



# How the Flows Change When Interest Rates Are Normalized: Risk to Economic and Financial Stability

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## INTRODUCTION

Central banks in major economies are normalizing interest rates after a long period of accommodative monetary policy. The main motivation for the interest rate normalization is to combat the sharp increase in inflation in the last few decades. In some instances, policy rates have already, or are expected to, go beyond the long run equilibrium monetary policy rates for the first time since the Global Financial Crisis. The last time Central Banks of major economies had to increase interest rates to fight high inflation was in the late 1970s and early 1980s. Multiple financial crises followed, most notably in Latin America, in what has been called the Latin American Debt crisis. Many lessons can be learned, from that period and from the latest research about systemic risk emanating from capital flows, to gauge

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where and to what extent financial instability may materialize in the next few years.

Financial flows increased noticeably in the run up to the Global Financial crisis. These were both increases in purchases of foreign assets and in borrowing from abroad. There was a sharp reversal in these flows at the onset of the GFC in the form of both retrenchments of foreign assets and sudden stops to foreign lending. Forbes and Warnock (2012) conclude that 78% of countries experienced a sudden stop in foreign lending during the global financial crisis.<sup>1</sup> The sudden stop was sharp but short lived. As major economies maintained accommodative monetary policy to counter the economic downturn, investors sought higher yield in non-major economies. Cross-border capital flows rose quickly back to levels seen in the run up to the GFC and has remained elevated for over a decade now. In a sample of 126 countries, all but 19 countries increased the total external liabilities in the five years leading up to the Covid health crisis (Benediktsson and Ahmed 2023). This build-up of systemic risk threatens to materialize now as interest rates rise worldwide. For countries where external liability is high, debt service costs will increase and refinancing will become, in some cases, prohibitively expensive. Exchange rate movements threaten to amplify the risk, as the dollar strengthens due to higher interest rates in the US and flight to safety as debt sustainability becomes the focus of international investors.

This chapter will bring together the lessons learned from the steep increase in major economies' policy rates in early 1980s and the ensuing debt and financial crises in a number of economies and recent literature on risks emanating from extreme capital flows. The chapter will start with discussion about financial crises in the 1980s. The focus will be on the Latin American Debt crisis. Then a short overview of recent research on external imbalances, foreign borrowing, and risks associated with it. The chapter will conclude with some indicators, informed by recent literature, of external imbalances and systemic risk.

## LESSONS FROM THE 1980S

In the early 1980s multiple Latin American countries experienced a severe economic and financial crisis, often called the Latin American Debt Crisis. During the 1970s capital inflow into Latin America rose sharply in the

<sup>1</sup>Their sample includes 97% of global financial inflows during the GFC.

**Table 1** Latin American debt crisis

<i>Country</i>	<i>Start</i>	<i>Output loss (% of GDP)</i>	<i>Gross fiscal costs (% GDP)</i>	<i>Increase in public debt (% GDP)</i>
Argentina	1980	58.2	55.1	33.1
Chile	1981	8.6	42.9	87.9
Colombia	1982	47.0	5.0	16.6
Mexico	1981	26.6	...	22.6
Peru	1983	55.2	...	14.3
Uruguay	1981	38.1	31.2	83.3

Source: Laeven and Valencia (2013)

form of both sovereign lending and lending to banks. As major economies increased interest rates sharply to fight the exuberant inflation in the early 1980s these flows came to a sudden stop and servicing the debt became prohibitively expensive. The resulting crises were costly, see Table 1. Output loss was over 50% of gross domestic product in Argentina and Peru over a five-year period. Gross fiscal cost was over 40% for Chile, where public debt almost doubled, see Table 1.

