Sovereign External Borrowing and Multilateral Lending in Crises

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Abstract

Multilateral development banks (MDBs) are key players in the International Financial Architecture and an important source of external finance for governments. Beyond their impact to foster development in recipient countries, understanding the behavior of MDB flows is important to assess their contribution to macroeconomic stability. This paper studies the co-movement of sovereign lending from MDBs with private sovereign lending and their dynamics during fiscal crises. The paper finds that unlike private lending, multilateral sovereign lending does not retrench in most fiscal crises. It also finds synchronization between multilateral development banks and the International Monetary Fund during fiscal crises, particularly in some regions. Event analyses show that this synchronization persists after several periods. Taken together, our results strongly support the notion that MDBs play an important role in crisis mitigation and suggest that this role neither erodes the discipline between International Financial Institutions within the International Financial Architecture, nor it creates incentives towards fiscal mismanagement in recipient countries.

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1. Introduction

The large literature that looks at the cyclicality of international capital flows finds that, overall, capital flows are procyclical (Broner et al. 2013; Kaminsky et al. 2005). The procyclicality of capital flows can amplify business cycles, increasing consumption and spending in periods of capital flow bonanzas and imposing substantial adjustments when foreign capital no longer flows into the country (Levy Yeyati and Zuñiga 2015; De la Torre et al. 2015). When distinguishing by type of lender, there seems to be evidence of some heterogeneity in the behavior of international sovereign debt flows. While private net lending to developing and emerging economies is procyclical (Galindo and Panizza 2018; Araujo et al. 2017; Levy Yeyati 2009; Dasgupta and Ratha 2000), there is scarce literature that looks at the cyclicality of flows from multilateral institutions. Few studies look at the countercyclical role of multilateral development banks (MDBs) (Galindo and Panizza 2018; Humphrey and Michaelowa 2011; Dasgupta and Ratha 2000), or at the role played by International Monetary Fund (IMF) lending in response to crises (McDowell 2017; Mody and Saravia 2013)[4].

Some papers have also analyzed the reaction of capital flows to crises in more detail. Broner et al. (2013) use a composite crisis indicator for banking, currency, and debt crises and find that in times of crises, capital flows decline. Dasgupta and Ratha (2000) test the response of net foreign direct investment flows to balance of payments crises (1984–1989, 1995, and 1997), but do not find significant associations.

Focusing on MDBs, Ratha (2005) examines cross-country data in 1980-2000 and finds that World Bank lending increased in the 1998-1999 Asian crisis.[5] Humphrey and Michaelowa (2011) examine the behavior of different institutions in years of global or regional economic crises (1982–1983, 1995, 1998–1999, and 2009)[6] and find that in 1998–1999 and 2009 the World Bank and the Inter-American Development Bank increased their financial support to their borrowing member countries.[7] Humphrey and Michaelowa (2013) study lending commitments by the same three MDBs but for a different set of countries and years: Bolivia, Colombia, Ecuador, Peru, and Venezuela in 1991-2010.[8] They find that the global financial crisis reduced World Bank lending, which they interpret as a supply restriction, while the Inter-American Development Bank's lending increased. Like the World Bank, the Andean Development Corporation lending also decreased, most likely due to a spike in its own cost of funding.

MDB lending to developing countries differs from other funding sources, primarily since they can borrow by issuing bonds on international capital markets at low costs thanks to their high credit ratings. Given that their mandate is not to maximize profits, but rather sustain development activities, MDBs are subsequently able to lend to developing countries with only a narrow mark-up, even under grim domestic macroeconomic conditions or even when the government has no direct access to international financial markets. Hence during crisis events, MDBs are uniquely positioned to restore the necessary confidence to promptly attract global

[4] Specifically, Mody and Saravia (2013) find that the IMF responds more promptly to countries in severe crises, and McDowell (2017) when borrowers are more exposed to bond markets and short-term debt and the threat of capital flight is higher.

[5] The author finds that World Bank lending increases not only during crises, but more in general when debt service payment increases, and international reserves decline.

[6] The authors also examine country crises defined based on the rankings for sovereign borrower risk in the annual Institutional Investor Index, on the overall fiscal balance of the central government as a share of GDP, and on international reserves divided by external short-term debt.

[7] For the remaining years, the authors do not observe significant differences in multilateral lending.

[8] Humphrey and Michaelowa (2011) focus instead on 10 countries in Latin America and the Caribbean in 1980-2009.

investors, minimizing output losses and preventing the spreading of crises to other countries. This unique financial model is one of the key aspects that makes MDB loans attractive to governments (Humphrey 2017).

Indeed, their relevance as a reliable source of sovereign funding has increased over time, especially for low and middle-income countries where their flows are larger than flows coming from private lenders (Avellán, Galindo and Lotti, 2020). This rising role as development partners has made MDBs critical to the execution of fiscal policy and could even have positive macroeconomic externalities such as contributing to directly increase external liquidity, or indirectly, by catalyzing private capital inflows (Broccolini et al. 2020). This is particularly crucial nowadays given that countries have become more dependent on global financial conditions and hence more vulnerable to crises (IMF, 2018).

While the IMF provides lending to countries experiencing balance of payments difficulties, the MDBs mostly provide longer-term development financing that in some cases can take the form of direct budget support to ease macroeconomic stress. In the context of a financial and economic crisis, global or national, international financial institutions (IFIs) like the IMF and the MDBs are called to respond promptly, with the provision of financial resources to the country or countries facing it, and their coordination is needed for the effective functioning of a responsive global financial architecture. If coordination is lacking, countries could seek budget support lending from MDBs trying to avoid an IMF program, for example, circumventing the requirements of one International Financial Institution (IFI) by turning to another, delaying -and perhaps, worsening- unavoidable macroeconomic adjustments. Coordination between IFIs and MDBs is not granted by institutional design and it is not mandated in their charters.[9] However, the need for coordination is expected as MDBs have their own governance structures, institutional mandates and needs of their borrowing members. Major shareholders in MDBs represented in the G-20, aware of the need to enhance coordination between MDBs and other IFIs in march 2017 issued the "Principles for effective coordination between the IMF and MDBs in case of countries financing while facing macroeconomic vulnerabilities". Among other things, the G-20 suggested that MDBs should "engage in a regular dialogue with the IMF to proactively identify potential opportunities for coordination and to ensure consistent policy signaling" and "structure lending in a manner to provide the borrowing country with appropriate incentives to carry through with its program of reform commitments, including, for example, through sequenced disbursements and corresponding conditions that are consistent with IMF conditionality". It is important to test whether coordination effectively takes place or poses a problem.

This paper studies the dynamics of MDB flows in fiscal crises, and thus, relates to the literature on the dynamics of international capital flows, which was spurred by the interest in financial crises over the last three decades. It also examines whether MDBs and the IMF engage in a coordinated effort during fiscal crises or crowd out each other instead. It begins with a description of the evolution of net flows for the public sector from MDBs and private creditors since the 1980s. For most countries, net flows from MDBs are larger and less volatile than net flows from the private sector, but there is some heterogeneity depending on the country's income level.

[9] Concerns about insufficient coordination between IFIs have been expressed in international fora such as the G20 (G20, 2017; G20, 2018), the G7 (MEF, 2017), the European Central Bank's task force on IMF issues (IRC Taskforce on IMF Issues, 2018), or by the U.S. Government (U.S. Department of Treasury, 2018), that have actively worked towards improving collaboration among the IFIs. In 2017 the G20 created an eminent persons group (EPG) to review whether the global financial architecture should be reformed, including IFIs and how they should coordinate (G20 EPG, 2018). To the best of our knowledge, this topic has been disregarded by the literature so far. The analysis aims at filling also this gap.

We then explore the co-movement of external private capital markets and MDBs. This is of interest to understand if MDB flows can substitute private ones during crises to ease its negative economic impacts. During crisis periods, a negative co-movement between MDB and private capital flows is in line with an MDB counter-cyclical mandate can be expected. The analysis finds that while in the 1980s there was a positive relationship between net flows from MDBs and the private sector, this relationship became negative in the 1990s, a decade of high crises frequency, and non-significant in recent decades.[10]

To explore the issue above further, the analysis turns to the behavior of net flows around different types of fiscal crises. A distinction is made between fiscal crises due to credit events, exceptionally large official financing, implicit domestic public debt default, and loss of market confidence. The analysis finds that private creditors and MDBs behave differently in times of fiscal crises. While private net flows are negatively associated with credit crises or loss of market confidence crises, MDBs do not change their behavior under these circumstances. On the contrary, all the MDBs' net flows are negatively correlated with implicit public defaults when governments resort to seigniorage to finance their fiscal deficits and/or accumulate domestic arrears, while net flows from private creditors do not change. Finally, when we group all fiscal crises together and split them whether there is presence or absence of a high-access IMF arrangement (i.e., with access above 100 percent of quota and fiscal adjustment as a program objective), we find that private creditors tend to retrench in fiscal crises, irrespective of the IMF presence. MDBs instead increase their support, but only in coordination with the IMF. Moreover, the synchronization between MDBs and the IMF is more marked in some regions. Event analyses studying the dynamics of net flows in 5-year windows around the onset of a crisis confirm these results.

The remainder of the paper is organized as follows. We provide a description of the data in Section 2. We discuss the empirical strategy in Section 3 and present the results in Section 4. We perform some robustness checks in Section 5 and give some final conclusions in Section 6.

2. Data

To study the dynamics of international government lending, this paper focuses on net flows received by any borrowing government during a given year, that is, disbursements net of principal repayments.[11] The World Bank's World Development Indicators are used as a source for net flows in current U.S. dollars from MDBs,[12]

[10] The analysis was unable to disentangle whether there is crowding out of private net flows due to net flows from multilateral development banks, as only simple correlations were examined.

[11] Analyses of disbursements rather than net flows go in the same direction and are available upon request.

[12] Public and publicly guaranteed multilateral loans include loans and credits from the World Bank, RDBs, and other multilateral and intergovernmental agencies (such as the Caribbean Development Fund, Council of Europe, European Development Fund, Islamic Development Bank, Nordic Development Fund, and similar entities). Excluded are loans from funds administered by an international organization on behalf of a single donor government. These are classified as loans from governments.

Regional Development Banks (RDBs),[13] the World Bank,[14] and private creditors.[15] RDBs and the World Bank are both part of the MDBs, but they are also analyzed separately to explore potential differences between them.

The sample includes 108 countries and totals 3,411 observations with non-missing net flows in the 1980–2015 period. High-income countries and countries that have fewer than 20 observations for GDP are excluded from the analysis.[16] The analysis also uses nominal GDP (in local currency units [LCUs] or in U.S. dollars) from the World Bank's World Development Indicators for the construction of relevant ratios.[17]

To examine the behavior of capital flows around fiscal crises, the analysis uses the database of fiscal crises prepared by Gerling et al. (2017). The authors define fiscal crises as periods of extreme funding difficulties that result in a disruption in the normal debt dynamics and in the government taking exceptional measures. The authors distinguish between four main types of events triggering a fiscal crisis: credit events, exceptionally large official financing, implicit domestic public debt default, and loss of market confidence.

A credit event occurs when the government reduces the present value of its debt owed to official or other creditors (de facto, mainly defaults on external debt). Exceptionally large official financing refers to any year in which a country facing a crisis engages with the IMF in a financial arrangement with access above 100 percent of quota and fiscal adjustment as a program objective. Financial support from the IMF is an alternative to outright default, usually for countries that are unable to pay their external liabilities and have associated balance of payment problems. Implicit domestic public debt default happens when countries default implicitly on domestic debt or their payment obligations by running domestic payment arrears or printing money to finance their budget (high inflation). The inflation rate threshold above which a fiscal crisis is identified is 35 percent per year for advanced markets (the average haircut of their public debt) and small developing states. The threshold for emerging markets and low-income developing countries is 100 percent. Finally, a loss of market confidence crisis occurs in years of extreme market pressures, when either the country loses market access[18] or the price of market access surpasses a threshold of 1,000 basis points for the spreads, which is widely seen as market participants' psychological barrier (Gerling et al. 2017).[19]

A first step in the analysis explores the dynamics of net flows scaled by GDP in different income groups. We split the sample into decades (1980s, 1990s, 2000s, 2010s), and compute averages and standard deviations per

[13] Net flows from RDBs include concessional and non-concessional financial flows. Concessional flows cover disbursements made through concessional lending facilities, and non-concessional financial flows cover the remaining flows. RDBs include the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, and Inter-American Development Bank.

[14] Net flows from the World Bank are the sum of net flows from the International Bank for Reconstruction and Development, the founding and largest member of the World Bank Group, and the International Development Association, the concessional loan window of the World Bank Group.

[15] Public and publicly guaranteed debt from private creditors includes bonds that are either publicly issued or privately placed; commercial bank loans from private banks and other private financial institutions; and other private credits from manufacturers, exporters, and other suppliers of goods, as well as bank credits covered by a guarantee of an export credit agency.

[16] They are excluded because the analysis will later calculate the trend of GDP, and it is important not to base the calculations on too few observations. Countries with fewer than 20 observations are Aruba, Afghanistan, Faeroe Islands, Iraq, Myanmar, Montenegro, Somalia, Serbia, São Tomé and Principe, and South Africa.

[17] The countries in the sample are listed in Table A1.

[18] The authors define loss of market access as the inability to "tap international capital markets on a sustained basis through the contracting of loans and/or issuance of securities across a range of maturities" (Gerling et al. 2017, p. 11).

[19] See Appendix I for a more thorough description of the data.

country for each subperiod. We then take the median average and median standard deviation of net flows per decade for each set of countries.

To scale the variables using an exogenous metric, we scale net flows by trend GDP rather than by GDP only, as in Broner et al. (2013).[20] To avoid a bias from outliers, observations in the top and bottom 1 percent of the net flow/trend GDP variables are also dropped.

As seen in Table 1, net flows from MDBs tend to be larger than net flows from the private sector, with the former being 0.94 percent of trend GDP, and the latter 0.44 percent. Moreover, net flows from MDBs are more stable, as shown by a median standard deviation of 0.92 of trend GDP compared to 1.30 for private creditors.

