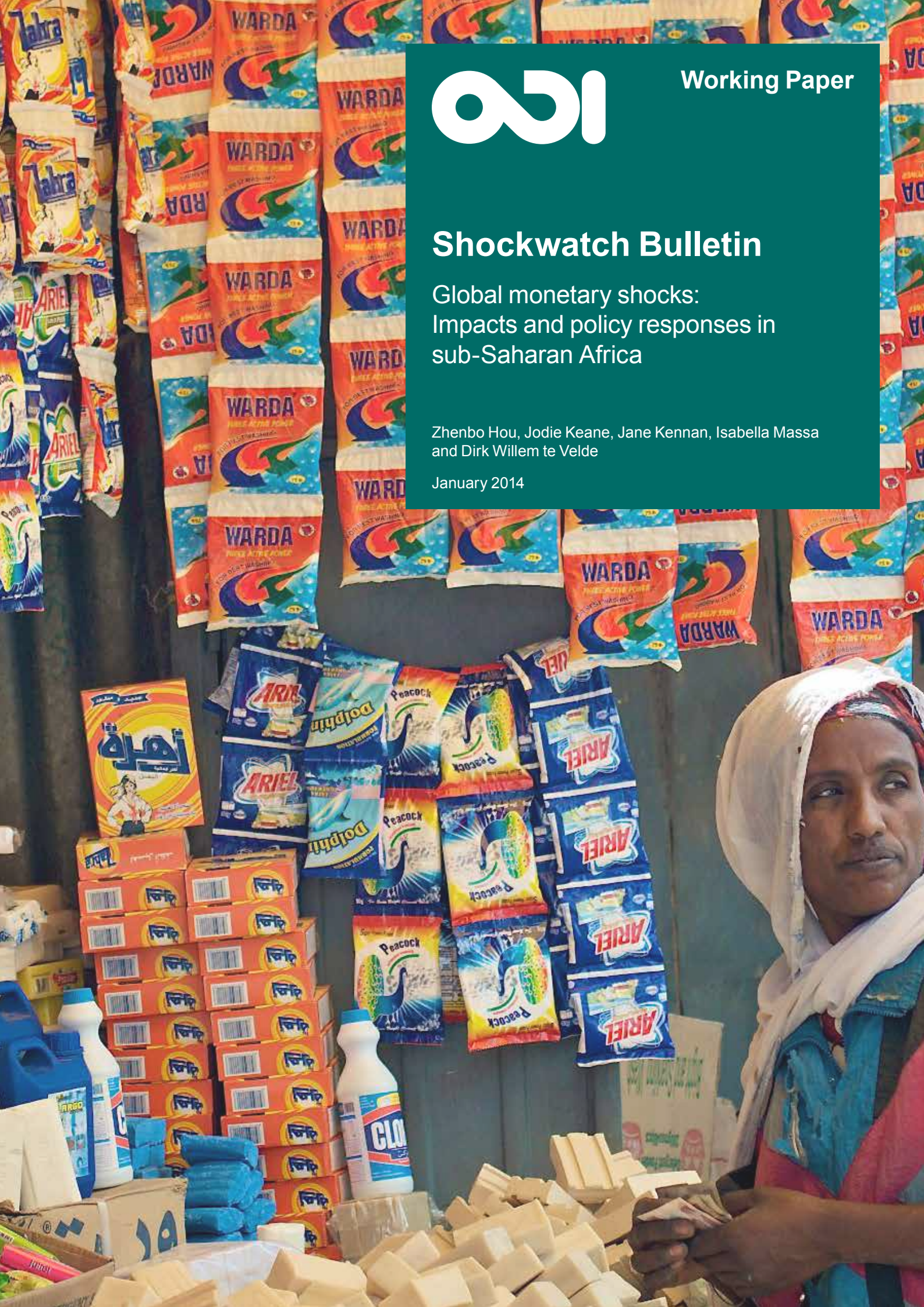

Working Paper

Shockwatch Bulletin

Global monetary shocks: Impacts and policy responses in sub-Saharan Africa

Zhenbo Hou, Jodie Keane, Jane Kennan, Isabella Massa and Dirk Willem te Velde

January 2014

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Abstract

A different and more intense financial integration of sub-Saharan countries into the global economy has become apparent in recent years. This brings new opportunities as well as new risks. This Bulletin examines how the (perception of) global monetary shocks in 2013 affected emerging economies and African countries, and analyses potential policy issues in responding to a global monetary shock, including the potential role of exchange rate policy as one of a range of policies that African countries can use to respond to changes in short-term equity and bond inflows.

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Abbreviations

AfDB	African Development Bank
BRICS	Brazil, the Russian Federation, India, China, South Africa
CFA	*Communauté Financière Africaine*
EU	European Union
FDI	Foreign Direct Investment
Fed.	US Federal Reserve
GDP	Gross Domestic Product
HIC	High-Income Country
IMF	International Monetary Fund
LIC	Low-Income Country
LMIC	Lower-Middle-Income Country
MIC	Middle-Income Country
NFA	Net Foreign Asset
QE	Quantitative Easing
REER	Real Effective Exchange Rate
SSA	Sub-Saharan Africa
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
US	United States

Executive summary

A different and more intense financial integration of sub-Saharan countries into the global economy has been apparent since 2009. This brings new opportunities as well as new risks. This Bulletin examines how global monetary shocks in 2013 affected a range of emerging and sub-Saharan African (SSA) countries, and analyses potential policy issues in responding to these, including the potential role of exchange rate policy as one of a range of policies that African countries can use to respond to global monetary shocks.

