

CAPITAL ACCOUNT LIBERALISATION AND POLICY FRAMEWORKS IN SOUTH AFRICA

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Abstract

After the global financial crisis emerging market economies (EMEs) experienced large capital inflows that contributed to exchange rate appreciation, asset price booms and over-leveraging. As central banks in advanced economies normalise monetary policy, there is a risk of disorderly withdrawal from EMEs by investors, reduced capital inflows and reversal of capital flows. The paper compares trends in capital flows into South Africa and other peer countries. It also discusses the determinants of capital inflows based on empirical literature. The role played by multilateral institutions (IMF and OECD) in providing guidance to countries for the treatment of capital flows using capital flow management measures is discussed as a way towards attaining ‘globally-accepted standards.’ There are numerous policy options that South Africa can employ to mitigate the risks of capital flow volatility, ranging from standard macroeconomic policies, structural measures, macroprudential as well as capital flow management measures.

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1. Introduction

Since 1995, South Africa has undergone a gradual and sequenced reduction in capital controls and is now close to full capital account liberalisation especially on capital inflows.

Capital account openness can bring potentially a lot of benefits. It can help increase access to diversified forms of finance, increase competition in the domestic financial system and facilitate the transfer of technology knowhow. However, like other countries, South Africa needs a policy toolkit to help manage the potential financial stability risks from having an open capital account. And the South African Reserve Bank's (SARB's) current macro prudential policy framework acknowledges the need for capital flow management measures (CFMs) to mitigate systemic risks arising from high/volatile international capital mobility.¹

This paper assesses the downside risks from capital flow volatility and the potential policy options for South Africa taking account of the evolving global “rules of the road” in this area especially from the IMF. The OECD Code of Liberalisation of Capital Movements (‘the Code’) is also relevant. In 2017, the South African government asked the OECD to benchmark its current capital account openness against international best practice as a first step in considering joining the Code. The latter has recently been under review for the first time in 25 years.

Section 2 describes the current context of risks to capital flows. The following section looks at recent trends in South Africa and compares this with EMEs more broadly. Section 4 summarises the recent literature on the risks from capital flows while Section 5 covers the various policies that can and are used worldwide to mitigate the risks including macro prudential and capital flow management measures and the current consensus on the “global rules of the road”. Section 6 discusses the potential implication for policies used in South Africa and concludes.

2. Context

Following progressive liberalisation over the past quarter of a century, South Africa is now close to full capital account convertibility. The majority of remaining restrictions apply to

¹ South African Reserve Bank (2016).

capital outflows.² Leape and Thomas (2011) argue that outward restrictions remaining on institutional investors are for prudential reasons. But South Africa, like emerging market economies (EMEs) in general, has very large future financing needs.³ It is neither likely nor desirable that this is financed entirely out of domestic saving. So it will need to maintain durable capital inflows from abroad to help finance continuous current account deficits (which have averaged 5% of GDP, over the past decade).

Following the Global Financial Crisis (GFC), in the context of reductions in policy rates in advanced economies (AEs) to very low levels, some EMEs have struggled at times to deal with the size of inflows and these have contributed to intermittent large exchange rate appreciation, asset price booms and over leveraging. In more recent years concerns though have switched to the risk of a disorderly withdrawal of capital as the Federal Reserve started to normalise monetary policy. For some investors, financing EMEs has become less attractive, reducing the flow of capital and potentially reversing it. These boom-bust cycles have been a common feature of cross-border capital flows, especially – although not only – in EMEs, over the past 40 years. And the case of South Africa seems to fit well with the pattern. Since a large part of its financing comes from more volatile types of flows, the country might be vulnerable to more extreme boom-bust cycles.

3. Trends in capital flows

Since 1990 through to the Global Financial Crisis (GFC), external financing of EMEs from non-residents increasingly came through private sector equity – portfolio equity and direct investment (Chart 1a).⁴ In particular, improvements in institutional quality and governance and in macroeconomic conditions have whetted investors' appetite for long-run EME exposures.

Direct investment into EMEs as a whole has also remained remarkably stable in the face of significant shifts in reserve accumulation, banking flows, and more recently portfolio flows.

² Authorised Dealers may acquire direct and indirect foreign exposures up to a limit of 25 per cent of their total liabilities, excluding shareholders' equity. Furthermore, the limit on foreign portfolio investments by South African institutional investors is applied to their total retail assets under management as follows: (i) up to 30 percent for Retirement Funds and the underwritten (non-linked) policy business of long-term insurance companies and (ii) up to 40 per cent for Investment Managers, Collective Investment Scheme Management Companies and the linked policy business of long-term insurance companies.

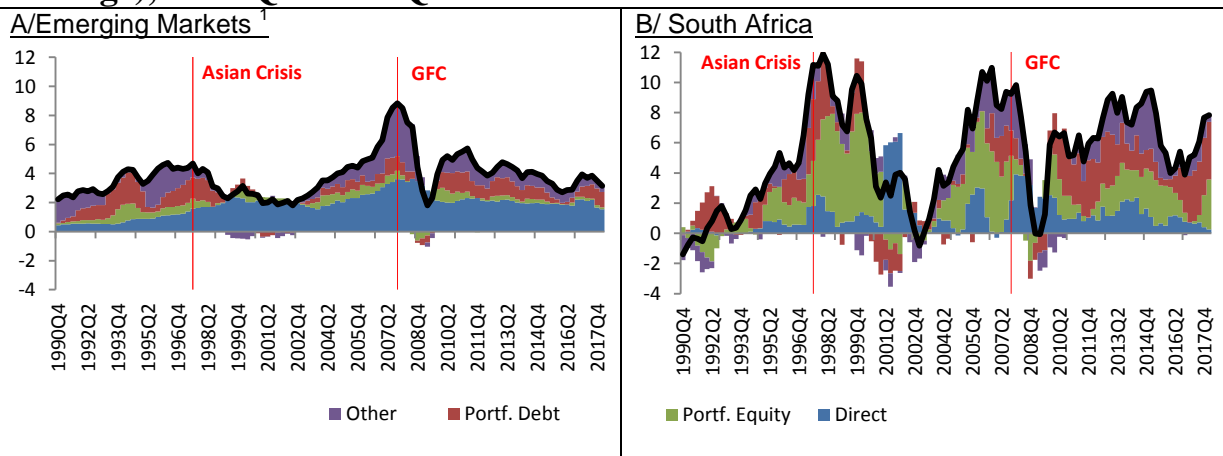
³ The OECD estimate infrastructure investment needs in EMEs and low income countries as a whole are around \$60 trillion through to 2030.

⁴ Unless stated all data on capital inflows in this paper are gross inflows from non-residents rather than inflows net of outflows from residents. Gross inflows is probably a better indicator of financial stability risks to the domestic economy. See discussion in Araujo *et al* (2017).

However, direct investment into South Africa has been both lower and less stable than into peer countries.⁵ Most of the equity flows into South Africa have been portfolio (Chart 1b). Leape and Thomas (2009) note that the relatively strong portfolio equity flows into South Africa have been supported by a large and liquid domestic equity market. Cross border bank lending to South Africa and to EMEs, in general, also grew rapidly after the Millennium especially in the few years ahead of the GFC (purple bars ‘other’ in Chart 1).

Since the GFC, debt inflows into EMEs have been strong with gross external debt more than doubling in South Africa to over 50% of GDP. Debt flows though to South Africa, as to EMEs as a whole, have been increasingly through bonds (orange bars in Chart 1b), mainly to finance ongoing government deficits. By end-2017, the public sector accounted for more than one-half (55%) of South Africa’s total external debt (\$173.3bn, 50% of GDP). But bank loans from abroad, mainly borrowing of the non-government sectors, has also remained material.

