Openness and financial stability Madhavi Pundit^{*} Arief Ramayandi[†] Christopher F Baum[‡] May 1, 2015

Abstract

This paper investigates the relationship between a country's financial openness and its domestic financial stability. We evaluate the relationship between components of gross capital flows and various measures of financial stability for 16 emerging and newly industrialized economies by considering the levels of gross capital flows. For each measure of financial stability, we employ systems of seemingly unrelated regression (SUR) estimators to allow for complete flexibility of the estimated relationships while allowing for cross-equation restrictions to be tested and, if warranted, imposed on the equation system. The findings suggest that although there are significant effects of gross capital flows on the financial stability proxies after controlling for a number of macroeconomic factors, the effects are not homogenous across our sample economies.

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1 Introduction

As a stylized fact, global imbalances, defined as the absolute value of world current account balances scaled by world GDP, have increased dramatically since the late 1990s (Gourinchas and Rey (2015), p. 591). This growth has great significance for emerging markets, as it has generally reflected capital flowing from those economies into the US and other 'first-world' markets. Researchers have stressed the importance of focusing on gross capital flows rather than net measures, as sizable, positively correlated movements in both inward and outward flows may be masked by a net figure (Broner et al., 2013). In recent years, a widely used measure of financial integration, the sum of cross-border claims and liabilities scaled by GDP, has markedly increased for many emerging economies (Lane and Milesi-Ferretti, 2007). Although movements in the capital account should mirror and offset those in the current account, valuations of cross-border claims may imply sizable wealth transfers between economies in response to changes in asset prices and exchange rates (Gourinchas and Rey (2015), p. 594). This may have a significant effect on emerging economies which tend to hold cross-border claims in the form of external sovereign debt.

With these stylized facts as a backdrop, we evaluate the relationship between gross capital flows and various measures of financial stability for 16 emerging and newly industrialized economies. We disaggregated the levels of gross capital flows into several categories and investigate their relevance for explaining movements in the stability of the financial sector.

The paper is organized as follows. Section 2 presents a review of the literature, while Section 3 discusses our data and empirical methodology. Section 4 provides our empirical findings, and Section 5 discusses their implications and offers concluding remarks.

2 Review of the literature

Capital flows to emerging markets have increased in recent years. The magnitude of flows has increased and volatility is high (Gourinchas and Rey (2015), p. 591). The literature has focused on the impact of capital flows on macroeconomic factors such as exchange rate pressures, build-up of domestic credit, pressures on asset prices and creation of bubbles, current account imbalances (Cardarelli et al., 2010) and also recently on macroeconomic volatility. On the one hand, financial integration allows for greater risk sharing. It may reduce financing constraints that can facilitate smoother consumption and investment, and reduce volatility. On the other hand, fluctuating flows and exposure to foreign shocks may increase domestic volatility. Evans and Hnatkovska (2007a,b) show that relation between financial integration and the volatility of output, consumption and investment is not monotonic. At low levels of integration, consumption volatility increases, but as integration increases, risk sharing benefits set in and volatility decreases. Empirical evidence on the relation between flows and macroeconomic volatility is not conclusive for emerging economies. Whether volatility increases or decreases may depend on the nature of flows (Hegerty, 2011) or on the level of financial development of the economy (Kose et al., 2003).

Macroeconomic volatility aside, the effect of financial capital flows on financial stability is more direct and with potential consequences for the real economy as the recent global crisis revealed (Erturk, 2005; Kaminsky and Reinhart, 1999).

Hence the issue of the impact of capital flows on financial stability in emerging markets has gained interest. There is a sizable literature on financial liberalization in general, which includes both deregulation of the domestic financial system and liberalization of the capital account and its relation to financial crises (Kaminsky and Reinhart, 1999). The literature considers that financial liberalization is likely to cause banking crises in emerging economies based on the evolution of competition, risk taking, and moral hazard, which is part of the liberalization process (Daniel and Jones, 2007). But the empirical evidence is again inconclusive on this relation (Eichengreen and Arteta, 2002) and the impact on stability may also vary depending on the short and medium run versus the long run, especially in capital markets (Kaminsky, 2005; Kaminsky and Schmukler, 2008).

