

# **Capital Flows, Monetary Policy and Globalisation**

**Comments at ECB Colloquium in Honor of Benoît Cœuré**

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It is a pleasure to be here today to honor the contributions and service of Benoît Cœuré. Benoît has been a prolific contributor to the economic debate at the ECB—and in the policy world more broadly. As background for my comments today, I googled Benoît’s speeches—thinking I would re-read them as inspiration. But there were far too many to read—or even print out and carry around—or even to download under the auspices of reading them at some point. Then I googled those that had the words “globalization”, “exchange rates” or “capital flows” in the title in an effort to focus on the themes for this panel—but even that was too imposing. So I settled on speeches on those three topics from just over the last three years.

This was still a lengthy assignment—but highlighted what has made Benoît so respected. He chooses important topics that venture beyond simply the current economic conjuncture; he reviews recent research and evidence to summarize the current state-of-play, but then tries to push our thinking in new ways. He is not afraid to challenge the conventional wisdom—even if it means challenging his own views from earlier speeches. This is not easy to do for anyone—particularly someone under the constant scrutiny of press in a central bank—but highlights Benoît’s intellectual honesty for which he garnered so much respect.

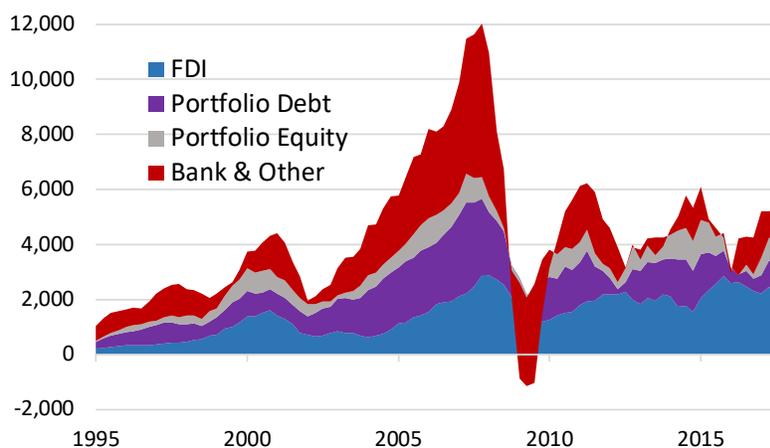
In honor of Benoît, my comments will cover three aspects of globalization that are frequent themes in these speeches: capital flow patterns, capital flow volatility, and the link between capital flows, monetary policy and exchange rates. These are broad themes—so I’ll focus on what has changed in each of them since the Global Financial Crisis (GFC) and what that means for the stability of the global financial system today.

## **1. Capital Flow Volumes**

Benoît often spoke about the risks around large volumes of capital flows—such as fueling bubbles or the effects of painful reversals. He was an “early adopter” of the important shift in thinking that occurred around the GFC—of focusing on gross (instead of net) international financial flows when assessing financial stability (i.e., Cœuré, 2016b). How have these risks evolved recently?

Figure 1 shows recent patterns in gross capital inflows (based on a sample of about 50 countries in Forbes and Warnock, 2019). Gross capital inflows contracted sharply during the crisis, and although they have partially recovered since, it is only to a fraction of levels from before 2008. Decomposing these gross capital inflows into four major components—foreign direct investment (FDI), bond flows, equity flows, and banking/other flows also clearly suggests that the reduction in cross-border flows since the crisis is primarily driven by a reduction in cross-border banking flows. In contrast, FDI has held up fairly well since the crisis—a positive development as FDI tends to be less sensitive to global factors and provide larger benefits in terms of economic growth (as highlighted in Cœuré, 2016b).

**Figure 1: Global Gross Capital Inflows (in \$bn over last 4q)**



Source: Forbes and Warnock (2019)

What has driven this sharp contraction in international banking flows—a sharp contrast to the resilience in FDI flows? A number of papers have analyzed different explanations—particularly for the contraction in banking flows—and found evidence for a range of factors. Many of these reflect the sharp economic downturn during the GFC—such as the increased cost of bank funding, weak demand for bank loans, and need for banks to rebuild their balance sheets. Other papers focus on the effects of crisis-response policies, such as specialized programs that incentivize domestic (over international) lending or that raise the penalties (and thereby costs) for certain types of lending abroad. Most analysis, however, finds a strong effect of increased prudential and macroprudential regulation. This is not surprising. As governments and central banks have tightened capital and liquidity requirements on bank lending, this has caused banks to reduce their lending domestically, as well as internationally.

Potentially more interesting than these direct effects of the post-crisis tightening of bank regulation are the corresponding indirect effects and unintended spillovers—a focus in Benoît’s recent article “The Known Unknowns of Financial Regulation” (Cœuré, 2019). As Benoît highlights, even if regulations are successful at strengthening the banks at the core of the financial system, this often generates tradeoffs and spillovers.

