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Capital Flows and Spillovers

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Table of Contents

About the New Thinking and the New G20 Project

The project aims to promote policy and institutional innovation in global economic governance in two key areas: governance of international monetary and financial relations and international collaboration in financial regulation. Sponsored by CIGI and the Institute for New Economic Thinking, the project taps new research and next-generation scholars in the emerging economies, linking them to established networks of researchers in the industrialized world. The objective over the longer run is to create a more permanent and self-sustaining research network that will provide a continuing stream of new ideas, sustain international collaboration and integrate researchers from the emerging economies into global policy discussions.

Miles Kahler and Barry Eichengreen (principals in the original project) recruited C. Randall Henning (new principal, American University) and Andrew Walter (University of Melbourne) to lead two research teams devoted to macroeconomic and financial cooperation and to international financial regulation. Gathering authors from eight countries, the project consists of 11 CIGI papers that add to existing knowledge and offer original recommendations for international policy cooperation and institutional innovation. CIGI will also publish the final papers as an edited volume that addresses the global agenda in these issue-areas.

About the Author

Şebnem Kalemli-Özcan is a Neil Moskowitz Endowed Chair Professor of Economics at University of Maryland, College Park. She is a research associate at the National Bureau of Economic Research and a research fellow at the Center for Economic Policy Research. A native of Turkey, Sebnem received her B.S. in economics from Middle East Technical University in 1995 and her Ph.D. in economics from Brown University in 2000. She was the Duisenberg Fellow at the European Central Bank in 2008 and held a position as lead economist/adviser for the Middle East and North Africa Region at the World Bank during 2010-2011. She was selected as one of the three senior research fellows of the International Monetary Fund (IMF) in 2013. She has held positions as a visiting professor at Bilkent University, Koc University and Harvard University. She has published extensively in the areas of international finance, international development and applied growth theory in journals such as *American Economic Review*, *Journal of Finance*, J*ournal of the European Economic Association*, *Review of Economics and Statistics*, *Journal of International Economics* and *Journal of Development Economics*. Her work has also appeared in many invited book volumes and policy outlets, and featured in World Bank reports and IMF *World Economic Outlooks*. She is the first Turkish social scientist to receive the Marie Curie International Reintegration Grants prize (in 2008) for her research on European financial integration. Her current research focuses on measuring the globalization of European firms and investigating the linkages between real and financial sectors in a globalized economy, together with the effects of such linkages on economic fluctuations and development.

Acronyms

BoP	balance of payments
FDI	foreign direct investment
FX	foreign exchange
GDF	Global Development Finance
IFS	International Financial Statistics
IMF	International Monetary Fund
OECD	Organisation for Economic Co-operation and Development
PPG	public and publicly guaranteed
VIX	Chicago Board Options Exchange Volatility Index

Executive Summary

This paper shows that debt flows have contractionary effects on emerging markets' output, while equity flows have expansionary effects. Such correlations can be driven by counter-cyclical debt flows and pro-cyclical equity flows, or by debt flows that lead to an appreciation and hurt exports, and by equity flows that improve the productivity of the real economy, broadly defined. It focuses on business cycle frequencies and the effect of global risk appetite in driving capital flows into emerging markets. A positive initial impact of debt flows on output is followed by a negative impact. Equity flows have a positive impact on output initially, and thereafter. Foreign direct investment (FDI) inflows have a positive effect on output only after a two-year lag, and if this period coincides with increased global uncertainty, the effect on output reverses, but the total effect stays positive. This result also holds for equity flows, suggesting that during increased periods of uncertainty, private investors leave emerging markets. Quantitative impacts are not large except in the case of FDI flows.

Introduction

Do gross capital flows import global shocks to emerging markets? If so, what are the output spillovers from such shocks to emerging markets and what tools should emerging market central bankers use to deal with them? Academics and policy makers have fiercely debated these central policy questions.

The textbook open economy model states that countries with open capital markets must choose between monetary autonomy and exchange rate management. In order to be able to deal with global shocks imported by capital flows, countries must use a floating exchange rate as the shock absorber, leaving monetary policy to be the tool for other domestic policy considerations. Hélène Rey (2013) recently challenged this centrepiece of international macroeconomics. Her argument is that widespread co-movement in capital flows, asset prices and credit growth across countries — a global financial cycle — makes the trilemma irrelevant: independent monetary policies are possible if, and only if, the capital account is managed. To put it differently, flexible exchange rates will not absorb global shocks (such as global financial crisis) that are imported across countries by extensive gross capital flows.[1]

Floating exchange rates will absorb some of the shocks, but ultimately we want to know the spillover effects of capital flows on the output of the emerging markets. As long as flexible rates do not absorb all the shocks, or emerging markets do not have fully flexible exchange rate regimes and instead use managed floats, there will be spillover effects, where the output of emerging markets cannot be insulated from global shocks. Of course, capital flows themselves are endogenous responses to different domestic shocks and, hence, it would be naive to see them purely as an exogenous force importing global shocks and affecting emerging markets' GDP.