With regard to capital flows in particular, some studies assess the link with financial sector efficiency, competitiveness and development (Andries and Capraru, 2013; Ahn, 2008), but there are fewer studies regarding the impact on financial sector stability in emerging economies. Giannetti (2007) shows that capital inflows may lead to overlending by banks as it increases the amount of funds available, and this can cause insolvencies which undermine the stability of the banking system. Mihaljek (2008) discusses the risks to stability associated with increased cross-border banking flows through foreign ownership of banks. One is the the traditional solvency risk, which he argues may be small because foreign-owned banks have a mandated regulatory capital base and are well managed overall. But the credit risk arising from rapid credit growth is relatively larger than in domestically owned banks, due to information asymmetry with regard to local borrowers. Further, foreign-owned banks face the risk of a slowdown or reversal of flows due to domestic or external triggers.

Caballero (2012) finds that surges in capital flows of all types increase the probability of banking crises, especially in emerging economies. But Furceri et al. (2011) show that large capital flows composed mainly of debt significantly increase the likelihood of banking (currency and balance of payments) crises, whereas equity and FDI flows have a negligible effect. Other studies also find that foreign currency debt increases the likelihood of financial crises (Bordo et al., 2010) Another trend in emerging countries which may pose a risk to stability is an increase in capital outflows. Desormeaux et al. (2008) find that outflows arising from an increase in foreign assets held by pension funds, as well as banks in Chile starting around 1997 did not significantly increase financial volatility.

3 Data and empirical methodology

In this section, we discuss the data sources and the estimation technique applied in the empirical investigation. Three categories of panel data enter the analysis: a set of proxies for financial stability, a set of gross capital flows, and a set of macroeconomic control variables.

3.1 Proxies of financial stability

The eight proxies of financial stability, taken from the World Bank's Global Financial Development Database (GFDD), are all ratio measures (with GFDD variable identifiers in the parentheses):

- Deposits (DL08): Financial system deposits to GDP (%)
- DomCredit (DI_14): Domestic credit to private sector (% of GDP)
- NetIntMargin (EI_01): Bank net interest margin (%)
- NonperfLoan (SI_02): Bank nonperforming loans to gross loans (%)
- LiqAssets (SI_06): Liquid assets to deposits and short term funding (%)

These items were chosen from GFDD due to their relevance and data availability. As the GFDD series are reported annually, the proportional Denton interpolation procedure (Bloem et al. (2001)) in Stata is used to create quarterly series.

3.2 Measures of gross capital flows

The six measures of gross capital flows, available from the MSCI Emerging Markets database, are:

- FDIAbroad: outward foreign direct investment made by country i
- FDIReportCty: inward foreign direct investment received by country i
- PortInvA: portfolio flows of financial assets held by country i
- PortInvL: portfolio flows of financial liabilities of country i
- OtherInvA: portfolio flows of other assets held by country i
- OtherInvL: portfolio flows of other liabilities of country i

Other assets and other liabilities include measures of trade credit, loans, currency and deposits, and the like. The financial account for country i is defined by the net of these six measures plus the change in official reserve assets, which are not considered in this analysis, as they will reflect policy measures.

3.3 Macroeconomic control variables

The macroeconomic variables used as controls, in once-lagged form, include:

- Real GDP (deviations from stochastic trend via Christiano–Fitzgerald filter)
- Exchange rate vs. USD, end of period
- Net exports
- Inflation rate, percent p.a.

The 16 countries included in the analysis are Argentina, Brazil, Colombia, Czech Republic, Greece, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Philippines, Poland, South Africa, Thailand, and Turkey. They were selected based on their data availability in terms of capital flows and GFDD coverage. The resulting panel is unbalanced quarterly data from 1989Q1 through 2011Q4.

3.4 Estimation strategy

We seek to identify the effects of the components of gross capital flows on a number of financial stability proxies in the context of unbalanced panels of cross-country data. In this context, we allow each country to have its own coefficient vector and error variance, as there is no reason to believe that the magnitude of these effects (or even their signs) may be equal across countries. To this end, we make use of Zellner's seemingly unrelated regression (SUR) estimator, specifying a separate equation for each country for each of the financial stability proxy variables. Unlike more restrictive approaches, such as fixed effects models, the use of SUR allows complete flexibility of the estimated relationships, while allowing for cross-equation restrictions to be tested and, if warranted, imposed on the equation system. Estimation of a system of country-level equations also provides for a gain in the efficiency of the estimates by taking the contemporaneous correlation of shocks into account.