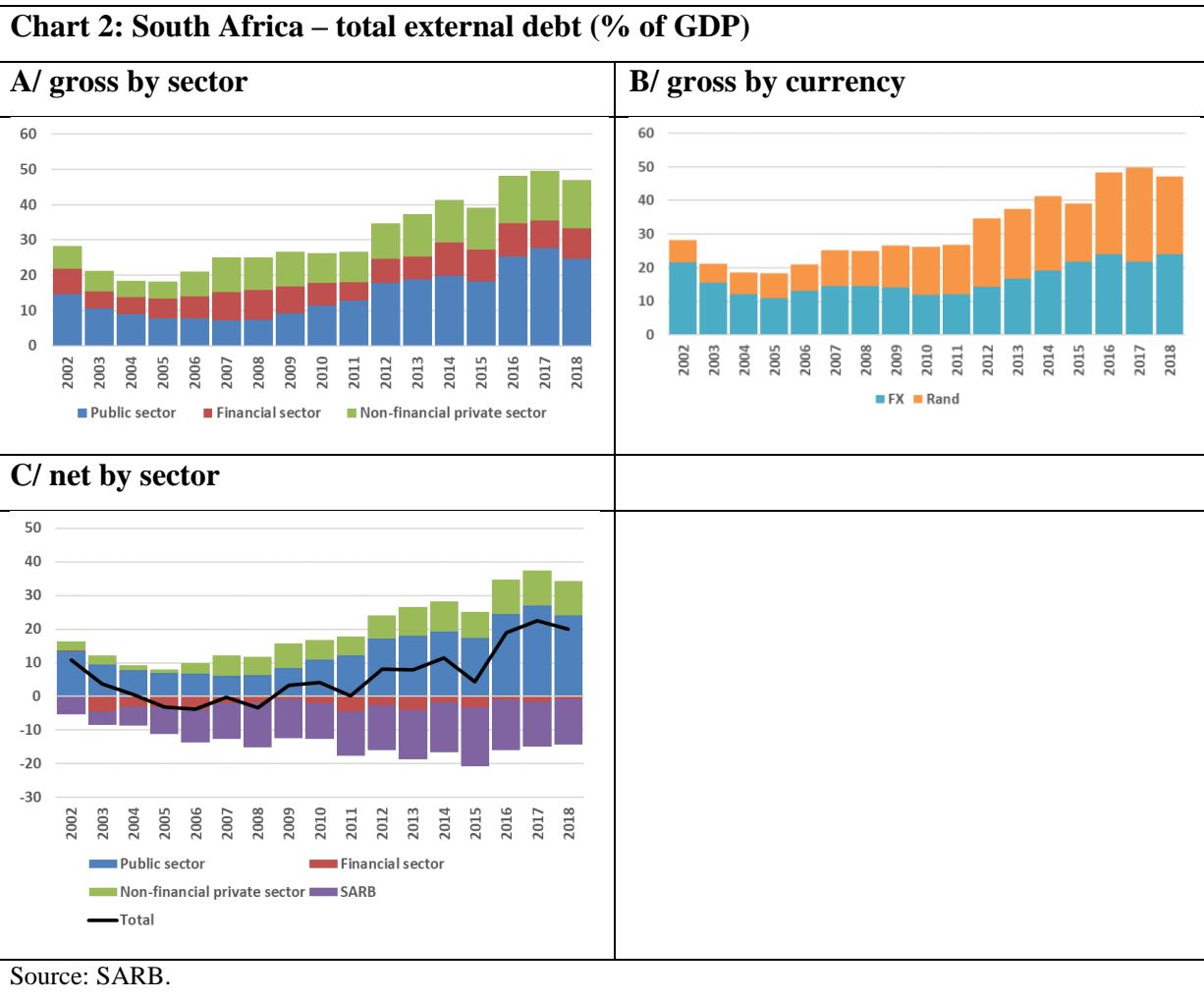
Chart 1: Gross capital inflows by type % of own GDP (3 month moving average), 1990 Q4–2017 Q4



¹ Excluding China. Emerging Markets are countries not classified as advanced economies or low-income developing countries, according to the IMF where data are available. The complete sample is Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Belarus, Belize, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Cabo Verde, Chile, Colombia, Costa Rica, Croatia, Cuba, Czech Republic, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Fiji, FYR Macedonia, Gabon, Georgia, Grenada, Guatemala, Guyana, Hungary, India, Indonesia, Iraq, Iran, Israel, Jamaica, Jordan, Kazakhstan, Korea, Kuwait, Libya, Malaysia, Maldives, Mexico, Montenegro, Morocco, Namibia, Nauru, Oman, Pakistan, Palau, West Bank and Gaza, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Serbia, Seychelles, South Africa, Sri Lanka, St. Lucia, St. Vincent and the Grenadines, Suriname, Swaziland, Syrian Arab Republic, Thailand, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Turks and Caicos Islands, Tuvalu, Ukraine, United Arab Emirates, Uruguay, Venezuela. Source: IMF IFS.

⁵ Brazil, Turkey, Mexico and Russia.

The riskiness of South Africa’s external balance sheet though is reduced since most (over 70%) of the government’s debt is denominated in rand and has a long average residual maturity with very little short-term (only 3%). Therefore, the build-up in South Africa’s total gross external debt since the wake of the GFC has primarily been by the public sector (including state-owned companies) in rand (Chart 2a and 2b). The picture is similar looking at external debt net of debt assets held by South Africa abroad (Chart 2c).

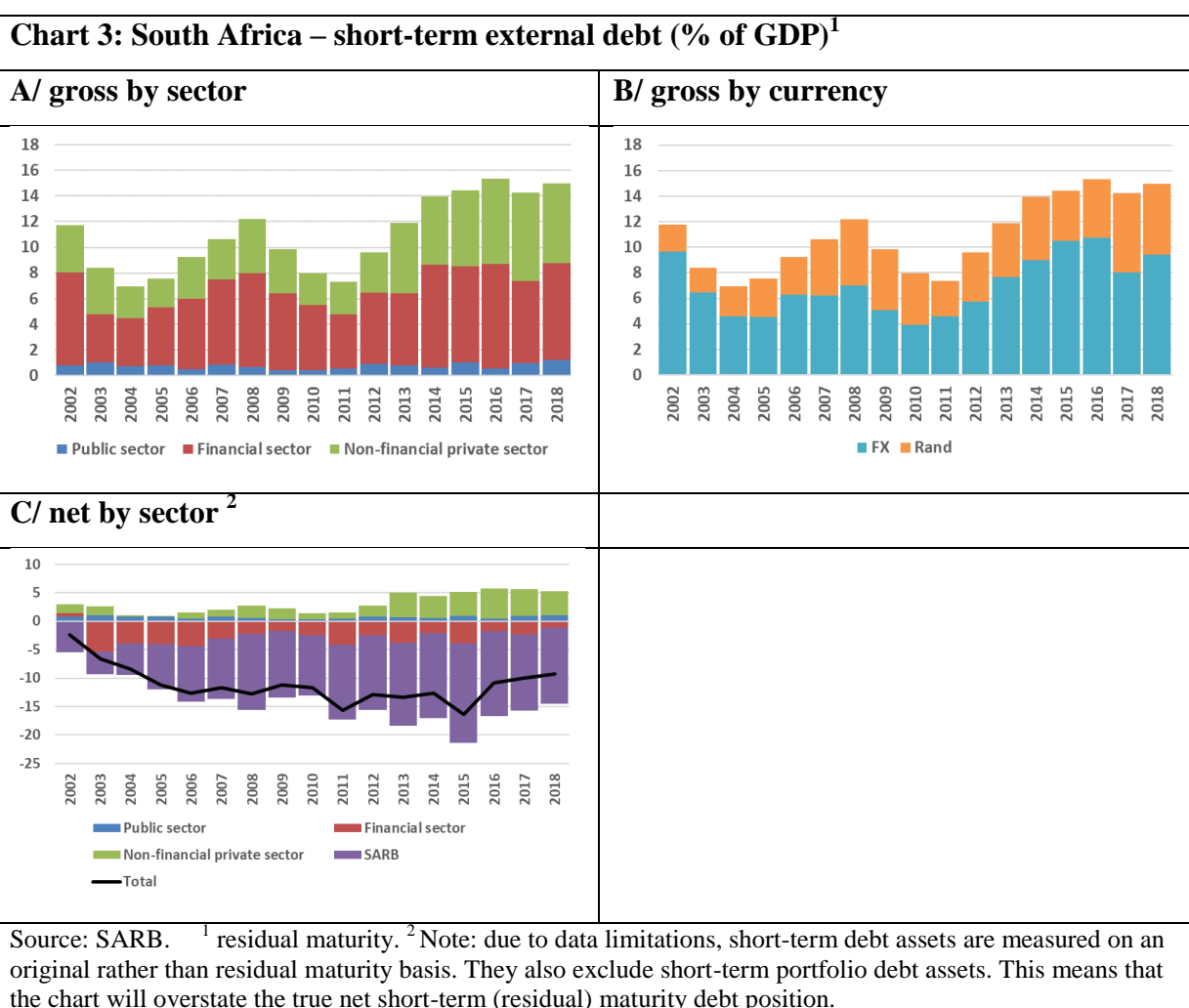


In addition, the broader net (of liabilities) external asset position – including aside from debt FDI and portfolio equity – remains positive, including the net foreign currency-denominated position. This means that the net valuation of South Africa’s external balance sheet improves when the rand weakens.

Nonetheless, the marked build-up in the government’s external debt and more broadly the doubling in its overall (external plus domestic) debt since the GFC could increase the

government’s funding difficulties. This would be especially the case if there was a shock that raised the cost of finance such as a sovereign rating downgrade (see Box A).