Five years of unconventional monetary policies in developed countries to address the impact of the global financial crisis led to increased capital flows to developing countries as investors searched for yields as developed countries' interest rates were kept at historic lows. The potential for the unwinding of these unconventional policies caused global instability from May 2013, especially in emerging economies such as India (initially), Indonesia, South Africa, Turkey and Brazil.

Less is known about the impacts of global monetary shocks on SSA. A typical view of SSA is that it is not financially integrated, that the global financial crises of 2008–9 affected African countries only through the real sector, and hence that global monetary conditions have no direct effects on SSA. However, this Bulletin (and our previous work) confirms that African countries did indeed benefit from monetary easing in developed countries, but that as such quantitative easing (QE) is rolled back they are likely to suffer some less benign consequences. They will find it more difficult to attract investors for their sovereign bonds as more developed country investors find higher yields in their own countries and the costs for African governments are likely to go up.

This Bulletin first provides a macro-economic update on selected key variables such as gross domestic product (GDP), trade, current account and government balances, and vulnerability, but also on private capital flows. SSA GDP grew at 4.2% in 2012 and is estimated to have accelerated to around 5% in 2013 and is expected to grow by 5.5% in 2014. Foreign direct investment (FDI) is estimated to have risen by between 10 and 20% in SSA in 2013, to around US$40 billion. Bank lending (outstanding) to SSA declined by some 5% to just over US$135 billion by the middle of 2013. Sovereign bond issuances in SSA (excluding South Africa) increased rapidly in 2013 (more than doubling from US$1.7 billion in 2012 to US$4.6 billion in 2013). SSA countries have issued US$10 billion-worth in sovereign bonds since 2007, with a marked upturn in 2013. Together, this suggests that SSA is much more financially integrated today than a decade ago, and much more reliant on short-term bond and equity inflows than even 3–4 years ago.

While many low-income countries (LICs) remain vulnerable to global macro-economic shocks, progress in rebuilding policy buffers in those in SSA has increased the number of countries expected to be resilient, approaching pre-crisis levels. A number of macro-economic indicators for African LICs indicate improving growth rates, lower government deficits, and that the current account balance is under control, although reserves expressed as number of months' imports have declined. But these are small improvements overall.

The main source of instability in 2013 was the timing, extent and expectations of the reversal of unconventional monetary policies in developed countries, especially the United States (US). Over the past three years the US Federal Reserve (Fed.) has bought US$1.5 trillion of long-term (8–10 year) US Treasury bills, and it now owns half of government debt with maturities of more than ten years (and has a total of US$4 trillion of assets). In the latest round of QE, it bought US$85 billion each month since September 2012. Testimony by the Fed. to the US Congress in May 2013 was interpreted to mean that it would taper this QE programme. It eventually announced that it will taper its support from January 2014 onwards, but despite a gradual tapering the Fed.'s assets are expected to top US$ 4.6 trillion at the end of the year.

The expectations on US tapering have affected long-term interest rates, stock markets and exchange rates across the world, with particularly large reactions in vulnerable emerging markets (Indonesia, Turkey, Brazil and initially India). The US base rate increased by 100 basis points after May 2013 and the (global financial) risk premium as measured by the sovereign bond interest rate spread over US Treasury bills increased by around 75 basis points for emerging markets.

We set out the spill-over effects of unconventional global monetary policy tools (expectation management strategy, changes in the composition of the central bank balance sheets, and QE). Monetary policies in the developed world may have direct or indirect impacts on developing economies, through different channels including: (i) financial channels, through capital flows, stock market prices and interest rates; and (ii) real channels: trade volumes and trade prices (both directly and indirectly).

Emerging markets have seen increased capital inflows owing to QE programmes, while the expectations of a tapering of these have led to a withdrawal of capital flows, although when the taper did not materialise in September 2013 there was a bounce back. It is therefore crucial that developing countries can manage such capital inflows and use them to their benefit while they last and manage volatility. A first look at bond issuances in SSA in recent years would suggest there has been little impact of a change in expectations of a US tapering on bond flows. Tanzania and Rwanda issued before the announcement in May 2013 and Nigeria, Ghana, Mozambique and Gabon afterwards. Since 2007 SSA has issued US$10 billion-worth in bonds. Investors from the US and United Kingdom (UK) were the main buyers of African bonds (accounting for more than two-thirds of total order books in Namibia, Senegal and Ghana), illustrating the direct short-term financial links between developed and African countries.

However, while African government bonds were still being issued, and were oversubscribed, in Ghana and Nigeria after May 2013, the yields on African bonds at issue declined between 2007 (Ghana, the first issuer in SSA) and May 2013 in average terms. Since then yields at issue have increased by around 100 basis points, in a similar way to US Treasury bill rates. Nigeria's bond in 2011 had a coupon rate of 6.75, and its yield fell to 3.64 in early 2013 but then increased to 6.24 in June 2013, after the Fed. tapering announcement. Ghana argued that its coupon rate for a sovereign bond issued in August 2013 was pushed up because of the talk of tapering.

The increased investment of developed countries in African bonds in 2013 suggests that global monetary conditions affect short-term bond and equity inflows into Africa. African countries intend to use the bond receipts to manage debt (to pay for the retirement of older and more expensive debt) and to finance infrastructure development. In some cases this will make SSA more dependent on global conditions (e.g. Ghana replaced domestic bonds with international bonds, making it

more dependent on global monitory conditions). So far short-term capital inflows have contributed in some African countries to expansionary fiscal policies, declining government bond yields, and the funding of government bond purchases or purchases of equities and private bonds (especially in Kenya and Nigeria), resulting in more-than-average stock price increases (and a bubble in Nigeria) and more-than-average credit growth. If Organisation for Economic Cooperation and Development (OECD) investors withdraw capital from Africa this is likely to affect especially those countries with weak fundamentals such as high current account and government deficits.