The aggregate results hide some heterogeneity across income groups: as the income level increases, net flows from MDBs decrease, going from 2.27 percent of trend GDP in the median low-income country to 0.48 in the median upper-middle-income country, but become more stable, with the standard deviation decreasing from 1.9 percent of trend GDP to 0.69 percent. This is true both for the MDBs altogether and for each MDB taken individually. The opposite occurs for net flows from private creditors, which increase by income level while becoming more volatile. It is also interesting to note that even in upper-middle-income countries, which capture most of the private flows, MDBs are an important source of external finance, reaching almost 90 percent of private median average net flows.

All net flows from MDBs experienced a decline over time. Only in upper-middle-income countries was there a recent small recovery, from 0.19 percent of trend GDP in the 2000s to 0.40 percent in 2010s. The pattern is similar for RDBs, while the retrenchment in net flows from the World Bank was constant through the decades. Net flows from private lenders, on the other hand decreased sharply in the 1990s and 2000s, and finally reverted the trend in 2010, even though they did not attain the levels they had in the 1980s.

In the analysis of the relationship between fiscal crises and international capital flows, we will also control for what the literature has recognized as typical push and pull factors. Push factors are global factors that are common to all countries, while pull factors are country-specific features that influence capital flows. Among push factors, we include the US VIX, which we standardize, as a proxy for global risk aversion, which might influence capital flows towards developing and emerging countries.[21] We also use the 10-year US government bond yield (yearly average), whose dynamics can be correlated with recessions in the US and therefore with increases in capitals towards emerging markets.[22] Finally, we add the global commodity prices of copper and an index for the price of crude oil (petroleum), which generally exhibit a positive correlation with capital inflows of commodity exporters.

Among pull factors, we include trade openness (measured as the sum of imports and exports as a percentage of GDP), financial development (domestic credit to the private sector as a percentage of GDP), whether the

[20] Trend GDP is calculated by applying the Hodrick-Prescott filter. Given that the data are yearly, a smoothing parameter of 100 to the series of nominal GDP in U.S. dollars is used. Nominal GDP is obtained from the World Bank's World Development Indicators.

[21] The VIX is the Chicago Board Options Exchange (CBOE) Volatility Index, which measures the market expectation of near-term volatility conveyed by stock index option prices, and can be found in FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/VIXCLS.

[22] We also retrieve the 10-year US Treasury yield from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/VIXCLS.

country has a fixed exchange rate regime, the (de jure) financial openness Chinn & Ito (2008) index, real GDP growth and public debt (as a percentage of GDP), as all these factors could be determinants of capital flows.[23]

The remainder of this paper further explores the relationship between net flows from private creditors and MDBs. The next section outlines the empirical strategy used to more formally assess the relationship between the two, and their behavior during and around fiscal crises.

[23] Trade openness, financial development, real GDP growth and public debt are all calculated from the data provided in the World Development Indicators. The information on the exchange rate regime comes from Ilzetzki, Reinhart and Rogoff (2019). We simplify the regime classification by including a dummy equal to one when there is a fixed exchange rate regime (when the currency is de facto pegged or has a crawling peg).

Table 1. Trends of Net Flows to the Government by Income Group and Decade

	All Countries		Low-income		Lower-middle-income		Upper-middle-income	
Net Flows MDB	**Median Average**	**Median Std Dev**	**Median Average**	**Median Std Dev**	**Median Average**	**Median Std Dev**	**Median Average**	**Median Std Dev**
All	**0.94**	**0.92**	**2.27**	**1.90**	**1.20**	**0.91**	**0.48**	**0.69**
1980s	1.65	0.81	2.83	1.31	1.68	0.86	0.94	0.41
1990s	1.15	0.82	2.79	1.70	1.46	0.77	0.54	0.57
2000s	0.53	0.58	1.74	0.73	0.71	0.48	0.19	0.57
2010s	0.51	0.35	1.03	0.50	0.57	0.30	0.40	0.32
Net Flows RDB								
All	**0.33**	**0.37**	**0.57**	**0.61**	**0.31**	**0.36**	**0.16**	**0.29**
1980s	0.49	0.31	0.84	0.56	0.44	0.32	0.38	0.24
1990s	0.34	0.34	0.77	0.64	0.56	0.35	0.21	0.18
2000s	0.15	0.21	0.35	0.25	0.27	0.21	0.08	0.16
2010s	0.16	0.13	0.19	0.18	0.24	0.12	0.13	0.20
Net Flows WB								
All	**0.52**	**0.54**	**1.30**	**1.09**	**0.61**	**0.54**	**0.20**	**0.42**
1980s	0.71	0.40	1.73	0.72	0.79	0.42	0.28	0.32
1990s	0.63	0.46	1.72	0.93	0.62	0.46	0.19	0.25
2000s	0.25	0.26	1.11	0.51	0.28	0.26	0.04	0.18
2010s	0.16	0.18	0.50	0.28	0.22	0.12	0.07	0.12
Net Flows Private								
All	**0.44**	**1.30**	**0.06**	**0.88**	**0.45**	**1.32**	**0.54**	**1.46**
1980s	0.68	1.28	0.19	0.57	0.91	1.37	0.93	1.45
1990s	(0.01)	0.63	(0.05)	0.03	(0.04)	0.56	0.22	0.92
2000s	0.04	0.65	0.02	0.08	(0.02)	0.49	0.35	1.01
2010s	0.58	0.76	-	0.24	1.03	0.98	0.58	0.94

Source: Authors' calculations.

Notes: This table presents the summary statistics of net flows scaled by trend GDP. The median value of country averages and of country standard deviations of net flows are reported for all the countries in the sample, as well as separately for low-, lower-middle- and upper-middle-income countries, as well as for all countries together. The sample period is from 1980 to 2015. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

3. Empirical Strategy

The examination of the relationship between external net flows to the government begins with a look at co-movements between private and MDB net flows. To assess the presence of co-movements between private and net flows from MDBs, the following models are estimated for each subperiod (1980s, 1990s, 2000s, 2010s), for each country grouping, and for the whole sample, as in Broner et al. (2013):

$$MDB_{i,t} = \alpha_i + \gamma_i t + \beta Private_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$Private_{i,t} = \alpha_i + \gamma_i t + \beta MDB_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where $MDB_{i,t}$ ($Private_{i,t}$) are net flows to the public sector from MDBs (private creditors) in country i in year t, scaled by trend GDP. The analysis includes country fixed effects a_i and country trends $\gamma_i t$ in order to consider country-specific differences and country changes over time. To control for within-country error correlation, standard errors $\varepsilon_{i,t}$ are clustered at the country level. β is our primary parameter of interest.

The analysis then turns to assessing the dynamics of net flows from different lenders in fiscal crises by estimating the following equation:

$$y_{i,t} = \alpha_i + \gamma_i t + \beta fisc\_cr_{h,i,t} + \varepsilon_{i,t}, \quad (3)$$

where $y_{i,t}$ are the different types of net flows scaled by trend GDP; $fisc\_cr_{h,i,t}$ are dummies for the years of fiscal crises where the identification criterion h (credit events, exceptionally large official financing, implicit domestic public debt default, and loss of market confidence) is met in country i and year t, a_i are country fixed effects, and $\gamma_i t$ are country trends; $\varepsilon_{i,t}$ is the error term, clustered at the country level.

As Gerling et al. (2017) note, at least two identification criteria for fiscal crises overlaps more than one quarter of the time in their dataset, with the most frequent combination being credit events and IMF programs. To isolate better the behavior of net flows during fiscal crises when an IMF program is in place, a key element to understand the complementarity or not of IFIs, we estimate the following model:

$$y_{i,t} = \alpha_i + \gamma_i t + \beta_1 fisc_{cr}\ with\ IMF_{h,i,t} + \beta_2 fisc_{cr}\ without\ IMF_{h,i,t} + \varepsilon_{i,t}, \quad (4)$$

where $fisc\_cr\ with\ IMF_{h,i,t}$ is a dummy signaling a fiscal crisis of any type accompanied by a high-access IMF program, whereas $fisc\_cr\ without\ IMF_{h,i,t}$ signals a fiscal crisis of any type with no high-access IMF program in place. The purpose of estimating this model is to isolate sovereign lending dynamics in the presence of the IMF while also controlling for other fiscal crises.

As a robustness check, we will re-estimate equations (4) and (5) including push and pull factors instead of country-trends, but leaving country fixed effects.

Among push factors, we include the US VIX, which we standardize, as a proxy for global risk aversion, as it might influence capital flows towards developing and emerging countries. Furthermore, we control for the real 10-year yield of US Treasury bonds as a proxy of global liquidity. We also add the global commodity prices of copper and an index for the price of petroleum, which generally exhibit a positive correlation with capital inflows of commodity exporters. Among pull factors, we include trade openness (measured as the sum of imports and exports as a percentage of GDP), financial development (domestic credit to the private sector as a percentage of GDP), whether the country has a fixed exchange rate regime, the (de jure) financial openness

Chinn & Ito (2008) index, real GDP growth and public debt (as a percentage of GDP), as all these factors could be determinants of capital flows.

To shed further light on the dynamics of net flows in fiscal crises, we conduct an event analysis in 5-year windows around the year in which a fiscal crisis criterion is triggered. To study sovereign lending two years preceding and following the triggering of a fiscal crisis criterion, we estimate:

$$y_{i,t} = \alpha_i + \gamma_i t + \sum_{k=-2}^{2} \beta_k start\_fisc\_cr_{h,i,t+k} + \varepsilon_{i,t} \quad (5)$$

where $start\_fisc\_cr_{h,i,t}$ signals only the year in which the identification criterion for fiscal crisis h is triggered in country i at time t.

In general, reverse causality could become an estimation problem as changes in overall debt inflows could trigger a fiscal crisis (as is the case in the loss of market confidence crises). However, we do not believe that this is the case for MDBs' sovereign flows for at least 2 reasons: First, by institutional design it is hard to envision MDBs setting a disbursement schedule that exogenously leads a country into a crisis; second, MDBs' business models enable them to isolate, at least partially, the effects of international financial conditions on their lending volumes. However, we do expect that fiscal crises affect sovereign debt inflows as countries would demand more resources from MDBs and also, as MDBs internal policies and safeguards may curb additional demand pressures.

Finally, to mitigate any remaining concern of endogeneity, we re-estimate equations (4)-(5) through the two-step panel data approach suggested by Arellano and Bover (1995) and Blundell and Bond (2000). Specifically, we introduce two lags of the dependent variables in the equations and estimate them through a system GMM where lagged levels are used as instruments for net flows in the difference equations and lag differences in the level equation. We employ Windmeijer's (2005) finite sample correction to report standard errors.[24] The next section presents the empirical results.

4. Results

4.1 Net Flows from Multilateral Development Banks and Private Creditors

Table 2 presents the correlations between net flows from MDBs and private creditors (equations 1-2). These net flows were positively associated in lower-middle income countries in the 1980s. Despite some differences in magnitude by income group, overall, their relationship turned negative in the 1990s, particularly in upper-middle income countries. In the most recent decades, however, there is no significant sign of co-movement between the two. The lack of correlation between private flows and MDB flows might indicate that MDB flows are being essentially directed to countries that have limited access to capital markets. Except for the 1990s, there seems to be no evidence of complementarities nor substitutability between the different types of lending.

[24] Two-step GMM with the finite-sample correction derived by Windmeijer (2005) makes two-step robust estimations more efficient than one-step robust, especially for system GMM.

Table 2. Correlations of Net Flows to the Government from Multilateral Development Banks and Private Creditors

	Low-income				Lower-middle-income				Upper-middle-income				All			
	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s
MDB = β PRIV (1)	0.056	-0.335	-0.007	0.013	0.105**	-0.023	0.029	-0.025	-0.022	-0.033**	0.008	0.032	0.041	-0.040**	0.011	0.011
se	(0.050)	(0.196)	(0.185)	(0.073)	(0.047)	(0.042)	(0.098)	(0.064)	(0.039)	(0.015)	(0.031)	(0.049)	(0.030)	(0.020)	(0.030)	(0.036)
PRIV = β MDB (2)	0.069	-0.036	-0.002	0.071	0.273**	-0.018	0.034	-0.096	-0.068	-0.138*	0.046	0.147	0.094	-0.046*	0.025	0.048
se	(0.053)	(0.037)	(0.062)	(0.413)	(0.117)	(0.034)	(0.119)	(0.240)	(0.109)	(0.081)	(0.166)	(0.226)	(0.071)	(0.025)	(0.069)	(0.158)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	23	22	21	19	31	41	38	36	30	40	41	41	84	103	100	96
No. of observations	185	162	151	86	258	323	326	202	258	335	371	228	701	820	848	516
***R*-squared (1)**	0.426	0.349	0.371	0.409	0.406	0.321	0.413	0.335	0.318	0.373	0.269	0.326	0.381	0.339	0.356	0.337
***R*-squared (2)**	0.403	0.190	0.094	0.352	0.430	0.269	0.296	0.273	0.368	0.353	0.287	0.236	0.394	0.323	0.280	0.262

Source: Authors' calculations.

Note: The table shows the correlations between net flows to the government from MDBs and private creditors for upper-middle-income, lower-middle-income, and lower-income countries. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development bank; PRIV: private creditors.

The question arises as to whether the negative correlations observed in the 1990s might be related to the higher frequency of fiscal crises during that decade. Indeed, when the number of years affected by fiscal crises is considered in the sample, a prevalence of fiscal crises during the 1990s is identified. Hence, the analysis now turns to the dynamics of net flows during fiscal crises.

4.2. Net Flows and Fiscal Crises

To analyze how net flows behave during crises, we compare their behavior during crisis and non-crisis years, by estimating equation (3). When fiscal crises are considered, regardless of their type (credit events, exceptionally large official financing, implicit domestic public debt default, and loss of market confidence), it can be seen that during times of crises there is a retrenchment in private creditors' net flows, while MDBs, RDBs and the World Bank tend to increase net flows to the public sector (Table 3).