Recent research is beginning to provide more details on what these tradeoffs and spillovers could involve. For example, research I’ve done with coauthors at the Bank of England and Bank of Canada show that tighter macroprudential FX regulations have partially “shifted the snowbank” of FX risks from banks to outside the regulated financial sector (Ahnert *et al.*, 2018). More specifically, as macroprudential regulations in some countries have made it more difficult for companies to access cheap loans in foreign currency from banks, some companies increase corporate debt issuance in foreign currency—thereby shifting the risks related to exchange rate movements to pension funds, hedge funds and other parts of the “shadow financial system” that purchase this corporate debt.

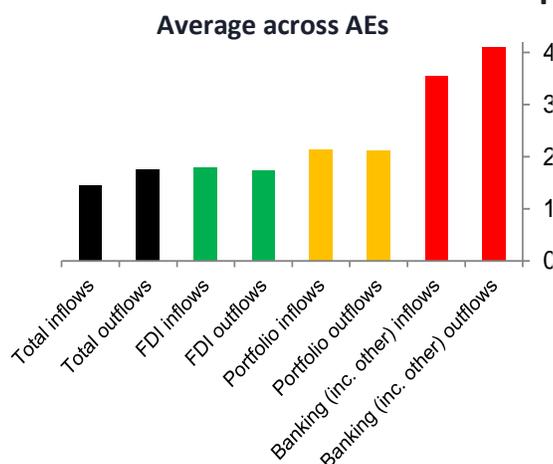
The size of these spillovers and secondary effects can also be large enough that they cannot be ignored when assessing financial stability. Although the reduction in cross-border FX loans has been larger than the increase in corporate FX debt over the last decade, the growth in dollar-denominated debt in

emerging markets is significant. According to estimates in Ahnert *et al.* (2019), macroprudential FX regulations in major emerging markets such as Brazil and Indonesia correspond to a reduction in their cross-border bank FX borrowing by more than half, but a 15%-20% increase in their FX corporate debt issuance. Although these regulations can strengthen banks at the core of the financial system and reduce the country’s overall FX exposure, other sectors that are less well monitored and may be less prepared to handle those risks could present a new vulnerability.

## 2. Capital Flow Volatility

Another aspect of capital flows on which Benoît often focused was whether they were “enduring”—one of his “3es” for financial globalization: “efficient, enduring and equitable” (Cœuré, 2016b). Figure 2 shows that bank flows tend to be more volatile than other types of capital flows. As a result, the decline in international bank flows shown in Figure 1, combined with the greater stability in FDI and other types of flows discussed above, should have reduced the volatility in international capital flows. But has this occurred to the extent that capital flows have achieved Benoît’s goal of being “enduring”? Will Benoît’s replacement no longer need to worry about capital flows fueling bubbles or painful reversals?