A survey of the econometric evidence on the effects of short-term capital inflows suggests that portfolio bond flows in LICs or African countries have had a neutral or even negative effect on growth, although some studies suggest policies and country characteristics matter and can make the impact positive.

We discuss a number of general policy suggestions which African countries could consider in responding to short-term capital flows.

- Use macro-economic policies (fiscal, monetary and exchange rate) to smooth the potential impact of increased inflows on increased inflation, exchange rate appreciation and fiscal expansion and to limit volatility.
- Develop financial sector policies to manage, regulate and maximise the potential of short-term equity and private bond flows.
- Ensure the proceeds of government bonds are used to invest in developing productive capacities or to fund a cost-lowering restructuring of debt flows.
- Monitor global monetary conditions in order to determine the appropriate timing of bond issuances.
- Consider the use of capital account management measures in cases of excessive volatility, but these may only be needed if the above policies are exhausted or do not work.

Many of these policies are known, but countries face large challenges when implementing them to smooth the impact of short-term capital inflows. Appendix 1 examines the role of African exchange rates in more detail. A brief review of four countries suggests a widely varying experience in the role played by exchange rate and related policies. In Ethiopia the exchange rate seems to have had multiple objectives, not just to smooth the impact of a financial crisis. Malawi has had a few major policy interventions in its exchange rate, but its management of the exchange rate implies that the country seems ill equipped to use its exchange rate to address cyclical variations. In contrast, the flexibility of Zambia's exchange rate has helped to mitigate external shocks since the global financial and euro zone crises. But in Ghana, as reserves are run down, and current and government balances are in large deficits, the exchange rate has become an important tool to address financial shocks.

Summary points

Major OECD countries used unconventional monetary policies such as QE (e.g. the buying up of US$1.5 trillion US Treasury bills by the US Fed. since 2007) to address the effects of the global financial crisis.

QE lowered long-term interest rates in developed countries until May 2013. The search for yields has stimulated capital flows and exchange rate appreciation in several emerging markets, but also in SSA countries.

Financial integration of SSA with the rest of the global economy has become much stronger in recent years. There are much higher levels of cross-border bank lending (which has more than doubled in a decade), FDI flows recovered in 2013 to pre-crisis record levels of US$ 40 billion.

SSA issued a record US$4.6 billion in sovereign bonds in 2013 (5% of developing country sovereign bond issues, and equivalent to a fifth of aid to SSA), up from zero in 2010.

Increased short-term capital can help growth in SSA, but it also makes SSA more vulnerable to global monetary conditions. Ghana accessed international bond receipts in part to retire more expensive domestic debt but this makes Ghana more sensitive to international conditions.

Expectations of a tapering of QE from May 2013 raised US interest rates, which affected stock markets and exchange rates in emerging countries with weaker fundamentals – such as Indonesia, Turkey, Brazil and India. For example, growth forecasts for India were lowered substantially during the year.

SSA appears to have been affected less, as Ghana, Gabon and Mozambique still issued sovereign bonds. However yields in SSA have increased during the year (e.g. in Ghana or Nigeria), making the servicing of bonds more expensive.

We are yet to see the effects of the actual tapering which will take place from January 2014 as the world economy gathers further pace, but we expect that higher yields in developed countries (by some 50–100 points during 2014) will reduce the incentives to invest in SSA in search of yields, especially in countries with weak fundamentals.

SSA countries can use macro-economic policies, financial sector policies and capital account management to address the volatility of short-term capital flows, although there are challenges with all of these in practice. They need better data and capacity to implement policies and monitor global monetary conditions. Moreover, a key challenge now is to make sure capital flows (and bond flows as a relatively new challenge) are spent effectively.

1 Introduction

SSA countries continued strong growth in 2013 and are on course for 5.5% growth rates in 2014. Some SSA countries are amongst the fastest growers in the world, but there are also some negative outliers owing to conflict (e.g. Central African Republic). SSA growth has been supported by continued demand for African commodities and buoyant domestic demand (especially for services sectors). Several African countries have also seen some productivity-enhancing structural transformation (IMF, 2013b).

Previous Shockwatch Bulletins examined the vulnerability of growth in African countries and LICs to various global macro-economic shocks (Massa et al., 2012; Hou et al., 2013). These studies built on a thorough examination of the effects of the global financial crisis, which had a major impact on African countries in 2008–10 (te Velde et al., 2010). African countries experienced a 3–5% drop in GDP compared to trend, but with significant differences across countries.

There were no major global economic shocks having such a marked impact on the continent in 2013. The euro zone troubles lowered Europe's growth, but there was no major financial crisis. China continued strong growth – at a slightly less fast rate (less than 8% in 2013) than in previous years, but there was no hard landing. Commodity prices, including oil prices, were less volatile than in the previous five years. In addition, African and low-income countries have become more resilient to macro-economic shocks by improving their macro-economic buffers in recent years (World Bank, 2013b; IMF, 2013d) and continued institutional reforms.

Our last Shockwatch Bulletin (Hou et al., 2013) paints a positive picture of increasing private sector capital flows, after a subdued period just after the onset of the global financial crisis of 2008–9. But it also points to the rapidly changing nature of private capital flows to SSA, with bond flows, international lending and portfolio flows playing an increasingly important part in growing private capital flows. Increased private capital flows to SSA are the result of several factors, but in the four years to May 2013 unconventional monetary policies in developed countries increased capital flows to developing countries as investors searched for yields while developed countries' interest rates were kept at historic lows. The expectations of the tapering of these unconventional policies caused global instability from May 2013, especially in emerging economies such as India (initially), Indonesia, South Africa, Turkey and Brazil.