The approach adopted in this paper will focus on dynamic correlations in the data by investigating the effects of lagged capital flows on current output and compare such effects during risk-on, risk-off periods, proxied by VIX (global financial cycle). The paper documents the output spillover effects of capital flows at business cycle frequencies, where the time variation in the data is taken seriously such that the methodology will differentiate between the contemporaneous effect and lagged effects.

The paper will focus on country and capital flow heterogeneity, investigating several sub-samples of countries (emerging, developing and advanced) and different asset classes (FDI, equity versus debt). Results will always be conditioned on lagged GDP growth proxying for the general economic condition of each country, combined with country and year effects, which will proxy unobserved country and time heterogeneity.

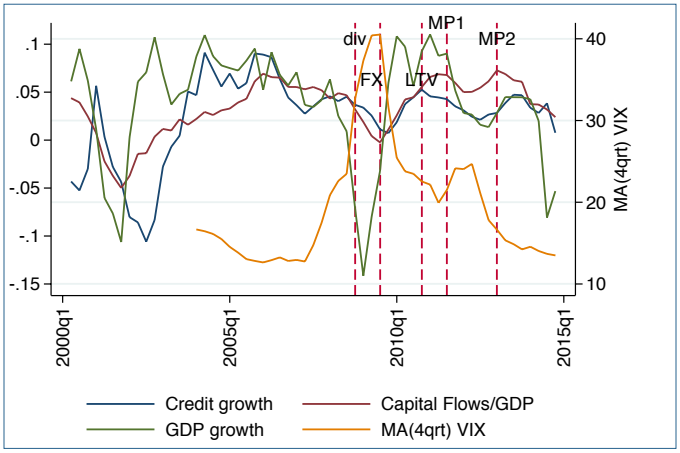
Typically, capital inflow episodes are associated with higher aggregate demand and output, real appreciation of the domestic currency, and trade and current account deficits (see Végh 2013; Reinhart and Rogoff 2009). In a standard two-period model, it is easy to show that an economy's response to three shocks (high domestic demand, fall in world interest rate and an exogenous

1 The empirical evidence on the issue is so far mixed. Klein and Shambaugh (2013) find evidence that more exchange rate flexibility is associated with greater monetary policy autonomy. As also shown by Aizenman, Chinn and Ito (2010), Klein and Shambaugh (2013) and Abiad et al. (2012), domestic interest rates of countries with less flexible regimes move closely with the US monetary policy shocks or with the countries they peg to. According to these authors, this is because countries that are de facto pegged against the US dollar will "import" US monetary policy, while free floaters will have the exchange rate as the shock absorber. Rey (2013), on the other hand, shows that global shocks, measured by VIX (the Chicago Board Options Exchange Volatility Index, a widely used measure of market risk), are the key determinant of capital flows and credit growth for any country in her sample, regardless of the exchange rate regime.

capital flow), will be identical, meaning macroeconomic effects of capital flows, such as a consumption boom and a real appreciation, will be the same regardless of the shock. In a model with nominal rigidities, there will be a real appreciation via higher inflation if the exchange rate regime is fixed, and via a fall in the nominal exchange rate if the exchange rate is flexible. Nevertheless, a real appreciation (depreciation) will take place in both types of model as a result of capital inflows (outflows) and, depending on the model, this may or may not be accompanied by a consumption boom. Hence, capital flows can be counter-cyclical or pro-cyclical, or lead to changes in output. This paper will make use of the insight from Rey (2013), where capital flows to emerging countries in the short run are mostly determined by global risk appetite, proxied by VIX, and will examine the effect on output in a differences-in-differences setting comparing high and low episodes of VIX.

Why is it important to document the dynamic patterns between capital flows and output in emerging markets at business cycle frequencies?[2] These correlations are the root cause of policy makers' response to capital flows. It is important for policy makers to resist appreciation, that is, "lean against the wind" as a result of capital inflows. As documented extensively in the literature, this "fear of floating" brought about a "managed float" system that is used widely by emerging market central bankers (see Calvo and Reinhart 2002; Kaminsky, Reinhart and Végh 2005). In general, central bankers use foreign exchange (FX) intervention or capital controls to manage the exchange rates. A non-sterilized intervention will mean an increase in money supply via higher international reserves and, hence, limit appreciation as a result of inflows, but will also cause overheating and inflation. Since policy makers do not want such an outcome and want to limit additional liquidity in the system, which will also cause financial stability concerns, they mostly engage in a sterilized intervention by selling government bonds to absorb the additional liquidity. However, since what government sells and what foreigners buy are not perfectly substitutable assets (portfolio channel), in general, sterilized interventions are not being effective in absorbing the domestic liquidity, although they are effective in managing the exchange rate (see Craig and Humpage 2001; Frankel 1986). It is also possible that the news that central banks are intervening in support of the currency will cause speculators to expect an increase in the price of that currency in the future, buying the currency today and bringing the expected price change. As a result, many emerging market central bankers also use macroprudential policy to a great extent.