Table 3. Net Capital Flows Dynamics in Fiscal Crises

	MDB	RDB	WB	Private
Crisis (β)	0.1472**	0.0545**	0.1026***	-0.3079***
se	(0.063)	(0.026)	(0.037)	(0.074)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106
Observations	3,411	2,967	3,323	2,944
R-squared	0.251	0.233	0.244	0.084

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crises. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

However not all fiscal crises are created equal and the reaction of international creditors may be different for different fiscal crises types. When the government reduces the present value of its debt owed to official or other creditors, that is, in credit events, countries experience a significant decrease of net flows from the private sector, but the MDBs do not change their lending patterns compared to non-credit crisis years (Panel A, Table 4).

Panel B shows results for events of exceptionally large official financing, that is, when the IMF gives large-scale supported programs to give countries time to rectify economic policies and restore growth. These programs constitute exceptional financing, typically through non-concessional loans, and are justified to avoid the country's near-default (Baldacci et al. 2011). The estimations reported in panel B suggest that when the IMF intervenes through a high-access program, the MDBs join efforts to provide financing to governments, which suggests coordination among the institutions. The private sector instead does not, but it does not leave the country either.

The third type of crisis examined in panel C is implicit public domestic defaults. Implicit defaults signal that the government either resorted to seigniorage to finance the fiscal deficit and/or accumulated domestic arrears. When countries default implicitly, MDBs altogether significantly decrease their lending. This seems to suggest that multilateral lending does not incentivize fiscal mismanagement in recipient countries, if anything, it does not reward it. However, to examine better this aspect we need to test whether multilateral lending was increasing before the fiscal crisis occurred in the country, which we will do in the next subsection.

Table 4. Net Flows Dynamics in Fiscal Crises, by Type

	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	**RDB**	**WB**	**Private**	**MDB**	**RDB**	**WB**	**Private**
Crisis (β)	0.0581	0.0303	0.0599	-0.2010***	0.4351***	0.0818**	0.2446***	0.0499
se	(0.068)	(0.029)	(0.043)	(0.075)	(0.095)	(0.034)	(0.064)	(0.106)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106	108	99	108	106
Observations	3,411	2,967	3,323	2,944	3,411	2,967	3,323	2,944
R-squared	0.249	0.232	0.242	0.079	0.263	0.234	0.254	0.076

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	**RDB**	**WB**	**Private**	**MDB**	**RDB**	**WB**	**Private**
Crisis (β)	-0.6704***	-0.1469	-0.4719***	-0.1737	0.0662	0.0232	-0.0066	-0.9266***
se	(0.204)	(0.093)	(0.130)	(0.222)	(0.085)	(0.031)	(0.052)	(0.175)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106	70	68	70	69
Observations	3,409	2,965	3,321	2,942	1,387	1,268	1,357	1,310
R-squared	0.256	0.233	0.250	0.077	0.238	0.255	0.286	0.156

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis years in which one of the following triggering criteria is identified: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Finally, as expected, when a country that regularly access international markets experiences a loss of market confidence, that is, it faces significant financing constraints or exhibits high credit risk spreads for long periods, private net flows decrease. Under these circumstances, as shown in panel D, MDBs do not change their lending to the country affected.

In sum, at times of fiscal crises, the direction of net flows changes depending on the creditor, with private investors contracting their lending in years of credit crises or loss of market confidence. Moreover, net flows from MDBs to finance governments in fiscal crises, only increase if it is a joint effort with the IMF.

As anticipated in Section 2, fiscal crises of different natures might be experienced by countries simultaneously. A country, for example, might be enduring a loss of market confidence crisis and run domestic payment arrears in the same year, or be subject to a credit crisis and therefore request financial support from the IMF. To shed more light on the coordination between MDBs and the IMF within the global financial architecture, in the subsequent exercise we separate fiscal crises where the country is engaged in a high-access IMF program from the fiscal crises where the country does not seek such help from the IMF.

Table 5 reports the results from estimating equation (4). Net flows from private creditors decline in years of fiscal crises, irrespective of the presence of the IMF. Exceptional financing from the IMF is instead strongly correlated with MDB lending. MDBs do not change significantly their behavior at times of fiscal crises, unless the IMF is providing large-scale financial support to a country: in this case MDBs also increase their support, which we interpret as further suggestive indication of synchronization among IFIs.

Table 5. Coordination with IMF

	MDB	RDB	WB	Private
Fiscal Crisis with IMF (β_1)	0.4698***	0.1020**	0.2210***	-0.3381***
	(0.112)	(0.041)	(0.072)	(0.128)
Fiscal Crisis w/o IMF (β_2)	-0.0457	0.0190	-0.0177	-0.4168***
	(0.068)	(0.029)	(0.043)	(0.089)
Country FE	Yes	Yes	Yes	Yes
Country Trends	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106
Observations	3,411	2,967	3,323	2,944
R-squared	0.262	0.234	0.249	0.090

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Coordination with the IMF might differ across regions. To reveal possible regional heterogeneity, we next examine whether the coordination between MDBs and the IMF varies according to the region of the borrowing country. To do so, we add interactions between the dummy signaling participation in a high-access IMF program and regional dummies. The results are presented in Table 6.

The omitted region in the regressions is the most numerous in our sample, Sub-Saharan Africa. Hence, β_1 captures the net flows behavior during fiscal crises with a high-access IMF program in Sub-Saharan Africa (SSA). The coefficients of the interactions exhibit different signs and the total effects on net flows in regions (each given by the sum of β_1 and the coefficient of the respective interaction) are reported at the bottom of the

table. Even though the interactions themselves are not always significantly different from zero, the estimates show that MDBs significantly increase their lending when a borrowing country in Europe and Central Asia (ECA), Latin America and Caribbean (LAC) or Middle East and North Africa (MENA) has an active arrangement with the IMF. While these results are confirmed for the World Bank net flows, Regional Development Banks seem to coordinate in LAC only.[25]

Table 6. IMF Coordination, Heterogeneity by Region

	MDB	RDB	WB	Private
Crisis with IMF (β_1)	0.2900	0.0783	0.0920	-0.2371
	(0.177)	(0.064)	(0.130)	(0.213)
EAP # Crisis with IMF (β_{1_EAP})	-0.3720	-0.1001	-0.1564	-0.0589
	(0.260)	(0.118)	(0.168)	(0.414)
ECA # Crisis with IMF (β_{1_ECA})	0.8568***	0.1063	0.5711***	-0.1958
	(0.315)	(0.153)	(0.197)	(0.390)
LAC # Crisis with IMF (β_{1_LAC})	0.3493	0.0934	0.2065	-0.0429
	(0.292)	(0.095)	(0.199)	(0.321)
MENA # Crisis with IMF (β_{1_MENA})	0.4053	-0.0655	0.2995*	-0.5527*
	(0.345)	(0.212)	(0.173)	(0.306)
SA # Crisis with IMF (β_{1_SA})	-0.3744	0.0434	-0.1339	-0.2872
	(0.368)	(0.171)	(0.189)	(0.225)
Crisis w/o IMF (β_2)	-0.0432	0.0196	-0.0171	-0.4134***
	(0.068)	(0.029)	(0.043)	(0.088)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106
Observations	3,411	2,967	3,323	2,944
R-squared	0.269	0.235	0.256	0.091
Effects in regions:				
EAP ($\beta_1 + \beta_{1\_EAP}$)	-0.082	-0.0217	-0.0644	-0.296
ECA ($\beta_1 + \beta_{1\_ECA}$)	1.147***	0.185	0.663***	-0.433
LAC ($\beta_1 + \beta_{1\_LAC}$)	0.639***	0.172**	0.298*	-0.28
MENA ($\beta_1 + \beta_{1\_MENA}$)	0.695**	0.0129	0.391***	-0.79***
SA ($\beta_1 + \beta_{1\_SA}$)	-0.0844	0.122	-0.0419	-0.524***

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program, by region. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. The region reference category is SSA: Sub-Saharan Africa. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa.

4.3. Dynamics

So far, we discussed the net flows' behavior during fiscal crises; to further explore the dynamics, Table 7 and Figure 1 depict their behavior around the fiscal crises' onset. This event study approach mostly reinforces the results found above.

[25] The paper presents regional differences on its main finding: synchronization between MDBs and IMF. Regional heterogeneity on other results was also explored, but there was no further evidence of large regional differences. Results are available upon request.

Table 7, Panel B shows that at times when a country is engaged in a program with the IMF, MDBs increase their lending, not only in the beginning of the crisis, but in subsequent years too. It is also interesting to see that MDBs boost their support exactly when the IMF starts a program and not before, signaling strong coordination. During the 5-year window around the beginning of a high-access IMF program, private creditors do not increase their net flows, but they do not retrench them either.

Results are also confirmed in implicit public domestic defaults (Panel C), where we observe a retrenchment of net flows from MDBs in the crisis year, as well as in the immediate aftermath, while private creditors do not change their lending. Not only multilateral flows retrench, but they do not increase before the implicit public domestic default occurs, which corroborates the hypothesis that multilateral lending does not push countries into fiscal mismanagement. Quite the opposite, as WB lending was even decreasing before the crisis exploded. The behavior of different lenders in these two types of fiscal crises, where the contrast is more striking, is depicted in Figure 1.

Furthermore, even if in credit crisis years MDBs do not show a different behavior from non-crisis years (Table 4), at least at the onset of a credit crisis their net flows expand (Panel A). Private net flows decline instead, but this decrease is not significantly different from zero. Finally, while net flows from private creditors retrench in years of loss of market confidence (Table 4), this decrease is not significantly different from zero when the crisis bursts (Panel D).

Regional differences found in the coordination with the IMF are also mostly confirmed by the event analyses (Table 8): MDBs altogether increase their support when a country in ECA or LAC has a program with the IMF. The number of countries in MENA and SA is too small to draw any conclusion.

Table 7. Dynamics of NFLs around Fiscal Crises

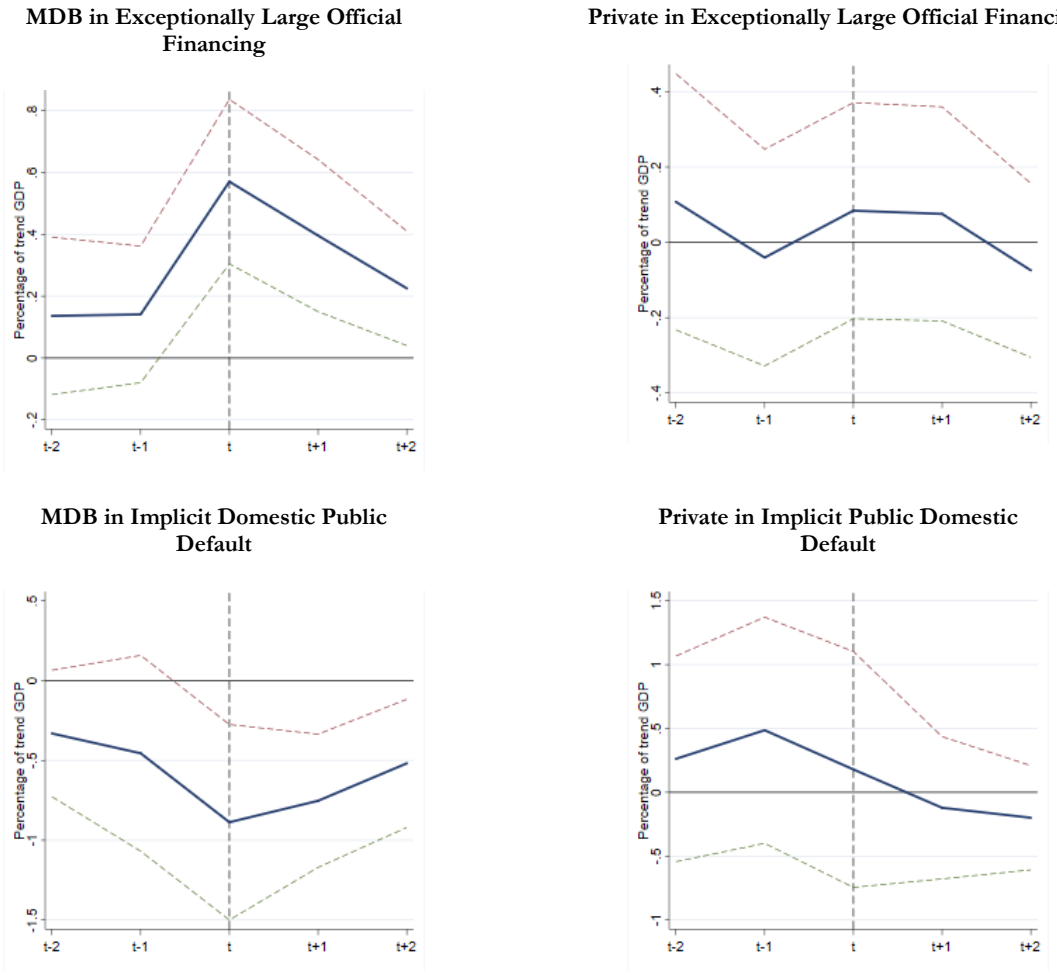
	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	0.1925*	0.0793*	0.0590	-0.0726	0.1363	0.0771	-0.0115	0.1076
	(0.099)	(0.044)	(0.071)	(0.098)	(0.153)	(0.056)	(0.091)	(0.205)
Year t-1	0.1244	-0.0171	0.0815	-0.0930	0.1410	0.0427	-0.0539	-0.0404
	(0.084)	(0.050)	(0.061)	(0.109)	(0.133)	(0.051)	(0.086)	(0.173)
Crisis Year	0.1659*	0.0319	0.0705	-0.0523	0.5705***	0.1739***	0.1526	0.0841
	(0.098)	(0.049)	(0.073)	(0.110)	(0.160)	(0.063)	(0.096)	(0.173)
Year t+1	0.0483	-0.0136	0.0472	-0.0116	0.3959***	0.1028*	0.2238**	0.0755
	(0.086)	(0.045)	(0.057)	(0.099)	(0.148)	(0.056)	(0.096)	(0.171)
Year t+2	0.0060	0.0035	-0.0106	0.0437	0.2253**	0.0408	0.1170	-0.0743
	(0.080)	(0.040)	(0.063)	(0.101)	(0.112)	(0.048)	(0.075)	(0.139)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	108	98	108	106
Observations	2,990	2,615	2,934	2,587	2,990	2,615	2,934	2,587
R-squared	0.285	0.244	0.268	0.086	0.292	0.247	0.272	0.086