This Shockwatch Bulletin discusses how the expectations on tapering affected emerging economies and how tapering might affect African countries, and identifies and analyses potential policy issues in responding to this global shock. A typical view of Africa is that it is not financially integrated with the rest of the world and that the financial crisis affected African countries only through the real sector, but this Bulletin suggests that African countries are also financially integrated. They have benefited directly from monetary easing in developed countries, and now that such support will be tapered they are likely to suffer the consequences. Recent developments after the global financial crisis have increased Africa's financial integration, bringing new opportunities as well as new risks.

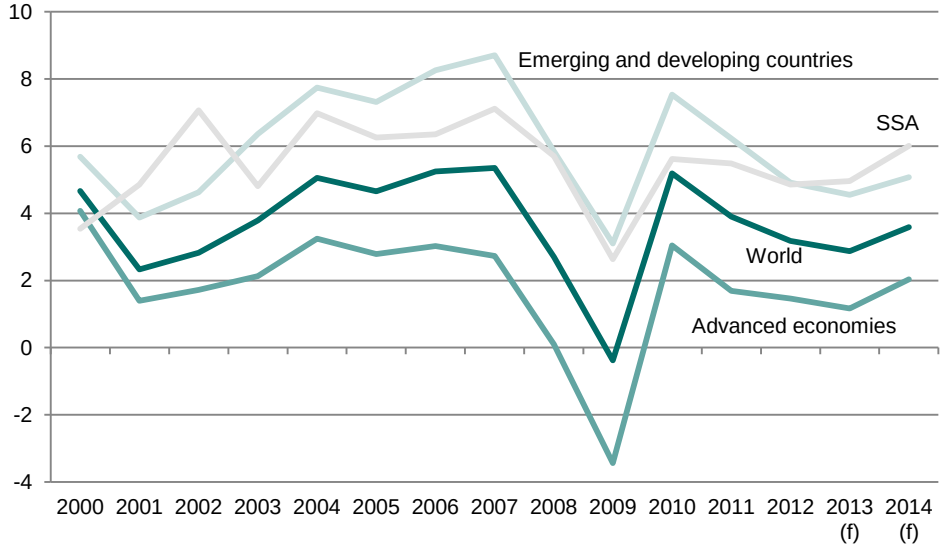
Chapter 2 will first provide a macro-economic update (global in Section 2.1 and for African countries in Section 2.2) and a review of the main sources of global economic instability in 2013 (Section 2.3). The rest of the Bulletin examines how expectations of global monetary shock in 2013 affected emerging economies and how it might affect African countries, and identifies and analyses potential policy issues in responding to this global shock. Chapter 3 discusses the spill-over effects of global monetary policy on emerging markets and then on SSA and identifies policy responses. This includes the use of appropriate exchange rate policies. In Appendix 1, we discuss exchange rate policy as one of a range of policies that African countries can use to respond to changes in global monetary shocks. Chapter 4 concludes.

2 Macro-economic update

2.1 Macro-economic update – global

World GDP growth is forecast to have slowed slightly in 2013 (at 2.9%) compared to 2012 (3.2%) (Figure 1), explained by a slow-down in both emerging markets and developed countries. The troubles in the euro zone stabilised somewhat, with a major crisis being averted partly through (unconventional) actions by the European Central Bank, although the European Union (EU) is still likely to record a fall in GDP in 2013. Japan and the US are estimated to record close to 2% growth in 2013. China is estimated to have achieved slightly less than 8% growth, India around 5%. Other emerging markets such as South Africa, Brazil and Turkey had a difficult 2013. SSA growth is likely to have outperformed the average for developing countries as a whole in 2013 and to do so again in 2014. The International Monetary Fund (IMF) will raise its world GDP growth forecasts for 2014 at the end of January 2014, possibly by 0.25% to take account of stronger than expected rebounds in the US and UK, with strongly performing stock market and house prices.

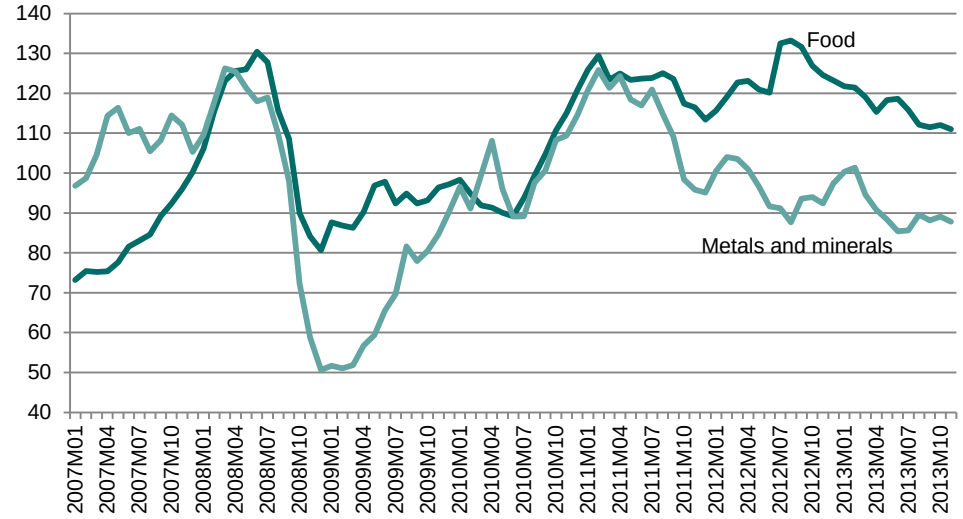
Figure 1: Real GDP growth (%)



Source: IMF World Economic Outlook database, October 2013 (http://bit.ly/1dxnDDQ).