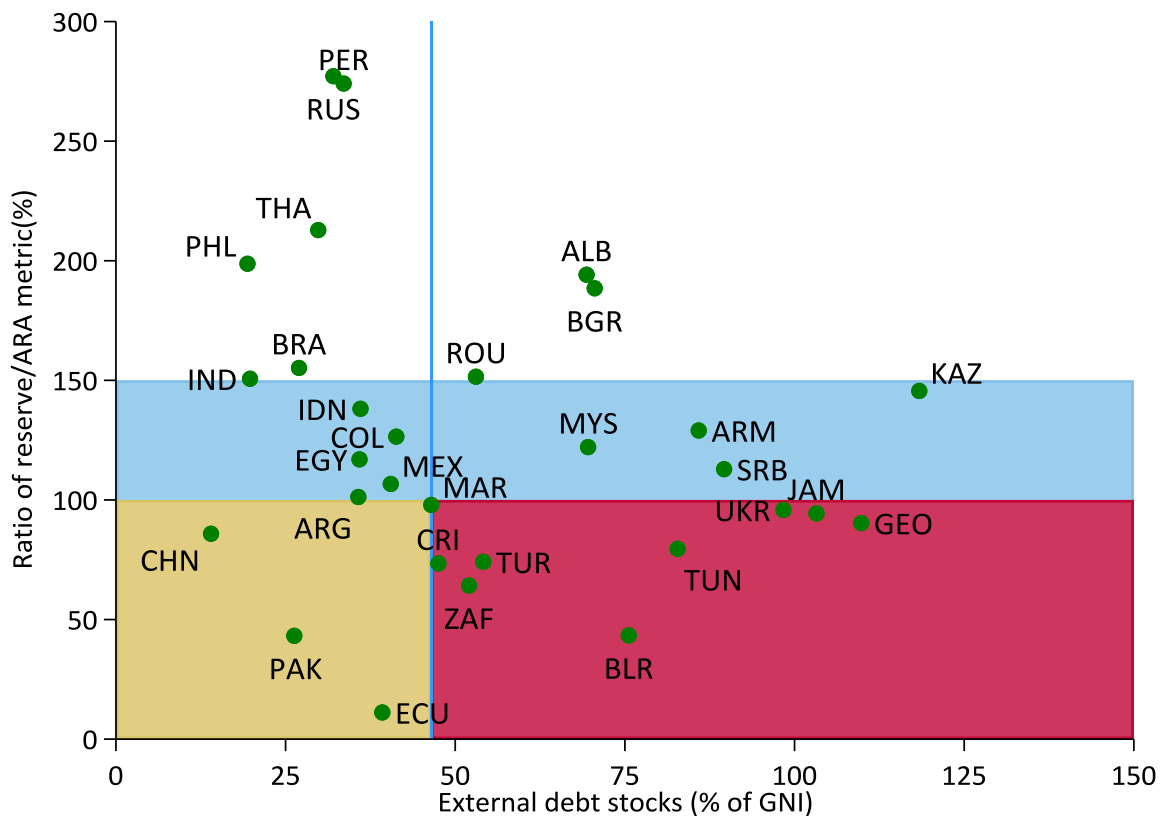
Moreover, and notwithstanding a substantial (\$20bn) build up in foreign currency reserves, the rapid pace of non-FDI capital inflows over the past decade has increased South Africa’s – and in particular the non-government sector’s – external funding risks. The increase in South Africa’s short-term gross external debt since the midst of the GFC has risen particularly for the non-bank private sector with much of this debt denominated in foreign currency (Chart 3a-b).



On a range of metrics, foreign currency reserves are now below levels which the IMF judges as adequate to cover the risk of a financing gap in the balance of payments. At end 2017, foreign exchange reserves just covered short-term (residual maturity) gross external debt and were equal to only two-thirds of the IMF’s assessment of reserve adequacy (ARA) metric – a

broader measure of gross external financing risk including medium-longer term debt and portfolio equity, the risk of domestic capital flight and loss of exports.⁶ Reserve cover on this broader metric – which the IMF finds is a good predictor of past currency crises (see IMF (2011)) – is lower still compared to peers including Turkey (see Chart 4).⁷

Chart 4: Reserve cover and external debt in EMEs



Note: Reserve cover data are end 2018 and external debt is end 2017 or the latest. The vertical line is for the median country. The sample consists of 30 emerging market and developing economies. ARA = assessment of reserve adequacy. The ARA metric reflects potential balance-of-payment foreign exchange (FX) liquidity needs in adverse circumstances and is used by the IMF to assess adequacy of FX reserves against potential FX liquidity drains. The metric used is not adjusted for capital control measures. The blue shaded area is the reserve adequacy range. The blue vertical line corresponds to the 50th percentile for the entire sample. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Most gross short-term external debt (and the foreign currency component within it), is currently split fairly evenly between banks and the non-bank private sector (Chart 3 a). The extent to which there is an overall external funding risk or within it a foreign currency

⁶ The precise weighting in the ARA for countries with floating exchange rates is $0.3\text{short-term debt} + 0.1\text{ other portfolio liabilities} + 0.05M2 + 0.05\text{exports}$. Allowing for the fact that South Africa has some remaining controls on resident outflows the broader reserve coverage measure is slightly higher at 70%.

⁷ The need for reserve cover though may be less in South Africa than some other EMEs given its history of a very flexible exchange rate and its deep domestic financial markets.

funding risk will depend, in part, on the size of natural or financial hedges of banks and non-bank corporates.

The available data suggest that the increase in short-term external debt net of debt assets has been concentrated in the non-bank corporate sector (Chart 3c). But to make a better assessment it would be useful to have a more granular breakdown of net short-term debt both by currency and by individual firms. For example, even if the overall corporate or banking sector showed a positive short-term net foreign currency position, it is possible that some individual firms may have large short-term foreign currency liabilities.

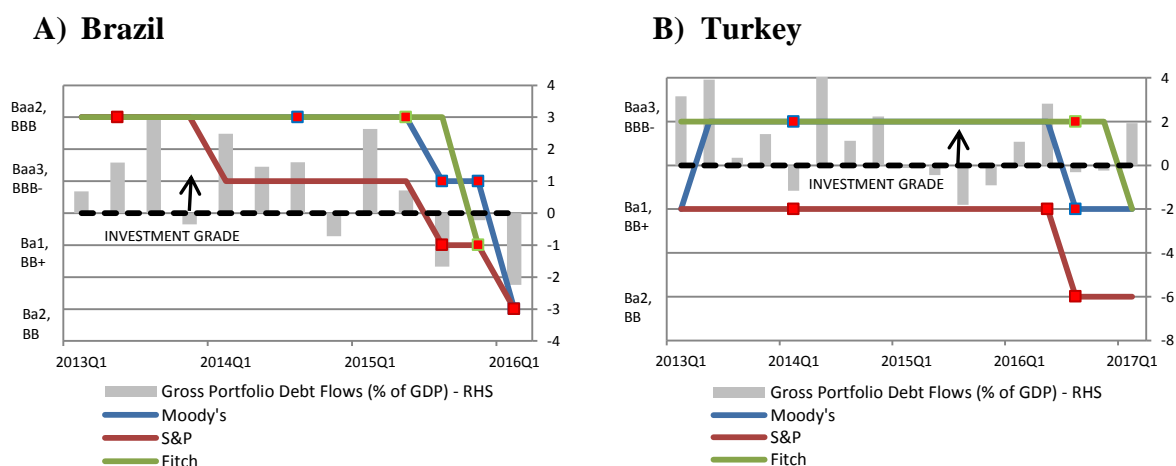
BOX A– IMPACT OF RATING AGENCY DOWNGRADES ON CAPITAL FLOWS

A country with an investment grade credit rating should, in principle, receive larger capital inflows than one that does not. Restrictions on investment mandates can hard wire this effect. For example, a sovereign is automatically excluded from Citigroup’s World Government Bond Index (WGBI) when both Moody’s and S&P give a sub-investment rating. This would result in forced debt sales.¹ Some institutional investors are only allowed to buy bonds from countries classified as investment grade by at least one of the three major agencies (Moody’s, S&P and Fitch). By the same token, if a country loses its status by all agencies, it should suffer capital outflows.

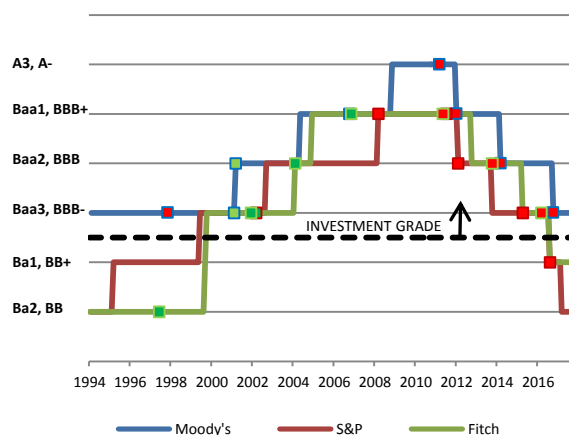
But the relationship between sovereign ratings and capital flows is not straightforward. Both Brazil and Turkey achieved investment grade before 2013 (Brazil by the 3 main agencies and Turkey by Moody’s and Fitch) after many years of improving fundamentals. In the case of Brazil, capital inflows were weaker after the downgrade to below investment grade by the first agency in 2015Q3. But in the case of Turkey, flows were weaker before the downgrade by the second agency in 2016Q3 (since one never upgraded the country to investment grade). Chart A panels A and B show the pattern of gross portfolio debt flows into Brazil and Turkey when they each faced downgrades to sub-investment grade status in recent years. In neither country is there a clear cliff edge impact on portfolio flows. The charts suggest that outflows mainly occur ahead of rather than after the last agency downgrade to sub-investment grade. It is difficult to know though whether this is attributable specifically to the expectation of downgrades by other rating agencies or rather to the more general deterioration in economic conditions that would have likely led to a broader set of investors selling bonds.