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	-0.3313	-0.1082	-0.2367	0.2619	-0.1112	0.0304	-0.0853	0.5758*
	(0.239)	(0.161)	(0.202)	(0.485)	(0.123)	(0.069)	(0.063)	(0.294)
Year t-1	-0.4554	-0.0610	-0.6206***	0.4862	-0.0487	0.0290	-0.0346	-0.0612
	(0.370)	(0.159)	(0.194)	(0.534)	(0.131)	(0.086)	(0.058)	(0.281)
Crisis Year	-0.8875**	-0.2542	-0.6997***	0.1791	-0.0737	0.0356	-0.0506	-0.3794
	(0.369)	(0.172)	(0.210)	(0.557)	(0.151)	(0.077)	(0.064)	(0.270)
Year t+1	-0.7530***	-0.1392	-0.7907***	-0.1210	0.2270	0.0313	0.0299	0.0137
	(0.252)	(0.146)	(0.221)	(0.336)	(0.212)	(0.062)	(0.083)	(0.349)
Year t+2	-0.5184**	-0.1859*	-0.4431**	-0.1991	-0.0496	-0.0029	-0.0076	-0.4014**
	(0.242)	(0.111)	(0.200)	(0.246)	(0.125)	(0.041)	(0.059)	(0.174)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	60	57	60	59
Observations	2,988	2,613	2,932	2,585	1,041	946	1,026	991
R-squared	0.290	0.245	0.283	0.086	0.242	0.253	0.281	0.169

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on 5-year windows around the triggering of a fiscal crisis criterion: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Figure 1. Dynamics of net flows in selected crises



Source: Authors' calculations.
Note: Net flows around the triggering of a fiscal crisis criterion (either exceptionally large official financing or implicit domestic public default). This figure shows the evolution of capital flows around crises by plotting the behavior of net flows by MDBs or private creditors in 5-year windows around crisis periods. The figure depicts the estimated coefficients reported in Panels B and C of Table 5,with confidence intervals at 10% significance level. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. MDB: multilateral development banks.

Table 8. Dynamics of Coordination with the IMF

Panel A. EAP

	MDB	RDB	WB	Private
Year t-2	-0.3322*	-0.1387	-0.2155**	-0.6416
	(0.166)	(0.100)	(0.073)	(1.126)
Year t-1	-0.5599**	-0.2557**	-0.2777**	-0.6518
	(0.234)	(0.117)	(0.107)	(0.722)
Crisis with IMF Year	-0.0780	-0.0073	-0.0234	-0.4081
	(0.183)	(0.092)	(0.115)	(0.533)
Year t+1	-0.2130	-0.1280	-0.0629	0.0704
	(0.425)	(0.237)	(0.159)	(0.697)
Year t+2	0.1818	0.0915	0.0976	-0.4894
	(0.214)	(0.075)	(0.198)	(0.404)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	15	15	15	15
Observations	426	415	422	318
R-squared	0.305	0.287	0.249	0.112

Panel B. ECA

	MDB	RDB	WB	Private
Year t-2	-0.1743	0.0677	-0.2519*	-0.0695
	(0.165)	(0.062)	(0.129)	(0.571)
Year t-1	0.2342	0.2564***	-0.0748	-0.1634
	(0.253)	(0.086)	(0.078)	(0.338)
Crisis with IMF Year	0.8710**	0.4193*	0.3535***	0.1684
	(0.364)	(0.208)	(0.109)	(0.520)
Year t+1	0.9233***	0.1456	0.5834***	0.3463
	(0.303)	(0.115)	(0.103)	(0.504)
Year t+2	0.7846**	0.1827*	0.2346***	0.1281
	(0.291)	(0.103)	(0.078)	(0.287)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	17	17	17	17
Observations	338	281	331	294
R-squared	0.539	0.536	0.630	0.251

Panel C. LAC

	MDB	RDB	WB	Private
Year t-2	0.3336	0.1415	-0.1151	0.3301
	(0.548)	(0.201)	(0.179)	(0.597)
Year t-1	0.2533	0.1181	-0.0829	0.1201
	(0.185)	(0.100)	(0.137)	(0.484)
Crisis with IMF Year	1.1955**	0.2285**	0.4461*	0.1906
	(0.433)	(0.096)	(0.231)	(0.459)
Year t+1	0.6155***	0.2428	0.1954	-0.2005
	(0.205)	(0.156)	(0.131)	(0.322)
Year t+2	0.4168***	0.1948**	0.1569*	0.0125
	(0.142)	(0.079)	(0.082)	(0.418)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	24	20	24	23
Observations	733	583	702	689
R-squared	0.135	0.175	0.157	0.037

Panel D. MENA

	MDB	RDB	WB	Private
Year t-2	0.2932	0.1716	0.2884	-0.5627**
	(0.297)	(0.130)	(0.210)	(0.221)
Year t-1	0.0279	0.0611	0.0663	-0.4233
	(0.431)	(0.295)	(0.237)	(0.566)
Crisis with IMF Year	-0.1478	-0.1124	0.0251	0.0598
	(0.383)	(0.190)	(0.150)	(0.380)
Year t+1	0.4845	0.0894	0.3079	1.5116
	(0.520)	(0.210)	(0.216)	(2.052)
Year t+2	0.7107	0.1018	0.3327	-0.6886
	(0.525)	(0.268)	(0.195)	(1.150)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	10	5	10	10
Observations	270	145	268	248
R-squared	0.121	0.253	0.201	0.096

Panel E. SA

	MDB	RDB	WB	Private
Year t-2	0.1343	0.0130	-0.0749	0.1562
	(0.119)	(0.067)	(0.053)	(0.190)
Year t-1	0.1775	0.1417	-0.0051	0.0492
	(0.123)	(0.089)	(0.095)	(0.358)
Crisis with IMF Year	0.4202	0.3123**	0.1968	-0.2133
	(0.300)	(0.103)	(0.200)	(0.130)
Year t+1	0.1951**	0.2344*	0.1003	-0.1126
	(0.069)	(0.114)	(0.075)	(0.158)
Year t+2	-0.2003	-0.0648	-0.0985	0.0245
	(0.235)	(0.120)	(0.147)	(0.128)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	6	6	6	6
Observations	190	184	190	190
R-squared	0.497	0.384	0.552	0.067

Panel F. SSA

	MDB	RDB	WB	Private
Year t-2	0.2162	0.0965	0.0888	0.3405
	(0.258)	(0.089)	(0.175)	(0.253)
Year t-1	0.1997	-0.0211	-0.0176	0.0913
	(0.280)	(0.088)	(0.186)	(0.246)
Crisis with IMF Year	0.4297	0.1143	0.0036	0.1665
	(0.259)	(0.102)	(0.182)	(0.271)
Year t+1	0.2575	0.0691	0.1633	0.0052
	(0.275)	(0.079)	(0.199)	(0.227)
Year t+2	-0.0337	-0.0636	0.0717	-0.0473
	(0.193)	(0.080)	(0.160)	(0.171)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	36	35	36	35
Observations	1,033	1,007	1,021	848
R-squared	0.305	0.209	0.231	0.086

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on 5-year windows around the triggering of a fiscal crisis accompanied by a high-access IMF program in different regions. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa; SSA: Sub-Saharan Africa.

5. Robustness Checks

We perform a robustness check where net flows are not only scaled by trend GDP, but also demeaned, and standardized by country standard deviations. We do so to consider that some countries present net flows that are more volatile than others, particularly if they represent financial centers. If that is the case, not standardizing could make the latter the most relevant in the estimations. Reassuringly, results go in the same direction.

As can be seen in Table 9, MDB and private net flows are positively correlated in the 1980s, but turn to negative in the 1990s, when fiscal crises are most frequent.

Table 9. Robustness Check: Correlations of Net Flows to the Government from Multilateral Development Banks and Private Creditors

	Low-income				Lower-middle-income				Upper-middle-income				All			
	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s
MDB = β PRIV (1)	0.020	-0.327	0.024	-0.021	0.114*	-0.044	0.044	-0.063	0.006	-0.082*	0.029	0.004	0.049*	-0.076*	0.032	-0.028
se	(0.042)	(0.198)	(0.108)	(0.039)	(0.049)	(0.045)	(0.105)	(0.078)	(0.035)	(0.043)	(0.041)	(0.078)	(0.026)	(0.032)	(0.039)	(0.044)
PRIV = β MDB (2)	0.053	-0.063	0.014	-0.167	0.218*	-0.038	0.054	-0.158	0.010	-0.115*	0.055	0.006	0.099*	-0.068*	0.046	-0.064
se	(0.103)	(0.054)	(0.058)	(0.330)	(0.067)	(0.041)	(0.132)	(0.176)	(0.063)	(0.064)	(0.075)	(0.124)	(0.047)	(0.031)	(0.053)	(0.098)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	23	22	21	19	31	41	38	36	30	40	41	41	84	103	100	96
No. of observations	185	162	151	86	258	323	326	202	258	335	371	228	701	820	848	516
***R*-squared (3)**	0.419	0.325	0.402	0.462	0.404	0.357	0.384	0.265	0.360	0.419	0.163	0.256	0.388	0.370	0.299	0.275
***R*-squared (4)**	0.333	0.219	0.069	0.366	0.440	0.295	0.321	0.280	0.350	0.318	0.248	0.337	0.378	0.303	0.254	0.321

Source: Authors' calculations.

Note: The table shows the correlations between net flows to the government from MDBs and private creditors for upper-middle-income, lower-middle-income, and lower-income countries. All the regressions include country fixed effects and country-trends. Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development bank; PRIV: private creditors.

Table 10 confirms the retrenchment of private net flows during credit and loss of market confidence crises (Panel A, Panel D). In implicit domestic public defaults private creditors do not change behavior, but MDB net flows decline significantly (Panel C). The coordination between IMF and MDBs and its regional heterogeneity are corroborated (Table 10, Panel B; Table 11-Table **12**), also by the event analysis (Table 13-Table **14**).

As a further robustness check, we use a different Hodrick-Prescott parameter to filter the GDP series and scale net flows by trend GDP. Specifically, we use the HP parameter value of 6.25 suggested by Ravn and Uhlig (2002).[26] Results are mostly confirmed (Tables A2-A7).[27]

[26] The authors suggest that the smoothing parameter λ should be adjusted according to the fourth power of a change in the frequency of observations. For annual observations, this suggests setting λ=6.25, different from the value λ=100 typical of the literature and adopted by us in the paper.

[27] The only exception is given by the correlations between private and MDB net flows in the 1880s and 1990s. Despite the estimates going in the same direction (positive in the '80s, negative in the '90s), the estimated coefficients are not significantly different from zero.

Table 10. Robustness Check: Net Flows Dynamics in Fiscal Crises, by Type

	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	RDB	WB	PRIV	MDB	RDB	WB	PRIV
Crisis (β)	0.033	0.094*	0.048	-0.141**	0.412***	0.188***	0.320***	0.023
se	(0.059)	(0.051)	(0.056)	(0.061)	(0.078)	(0.068)	(0.074)	(0.083)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	108	98	108	106	108	98	108	106
No. of observations	3411	2967	3323	2944	3411	2967	3323	2944
R-squared	0.200	0.149	0.219	0.082	0.218	0.153	0.233	0.080

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	RDB	WB	PRIV	MDB	RDB	WB	PRIV
Crisis (β)	-0.580***	-0.327**	-0.546***	0.021	-0.004	0.043	-0.083	-0.660***
se	(0.159)	(0.138)	(0.164)	(0.170)	(0.100)	(0.088)	(0.099)	(0.116)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	108	98	108	106	70	67	70	69
No. of observations	3409	2965	3321	2942	1387	1268	1357	1310
R-squared	0.207	0.150	0.227	0.080	0.250	0.168	0.277	0.163

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis years in which one of the following triggering criteria is identified: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). All the regressions include country fixed effects and country-trends. Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table 11. Robustness Check: Coordination with IMF

	MDB	RDB	WB	Private
Fiscal Crisis with IMF (β_1)	0.4290***	0.2420***	0.2738***	-0.2331**
	(0.093)	(0.086)	(0.087)	(0.098)
Fiscal Crisis w/o IMF (β_2)	-0.0573	0.0516	-0.0495	-0.2979***
	(0.063)	(0.055)	(0.057)	(0.069)
Country FE	Yes	Yes	Yes	Yes
Country Trends	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106
Observations	3,411	2,966	3,323	2,944
R-squared	0.215	0.156	0.228	0.091

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program. All the regressions include country fixed effects and country-trends. Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table 12. Robustness Check: IMF Coordination, Heterogeneity by Region

	MDB	RDB	WB	Private
Crisis with IMF (β_1)	0.2206	0.1748	0.1030	-0.1518
	(0.144)	(0.122)	(0.138)	(0.159)
EAP # Crisis with IMF (β_{1_EAP})	-0.2707	-0.0996	-0.2886	-0.1014
	(0.206)	(0.191)	(0.220)	(0.388)
ECA # Crisis with IMF (β_{1_ECA})	0.7613***	0.0245	0.5936***	-0.2926
	(0.209)	(0.256)	(0.192)	(0.297)
LAC # Crisis with IMF (β_{1_LAC})	0.3872*	0.3048	0.3487	0.0359
	(0.221)	(0.203)	(0.243)	(0.256)
MENA # Crisis with IMF (β_{1_MENA})	0.6438**	-0.1733	0.5427***	-0.3635
	(0.294)	(0.447)	(0.205)	(0.243)
SA # Crisis with IMF (β_{1_SA})	-0.2182	0.2734	-0.0979	-0.2035
	(0.390)	(0.388)	(0.240)	(0.197)
Crisis w/o IMF (β_2)	-0.0556	0.0527	-0.0476	-0.2939***
	(0.062)	(0.054)	(0.056)	(0.068)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106
Observations	3,411	2,966	3,323	2,944
R-squared	0.223	0.159	0.235	0.093
Marginal Effects in regions:				
EAP ($\beta_1 + \beta_{1\_EAP}$)	-0.0501	0.0752	-0.186	-0.253
ECA ($\beta_1 + \beta_{1\_ECA}$)	0.982***	0.199	0.697***	-0.444*
LAC ($\beta_1 + \beta_{1\_LAC}$)	0.608***	0.480***	0.452**	-0.116
MENA ($\beta_1 + \beta_{1\_MENA}$)	0.864***	0.00153	0.646***	-0.515***
SA ($\beta_1 + \beta_{1\_SA}$)	0.00241	0.448	0.00507	-0.355***

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program, by region. All the regressions include country fixed effects and country-trends. Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. The region reference category is SSA: Sub-Saharan Africa. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa.