During the inflation years of the 1970s the Mexican Peso real exchange rate appreciated a lot and external debt grew fast. Foreign public debt grew in the double digits, and even over 30% per year in 1974–1976. At the end of the 1970s the stock of foreign public debt in Mexico had grown fivefold (Ortiz and Serra-Puche 1986), although this only refers to public debt. Simultaneously, there was a sharp increase in external borrowing by Mexican banks (van Wijnbergen & Oks, 1994). Private creditors borrowing increased tenfold, from around half a billion dollars in the early 1970s to over \$5 billion in 1975 and 1976 and remained elevated to the end of that decade. As monetary policy in major economies was tightened to fight high inflation, private capital reversed out of Mexico. Initially, the government reacted to this by increasing public debt in defense of the peso, further exacerbating the looming debt crisis. The increase in debt and interest rates in the early 1980s almost doubled the ratio of interest payments of public debt to current account income to 29%. The cost of these crises proved to be substantial, or almost 27% of gross domestic product in the five-year period 1981–1986.

Other countries in Latin America experienced similar crises. Argentina experienced a sharp increase in external liabilities throughout the 1970s. The crisis in Argentina erupted in early 1981 with a failure of a major

commercial bank which resulted in a widespread bank run. By 1983 almost 70 banks had failed and Argentina defaulted on its external debt as the debt service of external debt became double its exports income (Sachs and Williamson 1985). This was the highest external debt servicing ratio in Latin America at the time. Output loss in Argentina in the first half of the 1980s reached a staggering 58% of GDP and the gross fiscal cost was of similar magnitude.

### CAPITAL FLOWS AND SYSTEMIC RISK

Systemic risk from capital inflows accumulated in a number of emerging markets throughout the 1970s and materialized in 1980s with considerable real costs. At the time the risks associated with those flows were hard to evaluate, mainly due to the quality of data that was available about those flows (Cuddington 1986). The current account was used as the main indicator of external imbalance. Recent research concludes that other, more focused indicators may be better indicators of external imbalances. Goldfajn and Valdés (1997) show that foreign lending to the financial sector is amplified through their increased lending into the domestic economy. A sudden outflow may then be triggered by international interest rates shocks. The sudden stop to foreign lending to the financial sector can then end in bank runs, which further amplifies the financial cycle, similar to what Argentina and Mexico experienced. Calvo in 1998 uses a simple theoretical model to connect cyclical movement in foreign capital flows with asset price bubbles and bursts in non-tradable assets, including housing. High leverage in real estate amplifies these cycles and the effects on other sectors of the economy. Calvo also concludes that these amplification cycles may occur irrespective of the current account.

More recent research has focused on which aspects of capital flows may be the best indicators of accumulation of systemic risk and increased likelihood of severe financial crisis. Prolonged periods of *extreme capital inflows*, or capital inflow bonanza's increase the likelihood of banking, sovereign debt, and currency crisis (Reinhart and Reinhart, 2009). The risks are amplified further if the surge in capital flows coincides with a *boom in domestic private leverage* (Caballero, 2016). The result is that the odds of a banking crisis increase about 3.7 times, to 15.5%, following a capital inflow bonanza. If in addition there is a simultaneous lending boom in the economy, then the odds of a banking crisis rise to over 33%. Net capital flows are all capital outflows minus all capital inflows. Capital

inflows can be either foreigners acquiring a domestic asset or a domestic entity selling a foreign asset. Both are labeled as capital inflows, but are likely motivated very differently by economic shocks and changes in risk perception.

Motivated by that Forbes and Warnock (2012) identified separately *foreign liability flows and domestic asset flows*. They find that foreign driven extreme liability flow episodes have historically been driven by global factors, in particular global risk perception. Additionally, they found that a sudden stop in liability flows may not be detectable in net capital flow data as sudden stops are frequently accompanied by domestic investor's retrenchments of assets from abroad. Still, the negative effects of a stop and reversal in liability flows may be widespread in markets that foreigners are pulling money out of, including securities markets. Lastly, the *composition and term structure* of the assets foreigners invest in also matters when considering systemic risk originating from liability flows. Rodrik and Velasco (1999) find that countries with short-term external liabilities over three times their reserves are more likely to experience a sudden stop followed by a prolonged and severe crisis. For the composition of flows, booms in foreign direct investment have not been linked with increased likelihood of a crisis; however, both a boom in portfolio equity inflows and debt inflows increase the probability of a crisis considerably (Caballero, 2016). The boom in inflow will increase risks through an increase in domestic leverage like Goldfajn and Valdés (1997) describe and unsustainable increases in asset prices, akin to what Calvo's (1998) model describes. Both are unsustainable in the long run and will end in a debt overhang and an asset price burst as the flows reverse.