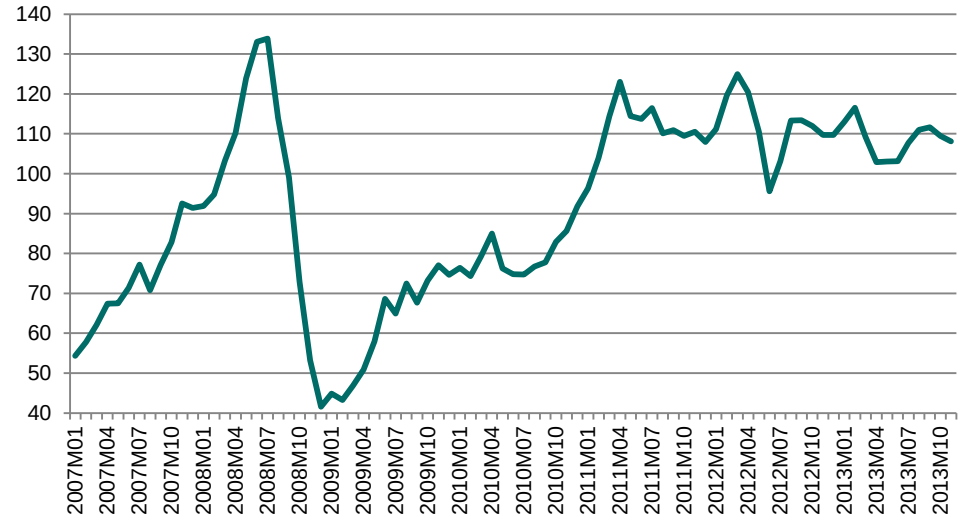
Commodity prices dropped during 2013, by more than 10% for food products and 5% for metals and minerals (Figure 2). Oil prices remained roughly constant (but with some fluctuations during the year), hovering at around US$110 per barrel (Figure 3). Metals, food and oil prices in particular have been extremely volatile in recent years, but it is notable that the volatility in commodity prices in 2013 is back to pre-2006 levels (Figure 4).

Figure 2: Commodity prices (2010=100, nominal), January 2007–November 2013



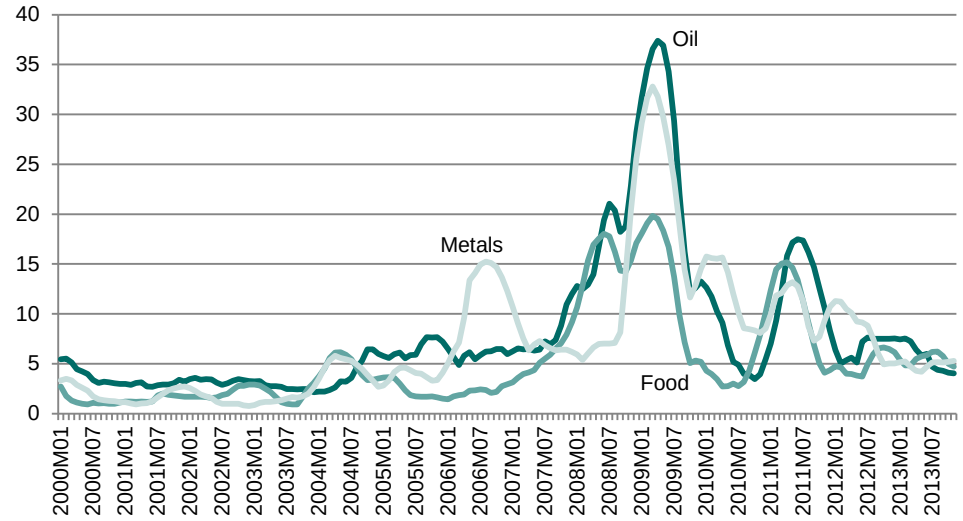
Source: IMF commodity prices.

Figure 3: Oil prices, Brent crude (US$ per barrel), January 2007–November 2013



Source: IMF commodity prices.

Figure 4: Volatility in oil, food and metal prices (%), 2007–13

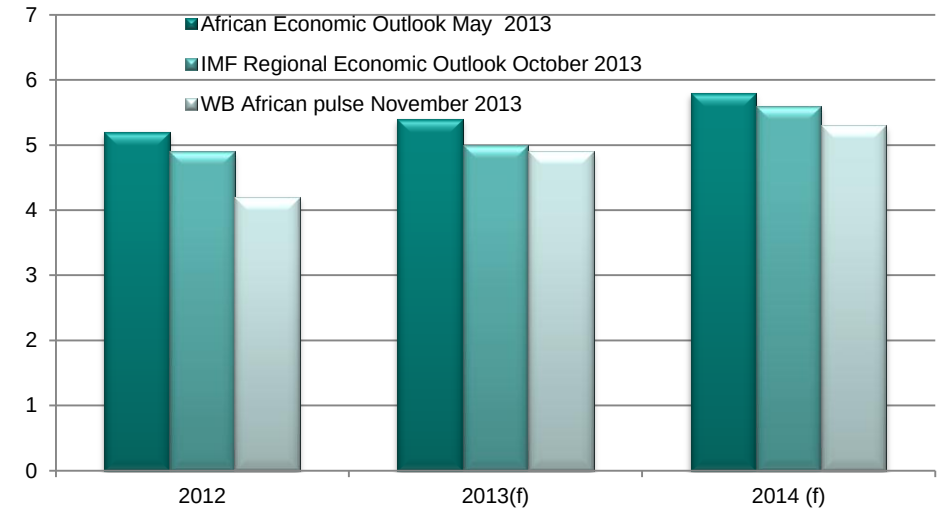


Note: Variation measured by standard deviation over past 12 months.
Source: Authors' calculations based on data in Figures 2 and 3.