Table 13. Robustness Check: Dynamics of NFLs around Fiscal Crises

	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	0.1891**	0.0684	0.0748	-0.0560	0.0785	0.1633	-0.0692	0.0479
	(0.084)	(0.067)	(0.081)	(0.087)	(0.123)	(0.101)	(0.102)	(0.169)
Year t-1	0.1212*	-0.0554	0.0693	-0.0684	0.1823*	0.1216	-0.0454	0.0208
	(0.070)	(0.067)	(0.073)	(0.094)	(0.109)	(0.103)	(0.089)	(0.132)
Crisis Year	0.1457*	0.0311	0.0647	-0.0741	0.5683***	0.3556***	0.2354*	0.1311
	(0.087)	(0.072)	(0.088)	(0.087)	(0.137)	(0.121)	(0.119)	(0.146)
Year t+1	0.0476	-0.0513	0.0131	-0.0328	0.4546***	0.2897***	0.2611**	0.0135
	(0.078)	(0.077)	(0.069)	(0.080)	(0.125)	(0.106)	(0.100)	(0.131)
Year t+2	0.0074	-0.0295	-0.0398	-0.0441	0.2692***	0.2090**	0.1501*	-0.0667
	(0.071)	(0.071)	(0.072)	(0.070)	(0.098)	(0.098)	(0.079)	(0.113)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	108	98	108	106
Observations	2,990	2,615	2,934	2,587	2,990	2,615	2,934	2,587
R-squared	0.222	0.166	0.241	0.095	0.234	0.174	0.246	0.095

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	-0.2433	0.1437	-0.1209	0.0730	-0.1090	0.0335	-0.1001	0.2836
	(0.267)	(0.262)	(0.237)	(0.325)	(0.127)	(0.156)	(0.106)	(0.176)
Year t-1	-0.4182	-0.0544	-0.6335***	0.5125	-0.0628	-0.0139	-0.0881	0.0187
	(0.296)	(0.218)	(0.212)	(0.349)	(0.155)	(0.214)	(0.088)	(0.198)
Crisis Year	-0.8418**	-0.4300*	-0.7336***	0.3014	-0.0753	0.0245	-0.0487	-0.2880
	(0.331)	(0.226)	(0.226)	(0.352)	(0.203)	(0.168)	(0.155)	(0.196)
Year t+1	-0.6011***	-0.2754	-0.7454***	0.0430	0.1300	0.0523	-0.0115	-0.1586
	(0.210)	(0.210)	(0.233)	(0.253)	(0.194)	(0.173)	(0.139)	(0.193)
Year t+2	-0.3048	-0.2060	-0.3622	-0.0776	-0.1502	0.0945	-0.0882	-0.3383**
	(0.227)	(0.194)	(0.241)	(0.171)	(0.146)	(0.162)	(0.102)	(0.140)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	60	57	60	59
Observations	2,988	2,613	2,932	2,585	1,041	946	1,026	991
R-squared	0.225	0.167	0.250	0.097	0.271	0.192	0.287	0.180

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on 5-year windows around the triggering of a fiscal crisis criterion: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table 14. Robustness Check: Dynamics of Coordination with the IMF, Heterogeneity by Region

	Panel A. EAP				Panel B. ECA			
	MDB	**RDB**	**WB**	**Private**	**MDB**	**RDB**	**WB**	**Private**
Year t-2	-0.2988**	-0.0855	-0.3228**	-0.5862	-0.1847	0.0816	-0.3184*	0.1888
	(0.119)	(0.107)	(0.137)	(1.150)	(0.187)	(0.131)	(0.181)	(0.367)
Year t-1	-0.6615*	-0.6253	-0.4687*	-0.6534	0.1668	0.3881	-0.0645	0.1026
	(0.359)	(0.469)	(0.255)	(0.722)	(0.196)	(0.271)	(0.095)	(0.275)
Crisis with IMF Year	-0.1589	-0.0463	-0.1408	-0.4120	0.7654***	0.7554**	0.5537***	0.1754
	(0.222)	(0.102)	(0.212)	(0.532)	(0.251)	(0.308)	(0.187)	(0.417)
Year t+1	-0.0228	0.0743	-0.1315	0.1017	0.9927***	0.3242	0.6920***	0.2680
	(0.302)	(0.289)	(0.184)	(0.718)	(0.267)	(0.218)	(0.136)	(0.386)
Year t+2	0.2528	0.1832	0.1275	-0.5610	0.8929***	0.4690*	0.2990**	0.0579
	(0.209)	(0.144)	(0.235)	(0.396)	(0.285)	(0.251)	(0.111)	(0.225)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	15	15	15	15	17	17	17	17
Observations	426	415	422	318	338	281	331	294
R-squared	0.293	0.218	0.307	0.124	0.407	0.306	0.547	0.240

	Panel C. LAC				Panel D. MENA			
	MDB	**RDB**	**WB**	**Private**	**MDB**	**RDB**	**WB**	**Private**
Year t-2	0.1055	0.2150	-0.3027	0.2174	0.3411	0.3565	0.3398	-0.4641*
	(0.393)	(0.355)	(0.255)	(0.434)	(0.286)	(0.227)	(0.207)	(0.247)
Year t-1	0.3155	0.2809	-0.1199	0.2350	0.1559	0.1139	0.1249	-0.1381
	(0.196)	(0.209)	(0.229)	(0.329)	(0.436)	(0.364)	(0.301)	(0.308)
Crisis with IMF Year	0.9590**	0.3860	0.4906	0.2387	0.0989	-0.1342	0.3960	-0.0252
	(0.346)	(0.230)	(0.364)	(0.374)	(0.495)	(0.258)	(0.493)	(0.325)
Year t+1	0.7099***	0.7691**	0.3565**	-0.1797	0.7187	0.2896	0.4798*	0.2759
	(0.167)	(0.289)	(0.164)	(0.351)	(0.544)	(0.356)	(0.250)	(0.973)
Year t+2	0.4214**	0.5590**	0.2023	0.1865	0.7362	0.6921	0.4639	-0.4438
	(0.180)	(0.227)	(0.158)	(0.339)	(0.508)	(1.061)	(0.283)	(0.763)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	24	20	24	23	10	5	10	10
Observations	733	583	702	689	270	145	268	248
R-squared	0.116	0.176	0.142	0.047	0.138	0.113	0.198	0.097

	Panel E. SA				Panel F. SSA			
	MDB	**RDB**	**WB**	**Private**	**MDB**	**RDB**	**WB**	**Private**
Year t-2	0.0977	0.1398	-0.1598	-0.0559	0.1692	0.1925	0.0695	0.1675
	(0.103)	(0.150)	(0.094)	(0.235)	(0.207)	(0.163)	(0.181)	(0.211)
Year t-1	0.2403	0.4209	0.0251	-0.1722	0.2750	0.0542	0.0369	0.0761
	(0.155)	(0.253)	(0.162)	(0.285)	(0.204)	(0.150)	(0.162)	(0.183)
Crisis with IMF Year	0.6576	0.7073**	0.5000	0.1400	0.5105**	0.2775	0.0138	0.1969
	(0.338)	(0.273)	(0.352)	(0.359)	(0.230)	(0.205)	(0.181)	(0.218)
Year t+1	0.2091*	0.5977*	0.1218	-0.0070	0.2554	0.0964	0.1293	-0.0328
	(0.085)	(0.270)	(0.104)	(0.275)	(0.220)	(0.152)	(0.197)	(0.141)
Year t+2	-0.1933	0.0035	-0.1211	-0.0554	0.0034	-0.0197	0.0832	-0.0912
	(0.261)	(0.231)	(0.219)	(0.146)	(0.139)	(0.130)	(0.149)	(0.132)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	6	6	6	6	36	35	36	35
Observations	190	184	190	190	1,033	1,007	1,021	848
R-squared	0.591	0.239	0.575	0.125	0.221	0.150	0.199	0.087

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program, by region. All the regressions include country fixed effects and country-trends. Net flows are first scaled by trend GDP and then standardized by de-meaning and dividing by the standard deviation at the country level. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. The region reference category is SSA: Sub-Saharan Africa. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa.

Additionally, we want to test whether results in section 4.2 are robust to the inclusion of control variables that could influence capital flows dynamics. For this purpose, we add what the literature has recognized as typical push and pull factors described in detail in the data section. Table A8 reports the results of estimating equation (3) once these controls are added. The estimated coefficients of push factors have the expected signs: an increase in global risk aversion (VIX), is always negatively associate with private net flows, while an increase in the and the real 10-year US government bond yield, a proxy for global liquidity conditions, is positively associated with multilateral net flows; crude oil price booms are positively associated with private flows to governments in developing countries, but negatively with multilateral development flows, while increases in debt ratios are negatively associated with private credit flows, but positively associated with multilateral net flows to governments; the estimated coefficient of the trade openness component always exhibits a negative sign, but mostly not significantly different form zero; higher financial development (proxied by domestic credit to the private sector, % of GDP) is positively and significantly associated with larger private capital inflows; the estimated coefficient of financial openness is mostly positive, but rarely significantly different form zero; finally, there does not seem to be an association between having a fixed exchange rate regime and multilateral or private net flows. Despite the drop in observations driven by the inclusion of push and pull factors in the estimations, the multilateral response to credit crises does not change, while once there is an exceptionally large official financing crisis and an arrangement with the IMF, net flows from MDBs, RDBs and the WB increases. In implicit domestic public defaults, net flows from multilateral development banks significantly retrench. While the response of the WB remains negative, it is no longer significantly different from zero. Finally, private net flows during periods of loss of market confidence significantly decrease. Overall, results found in Table 4 are robust to the inclusion of push and pull control variables.

Table A9 reports the results from estimating equation (4) when adding push and pull factors. The significant increase of MDB, RDB and WB net flows during fiscal crises where the IMF intervenes survives the inclusion of controls. At the same time, when fiscal crises without the IMF occur, we still observe a significant decrease of private credit and, differently from before, a significant decrease of net flows from RDBs. When we explore the heterogeneity of these results by region (Table A10), we still find that MDBs significantly increase their lending when a borrowing country in Europe and Central Asia (ECA), Latin America and Caribbean (LAC) or Middle East and North Africa (MENA) has an active arrangement with the IMF. While these results are confirmed for the World Bank net flows in ECA and MENA, Regional Development Banks seem to coordinate in MENA only. Overall, the picture offered by Tables 5-6 is not altered by the inclusion of push and pull factors in the estimations either.

As a final robustness check, we introduce in equations (4)-(5) two lags of the dependent variables. One advantage of this robustness check compared to the previous is that we do not lose as many observations from the sample. To estimate this dynamic panel with country fixed-effects, we implement a system-GMM, where we instrument for the lagged dependent variables with their lags. As the number of time periods available is large, an unrestricted set of lags offers too many instruments, overfitting endogenous variables, biasing coefficient estimates towards those from non-instrumenting estimators and weakening the Hansen test of the instruments' joint validity (Roodman, 2009). To limit instrument proliferation, we limit the number of lags used in the estimations and we collapse instruments so that we have one instrument per lag and variable, rather than for every period. In Table A11, we show the results from estimating this dynamic model with instruments from the 3rd lag up to the 6th lag (odd columns) or up to the 10th lag (even columns). The number of instruments varies between 42 and 49. During credit crises, MDB net flows increase. The same occurs in exceptionally large officially financing events, where also WB net flows significantly increase. In implicit domestic public defaults,

RDB net flows diminish significantly, while in crises of loss of market confidence, private net flows fall. Results are consistent with what found in our baseline.

Both the validity of the instruments and the presence of serial correlation in the residuals can be tested. The Arellano-Bond test for autocorrelation of residuals in differences confirms that, once two lags of dependent variables are introduced, differenced residuals do not exhibit significant AR(2) behavior, that is, first lags of endogenous variables are appropriate instruments for their current values. The results of the Hansen test suggest that overidentifying restrictions are valid for all specifications related to MDB net flows (except for loss of market confidence crises). Sometimes when analyzing the relationship between RDB or WB net flows and crises, the Hansen test suggests that overidentifying restrictions are not valid, but when that happens, changing the number of lags used as instruments is enough. Nevertheless, when estimating the response of private flows, we never seem to find a set of instruments where the overidentifying restrictions are valid.

Table A12 reports the results of estimating a dynamic panel through a system GMM with lags up to the 6th or 10th as instruments to analyze the response of net flows to fiscal crises with or without the IMF. While MDB or WB net flows increase in crises where the IMF intervenes, flows from private creditors decrease in fiscal crises without the IMF. The Arellano-Bond test for autocorrelation of residuals in differences confirms the absence of serial correlation in the residuals in all specifications. The Hansen suggests that overidentifying restrictions are mostly valid when estimating the effects of crises on MDB or WB net flows, but not when estimating the behavior of RDB or private flows. Overall, even the results from estimating dynamic panels through system-GMM are consistent with our baseline models.