Some recent academic research highlights the (permanent) impact of institutional investors on the volatility of capital flows on countries with low ratings rather than the one off fall in inflows resulting from a change in rating to sub-investment grade status. Fratzscher (2012) finds that the countries at the lowest 10% of sovereign ratings experienced 15% bigger net capital outflows during a crisis than countries with higher ratings. But they also received almost 10% larger net inflows during periods of generalised high risk appetite such as in 2009-10 (see Chart A panel D).

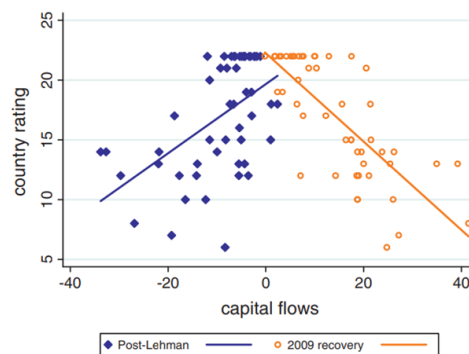
Chart A – Credit ratings and portfolio inflows



C) South Africa



D) Sovereign ratings and capital flows - immediate post-Lehman (October 2008 – February 2009) versus 2009-10 recovery



Source: Panel A to C, gross portfolio debt inflows from IMF IFS, ratings from Trading Economic. Panel D – Fratzscher (2012), total net capital inflows (% of total assets under management at the beginning of the period) versus country rating (at the beginning of the period). A higher value implies a better rating.

4. Evidence on risks of capital flows

Numerous studies have looked at the risks from different types of capital flows especially by instrument type. The empirical literature is fairly conclusive that debt inflows are more pro-cyclical, volatile and generate greater financial stability risks than equity flows.⁸ Although both debt and equity inflows can contribute to bubbles in domestic asset markets, debt market booms have in the past been found to be more associated with subsequent macroeconomic instability and financial crises. Often debt inflows, especially bank lending, has been positively associated with the growth in credit from domestic banks suggesting the potential for a mutually reinforcing cycle of credit to the real economy from domestic and foreign firms.

Eichengreen *et al* (2003) find that debt inflows in foreign currency increase the likelihood and severity of crises.⁹ Eichengreen and Gupta (2016) highlight that sudden stops of non-FDI flows in EMEs are usually preceded by a boom of inflows and associated with a marked fall in GDP growth. More generally, according to Ghosh *et al* (2016) surges in capital inflows are followed 20% of the time by financial crises often associated with large falls in output and especially so following surges in cross border bank lending ('other' flows).

⁸ See, for example, Kose *et al* (2009), Forbes and Warnock (2012) and Davis (2014).

⁹ See Eichengreen *et al* (2003).

Lots of studies have also looked at the determinants of capital inflows splitting them into global ('push') and country specific ('pull') factors. They nearly all show that gross inflows, especially flows from international banks, are strongly (positively) related to certain global factors – easier global monetary policy (Rey (2015), Bruno and Shin (2015 b), Correa *et al* (2016)) or higher risk appetite (Forbes and Warnock (2012), Bruno and Shin (2015 a), Eichengreen and Gupta (2016)). Avdjiev *et al* (2017) find that debt flows – bank loans and international debt securities – are sensitive to push as well as pull factors. On the former they find that risk appetite – proxied by the VIX – was most important pre-GFC while debt flows have been more sensitive to changes in US policy rates since then. In a recent survey of 34 empirical studies, Koepke (2019) finds that push factors are particularly important for gross portfolio equity and especially debt inflows whilst both push factors (in the form of risk aversion) and pull factors are important for gross banking inflows.

For South Africa, Ahmed *et al* (2005) finds that pull factors – higher GDP growth, a better institutional environment and higher interest rates – are the main factors attracting gross portfolio and FDI inflows into South Africa. In contrast, Aron *et al* (2010) find that gross portfolio inflows are dependent on a range of pull (lower inflation, higher credit rating) and push (higher growth in US GDP and stock market prices, lower VIX) factors. Kavli and Viege (2017) find that gross bond inflows into South Africa prior to the GFC were most affected by South Africa's sovereign yield spread but since the crisis by the VIX. In contrast, they find equity inflows were only affected by the VIX in the midst of the GFC.

The volatility – measured by the coefficient of variation – of total gross capital flows into South Africa has been lower than the average (median) of other EMEs. This is driven by a lower volatility of portfolio equity inflows. Leape and Thomas (2009) note that portfolio equity flows into South Africa, in contrast to debt, have a relatively long maturity. In contrast, the volatility of banking inflows ('other') and especially FDI have tended to be higher than for other EMEs (Table 1). Rangasamy (2014) notes the especially high volatility of FDI pre-2005 (1994-2004) where he finds that 80% of inflows reversed in the subsequent year. He highlights the importance of encouraging more stable greenfield FDI rather than foreign mergers and acquisitions.

Perhaps more importantly, is the pattern of flows around periods of crises. As in other EMEs, during the Asian crisis and the more recent global financial crisis the biggest turnaround of inflows was in debt flows especially banking flows (Charts 5-6). And the more granular BIS data suggest that this was mainly concentrated in flows denominated in foreign currency. In South Africa, the impact on net outflows has been muted, to some extent, by a retrenchment by residents of assets held abroad during these periods. Rangasamy (2014) also finds a positive association between gross inflows and outflows in South Africa including in the wake of the GFC (2008-2010).

Table 1: Volatility of Capital Inflows to Emerging markets and South Africa 1991-2017

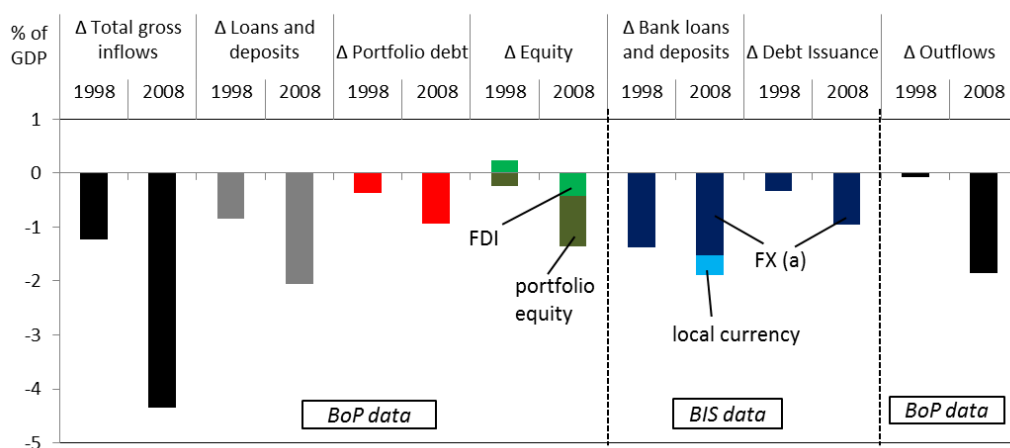
Emerging markets		1991- 1995	1996- 2000	2001- 2005	2006- 2010	2011- 2017	1991 2017
FDI	Mean (quarterly average)	0.23	0.90	0.72	0.93	0.68	0.84
	Standard Deviation	0.15	0.53	0.54	0.70	0.41	0.70
	Coeff. of Variation	0.56	0.75	0.73	0.52	0.66	0.89
Portfolio Equity	Mean (quarterly average)	0.08	0.04	0.04	0.02	0.01	0.03
	Standard Deviation	0.12	0.11	0.11	0.17	0.09	0.15
	Coeff. of Variation	1.32	1.54	2.15	1.86	2.28	3.26
Portfolio Debt	Mean (quarterly average)	0.06	0.15	0.08	0.15	0.23	0.23
	Standard Deviation	0.28	0.47	0.39	0.55	0.57	0.71
	Coeff. of Variation	1.60	1.63	1.48	2.57	2.18	3.61
Other Flows	Mean (quarterly average)	0.57	0.43	0.26	0.42	0.27	0.30
	Standard Deviation	0.98	0.97	0.92	1.00	0.82	1.32
	Coeff. of Variation	0.73	1.44	1.44	1.66	1.77	2.38
Total Flows	Mean (quarterly average)	0.00	0.42	0.64	1.34	1.07	0.97
	Standard Deviation	0.00	0.64	0.97	1.20	0.93	1.21
	Coeff. of Variation	0.78	0.99	1.15	0.85	1.03	1.33
Total Flows (plus E&O)	Mean (quarterly average)	0.00	0.26	0.60	1.28	0.90	0.97
	Standard Deviation	0.00	0.85	1.05	1.28	1.15	1.34
	Coeff. of Variation	0.72	1.15	1.04	0.75	1.19	1.29