2.2 Macro-economic update – Africa

The African Development Bank (AfDB), IMF and World Bank all estimate SSA growth to have increased in 2013 from 2012 and the forecast is for higher growth still (Figure 5). The studies done later in the year suggest lower growth rates, probably reflecting the slow-down in emerging markets which become apparent throughout 2013. None of these forecasts will have included the latest data suggesting a more positive picture in some European countries (e.g. the UK) and the US in recent weeks, which is causing the IMF to upgrade its world growth forecast for 2014.

Figure 5: SSA GDP growth forecasts (%)



Sources: AfDB et al. (2013), IMF (2013b) and World Bank (2013b).

African growth has been underpinned by strong domestic demand, with investment to GDP ratios likely to have been above 23% of GDP in 2013. This is 5 percentage points higher than in 2000, although still low by developing country standards. FDI

has also increased in recent years, and in 2013 FDI was back to its record levels of 2007–8, at more than US$50 billion to Africa and more than US$40 billion to SSA (see Table 1). According to World Bank World Development Indicators data, the share of inward FDI as a percentage of GDP in SSA was around 3.3% in 2011, well below its peak (4.5%) in 2008. And according to United Nations Conference on Trade and Development (UNCTAD) data, the share of FDI in gross fixed capital formation was 15% in 2012, well below the peak of 20% in 2008.

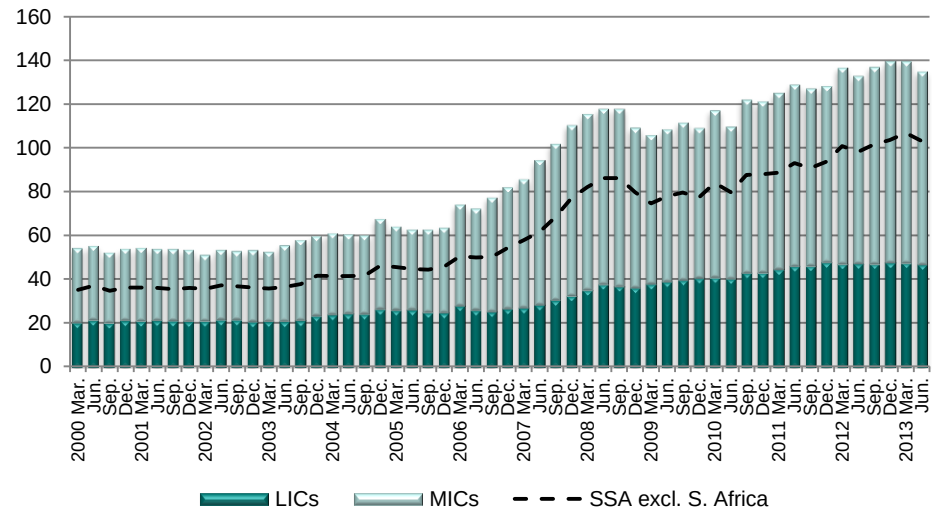
Table 1: Recent data on inward FDI to SSA

	SSA	Africa (incl. North and South Africa)
UNCTAD *Investment Monitor* (November 2013)	US$36 billion in 2012/H2–2013/H1	US$50.3 billion; 5.6% annual growth in 2013/H1
AfDB *African Economic Outlook 2013* (May 2013)		US$49.7 billion in 2012 US$56.6 billion in 2013 (near peak in 2008)
IMF *African Regional Economic Outlook* (October 2013)	Net FDI US$40.7 billion in 2013 and US$41.1 billion in 2014	
World Bank *Africa's Pulse* (October 2013)	US$40 billion	

Note: H1=Q1 and Q2, H2=Q3 and Q4.

Other capital flows had a mixed year, but together they suggest that SSA is more financially integrated now than previously. Cross-border lending (outstanding) to SSA declined by some 5% to just over US$135 billion (Figure 6), suggesting a withdrawal of foreign capital by banks from SSA. Nonetheless, SSA is still much more financially integrated through foreign banks now (US$130 billion on average over the past three years) than a decade ago (US$54 billion on average over three years).

Figure 6: Cross-border bank lending to SSA, total and by income group (US$ billion)

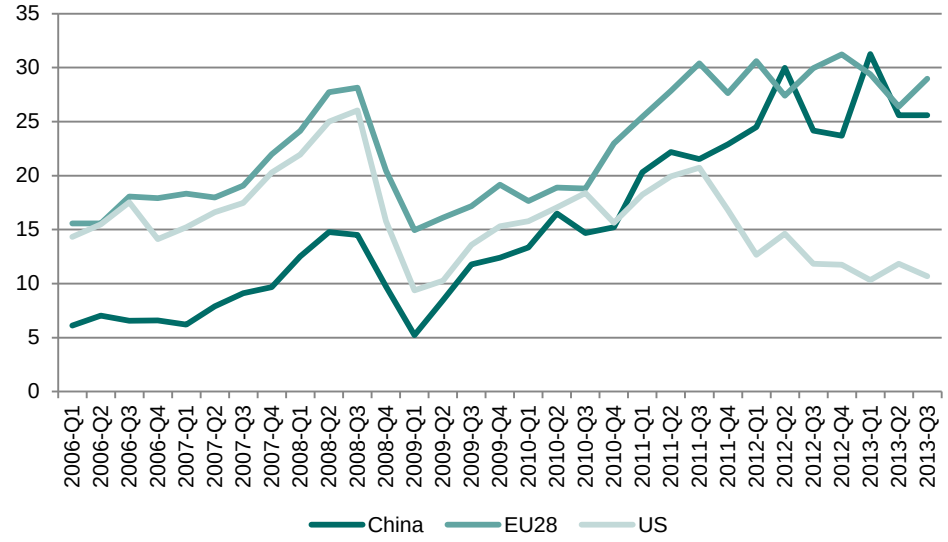


Note: Total international claims, immediate borrower basis. Country income groups as per World Bank classification at July 2013. Cross border bank lending to SSA's only HIC (Equatorial Guinea) was relatively minor (averaging less than US$80 million per quarter) and is not shown here.
Source: Authors' calculations based on Bank for International Settlements Consolidated Banking Statistics: Table 9A:A.