6. Conclusion

The document studies sovereign net flows dynamics during fiscal crises. It finds evidence that multilateral lending and private lending exhibit very different behaviors during fiscal crises, with private creditors mostly decreasing their exposure, but MDBs only doing so when fiscal crises are signaled by implicit domestic public defaults. This result suggests that any "insurance" services that MDBs may provide during fiscal crisis, does not come at the expense of promoting sound fiscal management.

Besides, when the IMF provides loans to member countries experiencing a macroeconomic crisis, MDBs contemporaneously increase their lending and continue to do so in the subsequent years. Despite the regional differences, this is evidence of coordination of MDBs and the IMF during fiscal crises. This result suggests that MDBs' lending during fiscal crises does not erode the role of the IMF and is in line with the mandate of working as a system within the International Financial Architecture.

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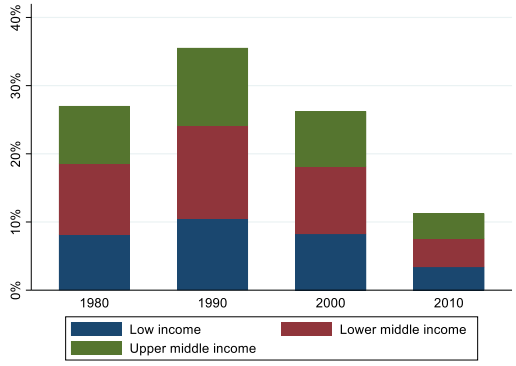
Appendix

I. Data

Fiscal Crises--- There are 255 fiscal crisis episodes in our sample. As Figure A1 shows, fiscal crisis years vary by decade and income group: in the 1990s, for example, 35.52% of years were fiscal crisis years (10.47%, 13.75%, and 11.3% in low-, lower-middle-, and upper-middle-income countries respectively). Only two countries in our sample have never been associated with a fiscal crisis since 1980.[28]

Figure A1. Fiscal Crisis Years, 1980–2015



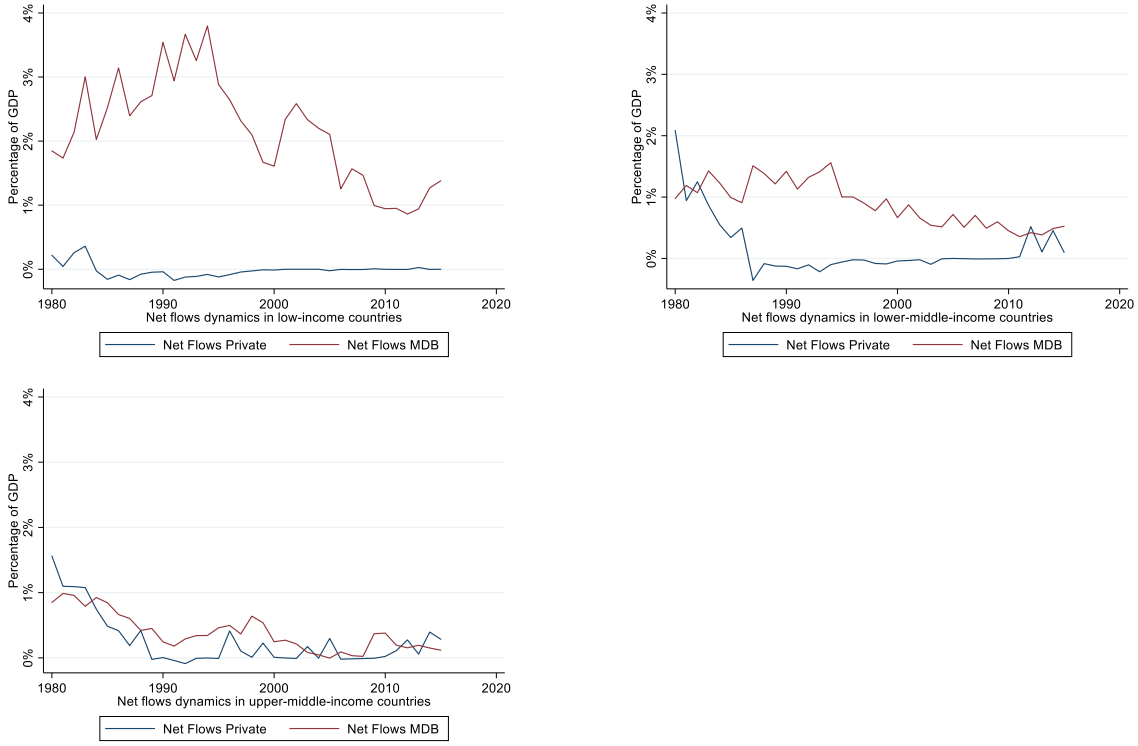
Source: Gerling et al. (2017); and authors' calculations.
Note: The histogram shows the percentage of fiscal crisis years that a group of countries in the sample (by income level) experience in a decade.

A fiscal crisis lasts on average nearly 5 years, with large differences by income level.[29] For each fiscal crisis more than one criterion can be triggered, either in the same year or in different years, and crisis years are relatively frequent: 35% of the country-years in our sample are years of credit crisis; 19% are years in which countries are engaged in a high-access IMF program; 4% are country-years of implicit public domestic default; loss of market confidence crises exhibit many missing values, but they occur in 25% of the country-years in the sample.

Net flows--- In Figure A2 we show net flows scaled by GDP to prevent larger countries from driving the results and to gain a better understanding of the relative magnitude of net flows with respect to the country's economy. To avoid a bias from outliers, observations in the top and bottom 1 percent of the net flow/GDP variables are dropped. A few trends that can be observed from the visual inspection of the data include: net flows from MDBs as a percentage of GDP decreased over time for all income levels; net flows from private creditors decreased over time as well but experienced a small recovery in the 2010s; the relative importance of MDB net flows increases in the lower the income group.

[28] China and Fiji.
[29] Fiscal crisis episodes in low income countries in our sample last 6 years, while in lower- and upper-middle income countries they last slightly longer than 4 years. When assessing duration, we follow Gerling et al. (2017) and do not consider the crisis periods that are ongoing at the start or end of their sample period (1970-2015), as we are unable to determine the exact date of beginning and end outside of the sample.

Figure A2. Dynamics of Net Flows by Lender and Income Groups



Source: Authors' calculations.
Note: The figure shows the trends of median new flows scaled by GDP for upper-middle-income, lower-middle-income, and lower-income countries. The sample period is from 1980 to 2015. MDB: multilateral development banks.

II. Appendix Tables

Table A1. List of Countries in the Sample, by Income Group

Low-income	Lower-middle-income		Upper-middle-income	
Burundi	Armenia	Pakistan	Angola	Kazakhstan
Benin	Bangladesh	Philippines	Albania	Lebanon
Burkina Faso	Bolivia	Papua New Guinea	Argentina	St. Lucia
African Republic	Côte d'Ivoire	Sudan	Azerbaijan	Maldives
Comoros	Cameroon	Solomon Islands	Bulgaria	Mexico
Ethiopia	Republic of Congo	El Salvador	Bosnia and Herzegovina	FYR Macedonia
Guinea	Cabo Verde	Syria	Belarus	Mauritius
The Gambia	Djibouti	Tajikistan	Belize	Malaysia
Guinea-Bissau	Egypt	Tonga	Brazil	Panama
Haiti	Ghana	Tunisia	China	Peru
Liberia	Guatemala	Ukraine	Colombia	Paraguay
Madagascar	Honduras	Uzbekistan	Costa Rica	Russia
Mali	Indonesia	Vietnam	Dominica	Thailand
Mozambique	India	Vanuatu	Dominican Republic	Turkmenistan
Malawi	Kenya	Samoa	Algeria	Turkey
Niger	Kyrgyz Republic	Yemen	Ecuador	St. Vincent and the Grenadines
Nepal	Cambodia	Zambia	Fiji	Venezuela
Rwanda	Lao P.D.R.		Gabon	
Senegal	Sri Lanka		Georgia	
Sierra Leone	Morocco		Equatorial Guinea	
Chad	Moldova		Grenada	
Togo	Mongolia		Guyana	
Tanzania	Mauritania		Islamic Republic of Iran	
Uganda	Nigeria		Jamaica	
Zimbabwe	Nicaragua		Jordan	

Source: Prepared by the authors.

Table A2. Robustness Check: Correlations of Net Flows to the Government from Multilateral Development Banks and Private Creditors

	Low-income				Lower-middle-income				Upper-middle-income				All			
	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s	1980s	1990s	2000s	2010s
MDB = β PRIV (1)	-0.018	-0.372	-0.021	-0.001	0.118**	-0.026	0.058	-0.025	-0.024	-0.012	0.007	0.043	0.031	-0.029	0.014	0.013
se	0.046	0.217	0.178	0.069	0.052	0.045	0.085	0.064	0.039	0.025	0.029	0.057	0.032	0.025	0.029	0.039
PRIV = β MDB (2)	-0.024	-0.040	-0.007	-0.005	0.261**	-0.021	0.068	-0.098	-0.072	-0.041	0.035	0.168	0.069	-0.032	0.029	0.051
se	0.065	0.039	0.060	0.366	0.110	0.037	0.102	0.245	0.109	0.095	0.154	0.224	0.073	0.028	0.059	0.158
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	23	22	21	19	31	41	38	36	30	40	41	41	84	103	100	96
No. of observations	182	162	151	86	258	326	326	202	259	335	369	227	699	823	846	515
R-squared (3)	0.440	0.355	0.378	0.416	0.383	0.338	0.459	0.339	0.281	0.349	0.258	0.327	0.363	0.343	0.377	0.339
R-squared (4)	0.378	0.194	0.077	0.366	0.443	0.257	0.294	0.286	0.354	0.342	0.252	0.286	0.388	0.312	0.251	0.294

Source: Authors' calculations.
Note: The table shows the correlations between net flows to the government from MDBs and private creditors for upper-middle-income, lower-middle-income, and lower-income countries. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development bank; PRIV: private creditors.

Table A3. Robustness Check: Net Flows Dynamics in Fiscal Crises, by Type

	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	RDB	WB	PRIV	MDB	RDB	WB	PRIV
Crisis (β)	0.0981	0.0501	0.0650	-0.1970***	0.4296***	0.0904***	0.2420***	0.0345
se	(0.068)	(0.031)	(0.044)	(0.075)	(0.096)	(0.034)	(0.065)	(0.103)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	108	99	108	106	108	99	108	106
No. of observations	3,417	2,968	3,328	2,944	3,417	2,968	3,328	2,944
R-squared	0.234	0.225	0.240	0.081	0.247	0.227	0.251	0.078

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	RDB	WB	PRIV	MDB	RDB	WB	PRIV
Crisis (β)	-0.7535***	-0.1450	-0.5245***	-0.1032	0.0835	0.0440	-0.0065	-0.9365***
se	(0.205)	(0.091)	(0.135)	(0.195)	(0.088)	(0.037)	(0.049)	(0.179)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of countries	108	99	108	106	70	68	70	69
No. of observations	3,415	2,966	3,326	2,942	1,388	1,270	1,359	1,309
R-squared	0.242	0.225	0.250	0.078	0.232	0.224	0.285	0.160

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis years in which one of the following triggering criteria is identified: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A4. Robustness Check: Coordination with IMF

	MDB	RDB	WB	Private
Fiscal Crisis with IMF (β_1)	0.4918***	0.1243***	0.2348***	-0.3477***
	(0.112)	(0.042)	(0.073)	(0.130)
Fiscal Crisis w/o IMF (β_2)	-0.0097	0.0319	-0.0103	-0.4196***
	(0.068)	(0.031)	(0.044)	(0.087)
Country FE	Yes	Yes	Yes	Yes
Country Trends	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106
Observations	3,417	2,968	3,328	2,944
R-squared	0.246	0.227	0.247	0.093

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A5. Robustness Check: IMF Coordination, Heterogeneity by Region

	MDB	RDB	WB	Private
Crisis with IMF (β_1)	0.3366*	0.1071*	0.1348	-0.2493
	(0.178)	(0.063)	(0.135)	(0.220)
EAP # Crisis with IMF (β_{1_EAP})	-0.4423*	-0.1395	-0.2144	-0.0400
	(0.261)	(0.124)	(0.171)	(0.417)
ECA # Crisis with IMF (β_{1_ECA})	0.8684***	0.0716	0.5283***	-0.1987
	(0.321)	(0.151)	(0.199)	(0.372)
LAC # Crisis with IMF (β_{1_LAC})	0.2773	0.1111	0.1471	0.0170
	(0.287)	(0.093)	(0.204)	(0.310)
MENA # Crisis with IMF (β_{1_MENA})	0.3816	-0.0750	0.2742	-0.7157*
	(0.324)	(0.212)	(0.184)	(0.397)
SA # Crisis with IMF (β_{1_SA})	-0.4273	0.0097	-0.1795	-0.2800
	(0.345)	(0.156)	(0.184)	(0.229)
Crisis w/o IMF (β_2)	-0.0068	0.0331	-0.0093	-0.4153***
	(0.068)	(0.031)	(0.044)	(0.087)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	108	99	108	106
Observations	3,417	2,968	3,328	2,944
R-squared	0.254	0.229	0.253	0.094
Marginal Effects in regions:				
EAP ($\beta_1 + \beta_{1\_EAP}$)	-0.106	-0.0325	-0.0795	-0.289
ECA ($\beta_1 + \beta_{1\_ECA}$)	1.205***	0.179	0.663***	-0.448
LAC ($\beta_1 + \beta_{1\_LAC}$)	0.614***	0.218***	0.282**	-0.232
MENA ($\beta_1 + \beta_{1\_MENA}$)	0.718***	0.0321	0.409***	-0.965***
SA ($\beta_1 + \beta_{1\_SA}$)	-0.0907	0.117	-0.0447	-0.529***

Source: Authors' calculations.
Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program, by region. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. The region reference category is SSA: Sub-Saharan Africa. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa.