South Africa

		1991- 1995	1996- 2000	2001- 2005	2006- 2010	2011- 2017	1991 2017
FDI	Mean (quarterly average)	0.06	0.27	0.54	0.45	0.28	0.31
	Standard Deviation	0.14	0.31	1.25	0.50	0.33	0.62
	Coeff. of Variation	2.39	1.13	2.31	1.12	1.19	2.02
Portfolio Equity	Mean (quarterly average)	0.08	1.08	0.26	0.55	0.42	0.46
	Standard Deviation	0.44	0.71	0.92	0.76	0.42	0.72
	Coeff. of Variation	5.49	0.66	3.60	1.37	1.01	1.57
Portfolio Debt	Mean (quarterly average)	0.23	0.38	-0.06	0.33	0.62	0.32
	Standard Deviation	0.38	0.98	0.58	0.73	0.51	0.68
	Coeff. of Variation	1.61	2.56	-9.26	2.18	0.83	2.10
Other Flows	Mean (quarterly average)	-0.02	0.17	0.15	0.31	0.41	0.21
	Standard Deviation	0.52	0.68	0.57	0.67	0.60	0.62
	Coeff. of Variation	-20.95	4.00	3.80	2.13	1.45	2.92
Total Flows	Mean (quarterly average)	0.35	1.90	0.88	1.65	1.73	1.30
	Standard Deviation	0.64	1.28	1.08	1.47	0.83	1.21
	Coeff. of Variation	1.83	0.67	1.22	0.89	0.48	0.93
Total Flows (plus E&O)	Mean (quarterly average)	0.17	1.72	1.11	1.66	1.62	1.25
	Standard Deviation	0.66	1.06	1.13	1.22	0.82	1.13
	Coeff. of Variation	3.94	0.61	1.01	0.73	0.50	0.91

Source: IMF, IFS and Bank calculations. Notes: Mean, standard deviation and coefficients of variation are the median across all countries in the sample during respective time periods. Coefficient of variation is standard deviation divided by mean. Data are quarterly from 1990 Q1 to 2017 Q4. All capital flows are expressed as % of annualised quarterly GDP. “plus E&O” adds the component of Errors and Omission from the balance of payments to flows from the financial account.

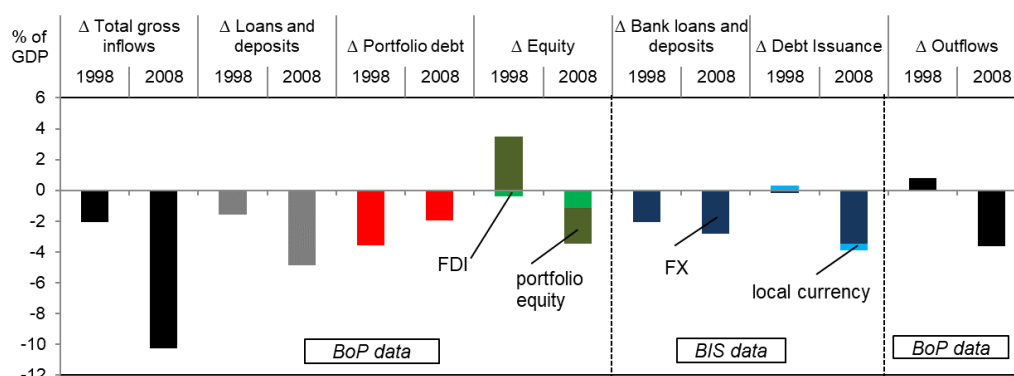
Chart 5: The turnaround in different types of gross capital inflows to EMEs in periods of global financial crisis



(a) Note that almost all net international debt flows into EMEs recorded in the BIS international debt statistics are in foreign currency. Sources: BIS, IMF.

Capital flows during a turnaround are the sum of the respective type of capital inflow (per cent of GDP) during a bust minus a boom. Each bust period starts in the quarter after a noticeable peak in aggregate gross capital inflows until the subsequent trough. Boom periods are the period before the bust and defined to last the same number of quarters as the subsequent bust.

Chart 6: The turnaround in different types of gross capital inflows to South Africa in periods of global financial crisis

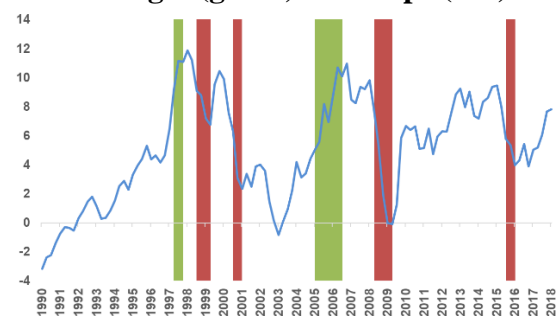


Source: IMF IFS and BIS. Note: the split between FX and local currency loans and deposits is not available in the BIS statistics for 1998 and 2008.

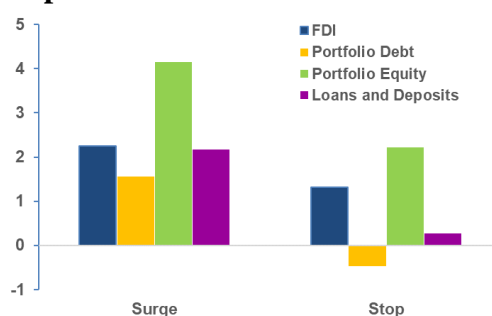
Another way of looking at capital inflow booms and busts is to assess directly what happened to the components of capital inflows during periods when total gross inflows into South Africa were significantly different from the past trend. Using the now common method suggested by Forbes and Warnock (2012), Chart 7a highlights 2 periods of inflow surges and 4 of stops over the past quarter of a century. Chart 7b shows that debt inflows – both bank loans and portfolio debt – are, in particular, much lower in bust than boom periods.

Chart 7: Gross capital inflows surges and stops in South Africa

a/ Gross flows into South Africa (% of GDP) and episodes of aggregate capital inflow surges (green) and stops (red)



b/ Average inflows (as % of GDP) during episodes of capital flows surges and stops by component



Source: IMF BOPS and authors' calculations. Gross capital inflows surges and stops identified using the method suggested by Forbes and Warnock (2012) – a surge (stop) is defined to start when total annual cumulative quarterly gross capital inflows relative to GDP rise (fall) to 1 standard deviation above (below) their backward looking mean, then surpass 2 standard deviations for at least one quarter, and until they fall back to 1 standard deviation.

In terms of assessing the vulnerability of inflows to common external factors, one indicator of this is the correlation of inflows into South Africa with those into other EMEs especially ones at a similar stage of development such as Brazil, Mexico, Russia and Turkey (peers in Table 2). This suggests that market-based inflows especially portfolio debt are most correlated with other countries and this common movement seems to have increased since the GFC. This seems to be consistent with the findings of Kavli and Viega (2017) that gross portfolio debt flows in to South Africa since the GFC have been more sensitive to global risk appetite.

Table 2: Correlation of gross capital flows into South Africa with other EMEs 1990 Q1-2017 Q4

	Direct		Portf. Debt		Portf. Equity		Other		Total	
	EM	Peers	EM	Peers	EM	Peers	EM	Peers	EM	Peers
1990-1995	0.39	-0.07	0.15	0.20	0.02	-0.20	0.07	0.28	0.58	0.01
1996-2000	-0.11	-0.10	0.56	0.47	-0.23	0.07	0.05	-0.24	0.33	0.50
2001-2005	0.32	-0.01	-0.09	-0.17	0.08	-0.25	0.40	0.10	0.49	0.07
2006-2010	0.04	0.11	0.61	0.52	0.59	0.45	0.41	0.34	0.60	0.57
2011-2017	-0.34	-0.06	0.46	0.41	0.21	0.19	-0.10	0.09	0.19	0.13
Before GFC	0.28	0.15	0.31	0.28	-0.07	-0.21	0.19	0.06	0.42	0.14
After GFC	-0.36	-0.08	0.44	0.45	0.29	0.25	-0.05	0.13	0.19	0.13
Total Period	0.21	0.14	0.40	0.31	0.12	-0.05	0.15	0.08	0.43	0.19

Note: Colours represent statistical significance. Red, orange and yellow represent respectively statistical significant at the 1%, 5% and 10% levels. Peers are Brazil, Turkey, Mexico and Russia.

5. Policies to deal with capital flow volatility

Such findings do not mean that EMEs should jump immediately to look for policies to limit (non-FDI) capital inflows. On the contrary, capital inflows potentially provide a range of benefits to the economy so the goal should be to make an open global financial system safer. Better conventional policies may help indirectly to limit capital flow volatility.

a/ Macro and structural policies

The ‘conventional wisdom’ is that standard macroeconomic policies are the first line of defence against capital flow volatility. Faced with a surge of inflows this would mean using a combination of a looser monetary, tighter fiscal policy and exchange rate appreciation and *vice versa* in face of capital outflow pressure. If foreign currency reserves seem inadequate building them up would both limit exchange rate overshooting and provide a cushion against any future capital flow reversal.¹⁰ During periods of large inflows this would seem to be a possible policy option for South Africa given its fx reserves currently are relatively low. In addition, the IMF (2016) finds that, amongst other things, higher foreign exchange reserves

¹⁰ See IMF (2012).

and especially a flexible exchange rate reduces the sensitivity of capital inflows to global factors in the first place. An open capital account also allows countries' private sectors to build up gross external assets. In many advanced countries in the past, these have been retrenched in times of reversals in capital inflows to cushion the impact on the domestic economy. South African banks too have short-term external assets that, in principle, could act as a cushion in a funding crisis.