Figure 1: The Case of Turkey



Data source: International Financial Statistics (IFS) and World Bank Group.

The effectiveness of macroprudential policies in terms of curbing credit growth seems to be suspect, though, as shown by Forbes and Klein (2013) and Forbes, Fratzscher and Straub (2014).

Figure 1 is a case in point. Here, the experience of Turkey, a typical emerging market country, is plotted. The correlation between capital flows and credit growth (which parallels the output growth) is evident. It is also clear that during periods of heightened global uncertainty, flows go down and vice versa. What is interesting is that policy reaction is also endogenous to this relationship between VIX and capital flows. Between 2008 and 2013, the Turkish central bank implemented several policies to deal with capital inflows and an overheating economy. In October 2008, it passed the dividend policy, which requires banks to seek approval before distributing dividends. In June 2009, it passed the FX policy, which allows non FX-earnings companies to borrow in FX from local banks, provided the FX loan amount is greater than US$5 million and the maturity date is longer than a year. The same law bans consumers from taking out FX-linked loans. In December 2010, the Turkish central bank implemented a ceiling for loan-to-value ratio on housing loans to consumer (at 75 percent) and on purchases of commercial real estate (at 50 percent). In spring 2011, there was additional guidance to banks that credit growth (adjusted for FX movements) should not exceed 25 percent. The first true macroprudential policy (MP1 in Figure 1) is in June 2011, introducing higher risk weights for fast-growing consumer loans.[3] In June 2011, there was also an increase in consumer

2 The literature, so far, has produced mixed results on the dynamic relationship between capital flows and output. Chinn and Prasad (2003) run panel regressions with annual data of current account and growth, obtaining weak results, sometimes positive, sometimes negative, depending on the control variables used. Most of the literature focuses on the long-run relationship between capital flows and growth, also finding different results depending on the country sample used. See Alfaro, Kalemli-Özcan and Volosovych (2011) for a survey of this literature.

3 For new general-purpose loans with maturities below two years, the capital adequacy risk-weight is increased to 150 percent (from 100 percent). For new general-purpose loans with a maturity greater than two years, the risk-weight is increased to 200 percent (from 100 percent).

loans provisioning.[4] These are combined with limits to credit card debt. In September 2011, there were changes to minimum capital adequacy requirements for banks with foreign strategic shareholders. The minimum ratio would depend on various factors such as the credit default swap spread of the parent and its sovereign, European Banking Authority stress test results and the public debt ratio in the country of origin. In January 2013, a second set of macroprudential policies started (MP2 in Figure 1) to increase the tax rates taken from interest income of short-term deposits. Overall, these measures seem to have had an effect on curbing the credit growth, in particular, loan to value and macroprudential, in the case of Turkey, and capital flows moved more with the VIX, except the last period, where, in spite of low VIX, capital flows declined.

As a result, it is important to evaluate the dynamic patterns in the data in terms of output growth (credit growth) and capital flows, since this is what the policy makers will look at first before undertaking the appropriate policy response.

The rest of the paper proceeds as follows. In the second section, the data is described and dynamic patterns in figures are shown. The third section undertakes a systematic regression analysis, and the final section draws conclusions.

Data and Dynamic Patterns

International Monetary Fund (IMF)-IFS data were used. The IFS database is the most comprehensive and comparable source of balance-of-payment (BoP) statistics for many countries. Nevertheless, there are several issues with the compilation of the BoP statistics, as discussed in greater detail by Lane and Milesi-Ferretti (2001) and Alfaro, Kalemli-Özcan and Volosovych (2008). There are substantial country differences in terms of time period coverage, and missing, unreported or misreported data, in particular for developing countries. Some countries do not report data for all forms of capital flows. Outflows data tend to be misreported in most countries and, as a result, captured in the "errors and omissions" item.[5] Unfortunately, it is hard to verify whether the data is really missing or is simply zero.[6] Due to the debt crisis of the 1980s, there are several measurement problems related to different methodologies of recording non-payments, rescheduling, debt forgiveness and reductions.[7]

The IFS database covers both private and public issuers and holders of debt securities. However, it is difficult to divide the available data by private-public creditor and debtor. Although the IFS reports the transactions by monetary authorities, general government, banks and other sectors, this information is not available for most countries for long periods of time. The World Bank's Global Development Finance (GDF) database, which focuses on the liability (debtors) side as the source of the data, provides the detailed debt decomposition into official and private borrowers, and some information on the identity of creditors. The GDF data was used in an effort to supplement the data missing in BoP statistics, and decompose net (total) debt into public and private debt flows by assigning the components to the appropriate debt category. For example, we can confidently argue that "Use of IMF credit" is the sovereign-to-sovereign transaction, but the creditor in "Public and publicly guaranteed [PPG] debt" could be either the private entity or the sovereign.