In the empirical analysis, we specify two systems of seemingly unrelated regressions (SURs) for each of the five measures of financial stability: a total of 10 sets of estimates. Each system contains country-specific dependent variables for one proxy measure (e.g., the volatility of Financial Deposits ratio for country i), with countryspecific regressors representing the six components of gross capital flows and the macroeconomic control variables. The first system expresses the level of the financial stability proxy in terms of the levels of gross capital flows. The second system models the volatility of the financial stability proxy as related to the levels of gross capital flow components. Volatilities for both the financial stability proxies are computed from four-quarter rolling standard deviations of the level measures. As the volatility of the financial indicators are computed based on interpolated series, the first SURs system is used to see if the interpolation brought up substantial qualitative effects on the empirical findings.

4 Empirical findings

As each of the 10 estimated SUR systems include up to 96 slope coefficients for the gross capital flow components, we summarize our preliminary findings below in terms of the number of significant positive and negative relationships detected in each of the systems. There are up to 16 country-specific coefficients for each combination of gross capital flow component and financial stability proxy. Given the unbalanced nature of the panel, some countries' data do not appear in all of the estimated systems.

4.1 Summary of findings for the levels of financial proxies vs. levels of capital flows

For the levels of the financial stability proxies, Table 1 reports the fraction of coefficients (of the possible 16) that are significantly different from zero. Table 2 reports the number of significant positive relationships detected, while Table 3 reports the corresponding number of significant negative relationships. Table 4 reports the number of net significant relationships, that is, the number of significant positive relationships minus the number of significant negative relationships. As we can see from Table 1, most of the proxies for financial stability are seen to be meaningfully related to gross capital flows in half or more of the countries studied.

From these results, we may see that larger outward FDI flows have a generally positive effect on the levels of all financial stability proxies, with a clear positive impact on the ratios of Net Interest Margin, and a negative impact on Deposits and Liquid Assets. Larger inward FDI flows have a predominantly positive effect on Domestic Credit. It appears that most of the proxies for financial stability are indeed related to gross FDI flows.

Turning to portfolio investment, increases in portfolio investment assets and liabilities both have clear effects on the financial stability proxies, but with mixed effects on the financial stability proxies across the country sample. The results for other investment assets and liability flows are somewhat similar, although larger 'other investment' asset and liability flows have a strong positive effect on the ratios of Domestic Credit for a number of countries. We may conclude that both of these categories of gross capital flows have meaningful effects on most countries' proxies for financial stability.

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	31	62	44	44	19	19
DomCredit	56	56	44	50	62	44
NetIntMargin	31	31	38	44	38	25
NonperfLoan	25	25	19	44	31	31
LiqAssets	56	44	44	56	12	44

Table 1: Levels of FSP vs levels of capital flows: Percentage of significant coefficients (from 16 countries)

Table 2: Levels of FSP vs levels of capital flows: Significant positive coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	1	5	4	3	1	1
DomCredit	5	7	4	5	7	6
NetIntMargin	4	4	2	5	4	2
NonperfLoan	2	1	1	2	1	0
LiqAssets	3	3	3	5	2	3

Table 3: Levels of FSP vs levels of capital flows: Significant negative coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	4	5	3	4	2	2
DomCredit	4	2	3	3	3	1
NetIntMargin	1	1	4	2	2	2
NonperfLoan	2	3	2	5	4	5
LiqAssets	6	4	4	4	0	4

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	-3	0	1	-1	-1	-1
DomCredit	1	5	1	2	4	5
NetIntMargin	3	3	-2	3	2	0
NonperfLoan	0	-2	-1	-3	-3	-5
LiqAssets	-3	-1	-1	1	2	-1

Table 4: Levels of FSP vs levels of capital flows: Net significant coefficients (from 16 countries)

4.2 Robustness check with annual data

There is naturally a concern, when interpolation procedures have been used, that they may have qualitative effects on the empirical findings. To investigate this issue, the first set of SUR models (on the levels of the financial stability proxies) have been reestimated on the original annual GFDD data, with the gross portfolio flows data aggregated to annual frequency.¹ This necessarily reduces the variability of the gross flows data and their explanatory power, and reduces the sample size in the SUR models by a factor of four. On the other hand, employing the response variable in its original form reduces the variation to be explained.