Table A6. Robustness Check: Dynamics of NFLs around Fiscal Crises

	Panel A. Credit Event				Panel B. Exceptionally Large Official Financing			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	0.1900*	0.0629	0.0824	-0.0590	0.1002	0.0548	-0.1159	0.1438
	(0.096)	(0.044)	(0.072)	(0.099)	(0.156)	(0.053)	(0.084)	(0.195)
Year t-1	0.1226	-0.0538	0.0811	-0.0790	0.0410	0.0369	-0.1240	-0.0565
	(0.087)	(0.047)	(0.062)	(0.107)	(0.119)	(0.049)	(0.082)	(0.168)
Crisis Year	0.1847*	0.0381	0.0745	-0.0431	0.5153***	0.2167***	0.1182	0.0493
	(0.105)	(0.050)	(0.074)	(0.112)	(0.153)	(0.074)	(0.094)	(0.181)
Year t+1	0.0909	-0.0280	0.0429	-0.0028	0.3544**	0.0997*	0.2047**	0.0807
	(0.102)	(0.046)	(0.058)	(0.097)	(0.145)	(0.055)	(0.096)	(0.167)
Year t+2	-0.0038	-0.0060	-0.0177	0.0134	0.2013*	0.0441	0.1076	-0.0829
	(0.085)	(0.040)	(0.065)	(0.091)	(0.109)	(0.046)	(0.075)	(0.136)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	108	98	108	106
Observations	2,993	2,616	2,935	2,585	2,993	2,616	2,935	2,585
R-squared	0.270	0.238	0.269	0.084	0.275	0.241	0.273	0.085

	Panel C. Implicit Domestic Public Default				Panel D. Loss of Market Confidence			
	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Year t-2	-0.1016	-0.0555	-0.2713	0.2442	-0.1077	0.0221	-0.0873	0.5181*
	(0.369)	(0.153)	(0.180)	(0.493)	(0.117)	(0.071)	(0.062)	(0.267)
Year t-1	-0.6806*	0.1005	-0.6876***	0.4435	-0.0454	0.0371	-0.0261	-0.0405
	(0.357)	(0.214)	(0.198)	(0.508)	(0.128)	(0.083)	(0.060)	(0.272)
Crisis Year	-1.0186***	-0.2392	-0.7604***	0.4207	-0.0775	0.0433	-0.0519	-0.3425
	(0.387)	(0.165)	(0.217)	(0.428)	(0.148)	(0.075)	(0.065)	(0.273)
Year t+1	-0.9251***	-0.1341	-0.8203***	-0.1050	0.1839	0.1408	0.0291	-0.1041
	(0.263)	(0.138)	(0.223)	(0.322)	(0.205)	(0.128)	(0.085)	(0.358)
Year t+2	-0.6154**	-0.1830	-0.4835**	-0.1832	-0.0403	0.0094	0.0052	-0.3624*
	(0.259)	(0.126)	(0.203)	(0.238)	(0.125)	(0.044)	(0.065)	(0.189)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	108	98	108	106	60	57	60	59
Observations	2,991	2,614	2,933	2,583	1,042	948	1,027	993
R-squared	0.277	0.238	0.285	0.085	0.238	0.209	0.276	0.172

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on 5-year windows around the triggering of a fiscal crisis criterion: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A7. Robustness Check: Dynamics of Coordination with the IMF, Heterogeneity by Region

Panel A. EAP

	MDB	RDB	WB	Private
Year t-2	-0.3517*	-0.1614	-0.2160**	-0.5490
	(0.180)	(0.108)	(0.077)	(1.175)
Year t-1	-0.5713**	-0.2586**	-0.2781**	-0.6429
	(0.236)	(0.116)	(0.105)	(0.729)
Crisis with IMF Year	-0.0996	-0.0266	-0.0225	-0.3763
	(0.173)	(0.086)	(0.108)	(0.534)
Year t+1	-0.2485	-0.1500	-0.0705	0.0483
	(0.430)	(0.241)	(0.154)	(0.694)
Year t+2	0.1433	0.0865	0.0664	-0.5263
	(0.225)	(0.080)	(0.204)	(0.411)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	15	15	15	15
Observations	427	418	421	319
R-squared	0.310	0.269	0.259	0.114

Panel B. ECA

	MDB	RDB	WB	Private
Year t-2	-0.2738	0.0612	-0.3458**	0.2837
	(0.168)	(0.058)	(0.140)	(0.357)
Year t-1	0.1184	0.2376**	-0.1328	-0.1700
	(0.213)	(0.085)	(0.091)	(0.295)
Crisis with IMF Year	0.7188**	0.3905*	0.2634**	0.1794
	(0.326)	(0.202)	(0.096)	(0.493)
Year t+1	0.7492**	0.1092	0.4967***	0.3524
	(0.301)	(0.119)	(0.087)	(0.475)
Year t+2	0.6528**	0.1613	0.1869*	0.1313
	(0.296)	(0.106)	(0.096)	(0.262)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	17	17	17	17
Observations	338	281	330	293
R-squared	0.552	0.535	0.665	0.241

Panel C. LAC

	MDB	RDB	WB	Private
Year t-2	0.4025	0.1794	-0.1079	0.3250
	(0.575)	(0.211)	(0.198)	(0.599)
Year t-1	0.2698	0.1211	-0.0939	0.1149
	(0.186)	(0.107)	(0.146)	(0.458)
Crisis with IMF Year	1.1849**	0.4566*	0.4395*	0.2256
	(0.431)	(0.246)	(0.234)	(0.472)
Year t+1	0.6088***	0.2379	0.2001	-0.1507
	(0.206)	(0.149)	(0.138)	(0.313)
Year t+2	0.4092***	0.1840**	0.1508*	0.0399
	(0.134)	(0.075)	(0.083)	(0.392)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	24	20	24	23
Observations	734	584	704	688
R-squared	0.128	0.153	0.147	0.037

Panel D. MENA

	MDB	RDB	WB	Private
Year t-2	0.3015	0.1688	0.3003	-0.6385***
	(0.292)	(0.122)	(0.212)	(0.171)
Year t-1	0.0423	0.0675	0.0677	-0.4950
	(0.430)	(0.289)	(0.238)	(0.607)
Crisis with IMF Year	-0.1312	-0.0953	0.0282	-0.6097
	(0.390)	(0.190)	(0.156)	(0.595)
Year t+1	0.4846	0.1088	0.3031	1.4286
	(0.518)	(0.212)	(0.220)	(1.990)
Year t+2	0.6645	0.1173	0.3124	-0.7642
	(0.495)	(0.269)	(0.194)	(1.124)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	10	5	10	10
Observations	270	145	268	248
R-squared	0.120	0.247	0.195	0.105

Panel E. SA

	MDB	RDB	WB	Private
Year t-2	0.1548	0.0230	-0.0662	0.1840
	(0.111)	(0.067)	(0.050)	(0.175)
Year t-1	0.1883	0.1502	0.0001	0.0574
	(0.133)	(0.091)	(0.102)	(0.344)
Crisis with IMF Year	0.4338	0.3181**	0.2051	-0.2046
	(0.298)	(0.106)	(0.195)	(0.126)
Year t+1	0.1991**	0.2324*	0.1092	-0.1140
	(0.072)	(0.105)	(0.081)	(0.161)
Year t+2	-0.2208	-0.0702	-0.1099	0.0142
	(0.222)	(0.109)	(0.143)	(0.116)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	6	6	6	6
Observations	190	184	190	190
R-squared	0.505	0.386	0.558	0.067

Panel F. SSA

	MDB	RDB	WB	Private
Year t-2	0.1410	0.0441	-0.1081	0.2975
	(0.256)	(0.077)	(0.154)	(0.240)
Year t-1	-0.0096	-0.0310	-0.1593	0.0743
	(0.243)	(0.080)	(0.172)	(0.237)
Crisis with IMF Year	0.3590	0.1186	-0.0423	0.1790
	(0.242)	(0.095)	(0.175)	(0.280)
Year t+1	0.2346	0.0803	0.1502	0.0157
	(0.269)	(0.079)	(0.202)	(0.230)
Year t+2	-0.0259	-0.0448	0.0792	-0.0557
	(0.191)	(0.077)	(0.157)	(0.172)
Country FE	Yes	Yes	Yes	Yes
Country-trends	Yes	Yes	Yes	Yes
Number of countries	36	35	36	35
Observations	1,034	1,004	1,022	847
R-squared	0.268	0.216	0.226	0.084

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on 5-year windows around the triggering of a fiscal crisis accompanied by a high-access IMF program in different regions. Net flows are scaled by trend GDP, where trend GDP is calculated by applying the Hodrick-Prescott filter with a smoothing parameter of 6.25. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa; SSA: Sub-Saharan Africa.

Table A8. Net Flows Dynamics in Fiscal Crises, by Type, with Controls

	MDB	RDB	WB	Private	MDB	RDB	WB	Private	MDB	RDB	WB	Private	MDB	RDB	WB	Private
Credit Event	0.1155	-0.0091	0.0761	-0.1242												
	(0.094)	(0.035)	(0.055)	(0.091)												
Exceptionally Large Official Financing					0.4643***	0.1504***	0.1990**	0.1165								
					(0.129)	(0.047)	(0.085)	(0.108)								
Implicit Domestic Public Default									-0.3899*	-0.0553	-0.1857	-0.4135				
									(0.217)	(0.088)	(0.165)	(0.387)				
Loss of Market Confidence													0.0178	-0.0646	-0.0158	-0.6254***
													(0.099)	(0.045)	(0.060)	(0.157)
Vix	-0.0141	-0.0163	-0.0210	-0.1514***	-0.0257	-0.0192*	-0.0268*	-0.1507***	-0.0155	-0.0159	-0.0224	-0.1462***	0.0483	0.0135	0.0086	-0.2109***
	(0.025)	(0.012)	(0.015)	(0.033)	(0.024)	(0.012)	(0.014)	(0.033)	(0.025)	(0.012)	(0.014)	(0.033)	(0.030)	(0.015)	(0.014)	(0.055)
US Treasury 10-year yield	0.1049***	0.0582***	0.0667***	-0.0617	0.1081***	0.0563***	0.0698***	-0.0695*	0.1152***	0.0580***	0.0728***	-0.0647	0.0192	0.0168	0.0106	-0.0665
	(0.035)	(0.017)	(0.023)	(0.042)	(0.035)	(0.016)	(0.022)	(0.041)	(0.035)	(0.016)	(0.022)	(0.042)	(0.039)	(0.016)	(0.024)	(0.063)
Copper Price	0.0000	0.0000	-0.0000	-0.0002***	-0.0000	0.0000	-0.0000*	-0.0002***	0.0000	0.0000	-0.0000	-0.0002***	0.0001*	0.0000	0.0000	-0.0001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Crude Oil price	-0.0050**	-0.0023**	-0.0018*	0.0121***	-0.0039*	-0.0020*	-0.0013	0.0120***	-0.0045**	-0.0023**	-0.0015	0.0120***	-0.0051*	-0.0019	-0.0016	0.0086**
	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)	(0.001)	(0.001)	(0.003)	(0.003)	(0.001)	(0.001)	(0.004)
GDP growth	-0.0046	-0.0069	0.0017	0.0020	-0.0035	-0.0064	0.0020	0.0032	-0.0054	-0.0069	0.0012	0.0020	-0.0221***	-0.0099*	-0.0110***	-0.0033
	(0.009)	(0.004)	(0.005)	(0.011)	(0.009)	(0.004)	(0.005)	(0.011)	(0.009)	(0.004)	(0.006)	(0.011)	(0.008)	(0.005)	(0.004)	(0.017)
Debt (%GDP)	0.0064***	0.0006	0.0041***	-0.0054***	0.0058***	0.0003	0.0038***	-0.0058***	0.0065***	0.0005	0.0042***	-0.0056***	0.0021	0.0023*	0.0020	-0.0080*
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.001)	(0.002)	(0.004)
Trade openness (%GDP)	-0.0038	-0.0016	-0.0026	-0.0029	-0.0027	-0.0012	-0.0021	-0.0026	-0.0039	-0.0016	-0.0027	-0.0028	-0.0051	-0.0005	-0.0028	-0.0129**
	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.004)	(0.002)	(0.002)	(0.004)	(0.003)	(0.002)	(0.002)	(0.006)
Credit (%GDP)	0.0055	0.0023	0.0014	0.0115***	0.0060	0.0024	0.0017	0.0116***	0.0059	0.0023	0.0017	0.0119***	0.0041	0.0012	-0.0007	0.0092*
	(0.004)	(0.002)	(0.003)	(0.004)	(0.004)	(0.002)	(0.003)	(0.004)	(0.004)	(0.002)	(0.003)	(0.004)	(0.003)	(0.001)	(0.002)	(0.005)
Financial Openness	0.0197	0.0651	0.3025*	0.0724	0.0652	0.0814	0.3205*	0.0915	0.0032	0.0645	0.2915*	0.0779	-0.1176	0.0069	0.0191	-0.0352
	(0.247)	(0.107)	(0.170)	(0.334)	(0.239)	(0.104)	(0.169)	(0.335)	(0.246)	(0.107)	(0.171)	(0.334)	(0.167)	(0.077)	(0.107)	(0.535)
Fixed Exchange Rate Regime	-0.1054	0.0016	-0.1371	0.0134	-0.1171	0.0031	-0.1491	0.0312	-0.1368	0.0007	-0.1550	0.0229	0.1277	0.0549	0.0919	-0.0384
	(0.139)	(0.063)	(0.101)	(0.110)	(0.134)	(0.062)	(0.098)	(0.111)	(0.139)	(0.064)	(0.100)	(0.111)	(0.100)	(0.051)	(0.069)	(0.181)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-trends	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Number of countries	100	93	100	96	100	93	100	96	100	93	100	96	63	61	63	61
Observations	2,030	1,813	2,007	1,707	2,030	1,813	2,007	1,707	2,030	1,813	2,007	1,707	896	825	883	851
R-squared	0.141	0.072	0.177	0.058	0.160	0.084	0.185	0.058	0.140	0.072	0.176	0.058	0.056	0.058	0.044	0.102

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis years in which one of the following triggering criteria is identified: credit event (Panel A), exceptionally large official financing (Panel B), implicit domestic public default (Panel C), loss of market confidence (Panel D). All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A9. Coordination with IMF, with Controls