The most important issue with the GDF database, however, is the fact that it covers the data *only* for the countries that are considered developing (by the World Bank) at the moment a given vintage of the GDF is released. If the World Bank reclassifies a country as "high-income," it is no longer included in the database.[8] The historic vintages of the GDF (available at http://data.worldbank.org/data-catalog/ international-debt-statistics) are used to find out which countries were in the database before and which are there now.

Cross-border capital flows can take the form of foreign direct, portfolio equity and debt investment, constituting the financial account — the mirror image of current account in the BoP statistics. Figure 2 plots the average current account balance with a reverse sign as a measure of total net capital flows from more than 100 countries, together with different types of flows.

4 The general provisions were increased from one percent to four percent. Specific provisions for closely followed-up loans (Group 2) increased from two percent to eight percent. The higher provisioning requirements are for banks having a consumer loan portfolio exceeding 20 percent of total loans or having a general-purpose loan non-performing loan greater than eight percent. If there is a restructuring of the loan allowing maturity extension, a minimum of 10 percent provisioning is required.

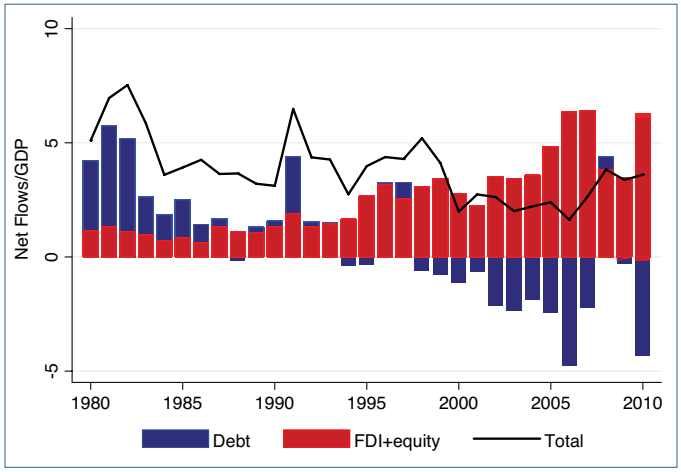
5 Frankel (2001), for example, argues that data collection is much better for capital flowing into a country than capital flowing out. The author gives the example that until 1994, no comprehensive survey of US residents' holdings of foreign securities had been conducted since World War II.

6 Several developing countries tend to report data for liabilities only, and no data for assets. This is especially the case for FDI flows. Some of these data, reported in the liability line, seem to correspond to net flows, that is, liabilities minus assets. However, it is difficult to verify whether this is the case as opposed to the asset data simply not being available. For example, portfolio equity data for most developing countries were negligible until recently.

7 As noted by Lane and Milesi-Ferretti (2001), these issues create large discrepancies between debt data reported by different agencies.

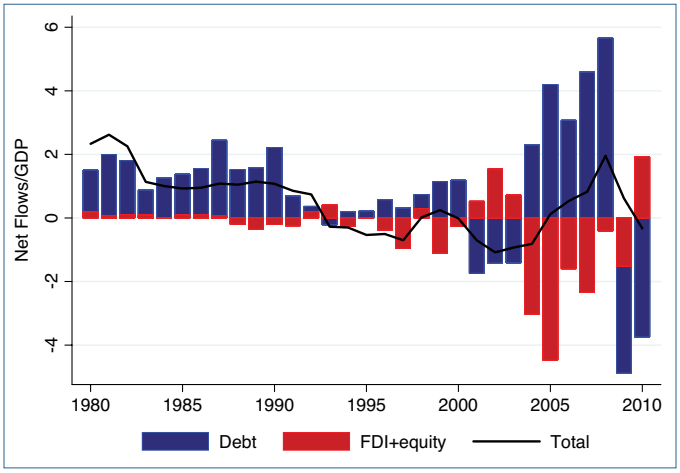
8 For example, the note on the November 2007 vintage of the GDF (available online at http://data.worldbank. org/data-catalog/international-debt-statistics) explicitly says: "Barbados, Czech Republic, Estonia and Trinidad and Tobago are no longer included in the database as they were reclassified in July [of 2007] as high-income countries."

Figure 2: Total Net Capital Flows — All Countries



Data source: IFS and World Bank Group.