Connected with this literature is research on the effects of US monetary policy on capital flows to emerging market economies. Banerjee et al. (2016) find that a "US contractionary monetary policy shock leads to a retrenchment in EME capital flows, a fall in EME GDP, and an exchange rate depreciation." Their theoretical DSGE model even indicates that responses of asset prices and interest rate spreads in peripheral countries can be larger than in the center country that implements the contractionary policy. This is in line with Calvo et al. where policy rate increases in the US in 1994 are said to have translated quickly into changes in cross-border capital flows.

This research indicates that a current account deficit may not be the best measure of external imbalances which are likely to result in economic and financial crisis. It is necessary to look beyond that to how the current

account deficit is funded. It has to be assessed whether it is through stable foreign direct investment or for example short-term lending to the financial sector which then amplifies the risk through increased lending into the domestic economy. External imbalances and risks may even accumulate irrespective of the current account if external debt is fueling unsustainable increase in domestic leverage and asset price bubbles.

## EXTERNAL IMBALANCES AND SYSTEMIC RISK

New data, motivated by the above research, is now available to improve assessment of external imbalances and potential risks associated with increases in monetary policy rates in major economies.

Robin Koepke and Simon Paetzold (2020) put together a dataset of monthly *debt and equity flows* to a number of countries. This is hence net capital flows, excluding foreign direct investment. Looking at seven EMEs it is clear that debt and equity flows have increased a lot in the past decade. According to their dataset net debt and equity inflows were more than double on average each month in the five years leading up to the Covid health crisis than they were in the run up to the Global Financial Crisis. Debt and equity flows were in particular high and persistently positive in the aftermath of the GFC up until major economies announced they would start to taper their quantitative easing in 2014–2015. A noticeable pattern is that net debt and equity inflows are persistently positive over a long period while reversals are more extreme but short lived.

When looking at individual countries this becomes even more apparent. Brazil and Chile experienced substantial debt and equity inflows in the run up to the GFC. The capital reversal was sharp but lasted only a few months. As soon as late 2009 capital started to flow into both countries, which experienced a capital inflow bonanza in 2009–2014. The inflows in that period far exceeded previously capital inflow periods. This occurred even though Brazil employed a number of capital inflow measures, including a tax on portfolio equity and fixed income inflows, to try to dampen the flows (Chamon and Garcia 2016). Net equity and debt flows have reversed, out of Brazil in the past five years. It is not clear from this dataset if this reversal is driven by foreigners lending less to Brazil (reversal of liability flows) or Brazilians acquiring more equity and debt abroad (asset flows). Brazilian external debt has declined by a third 2015–2020, indicating that the main factor is less borrowing from abroad. Chile has had volatile but mostly positive inflows into debt and equity in the last five years. Is this

retrenchment of foreign debt and equity (asset flows) or is this borrowing from abroad (liability flows)? Chile's external debt has increased 15% 2015–2020, indicating these flows are liability flows.<sup>2</sup>

A new dataset splits flows into liability and asset flows (Avdjiev et al., 2022). In 21 countries from 1996 to 2020 liability flows to these countries increased significantly in the run up to the GFC when they reversed sharply. By 2010, liability flows were again similar to what they were in the run up to the GFC and they remained elevated until major central banks signaled they would start tapering their asset purchases in 2014. In the last five years, liability flows have still remained considerably higher than they were at the turn of the century. This has led to historically high external debt, which will be discussed below. First, however, it is notable that the liability flow reversal at the onset of the Covid health crisis is barely noticeable, compared to the sharp reversal in net debt and equity flows. This indicates that the capital flow reversals were more in the form of domestic capital flight than a foreign sudden stop.