Structural measures are also important. A deepening and broadening of domestic capital markets should mean that surges and stops in capital inflows can be better accommodated. A deepening of domestic local capital markets make it easier for an economy to absorb a surge in capital inflows without causing a credit or asset price bubble.¹¹ It is especially important to develop local capital markets in local currency given that borrowers will avoid balance sheet losses from domestic exchange rate depreciation. A more diversified domestic investor and instrument base, including institutional investors and simple and transparent securitisation markets, also reduces the risk of a drying up in any particular form of financing. Compared to its EME peers though South Africa already has reasonably deep and broad-based domestic investor base and capital markets (Table 3).

Issuing debt in local rather than foreign currency also allows for monetary policy independence in a floating regime. However, independence may not be full. Hofmann *et al* (2017) find a strong association in EMEs, including in South Africa, between domestic currency appreciation against the dollar (but not on a traded-weighted basis) and lower local currency bond yields. They attribute this to the risk taking channel of monetary policy. Appreciation against the dollar increases the credit worthiness of borrowers to the extent they have net dollar liabilities. This, in turn, encourages greater debt inflows from abroad that push down (moderately) on local currency yields. In other words, issuing in local currency is not a free lunch but rather transfers the exchange rate risk (or gains) to EME creditors. Depending on their reaction to changes in the value of the domestic exchange rate they can accentuate movements in capital flows and domestic exchange rates.

The main structural policy to break this risk taking channel link between changes in the exchange rate and local currency yields would be to reduce dollar mismatches in the

¹¹ For example, Hassan (2015) finds a low correlation between net capital inflows and domestic credit growth in South Africa in recent years unlike in some peer countries.

economy as is the case in most advanced countries. This though cannot be achieved overnight. Consideration could also be given to sterilised intervention especially if there is a risk otherwise of a domestic credit boom and the exchange rate is already over-valued, for example, based on the IMF's judgement in its *External Sector Report*. Carstens (2019) argues that sterilised foreign currency intervention, similarly to conventional macro prudential instruments (see below), can therefore both reduce the risks to financial stability from a build-up of financial imbalances as well as acting as a cushion against marked capital outflows and domestic exchange rate depreciation.¹²

Table 3: Foreign investors, domestic investor base and market-liquidity measures

2. Foreign Investors, Domestic Investor Base, and Market-Liquidity Measures

	Foreign Investors		Domestic Investor Base				Market Liquidity/Depth			
	Debt	Equities	Mutual funds	Insurance	Pension funds	Banks assets	FX turnover (Spot)	FX turnover (Forwards, Swaps, Options)	Equity turnover	International debt trading volume
	% GDP	% GDP	% GDP	% GDP	% GDP	% GDP	% GDP	% GDP	% Mkt Cap	% GDP
	2018:Q1	2018:Q1	2017	2016	2016	2017	Apr. 2016	Apr. 2016	2017	2018:Q1
China	3	6	14	20	1	308	0.3	0.4	192	1
India	4	6	12	17	1	75	0.7	0.9	43	1
Indonesia	16	11	3	4	2	57	0.3	0.2	18	10
Malaysia	29	26	60	20	60	188	0.5	2.3	28	3
Philippines	8	17	2	8	4	101	0.4	0.4	12	12
Thailand	9	29	30	22	6	186	1.0	1.6	59	1
Argentina	22	4	5	5	...	34	0.2	0.0	7	30
Brazil	11	18	60	13	13	191	0.4	0.7	70	10
Chile	25	12	20	22	70	114	1.6	1.4	12	10
Colombia	25	3	...	7	22	70	0.7	0.6	11	18
Mexico	32	13	10	7	14	67	0.6	1.3	27	19
Peru	19	11	4	6	21	63	0.4	0.4	6	20
Hungary	29	13	12	8	4	99	0.6	2.1	32	14
Poland	25	10	8	10	8	94	0.4	1.5	34	12
Russia	5	11	0.2	2	4	90	1.5	2.0	23	7
South Africa	26	57	52	66	100	114	1.0	6.1	31	17
Turkey	15	6	2	5	2	105	0.8	1.8	172	14
Median	19	11	11	8	7	99	0.6	1	28	12

Sources: Bank for International Settlements; CEIC; EMTA; IMF, International Financial Statistics database, World Economic Outlook database; Investment Company Institute; national authorities; World Bank, Global Financial Development database; World Federation of Exchanges; and IMF staff calculations.
 Note: Pension fund data include private and funded plans. Mutual fund data exclude closed-end funds and exchange-traded funds. For each indicator, the "best" and the "worst" quartile values are highlighted in green and red, respectively, across a snapshot of different countries, with the assumption that it is better to have deeper domestic investor base and market liquidity. In panel 2, FX turnover is quoted on a daily basis. Data labels in panel 1 use International Organization for Standardization (ISO) country codes. FX = foreign exchange; Mkt Cap = market capitalization.

IMF (2018c).

b/ Macro prudential and capital flow management measures

There is a question though whether sound macro and structural measures are sufficient to fully limit capital inflow volatility. As discussed above, periods of gross debt inflows and reversals – including into South Africa – tend to come in waves and seem – other than for FDI – to be highly correlated across country and very susceptible to changes in the global investment environment irrespective of country specific factors and policies.¹³

¹² Carstens (2019).

¹³ Rey (2015) and Forbes and Warnock (2012).

Therefore, countries may also need *macro prudential* tools that address systemic risk arising from marked changes in capital inflows. These instruments are intended to target the build-up of systemic vulnerabilities in, among others, asset and credit markets, specific sectors of the economy, risk that are attributed to the structure of the financial system (interconnectedness), as well as risks of liquidity and maturity mismatches. In general, these instruments do not discriminate explicitly between residents and non-residents.

Domestic macro prudential policies Macro prudential instruments are useful in mitigating systemic risk from volatile capital flows even when they are not designed to limit or target capital flows. They can dampen the pro cyclical impact of capital inflows on asset prices, exchange rate and credit growth by restraining bank leverage and/or curbing excessive credit growth to domestic borrowers, including lending in foreign currencies. And during periods of risks in capital outflows, macro prudential policy increases the resilience of the economy by building capital buffers to mitigate credit risk from foreign-currency borrowing and by reducing the reliance on wholesale funding in foreign currencies.

Macro prudential tools may also indirectly reduce the risk of marked changes in capital inflows in the first place. For example, Avdjiev *et al* (2017) and Hoggarth *et al* (2016) find that increases in capital requirements reduce the extent of a capital reversal in face of global shocks.

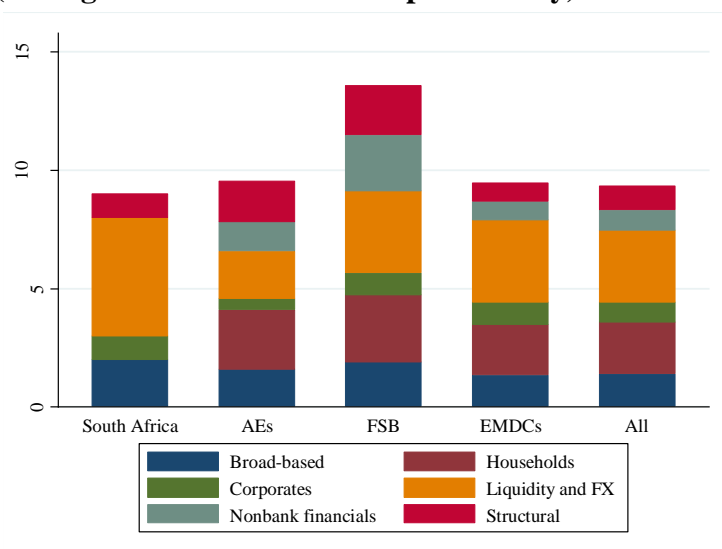
Since the GFC, many countries have established or strengthened their macro prudential policy functions and their range of macro prudential tools. Last year the IMF published its first systematic survey of macro prudential tools used by its member countries. These are measures used to deal with systemic financial stability risk rather than necessarily to deal with risks from capital flows.¹⁴ They received responses from 141 member countries.

The most frequently used ones, including those reported by South Africa, are those agreed under Basel 3, in particular, the capital conservation buffer, the leverage ratio and the liquidity coverage ratio. Sectoral tools are most frequently used for the housing real estate sector although some EMDCs, in particular, apply such tools to the corporate sector. In contrast to the average in both AEs and EMEs, South Africa did not report using any tools

¹⁴ IMF (2018a).

applied to the household or non-bank financial sectors (see Chart 8). For example, Turkey, Brazil and Mexico all apply a range of tools on non-bank financials and capital requirements on the household sector. Turkey and Brazil also apply LTV limits and caps on household credit.

Chart 8: Use of macro prudential tools by main type (average number of measures per country)



Source: IMF (2018a).