Figure 3: Total Net Capital Flows — OECD



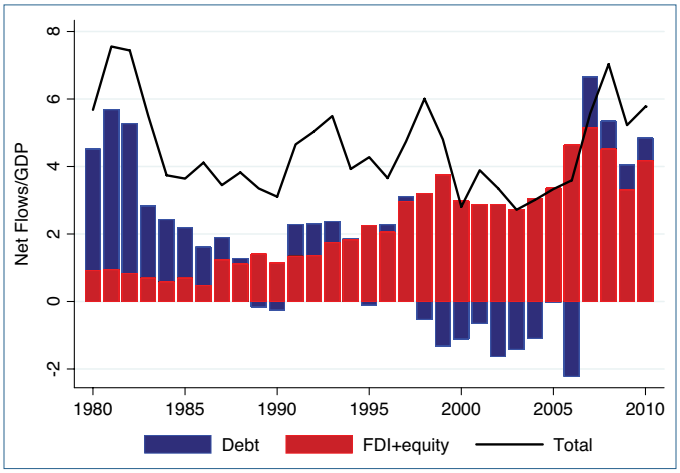
Data source: IFS and World Bank Group.

The figure shows that the world is running a current account deficit, around roughly five percent of GDP, implying positive net capital flows on average since the 1980s. Since the 1990s, however, countries seem to be net borrowers in FDI and equity investment, and net lenders in debt instruments. This simple plot hints that the current account may not be informative in terms of testing the predictions of certain classes of models for the amount and direction of capital flows and their implications for economic fluctuations and growth. The appropriate definition (FDI versus debt, public versus private or net versus gross flows) must be used depending on the question being asked.

Figures 3 and 4 show that these patterns are driven by the fact that during the last few decades, emerging markets borrowed more in terms of FDI and equity, while developed countries borrowed more in terms of debt. These observations should not lead to the conclusion that emerging and developing countries are net lenders and developed countries are net borrowers, although (like China and United States), it is simply that most of the high-growth countries are still net borrowers, as shown in Figure 5, but the type of borrowing they do has changed during the last decade.

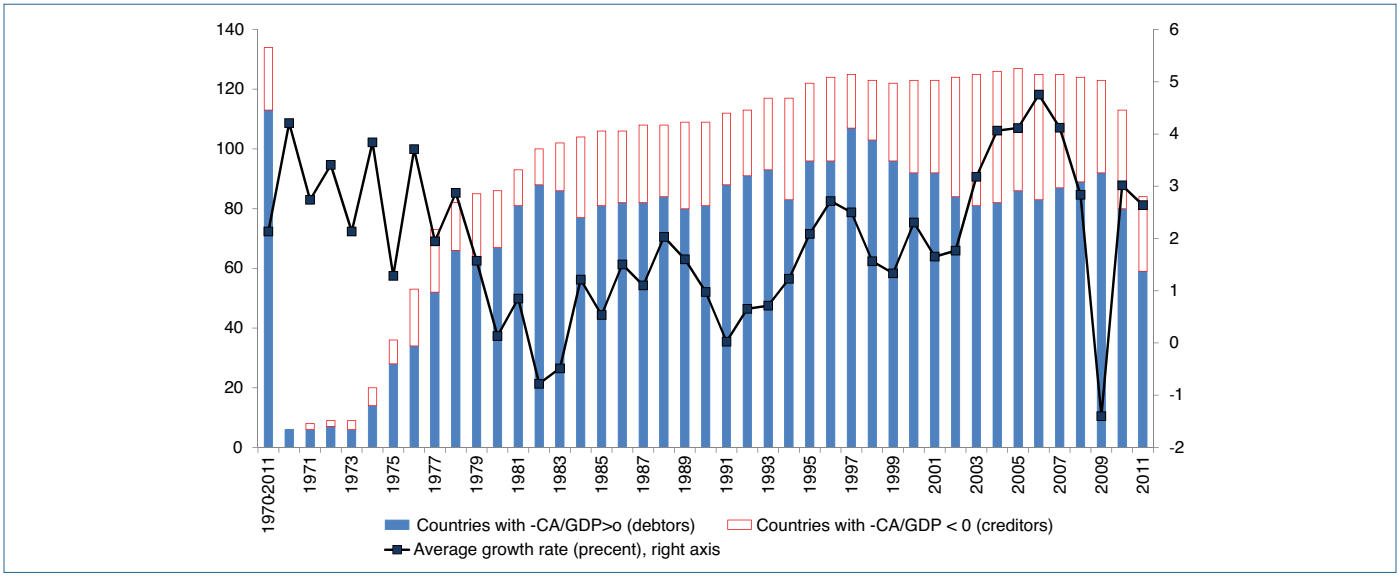
The figures clearly show the importance of investigating gross flows instead of net flows from the perspective of policy making. Figures 6, 7 and 8 show gross inflows by type and plot how dynamics of different asset classes evolve with VIX. It is very interesting to see that during increased periods of risk, proxied by VIX, countries that are members of the Organisation for Economic Co-operation and Development (OECD) lose some flows, but equally from both types. Emerging markets and developing countries, on the other hand, lose a significant chunk of FDI and equity types of flows as opposed to debt.