**Figure 2: Coefficients of Variance for Gross Capital Flows**

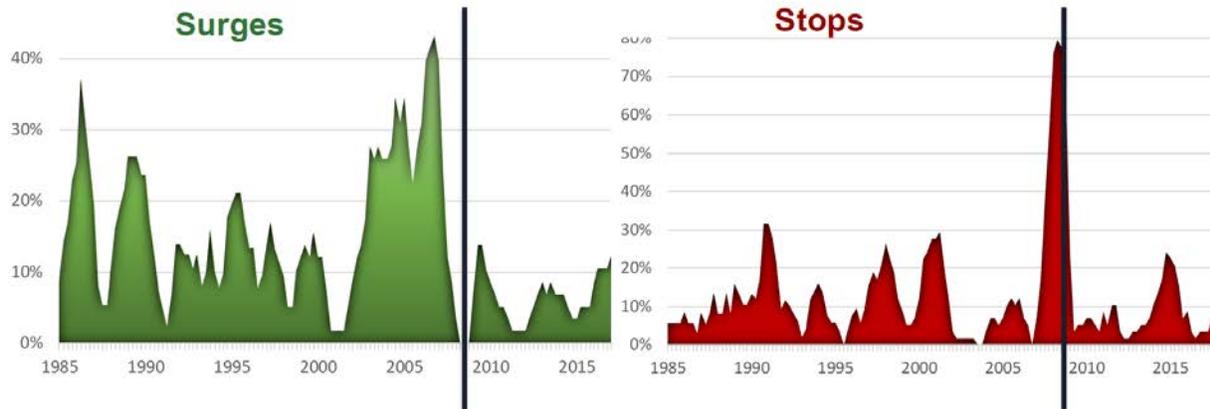


**Source:** Forbes (2014), “Financial Deglobalisation, Banks and the Beatles”, Bank of England speech, Nov.

To assess if capital flows have been more stable since the GFC, I will show you several graphs from current work with Frank Warnock (Forbes and Warnock, 2019). We updated earlier work that built time-series data on gross capital inflows and outflows by foreigners and domestics, and then used this data to test for sharp changes in these four types of capital flows relative to historic norms. We developed a methodology that defined four types of capital flow “waves”: surges (sharp increases in capital flows from foreigners); sudden stops (sharp decreases in capital flows from foreigners); flight (sharp increases in capital outflows by domestics) and retrenchment (sharp increases in capital inflows from domestics as they bringing previous investment back home). Our updated dataset includes information on quarterly gross capital flows for about 50 advanced economies and emerging markets from 1980 through the end of 2018, which we use to calculate updated “episodes” of extreme capital flow movements.

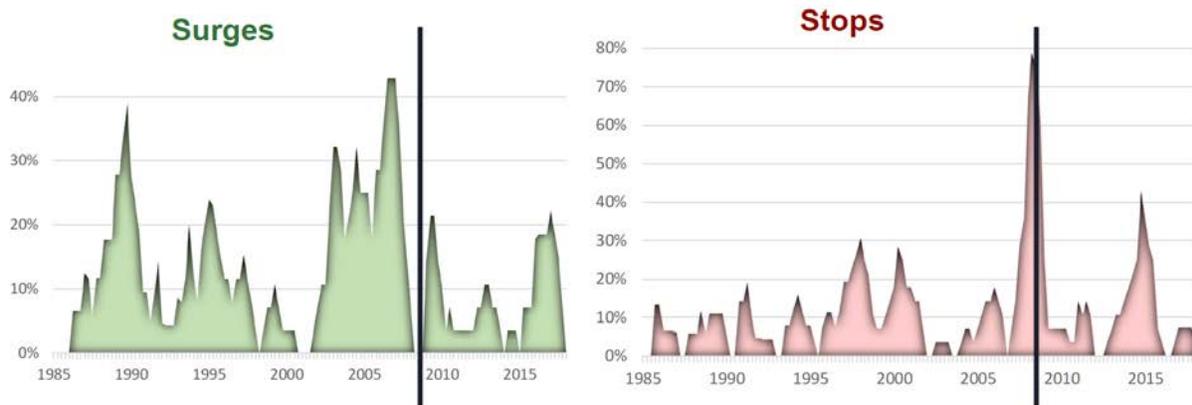
Figure 3 shows results on the share of countries that have experienced a surge or stop episode since 1985. It documents the well-known increase in sudden surges of capital inflows from abroad before the GFC, and the spike in sudden stops during the GFC. Most interesting, however, is the updated results since the GFC (denoted roughly by the black vertical line). The incidence of sudden surges seems to have fallen sharply, as has the incidence of sudden stops (albeit not as dramatically). These patterns are consistent with arguments that the decline in international capital flows, particularly in volatile banking flows, has contributed to more “enduring” and less volatile capital flows—at least as assessed by these extreme capital flow episodes.

**Figure 3: Incidence of Surges and Stops: Full Sample**



*Source: Forbes and Warnock (2019).*

**Figure 4: Incidence of Surges and Stops: Emerging Markets**



*Source: Forbes and Warnock (2019).*

This sample, however, includes both advanced economies and emerging markets—and much of the contraction in global banking flows has occurred between advanced economies. Emerging markets also tend to be more vulnerable to sudden shifts in global capital flows, and more vocal about the challenges from this volatility. Have capital flows to emerging markets also become more “enduring”? To test this,

Figure 4 reports the same results on the share of countries that experienced a surge or stop episode—but now only includes emerging markets. There continues to be a reduction in surge episodes since the GFC, albeit not to the same extent as for advanced economies. There is also a reduction in the incidence of stop episodes during most quarters—except a prominent peak around 2015 (when the U.S. Federal Reserve raised the Federal Funds rate for the first time in nearly a decade and growth in China slowed). Around 2015 the incidence of sudden stops spikes—and although not to the level experienced during the GFC—to a level higher than the historical experience.

These figures suggest that the lower volume of international capital flows, particularly in bank flows, has coincided with more “enduring” capital flows for advanced economies, and some improvement—but more moderate—for emerging markets. This is consistent with the evidence that tighter regulation has reduced international bank flows, particularly between advanced economies, and thereby reduced the most volatile type of cross-border capital flows. This is also consistent with research showing that sharp capital flow movements have been less tightly correlated with risk measures (such as the VIX) since the GFC, as bank lending also tends to move tightly with risk measures (see Forbes and Warnock, 2019, Goldberg and Krogstrup, 2019 and Bruno and Shin, 2015). This reduction in capital flow volatility may not last. It may partly reflect the short time period since the crisis, the stimulative monetary policy in advanced economies, or other temporary factors. Nonetheless, the early evidence suggests that reforms to the global financial system are moving in the direction of achieving Benoît’s goals of making international capital flows more “enduring”.