Table 4: Most commonly used categories of conventional macro pru policies in IMF survey of 9 countries

Broad-based capital tools	Countercyclical capital buffer - Croatia, Iceland, Sweden, Peru Minimum capital requirements - Cambodia, Turkey Systemic risk buffer - Croatia, Iceland Dynamic provisioning / countercyclical provisioning - Peru, Colombia
Structural tools	Capital buffer for systemically important institutions - Croatia, Iceland, Sweden Pillar II add-on for largest banks - Sweden
Sectoral capital tools	Risk weight floor on mortgages - Sweden Higher risk weights on consumer loans - Turkey Capital buffer according to sectoral concentration - Peru Risk weights on foreign borrowing - Croatia
Sectoral asset-side tools	LTV and DTI ratio - Colombia, Sweden, Turkey,
Liquidity tools	Liquidity coverage ratio - Cambodia, Iceland, Korea, Sweden, Peru

Source: IMF (2017).

A recent review by IMF staff of 9 countries show that a range of macro prudential measures were used to reduce the build-up of systemic risk and may have indirectly reduced capital inflows (see Table 4).

Capital-based tools were used in circumstances where capital inflows resulted in excessive private-sector credit growth that had a potential to stimulate the build-up of system-wide risk during an upward phase of the financial cycle. Sectoral capital and asset-side tools were used when increased banks' exposure to specific sectors of the economy was fuelled by capital inflows and led to the build-up of system-wide vulnerabilities.¹⁵ Liquidity-based instruments were mostly used when banks relied on capital inflows as a source of funding to ensure continuous liquidity in the event of disruptions in foreign funding or a reversal of capital flows.¹⁶

Capital flow management measures (CFMs) Countries may also need prudential tools that directly address excessive volatility in capital inflows. A number of countries have introduced such measures in recent years. CFMs comprise measures that discriminate explicitly against non-residents and also other measures which are intended to affect capital flows, particularly in foreign currency.¹⁷ These measures though can be contentious if it is thought they are being used to manipulate the exchange rate rather than to deal with a well-defined financial stability risk. Although, South Africa uses a range of liquidity measures it uses a lot fewer measures in foreign currency than most of its peers. The only measure South Africa reported to the IMF Survey is a 10% limit on banks' net foreign exchange positions (over all maturities in aggregate). In contrast, Turkey, Mexico and South Korea all use a range of liquidity measures in foreign currency. And a number of EMEs with lower gross short-term foreign currency debt than South Africa use some form of measure applied to banks to limit foreign currency maturity risk.

¹⁵ For example, capital buffer on foreign currency loans in Peru and LTV ceilings on housing and commercial real estate loans in Turkey.

¹⁶ These disruptions could weaken the banking sector's regular foreign funding sources and culminate into system-wide vulnerabilities.

¹⁷ The latter include reserve requirements on foreign currency deposits, limits on foreign exchange exposure, limits on foreign currency loans, unremunerated reserve requirements on capital inflows, LCR in foreign currency, NSFR in foreign currency, loan-to-deposit ratio on foreign currency-denominated loans and deposits, capital buffer for foreign currency loans.

The closest we have to global “rules of the road” on using CFMs is the IMF Institutional View on the Liberalisation and Management of Capital Flows (IV) (2012).¹⁸ Although the IMF Board unanimously supported the IV in principle, there have been disagreements over the advice that IMF staff have given in practice in its bilateral surveillance in recent years.

The IMF adopts a practical approach and assesses the benefits to financial stability of any CFM against the costs to an open capital account. The Fund is more likely to think CFMs on inflows are appropriate, albeit only temporarily, when: (i) the policy is dealing with an identified domestic systemic financial stability (FS) risk, (ii) there is evidence of a capital inflow surge, and (iii) there are no alternative measures available to deal with the FS risk that have less impact on capital inflows. Policies to limit capital outflows are usually judged only appropriate if the country is in, or imminently facing, a currency crisis and even here it should form part of a broader package of measures that deal with the fundamental cause of the crisis.

OECD members have to abide by its Code of Liberalisation of Capital Movements (the ‘Code’). Some non-members have also chosen to abide by the Code. So, if South Africa decides to join the Code it would be given advice on CFMs by both the Fund and the OECD. The Code is a legally binding multilateral agreement and is, in general, more restrictive in allowing its Code adherents to use CFMs temporarily than in the IMF’s approach. In particular, to limit financial stability risks, the IMF has usually been sympathetic to national regulators applying measures on their banks’ lending and borrowing in foreign currency. But to the extent that these measures affect non-residents most are seen as an infringement of the OECD Code.

The OECD recently completed a review of its Code for the first time in 25 years.¹⁹ It has resulted in a modest relaxation in the OECD’s approach to CFMs. In particular, countries can use certain specific measures to deal with foreign currency funding risk without infringing the Code – the Liquidity Coverage Ratio (LCR) and Net Stable Funding Requirement (NSFR) in foreign currency. But other measures applied to foreign currency will need to be assessed on a case by case basis. This implies countries will need to notify the OECD that they are using such measures (see Annex 1 for more details).

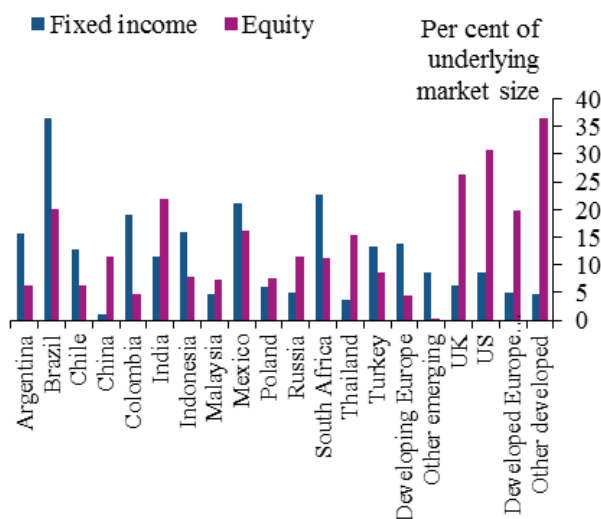
¹⁸ IMF (2012).

¹⁹ OECD (2019).

Currently, CFMs are aimed primarily at domestic banks – assets, liabilities or net positions. They do not usually cover direct borrowing from abroad by domestic companies and households.

Non-bank macro pru measures As discussed above, there has been a marked rise in cross border – as well as local – bond finance of domestic non-banks in South Africa since the GFC. One particular source of risk from non-bank finance is the sale of assets by open-ended investment funds (OEIFs). Investors in OEIFs can redeem their funds on demand which may force the fund to sell its underlying assets irrespective of the strength of the economy. As shown in Chart 9, OEIFs hold a significant amount of bonds in South Africa – accounting for more than 20% of the total (sovereign and corporate) outstanding bonds.

Chart 9: Open-ended Investment Funds (OEIFs), assets held in EMEs, 2017



Source: BIS International debt statistics, World Federation of Exchanges (WFE), Morningstar and Bank calculations. Note: Denominator for fixed income is debt securities outstanding (2017 Q4) from BIS and for equity is domestic market capitalization (January 2017) from WFE. Numerator for fixed income are holdings of funds with strategies classified as “investment grade” and “high yield”. For equity, funds with strategy classified as “emerging market” are considered.

(a) For a sample of 50,000 open-ended investment funds.

One possible option to reduce the volatility of cross border market-based finance is to extend regulation at the creditor end. The FSB has published a consultative document with policy recommendations to address such structural vulnerabilities from asset management activities

and investment funds.²⁰ These include addressing liquidity mismatches and redemption terms in open-end funds highlighted as risk factors in our analysis. Some advanced countries also apply their own specific measures to non-bank financials. For example, according to the IMF macro pru survey, Australia, Germany, Singapore and Switzerland all apply macro prudential measures to the domestic asset management industry to limit leverage and/or reduce liquidity risk.

Looking at the International Monetary and Financial System as a whole, it is also important that the global external safety net and the IMF resources and instruments within it remain adequate to serve the role as foreign currency lender of last resort. Over the medium term, the demands on the system are likely to grow, potentially substantially, as South Africa, and EMEs as a whole, further liberalise their capital accounts and make up a growing share of world GDP.

6. Conclusion and implications for South Africa

Over the past quarter of a century, South Africa has gradually opened up its capital account. External financial liberalisation should bring a range of economic benefits but at the same time poses some challenges to maintaining financial stability.

The stronger and more stable a country's fundamentals – macroeconomic indicators and frameworks, structural policies and exchange rate flexibility – the less likely it should be vulnerable to sharp variations in capital flows and the better able it can withstand such shocks.

In the past, South Africa has attracted a lot of equity finance. But unlike its peers this has been mainly in the form of portfolio equity flows rather than FDI. That said, in South Africa's case it seems these flows have usually been a stable form of financing.

However, since the GFC, many EMEs, including South Africa, have witnessed large inflows of debt especially market-based finance. This has been more volatile and vulnerable to

²⁰ FSB (2017).

changes in external ('push') factors.²¹ This suggests that a broader range of policies should be considered to deal with EME financial stability risks emanating from abroad.

Conventional domestic macro prudential policies, such as minimum capital and liquidity requirements – can strengthen the banking system to help it withstand shocks including from abroad. But policies may also be needed that are aimed directly to deal with risks from abroad – so-called capital flow management policies.

South Africa does not have large total external debt but its private sector does have quite large and growing short-term gross external/foreign currency financing needs. Unlike a number of its peers, South Africa does not have tools aimed at limiting banks' maturity mismatches in foreign currency. In any case, it would also be useful to monitor short-term external financing (ideally on a residual maturity basis) net of external debt assets including on a granular basis, for example, by sector and currency.