Comparing capital flows for India from both data sets supports this. In the first quarter of 2020 net debt and equity outflow was almost \$15 billion. In this same quarter the only liability flows that turn negative are corporate portfolio flows, other liability flows remain positive. This indicates a large amount of domestic capital flight in the first quarter of 2020. This is very different from the GFC where liability flows turn very negative—that is foreigners divesting from India, while net debt and equity flows turn negative, but not to the same extent. The sudden stop in 2008 was partially buffered by domestic retrenchment. These results may be crisis specific, or it may indicate that liability flows now are more stable than they were in the run up to the GFC.

The liability flows since the GFC have resulted in record high external debt around the world. The World Bank IDS dataset confirms that in the five years leading up to the Covid health crisis 109 of 126 increased their external debt. Nine of those countries more than double their external debt. They are, in alphabetical order, Angola, Bangladesh, Egypt, Laos, Mongolia, Montenegro, Nigeria, Qatar, and Uzbekistan (Benediktsdottir and Ahmed 2023). It is notable that most, if not all, of these countries have increased their external borrowing from China. Of the 24 countries which increased their external debt 70% or more in 2015–2020, 13 have liability data available. There is a sharp increase in liability flows in 2006

<sup>2</sup>World bank IDS data set and authors calculations.

and 2007 followed by a sudden stop and reversal in 2008. Foreign lending increased again in 2010 and then more noticeably in 2016 and on. Again there is little, if any, reversal of liability flows during the Covid crisis.

The sharp increase in liability flows to these 13 countries in 2016 coincides with the push from China to fund infrastructure projects around the world. Around a third of China lending to Africa in 2000–2019 went to Angola. There was a sudden stop to this lending in 2020. In early 2021 Angola signed a debt relief agreement with China, which gave it a three-year moratorium on debt payments.<sup>3</sup> Kenya's liability flows have remained elevated since 2011. Most of the liability flows have been to the general government from China, who now account for a third of Kenya's external debt.<sup>4</sup> The liability flows continued in 2020, despite the onset of the Covid health crisis. In October 2022, the Kenyan government official said that they needed to renegotiate a large loan from China, or else they may default.

## CONCLUSIONS

A prolonged period of low interest rates in major economies has resulted in high systemic risk in many economies. This systemic risk threatens to materialize as interest rates are hiked in an effort to combat inflation. The Latin America debt crisis transpired following a sharp interest rate rise following a decade of increased external borrowing by governments and banks in Latin America.

Recent research indicates that the current account is not the best indicator of systemic risk emanating from external imbalances. First, foreign direct investment flows have not been linked to increased risks of financial crisis. Data from Koepke and Paetzold (2020) for net debt and equity flows shows that these flows have been positive and elevated into non-major economies in the past decade. This indicates increased external imbalances. Liability flow data from Avdjiev, Kalemli-Özcan, and Servén (2022) supports this further. Foreign lending to non-major economies was very high from the end of the GFC to the onset of the taper of asset purchases by major central banks. This has resulted in high external debt,

<sup>3</sup> Reuters January 11, 2021, "Angola gets breathing space from Chinese creditors, says finance minister."

<sup>4</sup> VOA news October 19, 2022. "Kenya Wants to Renegotiate Loans for Chinese-Built Railway."



which may not be sustainable. Some of this can be attributed to China's push for infrastructure financing. There is some indication, though, that this persistent foreign capital inflow in the last decade is not as unstable as the capital inflow bonanza in the run up to the GFC. At the onset of the Covid health crisis net equity and debt flows turned negative fast, but liability flows did not.

Research indicates that in addition to focusing on debt and equity liability flows the term structure of external liabilities is important. Good data on that is still not available and may be hard to get. In addition to term structure of debt other runnable liabilities are also important, including foreign-owned deposits and foreign ownership in liquid securities.

The conclusion based on liability flows and external debt of non-major economies is that systemic risk is elevated and it threatens to materialize as dollar interest rates are increased. Better knowledge of how reversible the liability flows are would be helpful for the assessment of overall risk for individual countries.

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