Tables 5–8 may be compared with their counterparts from the quarterly measures, Tables 1–4. Table 5 illustrates that each of the gross capital flow variables have more prevalent effects on the levels of financial stability proxies in the annual data. In Tables 6 and 7, we see that the effects are more clearly positive than negative for most of the gross capital flow measures. Table 8 reinforces this conclusion, with all net effects displaying positive signs.

Although these results suggest that there is more empirical support for our hypotheses in the annual data, they should be treated with caution due to the very limited sample size of some of these regressions. Furthermore, although it is straightforward to aggregate the gross capital flows to annual measures, it is not sensible to compute volatility measures for the financial stability indicators from the original annual data, as in several cases it would exhaust the available data to compute four-quarter moving average standard deviations. Therefore, analysis of the effects of gross capital flows on the *volatility* of the financial stability proxies can only be

¹At present, the macroeconomic control variables are not included in these annual regressions.

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	62	50	62	81	69	81
DomCredit	50	75	50	75	69	62
NetIntMargin	56	69	50	69	81	56
NonperfLoan	62	56	56	50	62	50
LiqAssets	62	69	62	75	69	69

Table 5: Levels of capital flows: Percentage of significant coefficients (from 16 countries)

Table 6: Levels of capital flows: Significant positive coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	7	7	8	11	10	10
DomCredit	8	10	6	11	9	10
NetIntMargin	8	7	6	8	8	9
NonperfLoan	8	6	6	6	7	5
LiqAssets	8	7	7	8	7	8

Table 7: Levels of capital flows: Significant negative coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	3	1	2	2	1	3
DomCredit	0	2	2	1	2	0
NetIntMargin	1	4	2	3	5	0
NonperfLoan	2	3	3	2	3	3
LiqAssets	2	4	3	4	4	3

Table 8: Levels of capital flows: Net significant coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	4	6	6	9	9	7
DomCredit	8	8	4	10	7	10
NetIntMargin	7	3	4	5	3	9
NonperfLoan	6	3	3	4	4	2
LiqAssets	6	3	4	4	3	5

performed on the quarterly interpolated data. The robustness checks presented here clearly indicate that we are not manufacturing findings by applying the interpolation procedure; if anything, we are raising the bar for detecting significant relationships. Thus, proceeding with the quarterly interpolated data seems to be the most sensible strategy.

4.3 Summary of findings for the volatility of financial proxies vs. the level of capital flows

The impact of gross capital flows on financial sector condition may manifest itself in terms of the levels of these proxies, as we have discussed, but it may also have important effects on their volatility. Indeed, there may be more concern about the variability of these ratios as they are acting as proxies for financial stability. If there are wide variations in these ratios—for instance, in the net interest margin earned by the banking sector that may significantly reduce the stability of the financial sector, and call into question the adequacy of financial intermediaries' capitalization. Thus, we repeat the estimation for the volatility measures of the financial stability proxies rather than their levels. Table 9 reports the fraction of coefficients that are significantly different from zero. Table 10 reports the number of significant positive relationships detected out of 16 possible, while Table 11 reports the corresponding number of significant negative relationships. Table 12 reports the number of net significant relationships, that is, the number of significant positive relationships minus the number of significant negative relationships.

Table 9 reveals that gross capital flows have significant effects on the volatility of the financial stability proxies in most cases, with at least half of the countries reporting significant relationships for many proxies. These effects may take either sign, as Tables 10–12 reveal. For instance, larger outward FDI flows have a net positive effect on all of the proxies, while the effects of inward FDI flows are mixed. Table 10 reveals that outward and FDI flows have strong positive effects on Deposits and Nonperforming Loands ratios for a number of countries.