Figure 4: Total Net Capital Flows — Benchmark Emerging Markets



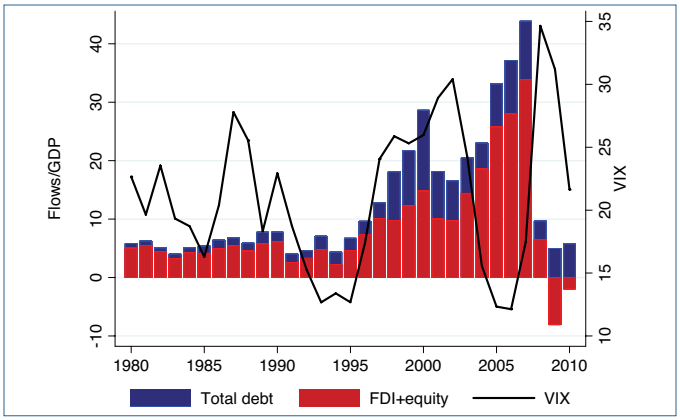
Data source: IFS and World Bank Group.

Figure 5: Creditors and Debtors among Developing and Emerging Countries



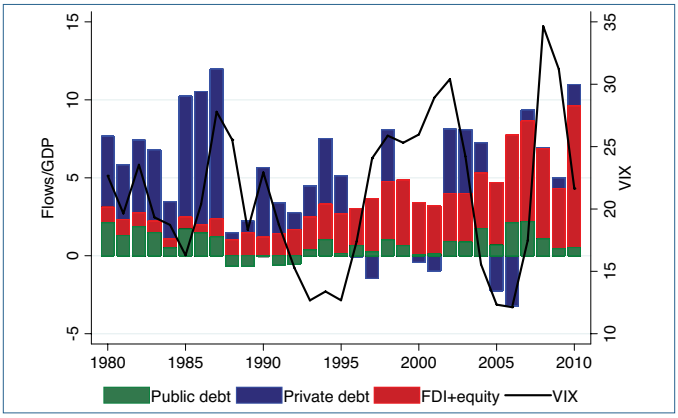
Data source: IFS and World Bank Group.

Figure 6: Total Flows and VIX — OECD



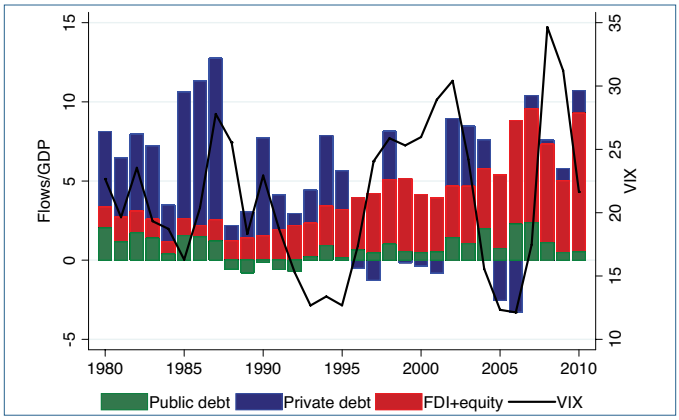
Data source: IFS and World Bank Group.

Figure 7: Total Flows and VIX — Benchmark EM



Data source: IFS and World Bank Group.

Figure 8: Total Flows and VIX — All Developing



Data source: IFS and World Bank Group.

Regression Analysis

We run a simple form of a dynamic panel regression, where we regress change in output from the period capital flow arrives into several future periods on capital flows. This will be akin to an impulse response function done via the local projections method:

$$\Delta \log GDP_{i,t+k} = \alpha_i + \lambda_t + w\Delta \log GDP_{i,t-1} + \beta \text{ Capital Flows}_{i,t} + \epsilon_{i,t} \quad (1)$$

Controlling country and time effects and lagged GDP growth is very important to capture first order endogeneity, due to unobserved heterogeneity and omitted variables. Simultaneity is less of a concern for us, since we want to know how the correlation between flows and output changes over time. We will consider $k = 1, 2, 3, 4$.

Table 1 shows that, on impact, there is a positive correlation between all types of capital flows and output growth, conditional on lagged growth and country and year fixed effects. First order endogeneity concerns, such as omitted variables and unobserved country and common time influences, are all controlled here. These correlations are consistent with low-growth countries' governments borrowing in the form of debt to smooth out transitory shocks, and high-growth countries receiving private flows. They are also consistent with private equity and FDI flows relaxing credit constraints and causing a boom in the domestic economy, whereas public borrowing crowds out private investment and, hence, hurts growth. Debt flows causing an appreciation and hurting exports and, hence, lowering output for a given policy rate, is also a possible story.

In Table 2 and 3, right-hand side variables two and three years are lagged, and lagged growth is conditioned on; however, here it is not very plausible to think that results are driven by booming economies attracting FDI and equity, and low-growth economies borrowing in debt flows from official agencies.