	MDB	RDB	WB	Private
Fiscal Crisis with IMF (β_1)	0.6786***	0.1609**	0.2886**	-0.1614
	(0.182)	(0.064)	(0.113)	(0.139)
Fiscal Crisis w/o IMF (β_2)	-0.1029	-0.0791**	-0.0296	-0.3271***
	(0.073)	(0.031)	(0.045)	(0.097)
Vix	-0.0287	-0.0203*	-0.0281*	-0.1530***
	(0.024)	(0.012)	(0.014)	(0.033)
US Treasury 10-year yield	0.1026***	0.0582***	0.0669***	-0.0544
	(0.035)	(0.016)	(0.023)	(0.042)
Copper Price	-0.0000	0.0000	-0.0000*	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)
Crude Oil price	-0.0035*	-0.0017*	-0.0012	0.0128***
	(0.002)	(0.001)	(0.001)	(0.003)
GDP growth	-0.0043	-0.0072*	0.0016	0.0003
	(0.009)	(0.004)	(0.005)	(0.011)
Debt (%GDP)	0.0057***	0.0003	0.0038***	-0.0052***
	(0.002)	(0.001)	(0.001)	(0.002)
Trade openness (%GDP)	-0.0028	-0.0013	-0.0022	-0.0029
	(0.004)	(0.002)	(0.002)	(0.004)
Credit (%GDP)	0.0059	0.0023	0.0016	0.0113**
	(0.004)	(0.002)	(0.003)	(0.004)
Financial Openness	0.0465	0.0680	0.3136*	0.0418
	(0.234)	(0.105)	(0.167)	(0.335)
Fixed Exchange Rate Regime	-0.1185	-0.0011	-0.1475	0.0027
	(0.133)	(0.063)	(0.098)	(0.109)
Country FE	Yes	Yes	Yes	Yes
Country-trends	No	No	No	No
Number of countries	100	93	100	96
Observations	2,030	1,813	2,007	1,707
R-squared	0.173	0.089	0.190	0.067

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A10. IMF Coordination, Heterogeneity by Region

	MDB	RDB	WB	Private
Crisis with IMF (β1)	0.4480**	0.0749	0.1808	-0.2114
	(0.200)	(0.075)	(0.118)	(0.182)
EAP # Crisis with IMF (β1_EAP)	-0.5513**	-0.0945	-0.1625	0.1888
	(0.223)	(0.126)	(0.133)	(0.596)
ECA # Crisis with IMF (β1_ECA)	0.8112**	0.1686	0.4846**	0.3539
	(0.366)	(0.182)	(0.206)	(0.535)
LAC # Crisis with IMF (β1_LAC)	-0.0676	0.0859	-0.1314	-0.2508
	(0.260)	(0.143)	(0.247)	(0.397)
MENA # Crisis with IMF (β1_MENA)	0.6412	0.0147	0.1786	0.4558*
	(0.395)	(0.073)	(0.129)	(0.246)
SA # Crisis with IMF (β1_SA)	-0.6459**	-0.0906	-0.1475	-0.0662
	(0.275)	(0.088)	(0.147)	(0.331)
Crisis w/o IMF (β2)	-0.0803	-0.0668*	-0.0206	-0.3004***
	(0.073)	(0.035)	(0.040)	(0.109)
Vix	-0.0341	-0.0166	-0.0387***	-0.1538***
	(0.023)	(0.013)	(0.013)	(0.035)
US Treasury 10-year yield	-0.0325	-0.0653**	0.0016	0.0691
	(0.045)	(0.027)	(0.026)	(0.061)
Copper Price	0.0000	0.0000***	-0.0000	-0.0002***
	(0.000)	(0.000)	(0.000)	(0.000)
Crude Oil price	-0.0050**	-0.0024**	-0.0022**	0.0145***
	(0.002)	(0.001)	(0.001)	(0.003)
GDP growth	-0.0020	-0.0041	0.0014	0.0059
	(0.008)	(0.003)	(0.006)	(0.011)
Debt (%GDP)	0.0041*	0.0003	0.0012	-0.0001
	(0.002)	(0.001)	(0.002)	(0.003)
Trade openness (%GDP)	0.0007	-0.0017	0.0004	-0.0082
	(0.003)	(0.002)	(0.002)	(0.005)
Credit (%GDP)	0.0060	0.0010	0.0025	0.0193***
	(0.004)	(0.002)	(0.002)	(0.006)
Financial Openness	-0.1489	-0.0770	0.2297*	-0.2286
	(0.205)	(0.096)	(0.126)	(0.454)
Fixed Exchange Rate Regime	-0.1529	-0.0138	-0.1229	0.0598
	(0.113)	(0.045)	(0.087)	(0.129)
Country FE	Yes	Yes	Yes	Yes
Country-trends	No	No	No	No
Number of countries	100	93	100	96
Observations	2,030	1,813	2,007	1,707
R-squared	0.450	0.390	0.478	0.219
Effects in regions:				
EAP (β1 + β1_EAP)	-0.103	-0.0196	0.0184	-0.0225
ECA (β1 + β1_ECA)	1.259***	0.244	0.665***	0.143
LAC (β1 + β1_LAC)	0.380**	0.161	0.0494	-0.462
MENA (β1 + β1_MENA)	1.089***	0.0896**	0.359***	0.244
SA (β1 + β1_SA)	-0.198	-0.0156	0.0333	-0.278

Source: Authors' calculations.

Note: This table reports panel regressions of net flows from different creditors on fiscal crisis accompanied by a high-access IMF program and fiscal crises not accompanied by a high-access IMF program, by region. All the regressions include country fixed effects and country-trends. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Standard errors in parentheses are clustered at the country-level; *** p<0.01, ** p<0.05, * p<0.1. MDB: multilateral development banks; RDB: regional development banks; WB: World Bank. The region reference category is SSA: Sub-Saharan Africa. EAP: East Asia and Pacific; ECA: Europe and Central Asia; LAC: Latin American and Caribbean; MENA: Middle East and North Africa; SA: South Asia; SSA: Sub-Saharan Africa.

Table A11. Net Flows Dynamics in Fiscal Crises, by Type, system-GMM

	MDB	MDB	RDB	RDB	WB	WB	Pivate	Pivate	MDB	MDB	RDB	RDB	WB	WB	Pivate	Pivate
Credit Event	0.127*	0.109*	0.036	0.018	0.038	0.028	-0.089	-0.093								
	(0.073)	(0.066)	(0.028)	(0.028)	(0.044)	(0.040)	(0.064)	(0.060)								
Exceptionally Large Official Financing									0.249***	0.213***	0.052	0.036	0.127**	0.133***	-0.030	-0.001
									(0.095)	(0.074)	(0.033)	(0.035)	(0.049)	(0.045)	(0.075)	(0.078)
MDB $_{t-1}$	0.421	0.424*							0.397	0.453*						
	(0.356)	(0.218)							(0.353)	(0.236)						
MDB $_{t-2}$	0.298	0.327							0.301	0.300						
	(0.292)	(0.206)							(0.285)	(0.208)						
RDB $_{t-1}$			0.122	0.263							0.137	0.258				
			(0.402)	(0.260)							(0.407)	(0.261)				
RDB $_{t-2}$			0.404	0.327							0.391	0.323				
			(0.376)	(0.201)							(0.379)	(0.200)				
WB $_{t-1}$					0.348	0.248							0.346	0.256		
					(0.323)	(0.310)							(0.341)	(0.343)		
WB $_{t-2}$					0.449	0.561*							0.442	0.545*		
					(0.311)	(0.288)							(0.322)	(0.314)		
Private $_{t-1}$							0.096	0.113							0.101	0.129
							(0.321)	(0.342)							(0.340)	(0.358)
Private $_{t-2}$							0.291	0.260							0.282	0.246
							(0.201)	(0.181)							(0.204)	(0.182)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lag limit	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10
Collapse	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruments	42	48	42	46	42	49	42	46	42	48	42	46	42	49	42	46
Countries	108	108	98	98	108	108	105	105	108	108	98	98	108	108	105	105
Observations	3103	3103	2661	2661	2998	2998	2560	2560	3103	3103	2661	2661	2998	2998	2560	2560
AR(2)	0.675	0.472	0.429	0.335	0.287	0.149	0.322	0.380	0.651	0.568	0.459	0.343	0.318	0.203	0.356	0.426
Hansen	0.112	0.328	0.232	0.0173	0.0124	0.296	0.00163	0.00767	0.105	0.279	0.226	0.0173	0.0108	0.257	0.00138	0.00677

Source: Authors' calculations.

Note: All regressions are two-step system GMM. Year FE are not reported. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Windmeijer's finite-sample correction for the two-step covariance matrix, corrected standard errors clustered at the country-level in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The bottom rows report *p*-values for the Arellano-Bond test for AR(2) in differences and the Hansen test of joint validity of instruments. FE: fixed effects; MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A11 CONTINUED. Net Flows Dynamics in Fiscal Crises, by Type, system-GMM

	MDB	MDB	RDB	RDB	WB	WB	Pivate	Pivate	MDB	MDB	RDB	RDB	WB	WB	Pivate	Pivate
Implicit Domestic Public Default	-0.210	-0.172	-0.154**	-0.115*	-0.110	-0.118	0.067	0.090								
	(0.147)	(0.114)	(0.059)	(0.069)	(0.088)	(0.093)	(0.165)	(0.172)								
Loss of Market Confidence									0.044	0.080	-0.023	-0.025	-0.009	0.016	-0.243*	-0.213*
									(0.090)	(0.101)	(0.035)	(0.027)	(0.051)	(0.068)	(0.139)	(0.116)
MDB $_{t-1}$	0.408	0.407*							0.635	0.344						
	(0.356)	(0.216)							(0.627)	(0.357)						
MDB $_{t-2}$	0.313	0.335*							0.064	0.185						
	(0.292)	(0.202)							(0.490)	(0.258)						
RDB $_{t-1}$			0.134	0.270							0.315	0.302				
			(0.401)	(0.257)							(0.533)	(0.305)				
RDB $_{t-2}$			0.397	0.317							0.343	0.352				
			(0.376)	(0.201)							(0.353)	(0.240)				
WB $_{t-1}$					0.351	0.253							0.138	0.104		
					(0.329)	(0.319)							(0.341)	(0.355)		
WB $_{t-2}$					0.451	0.556*							0.346	0.131		
					(0.314)	(0.293)							(0.671)	(0.672)		
Private $_{t-1}$							0.121	0.150							0.363	0.421
							(0.350)	(0.365)							(0.516)	(0.421)
Private $_{t-2}$							0.271	0.236							0.225	0.249
							(0.204)	(0.181)							(0.299)	(0.238)
Country FE																
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lag limit	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10
Collapse	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruments	42	48	42	46	42	49	42	46	42	46	42	46	42	46	42	46
Countries	108	108	98	98	108	108	105	105	70	70	67	67	70	70	69	69
Observations	3101	3101	2659	2659	2996	2996	2558	2558	1341	1341	1208	1208	1291	1291	1236	1236
AR(2)	0.646	0.438	0.445	0.360	0.296	0.163	0.392	0.461	0.690	0.932	0.595	0.367	0.732	0.912	0.639	0.559
Hansen	0.119	0.354	0.234	0.0176	0.0121	0.290	0.00128	0.00642	0.0336	0.0200	0.254	0.274	0.135	0.103	0.0661	0.0277

Source: Authors' calculations.

Note: All regressions are two-step system GMM. Year FE are not reported. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Windmeijer's finite-sample correction for the two-step covariance matrix, corrected standard errors clustered at the country-level in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The bottom rows report *p*-values for the Arellano-Bond test for AR(2) in differences and the Hansen test of joint validity of instruments. FE: fixed effects; MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.

Table A12. Coordination with IMF, system-GMM

	MDB	MDB	RDB	RDB	WB	WB	Pivate	Pivate
Fiscal Crisis with IMF (β1)	0.297***	0.272***	0.025	0.017	0.122**	0.117**	-0.125	-0.084
	(0.111)	(0.094)	(0.031)	(0.035)	(0.056)	(0.054)	(0.095)	(0.097)
Fiscal Crisis w/o IMF (β2)	0.010	0.012	0.004	-0.011	-0.026	-0.036	-0.109	-0.133*
	(0.051)	(0.050)	(0.027)	(0.029)	(0.037)	(0.037)	(0.075)	(0.073)
MDB $_{t-1}$	0.391	0.409*						
	(0.345)	(0.213)						
MDB $_{t-2}$	0.303	0.326						
	(0.281)	(0.201)						
RDB $_{t-1}$			0.133	0.274				
			(0.402)	(0.256)				
RDB $_{t-2}$			0.397	0.318				
			(0.376)	(0.198)				
WB $_{t-1}$					0.351	0.247		
					(0.330)	(0.325)		
WB $_{t-2}$					0.442	0.560*		
					(0.315)	(0.300)		
Private $_{t-1}$							0.074	0.092
							(0.316)	(0.337)
Private $_{t-2}$							0.294	0.259
							(0.197)	(0.179)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3103	3103	2661	2661	2998	2998	2560	2560
Lag limit	3-6	3-10	3-6	3-10	3-6	3-10	3-6	3-10
Collapse	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Instruments	43	49	43	47	43	50	43	47
Countries	108	108	98	98	108	108	105	105
AR(2)	0.638	0.452	0.444	0.355	0.308	0.170	0.295	0.362
Hansen	0.0377	0.207	0.0853	0.00877	0.00257	0.190	0.000307	0.00340

Source: Authors' calculations.

Note: All regressions are two-step system GMM. Year FE are not reported. Net flows are scaled by trend GDP. The sample period is from 1980 to 2015. Windmeijer's finite-sample correction for the two-step covariance matrix, corrected standard errors clustered at the country-level in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The bottom rows report *p*-values for the Arellano-Bond test for AR(2) in differences and the Hansen test of joint validity of instruments. FE: fixed effects; MDB: multilateral development banks; RDB: regional development banks; WB: World Bank.