Portfolio investment flows have strong effects on a number of proxies, particularly Financial Deposits and Domestic Credit. For Deposits, positive and negative effects appear with somewhat similar frequency, while effects on Domestic Credit are predominantly negative. Other investment asset and liability flows have generally negative effects on the financial stability proxies. It appears that gross capital flows have meaningful linkages to both the level and volatility of the financial proxies in most of the countries studied.

Table 9: Volatility of FS	SP vs levels of capits	al flows: Percenta	age of signif	ficant coeffi-	
cients (from 16 countrie	es)				
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	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	56	44	62	31	31	44
DomCredit	31	31	44	38	31	31
NetIntMargin	31	44	44	25	50	31
NonperfLoan	38	38	44	31	31	38
LiqAssets	31	25	31	38	19	31

Table 10: Volatility of FSP vs levels of capital flows: Significant positive coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	6	5	4	3	2	1
DomCredit	3	1	2	1	1	2
NetIntMargin	4	3	5	2	1	1
NonperfLoan	5	4	6	3	4	2
LiqAssets	4	3	3	4	1	3

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	3	2	6	2	3	6
DomCredit	2	4	5	5	4	3
NetIntMargin	1	4	2	2	7	4
NonperfLoan	1	2	1	2	1	4
LiqAssets	1	1	2	2	2	2

Table 11: Volatility of FSP vs levels of capital flows: Significant negative coefficients (from 16 countries)

Table 12: Volatility of FSP vs levels of capital flows: Net significant coefficients (from 16 countries)

	FDIAbroad	FDIReportCty	PortInvA	PortInvL	OtherInvA	OtherInvL
Deposits	3	3	-2	1	-1	-5
DomCredit	1	-3	-3	-4	-3	-1
NetIntMargin	3	-1	3	0	-6	-3
NonperfLoan	4	2	5	1	3	-2
LiqAssets	3	2	1	2	-1	1

4.4 Untangling the mixed effects

Despite the meaningful linkages between the volatility of financial proxies that capture the state of financial stability in the economies under study, our empirical results seems to be in line with previous findings on the inconclusive relation between capital flows and macroeconomic volatility and financial stability. Signs of the statistically significant coefficients reported in the previous subsection vary across countries. Here, we confront those coefficients with several financial aggregates and macroeconomic variables to look for meaningful patterns that may shed some lights on possible reasons behind those sign differences.

The financial aggregates considered here are: the relative size of the banking sector in the economy (represented by the deposit money banks' assets to GDP), the credit to deposit ratio and the liquid assets to deposit ratio. The macroeconomic variables observed are: the degree of trade openness (the sum of exports and imports as a ratio to GDP), inflation, the degree of exchange rate flexibility (measured by exchange rate volatility) and real GDP. All aggregates are averaged for the whole sample period, except for exchange rate volatility, which is measured as the standard deviation of the entire series.

4.4.1 Financial aggregates

To look for plausible patterns, we plot the significant coefficients of the different measures of gross capital flows in ascending order of the financial aggregates and see if an obvious trend emerges. The relative size of the banking sector appears to be related with the effect of capital outflows on financial stability. A larger ratio of bank assets to GDP tends to be associated with higher effects of FDI and other investment inflows on the volatility of deposits, domestic credit, net interest margin (NIM) and nonperforming loans (NPL). Hence, the effects on financial stability of FDI and other investment inflows are weaker in countries with a larger banking sector. Outflows of FDI and other investments, on the other hand, tend to have a stronger effect on financial stability as the size of the banking sector size increases. The effects of portfolio flows on the degree of financial stability are the opposite of those of FDI and other investments, whereas outflows tend to be associated with smaller financial stability effects in countries with a larger banking sector, and vice versa.

When plotted against the credit to deposit ratio, it seems that almost all types of capital flow tend to be less enhancing to financial stability as the ratio increases. The only exception is portfolio inflows, which appear to be more financial stabilityenhancing in countries with a larger credit to deposit ratio.

Against different levels of liquid assets, the effect of portfolio inflows on financial stability reverses. Higher portfolio inflows tend to be associated with weaker financial stability in countries with larger liquid assets. This is also true for outflows of other investments. Other investment inflows and FDI inflows, on the contrary, tend to have more financial stability-enhancing effects in countries with larger liquid assets.