Given debts flows are increasingly occurring through capital markets there is also a question whether the macro prudential perimeter needs to be extended to non-bank financial institutions (NBFIs) such as OEIFs. Some countries apply restrictions to domestic NBFIs.

The range of CFMs that countries can use is, to some extent, dictated by peer group pressure. The closest we have to global "rules of the road" in using policies to deal with capital inflows is the IMF's Institutional View. The interpretation of this view, in practice, though is still work in progress and the Fund has been criticised in recent years in its country recommendations by both advanced countries and EMEs. The OECD also has its – recently revised – Code of Liberalisation of Capital Movements. As the name suggests, should South Africa join the OECD its policy flexibility in using CFMs would likely be somewhat more constrained.

There is also a question whether more can be done at the creditor (capital flow 'push') end to help smooth capital flows to EMEs such as policies aimed at structural vulnerabilities from global asset management activities and investment funds. More broadly, more analysis and discussion at international fora of the financial spillover impact on EMEs from advanced

²¹ See Carney (2019).

country policies would be useful. This is becoming more important for creditor as well as debtor countries since the growing relative size of EMEs and capital account openness is overtime increasing the size of policy spillbacks from EMEs to advanced countries.

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Annex 1: Global rules of the road – the IMF Institutional View with the OECD Code

This annex compares the IMF and OECD approaches to policies that deal with capital flow volatility.

IMF approach

Broadly speaking the IMF approach in its Institutional View focuses on reducing systemic financial stability risks and subject to that encouraging open capital flows. The Fund puts a high value on the design intent of the instrument. Those that, in the IMF's judgement, are designed to reduce systemic financial stability risks are macro prudential management measures (MPMs) while those aimed at reducing capital flows are capital flow management measures (CFMs). Measures designed to reduce capital flow volatility in order to reduce financial stability risks are MPMs/CFMs.

The Fund seems to have a preferred pecking order in policies they think are acceptable – MPMs over MPMs/CFMs and MPM/CFMs over CFMs. MPMs can be put in place pre-emptively and can be a permanent measure. CFMs can be considered but should be introduced usually only where there is evidence that a capital inflow surge is causing a financial stability risk. And they should be removed once the capital flow boom subsides. But the benefits versus costs of the measure needs evaluating including whether alternative measures can be used instead to deal with the financial stability risk that don't affect – or have less effect on – capital flows (ie non-CFMs).

OECD approach

In contrast to the IMF's approach, the OECD Code of Liberalisation of Capital Movements (the 'Code') aims to maintain open capital flows and subject to that considers whether foreign currency macro prudential measures should be allowed.

Therefore, the bias in the OECD Code is to protect capital account openness. Consequently, the OECD is usually less sympathetic than the IMF in using CFMs or MPMs/CFMs. The OECD Code is also legally-based so tends to be more black and white than the shades of grey in the IMF's approach with its focus on the *intent* of the policy measure.

That said, a number of MPMs that may affect capital flows are already excluded from the OECD Code:

- Any foreign currency measure that is applied within a country between residents and so does not directly affect non-residents (eg domestic banks' lending in foreign currency to domestic households and companies).

- Limits on domestic banks' open positions between their foreign currency assets and liabilities. This, of course, could affect capital flows but was decided in the past to be excluded from the Code. The rationale is that it is standard banking regulatory measure.
- Limits on borrowing by domestic households ('non-corporates') from non-residents. This is clearly a capital control. This was an *ad hoc* exclusion and is justified on the grounds that households' borrowing in foreign currency would likely be unhedged.

Recently the OECD has finalised a Review of the Code (OECD (2019)). This has meant that Basel liquidity measures – the LCR and NSFR – applied in foreign currency are now explicitly allowed. All other measures applied to foreign currency liabilities will be assessed on a case by case basis. These would need to be reported to the OECD. How the OECD responds will depend on which 'red line' list – A or B – the proposed measure applies. List A covers mainly restrictions on long-term instruments and/or explicitly on non-residents. If countries want to impose restrictions on these measures they have to ask permission – 'derogation' – and make a strong case. Even if accepted they will be under pressure to withdraw the measure as soon as possible. List B is for less restrictive measures but ones that may hinder capital movements such as on short-term capital flows. Countries can use these measures temporarily but have to inform the OECD (make a 'reservation').

Table A.1 summarises the latest IMF and OECD approaches.²² MPM/CFM measures would be acceptable according to the IMF, possibly more than just temporarily, so long as they can be justified according to the systemic financial stability risk at hand. The OECD approach is more rules-based and any measure not explicitly excluded from the Code would likely face both a higher bar in its use and be time limited especially where derogation has been required.

Measures that discriminate by residency would likely be an infringement of the Code but could be allowed in the IMF approach although non-discriminatory measures would be preferred. At the other extreme, non-fx non-discriminatory measures would, in effect, be treated the same by the IMF and the OECD. For the Fund these would be standard macro prudential policy measures and for the OECD they would fall outside the Code since would not directly affect non-residents. For similar reasons, fx measures applied explicitly to domestic banks' domestic assets would probably be acceptable to both IFIs.

²² See IMF (2018b) and OECD (2018).

The main likely differences in approaches would be on fx measures applied to banks' liabilities and potentially on fx asset/liability ratios (other than the LCR and NSFR). In the IMF approach, all such MPMs/CFMs would probably be acceptable so long as they can be justified on financial stability grounds. In the OECD approach countries would likely need to make a reservation or derogation and so at best could be used only temporarily.

In practice, the approaches of the IMF and OECD to capital outflow measures are usually similar. These measures would be a violation of the OECD Code but the OECD Investment Committee would likely accept these *ex post* if the country is facing a currency crisis. Similarly, the IMF generally only thinks such measures are appropriate if a country is in the midst of a financial crisis. The one exception is if the IMF think's a country's problem has been caused because of premature capital account liberalisation then it may be appropriate to (re) introduce capital controls even in a non-crisis situation.

Table A1: Interpretation of different macro prudential measures and capital flows

Type of measure	Examples of measures	IMF approach (maintain capital account openness so	OECD Code (willing to consider reducing financial stability risks
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		long as it doesn't increase financial stability risks)	so long as it doesn't threaten capital account openness)¹
CAPITAL INFLOWS			
Residency-based	<p>Domestic banks' limits on liabilities from non-residents*</p> <p>Reserve requirements on banks' deposits from non-residents</p> <p>Stamp duty on property transactions for non-residents*</p> <p>Hedging requirement for corporate borrowing from abroad*</p>	<p>MPM/CFM if systemic risk CFM otherwise. If CFM dealing with capital inflow surge appropriate temporarily if no better alternative. If no inflow surge then inappropriate</p> <p>CFM/MPM if systemic risk CFM otherwise. If inflow surge CFM may be appropriate temporarily if not should use alternative policies</p> <p>If systemic risk CFM/MPM and if capital inflow surge policy is appropriate</p>	<p>Capital control – violation of Code. List A derogation invoked (unless limits are just on short-term liabilities then List B reservation)</p> <p>Real estate restrictions are a List B measure so require a reservation</p> <p>Violation of either List A or B so requires either a derogation or reservation</p>
FX-based on:			
banks' foreign currency liabilities	<p>Higher reserve requirements on fx deposits</p> <p>Direct limits on banks' fx liabilities</p>	<p>MPM if increased for fs reasons not related to capital inflows MPM/CFM if increased because of a capital flow surge</p>	<p>Either listed on A or B. Whether allowed decided on a case by case basis.</p>
Banks' foreign currency asset/liability ratios	<p>FX liquidity ratios</p> <p>Open FX position</p>	<p>MPM or MPM/CFM if increased because of a capital flow surge MPM</p>	<p>LCR and NSFR now allowed. They fall outside the scope of the Code Falls outside the scope of the Code</p>
Banks' foreign currency domestic assets	<p>Higher risk-weighted capital ratios on corporates with unhedged foreign</p>	<p>MPM – intended to strengthen creditor. No direct impact on capital flows</p>	<p>Falls outside the Code since resident to resident measure</p>

	currency borrowing		
Non-foreign currency non- residency-based measures	Counter-cyclical capital buffer Loan/value and loan/income ratios	Standard MPM to increase banks’ resilience in face of a domestic credit boom	Falls outside the Code since these measures are usually applied to resident institutions only on their resident assets
CAPITAL OUTFLOWS	Surrender requirements on exporters’ foreign currency earnings*	Appropriate only if in crisis situation and part of a broad policy response	Violation. List B reservation needed
	Limit on banks’ gross foreign currency derivative position *	Can be appropriate outside crisis if liberalisation is judged premature and measure part of broad policy response	Violation. List B reservation needed
	Limit on banks’ transfers abroad *	Appropriate temporarily if crisis situation and part of broad policy response	Violation potentially of both List A and B measures so requires derogation or reservation
	Limit on financial institutions’ investments abroad *	Not appropriate unless crisis situation	Violation potentially of both List A and B measures so requires derogation or reservation

¹ Unless a reservation was agreed with the OECD when the country joined the Code. * Actual measure implemented by some countries in practice.