However, as we will discuss in the next chapter, sovereign bond issuances in SSA excluding South Africa increased rapidly in 2013 (more than doubling from US$1.7 billion in 2012 to US$4.6 billion). SSA countries have issued US$10 billion-worth in sovereign bonds since 2007, with a marked upturn in 2013 (see also Hou et al., 2013). These portfolio debt flows in 2013 alone were the equivalent of 12% of total FDI inflows into SSA, which were US$40 billion. They were around 5% of total sovereign bond issuances in emerging markets in 2013.

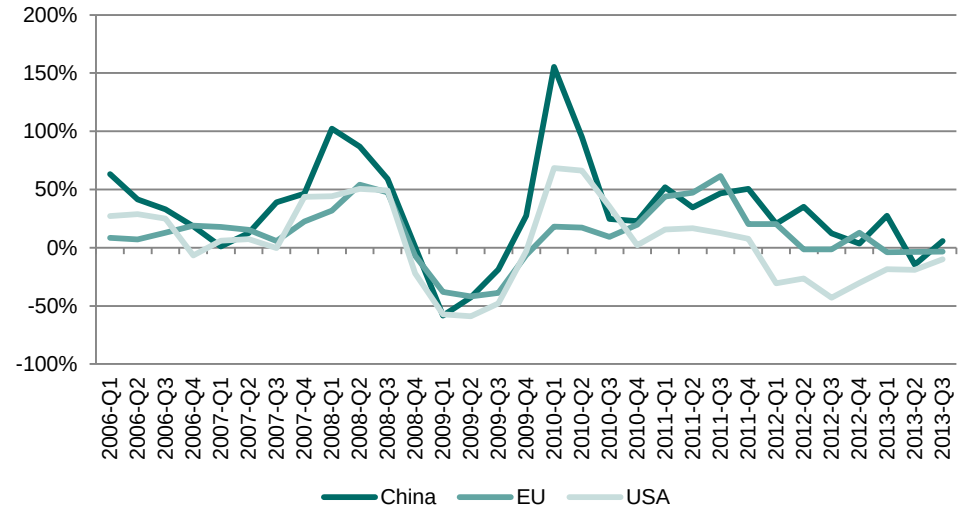
Figure 7 charts data on imports from SSA by its major trading partners (EU28, China and USA). The value of Chinese imports from SSA has held up better since the global financial crisis than those of the EU and significantly better than the US, although growth rates have been variable (Figure 8).

Figure 7: Imports from SSA, Q1/2006–Q3/2013 (US$ billion)



Source: International Trade Centre, Trade Map database.

Figure 8: Imports from SSA, quarterly year-on-year change (%)



Note: Percentage change in value of imports from SSA Q1/2006 over Q1/2005, Q1/2007 over Q1/2006, etc.
Source: Calculated from data obtained from International Trade Centre, Trade Map database.

Table 2 shows the trade performances by country for Q1–Q3/2013 compared to the same period a year before. Leaving aside some obvious outliers, countries such as Sierra Leone and Liberia recorded very rapid increases in exports and they are also amongst the fastest growers.

Table 2: Aggregate value of Chinese, EU and US imports from SSA countries: year-on-year change by country

Country	Q1–3/2013 over Q1–3/2012	Country	Q1–3/2013 over Q1–3/2012
SSA	**-2.8%**		
Somalia	281.6%	Angola	1.2%
Western Sahara	275.4%	Democratic Republic of the Congo	0.2%
Sierra Leone	85.5%	Senegal	-1.7%
Guinea-Bissau	82.5%	Chad	-1.8%
Madagascar	48.8%	Kenya	-2.0%
Liberia	40.1%	South Africa	-2.1%
Sudan	38.5%	Guinea	-2.7%
Botswana	37.4%	Lesotho	-4.7%
Seychelles	35.6%	Burundi	-5.2%
Swaziland	34.2%	Congo	-7.5%
Niger	27.9%	Cameroon	-7.9%
Comoros	22.7%	Equatorial Guinea	-12.9%
Zimbabwe	17.8%	Eritrea	-14.2%
Gambia	16.7%	Nigeria	-16.8%
Ghana	16.5%	Cape Verde	-18.4%
Rwanda	16.1%	Benin	-19.8%
United Republic of Tanzania	14.2%	Malawi	-20.1%
Mozambique	13.8%	Togo	-23.2%
Mauritania	11.9%	Namibia	-26.5%
Uganda	11.6%	Djibouti	-27.1%
Gabon	11.4%	Central African Republic	-28.2%
Mauritius	10.7%	Sao Tome and Principe	-31.4%
Zambia	10.0%	Burkina Faso	-34.4%
Côte d'Ivoire	5.2%	Mali	-51.7%
Ethiopia	3.7%		

Source: Calculated from data obtained from International Trade Centre, Trade Map database.