These patterns suggest that the relation between gross capital flows and financial stability is complex and far from straightforward. They also shed some light on factors that underlie the inconclusiveness of the empirical relation between capital flows and financial stability. In what follows, we delve further by examining possible patterns between the estimated coefficients and some macroeconomic variables.

4.4.2 Macroeconomic variables

Some patterns that suggest that macroeconomic variables may explain the impact of capital flows on financial stability emerge. In low income countries, FDI outflows tend to increase volatility of NIM and liquid assets compared to high income countries. This pattern is also seen for the impact of portfolio investment outflows on nonperforming loans. On the other hand, FDI inflows tend to reduce the volatility of financial system deposits in low income countries. Portfolio investment inflows and other investment inflows and outflows tend to be stability-inducing for domestic credit in low income countries, while there is no significant relation between these flows and credit volatility in high income countries. Other investment inflows are also more stability-inducing when we consider deposits and liquid assets for low income countries. Other investment outflows show no relation with volatility of NIM in low income countries, but for higher GDP countries, the relation is negative, i.e., it tends to reduce volatility. We see a decreasing impact on volatility of liquid assets as GDP increases.

Trade openness also explains some of the estimated relations between flows and financial volatility. In countries that are less open, FDI outflows tend to increase volatility of NIM more than in countries that have greater openness. Similarly, FDI inflows increase the volatility of liquid assets in less open countries, and portfolio inflows show this relation with non-performing loans. In countries with low openness, other investment inflows and outflows have no significant relation with the volatility of domestic credit, but they are stability-inducing in countries with higher openness. Again, other investment outflows increase volatility of non-performing loans in less open countries, but not in more open countries. These flows tend to decrease the volatility of domestic credit in less open countries more than in countries with greater openness.

In countries with low inflation, portfolio inflows and other investment outflows tend to reduce the volatility of non-performing loans whereas in countries with high inflation they increase that volatility. Similarly, other investment inflows also reduce volatility of this financial variable more in countries with low inflation. Other investment outflows reduce the volatility of domestic credit in low inflation countries but increase volatility in high inflation countries. But the impact on NIM is such that the flows reduce volatility to a lesser extent in low inflation countries. Then, FDI outflows tend to increase the volatility of liquid assets in low inflation countries but are stability-inducing in high inflation countries.

Exchange rate volatility also plays a role in determining the impact of capital flows on financial sector volatility. In countries with low exchange rate volatility, which suggests a more fixed regime, FDI outflows increase the volatility of NIM compared to countries with a freer exchange rate regime. This also holds for the relation between FDI inflows and non-performing loans, portfolio inflows and domestic credit as well as liquid assets, and other investment inflows and outflows and non-performing loans. The opposite pattern is seen in some cases. In countries with a fixed exchange rate regime, FDI inflows are more stability-inducing for domestic credit than in countries with a floating regime. Similarly, portfolio outflows fail to exhibit a significant relation with the volatility of non-performing loans in fixed regime countries, but increase volatility in others. These flows induce stability in liquid assets among countries with fixed regimes but increase volatility among the others.

5 Concluding remarks

In conclusion, this investigation of the relationship between quarterly gross capital flows and proxies for financial stability in a cross-country setting reveals that there are significant effects of gross flows' levels on both the level and volatility of the financial stability proxies after controlling for a number of macroeconomic factors. Robustness checks on the level series, expressed at annual frequency, indicate that the results are not sensitive to the interpolation procedure applied to the financial stability proxies.

Our study confirms the inconclusive evidence on the relation between capital flows and financial stability found in the literature as the effects of capital flows on financial stability vary quite substantially across countries. The variation is found not only in terms of magnitude, but also in the estimated signs of the coefficients. We attempt at providing possible explanations for those variations. We argue that the differences in coefficients could be partially explained by differences in some financial aggregates and key macroeconomic variables. For example, different types of capital inflows tend to be more stability-inducing in lower-income countries. The meaningful patterns discussed in our study shed some light on why the effect of capital flows on financial stability may differ across countries, and offer a possible agenda for future research to more fully understand the relation between capital flows and financial stability.

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