0.5341	0.0451	0.1906	0.4489**
	(0.523)	(0.069)	(0.390)	(0.187)
Number of Loans $_{c,t-1}$	0.8827***			
	(0.067)			
Size (%GDP)$_{c,t-1}$		0.2717***		
		(0.058)		
Banks per Loan $_{c,t-1}$			0.3680***	
			(0.042)	
Maturity $_{c,t-1}$				0.0958***
				(0.035)
$\sum_{k=0}^{2} MDB_{c,t-k}$	1.152	0.321*	1.360*	1.557***
$Wald\ test : p\ value$	0.269	0.050	0.058	0.000
Observations	2,691	2,691	2,691	2,458
R-squared	0.883	0.402	0.730	0.411
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Average MDB	0.259	0.259	0.259	0.240
Average Dep. Var.	6.838	0.946	2.649	6.456

Notes: The table presents the estimates of equation 1 when the data is aggregated at the country-year level. The dependent variables are: (i) the number of loans (column 1), (ii) the size of syndicated loans (% of GDP, column 2), (iii) the average number of banks per loan (column 3), and (iv) the average maturity of syndicated loans (in years) (column 4). $MDB_{c,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country c at time t. The table reports, in the bottom rows, the cumulative effect of $MDB_{c,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. The estimations control for country fixed effects and year fixed effects. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A19: Direct and Indirect MDB Mobilization Effects at the Country Level

	Direct + Indirect Effects		**Indirect Effects**	
	Size (%GDP) including MDB loan (1)	Banks including MDB loan (2)	Size (%GDP) excluding MDB loan (3)	Banks excluding MDB loan (4)
MDB $_{c,t}$	0.6262***	2.8996***	0.1891**	0.9409**
	(0.101)	(0.423)	(0.076)	(0.372)
Size (%GDP) $_{c,t-1}$	0.2845***			
	(0.055)			
Banks per Loan $_{c,t-1}$		0.3767***		
		(0.039)		
Size (%GDP) $_{c,t-1}$			0.2883***	
			(0.058)	
Banks per Loan $_{c,t-1}$				0.4038***
				(0.041)
Observations	2,808	2,808	2,808	2,808
R-squared	0.403	0.722	0.403	0.723
Country FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Average MDB	0.256	0.256	0.256	0.256
Average Dep. Var.	1.008	6.722	0.928	6.354

Notes: The table presents presents the estimates of equation 1 when the data is aggregated at the country-year level, without additional lags of $MDB_{c,t}$. Columns 1-2 report total mobilization effects (direct + indirect); columns 3-4 report indirect mobilization effects only. The dependent variables are: (i) the size of syndicated loans (% of GDP, columns 1-3), and (ii) the average number of banks per loan (columns 2-4). In columns 1-2 the outcome variables include the amount lent by MDBs' partners and the number of those partners, respectively. In columns 3-4 the outcome variables exclude the amount brought by MDBs' partners and the number of the banks. $MDB_{c,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector c at time t. The estimations control for country fixed effects and year fixed effects. The bottom rows show the sample averages of the $MDB_{c,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A20: MDB Mobilization Effects: Cross-Country Heterogeneity by Income Level

	Low Income Countries				**Other Developing Countries**			
	Number of Loans	Size (%GDP)	Banks	Maturity	Number of Loans	Size (%GDP)	Banks	Maturity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$MDB_{cs,t}$	0.2135	0.0092	0.5958	1.0947***	0.3222*	0.0744***	0.3297	0.5407***
	(0.137)	(0.037)	(0.367)	(0.384)	(0.190)	(0.024)	(0.238)	(0.130)
$MDB_{cs,t-1}$	-0.0238	-0.0651*	0.2046	0.1009	0.1374	0.0183	0.6069***	0.1294
	(0.053)	(0.033)	(0.256)	(0.242)	(0.187)	(0.027)	(0.210)	(0.131)
$MDB_{cs,t-2}$	0.2174**	0.0458	0.7552***	0.4365**	-0.1396	0.0457**	0.4261	0.2787***
	(0.094)	(0.045)	(0.273)	(0.201)	(0.181)	(0.020)	(0.277)	(0.105)
Number of $Loans_{cs,t-1}$	0.2156				0.8115***			
	(0.162)				(0.068)			
Size $(\%GDP)_{cs,t-1}$		0.3078**				0.1823**		
		(0.122)				(0.080)		
Banks per $Loan_{cs,t-1}$			0.0665				0.2153***	
			(0.044)				(0.034)	
$Maturity_{cs,t-1}$				0.0424				0.0593***
				(0.050)				(0.018)
$\sum_{k=0}^{2} MDB\_Support_{cs,t-k}$	0.407*	-0.0101	1.556**	1.632***	0.320	0.138***	1.363**	0.949***
$Wald\ test: p\ value$	0.074	0.857	0.021	0.0029	0.451	0.007	0.020	0.000
Observations	7,749	7,749	7,749	7,569	16,461	16,461	16,461	15,859
R-squared	0.711	0.468	0.591	0.468	0.849	0.402	0.682	0.541
Sector-country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Average MDB	0.0210	0.0210	0.0210	0.0126	0.0611	0.0611	0.0611	0.0501
Average Dep. Var.	0.125	0.0520	0.363	0.240	1.059	0.130	2.075	0.997

Notes: The table presents the estimates of equation 1 in different sub-samples. The sample is limited to low income countries (columns 1-4) and other developing countries (columns 5-8). See Section 1 for details on the sample splits. The dependent variables are: (i) the number of loans (columns 1, 5), (ii) the size of syndicated loans (% of GDP, columns 2, 6), (iii) the average number of banks per loan (columns 3, 7), and (iv) the average maturity of syndicated loans (in years) (columns 4, 8). $MDB_{cs,t}$ is a dummy equal to 1 if there is at least one MDB providing a syndicated loan in country-sector *cs* at time *t*.The table reports, in the bottom rows, the cumulative effect of $MDB_{cs,t}$ between year $t-2$ and t, with the associated p-value of a Wald test, and the sample averages of the $MDB_{cs,t}$ and outcome variables. Standard errors clustered at country level are in parentheses: * p<0.1, ** p<0.05, *** p<0.01.

Table A21: Countries by Income Levels

Low Income Countries
Afghanistan, Benin, Burkina Faso, Chad, Eritrea, Ethiopia, Guinea, Haiti, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Niger, Rwanda, Senegal, Sierra Leone, Syria, Tajikistan, Tanzania, Togo, Uganda, Yemen, Zimbabwe
Other Developing Countries
Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bahamas, Bahrain, Bangladesh, Belarus, Belize, Bolivia, Bosnia and Herzegovina, Brazil, Bulgaria, Cambodia, Cape Verde, Colombia, Costa Rica, Croatia, Djibouti, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Gabon, Georgia, Ghana, Grenada, Guatemala, Guyana, Honduras, Hungary, India, Indonesia, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Laos, Lebanon, Libya, Macedonia, Malaysia, Maldives, Marshall Islands, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Morocco, Myanmar, Namibia, Nicaragua, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Saint Lucia, Saudi Arabia, Serbia, South Africa, Sri Lanka, Sudan, Thailand, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Ukraine, United Arab Emirates, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Zambia

Notes: The income level of the country is based on country classification for the World Bank's 2018 fiscal year. The threshold for low-income countries is GNI per capita smaller than 995 current USD.