Table 1: Capital Flows and Output Growth

	(1)	(2)	(3)
Δlog (GDP)$_{t-1}$	0.179*** (0.052)	0.171** (0.051)	0.148** (0.053)
(FDI and Equity Inflows)/GDP)$_{t-1}$	0.051** (0.010)		
(Debt Inflows/GDP)$_{t-1}$		0.051*** (0.008)	
(All Private Inflows/GDP)$_{t-1}$			0.043** (0.020)
Obs.	2,636	2,649	2,353
Year FE	yes	yes	yes
Country FE	yes	yes	yes

Robust standard errors in parentheses.
*p<0.05, **p<0.01, ***p<0.001

The magnitude of the effect is such that a 10 percentage point increase in FDI, equity or debt flow increases growth by 0.5 percentage point contemporaneously (flows in t-1 and growth from t-1 to t). Tables 2 and 3 reveal that this relationship is positive when lagged flows are used for FDI and equity flows, but negative for debt flows, since all private flows are defined as the sum of FDI, equity and private debt. Table 2 implies similar magnitudes, yet Table 3 implies a total effect of a 10 percentage point increase in debt leading to a -0.3 to 0.5 percentage point decrease in growth, depending on global risk appetite being high or low, respectively. On the FDI and equity side, Table 3 implies a two percentage point increase in growth over three years, even though some of the FDI and equity flows do leave due to a high VIX environment. Both tables show that lagged growth is a very good predictor of current growth.

Table 2: Capital Flows and Output Growth: Effects after Two Years

	(1)	(2)	(3)
Δlog (GDP)$_{t-1}$	0.179*** (0.052)	0.171** (0.051)	0.148** (0.053)
(FDI Inflows)/GDP)$_{t-2}$	0.023 (0.02)		
(Debt Inflows/GDP)$_{t-2}$		-0.027*** (0.001)	
(All Private Inflows/GDP)$_{t-2}$			0.053** (0.020)
Obs.	2,636	2,649	2,353
Year FE	yes	yes	yes
Country FE	yes	yes	yes

Robust standard errors in parentheses.
*p<0.05, **p<0.01, ***p<0.001

Table 3: Capital Flows and Output Growth: Effects after Three Years and the Role of VIX

	(1)	(2)	(3)
$\Delta\log(GDP)_{t-1}$	0.168** (0.053)	0.170** (0.054)	0.137** (0.053)
$(FDI\ Inflows/GDP)_{t-3}$	0.2631** (0.091)		
$(FDI\ Inflows/GDP)_{t-3} \times VIX$	-0.010** (0.003)		
$(Debt\ Inflows/GDP)_{t-3}$		-0.054** (0.009)	
$(Debt\ Inflows/GDP)_{t-3} \times VIX$		-0.004 (0.002)	
$(All\ Private\ Inflows/GDP)_{t-3}$			0.156** (0.068)
$(All\ Private\ Inflows/GDP)_{t-3} \times VIX$			-0.008** (0.003)
Obs.	2,636	2,649	2,353
Year FE	yes	yes	yes
Country FE	yes	yes	yes

Robust standard errors in parentheses.
*p<0.05, **p<0.01, ***p<0.001

Next, we focus on the VIX-driven capital flows and compare the effects of such flows on output during high and low episodes of global risk appetite as done in Table 3. Private flows such as FDI and equity leave the country during periods of heightened uncertainty. During normal times they flow in and have an expansionary effect, since their total effect is positive with a joint significance. Again, total effect is such that a 10 percentage point increase in FDI will increase growth by two percentage points over three years, even though some FDI leaves the country. This suggests that FDI and equity flows might come into booming economies originally, but then they also have an additional expansionary effect. The total effect of debt flows on output, on the other hand, is negative; as argued above, a 10 percentage increase in debt flows will lead to a -0.8 percentage point reduction in growth when the global risk appetite is high, and 0.3 when it is low. The key point here that helps us to separate the stories is the fact that debt flows do not affect growth differentially during high versus low periods of uncertainty. This means they have a contractionary effect overall, or that originally low-growth countries borrow from official agencies.

Conclusion

This paper investigates the dynamic correlations between capital flows and output spillovers for different country groups and types of capital flows. It focuses on business cycle frequencies and the effect of global risk appetite in driving capital flows into emerging markets, and tries to shed light on the central policy question of the expansionary versus contractionary effects of capital flows.

The paper shows a positive initial impact of debt flows on output, which is followed by a negative impact. FDI inflows have a positive effect on output only, with a three–four year lag; if this period coincides with increased global uncertainty, the effect on output reverses, although the total effect is still positive. This result holds for other types of private flows, suggesting that during increased periods of uncertainty, private capital leaves the emerging markets; when the global risk appetite is high, capital flows in have positive effects on output. Debt flows, on the other hand, lead to a contraction in output and do not have a differential effect on growth during high- and low-risk appetite periods.