### **3. Capital Flows, Monetary Policy and Exchange Rates**

A final aspect of capital flows that has been a focus of several of Benoît’s recent speeches is the link between monetary policy, exchange rates, and capital flows—especially if these relationships have changed since the GFC with unconventional monetary policy. Benoît’s thinking seems to have evolved over time as more evidence developed. His most recent work suggests that asset purchases by central banks and the corresponding portfolio rebalancing have significant effects on international capital flows and exchange rates (Cœuré, 2017b). If capital flows and exchange rates are an important transmission channel of unconventional monetary policy, this could have important implications for the debate on currency wars—a concern which Cœuré was also forthright in addressing (2016a).

There are a number of reasons why the impact of monetary policy on the exchange rate and capital flows could have changed since the GFC and/or from the use of unconventional monetary policy. The reduction in international bank flows and related tighter prudential and macroprudential regulation could have reduced liquidity, so that changes in monetary policy have greater effects on relative prices (i.e., the exchange rate) than the volume of capital flows. Changes in monetary policy (such as a 25bp change in the policy rate) could have a larger impact when rates are at today’s low levels if it is the percent change in rates, rather than the change, which is important for relative returns, capital flows, and exchange rates. This effect could be aggravated in today’s environment when there is less divergence in policy interest rates across major financial centers (see Jordà and Taylor, 2019). When monetary policy is adjusted using unconventional tools, it could also have different effects on the exchange rate than adjustments in policy interest rates if it has different effects on the term premium or on short relative to long rates (each of which could have different exchange rate effects). Finally, if unconventional policy is interpreted as more of a longer-term commitment (such as through its “Odyssean” element of commitment, as discussed in Cœuré, 2017a), it may have larger effects.

Testing if the relationship between monetary policy and exchange rates has changed since the crisis, and particularly if unconventional tools have differential effects, is extremely difficult. The empirical evidence on these channels is limited, partly due to identification challenges, and partly due to the limited experience with unconventional tools to date. Early studies suggested that Fed announcements of quantitative easing (QE) had larger effects on the dollar than non-QE announcements, but these did not control for the fact that the average stimulus provided by the QE announcements immediately after the GFC was larger than for the non-QE announcements—so it was not a comparison of “apples to apples”. More recent work attempts to control for the size of the intended stimulus and finds mixed evidence. Brainard (2017) is an excellent summary of this work, including a discussion of how the impact of monetary policy on exchange rates could generate greater spillovers and challenges for different emerging markets today.

In some of his more recent work, Benoît seems to have become convinced that not only does monetary policy have exchange rate effects, but these effects could be larger with unconventional policy tools (Cœuré, 2017b). I can’t prove or disprove this today—but preliminary evidence in Forbes, Hjortsoe and Nenova (2019) suggests that a greater share of exchange rate volatility in advanced economies has been driven by monetary policy shocks since the GFC, and that countries with interest rates around their lower bounds have had more volatile exchange rates. These patterns could be occurring for a number of reasons—but are also consistent with Benoît’s arguments that exchange rates are an important part of the adjustment mechanism for countries using unconventional monetary policy. As global banking flows have contracted, and global liquidity decreased, it is certainly possible that a greater share of the international adjustment to shocks is occurring by change in relative prices (i.e., exchange rates) instead of changes in the volume of capital flows.

#### **4. Final Thoughts:**

My comments have focused on recent economic developments in capital flows, monetary policy and exchange rates—but I would be remiss to ignore one final legacy of Benoît: his willingness to venture beyond economics and also consider broader related political concerns. For example, Cœuré (2016a) discusses how actions taken by central banks in one country spillover to others, and how coordination could therefore be optimal from a purely economic perspective, but was difficult and unlikely when politics are taken into consideration. Benoît was even willing to tackle the highly charged debate on the “currency war criticism of monetary policy” and provide sound evidence why exchange rate movements should not simply be viewed as “beggar thy neighbor” policies (Cœuré, 2017c). Even when he tackled these highly sensitive topics, however, Benoît always relied heavily on evidence and research results to justify his arguments. This is a model for a central banker—and model that is becoming more important as central bankers are subject to increasing political pressure, including to soften some of the reforms discussed above to strengthen the resilience of the global financial system. Whether political pressure effects the decisions of central bankers or not—it puts more onus on them to justify their decisions with evidence so as not to be perceived as making decisions based on politics instead of economics. Debates on globalization, capital flows, exchange rates, and monetary policy will continue, and likely become more heated as trade and currency tools have become more widely used to address a broader range of concerns. In this environment, Benoît’s model of focusing on the facts, evidence and research is a model to which we should all aspire even more.

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