Policy implications are such that from the perspective of the domestic economy, FDI and equity flows are better than debt flows in terms of their effect on output. However, these flows are not a panacea and can also cause instability in domestic financial markets, as they are quick to reverse. Real FDI ("green field") flows that cannot be reversed are very small and their positive effect on growth appears very late.

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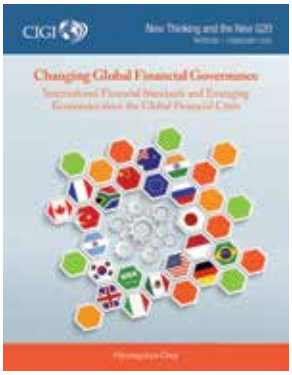

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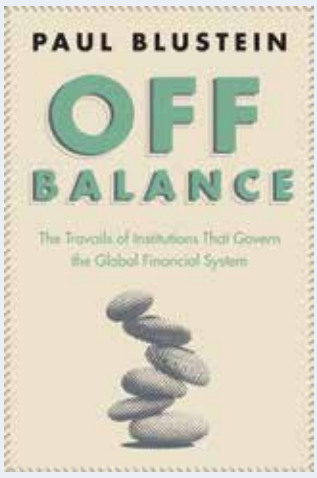

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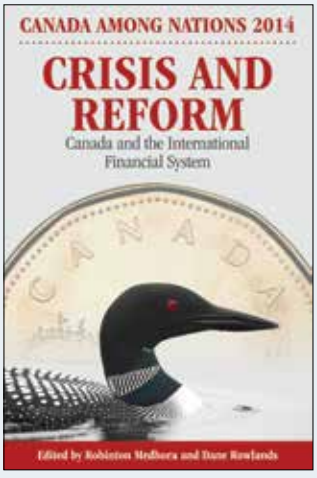

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Since China's pilot scheme for RMB cross-border settlement was launched in 2009, it has become increasingly important for monetary authorities in terms of macroeconomic policy frameworks. The authors use an analytical model that includes monetary supply and demand to examine the influences of RMB cross-border settlement on China's domestic interest rate, asset price and foreign exchange reserves. They also look at how RMB settlement behaves in different ways with the various items in China's balance of payments.

The Risk of OTC Derivatives: Canadian Lessons for Europe and the G20

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Chiara Oldani

Over-the-counter (OTC) derivatives played an important role in the buildup of systemic risk in financial markets before 2007 and in spreading volatility throughout global financial markets during the crisis. In recognition of the financial and economic benefits of derivatives products, the G20 moved to regulate the use of OTC derivatives. Attention has been drawn to the detrimental effects of the United States and the European Union to coordinate OTC reform, but this overlooks an important aspect of the post-crisis process: the exemption of non-financial operators from OTC derivative regulatory requirements.

Sovereign Bond Contract Reform: Implementing the New ICMA *Pari Passu* and Collective Action Clauses

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Gregory D. Makoff and Robert Kahn

The International Capital Market Association (ICMA) has recently published proposed standard terms for new, aggregated collective action clauses. Concurrently, the ICMA released new model wording for the pari passu clause typically included in international sovereign bond contracts. These announcements and the commencement of issuance of bonds with these clauses are an important turning point in the evolution of sovereign bond markets.

Completing the G20's Program to Reform Global Financial Regulation

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Malcolm D. Knight

The measures regulators have largely agreed on for a strengthened and internationally harmonized financial regulatory regime, which were endorsed at the 2014 G20 leaders summit in Brisbane, are a major step toward achieving a robust and less crisis-prone global financial system. There are, however, a number of specific measures that need to receive closer attention in order for the G20 leaders to declare their reform program a success. This paper discusses what policy makers and regulators should focus on in 2015 and why closer international cooperation in implementing regulatory reforms will be essential for success.

The Trade in Services Agreement: Plurilateral Progress or Game-changing Gamble?

CIGI Papers No. 53
Patricia M. Goff

Trade analysis in the current moment is understandably focused on mega-regional negotiations, but plurilateral talks also deserve our attention. Plurilateral negotiations leading to a Trade in Services Agreement (TiSA) is the focus of this paper. Barriers to trade in services are distinct and their removal consequential; thus inviting careful consideration and, ideally, public debate. This paper seeks to illuminate developments in negotiations toward the plurilateral TiSA. Just as it has become commonplace to ask whether regional agreements advance economic and political agendas, so is it useful to explore the promise and peril of plurilateral agreements such as TiSA.

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About CIGI

The Centre for International Governance Innovation is an independent, non-partisan think tank on international governance. Led by experienced practitioners and distinguished academics, CIGI supports research, forms networks, advances policy debate and generates ideas for multilateral governance improvements. Conducting an active agenda of research, events and publications, CIGI's interdisciplinary work includes collaboration with policy, business and academic communities around the world.

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CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

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