Government deficits increased in SSA between 2011 and 2013, with external debt to GDP ratios expected to have increased slightly from 23.3% in 2011 to 24.5% in 2013 (this is significant given the rapid decreases throughout the 2000s owing to debt relief).

Output in Sudan and the Central African Republic probably fell in 2013, but Sierra Leone and Niger had double-digit growth. The Economist Intelligence Unit forecasts Sierra Leone (12%), Congo (8%) and Tanzania (8%) to be amongst the ten fastest GDP-growth performers in 2014.[1]

According to IMF *World Economic Outlook*, October 2013, forecasts, Sierra Leone was expected to be the second-fastest grower in the world in 2013, with real GDP *per capita* growth of 10%. Liberia, Rwanda, Ghana and Gabon, which are all expected to achieve more than 5% real GDP *per capita* growth, are in the world's top 20 growth performers.

[1] *The Economist*, 4 January 2014: data appendix.

African LICs appear to have become less vulnerable to shocks according to the IMF (2013d). While many LICs remain vulnerable, progress in rebuilding policy buffers in African LICs has lowered the number of countries considered to be highly vulnerable in 2013. Table 3 provides the median on a number of macro-economic indicators. For African LICs there are remarkably strong improvements in growth rates, slightly lower government deficits, and the current account balance is under control, although reserves expressed as number of imports have declined.

Table 3: Macro-economic indicators for African countries and LICs (median)

	2009	2010	2011	2012	2013(f)
SSA LICs:					
GDP growth (%)	3.8	5.9	4.9	4.6	5.8
Inflation rate	5.3	4.2	7.2	6.3	5.5
International reserves (months of imports)	4.5	3.7	3.6	3.4	3.4
Fiscal balance	-4	-3.9	-3.1	-3.2	-2.8
Current account balance	-3.7	-4.2	-5.6	-4.2	-4.9
Debt as % of GDP	38.9	35.9	38.3	37.2	
All LICs (IMF definition):					
GDP growth (%)	3.3	5.3	5	4.7	4.8
Inflation rate	4.7	4.7	7.4	5.8	5.6
International reserves (months of imports)	4.1	3.8	3.8	3.7	3.5
Fiscal balance	-4	-2.8	-2.9	-3.1	-2.8
Current account balance	-3.3	-4.1	-3.5	-4.1	-4.8
Debt as % of GDP	44.3	40.2	40.3	42.3	
SSA:					
GDP growth (%)	3.1	5.8	4.7	4.6	5
Inflation rate	6.7	4.3	6	6.3	5.5
International reserves (months of imports)	4.5	3.8	3.6	3.6	
Fiscal balance	-4.1	-3.9	-2.9	-3	-2.8
Current account balance	-7.3	-8.6	-7.9	-9.3	-9.5
Debt as % of GDP	36.3	36	37	35.4	36.2

Source: IMF (2013b and d).

2.3 Global risks and sources of instability

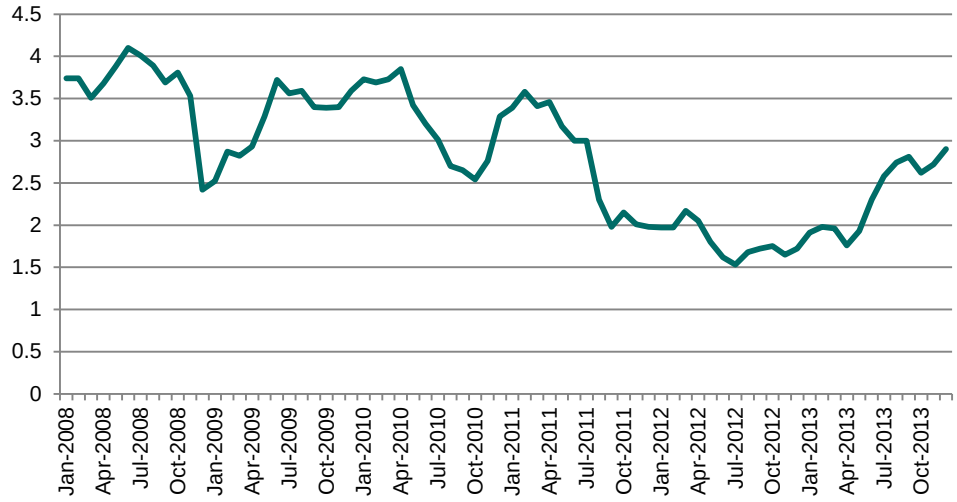
The main source of instability in 2013 was the timing and extent of the reversal of unconventional monetary policies in developed countries, especially the US. Long-term interest rates have been kept down by the Fed. through its QE programme. Over the last three years the Fed. has bought long-term (8–10 year) US Treasury bills, with the result that it now owns half of government debt with maturities of more than ten years. Testimony by the Fed. to the US Congress in May 2013 was interpreted to mean that it would taper this QE programme. This affected global financial markets across the world, leading to changes in expectations. Over May–July 2013 there was a widespread sell-off in financial markets globally. Many expected an announcement about tapering in September. Many emerging markets with weak fundamentals – government and current account deficits – (Turkey, South Africa, Indonesia, Brazil and, initially, India) were affected.

In September 2013 it was concluded that the macro-economic situation of the US economy precludes ending QE. The potential tapering was therefore postponed, and in the meantime the Fed. reinforced its QE programme by purchasing US$85 billion a month of treasury and mortgage bonds (as it has been doing since September 2012). Then, in December 2013, it announced it would taper the QE programme from January 2014 onwards, reducing purchases from US$85 billion to

US$75 billion per month. At the same time, it announced that it would remain committed to maintaining short-term policy rates close to zero until at least mid-2015.

The QE has lowered the benchmark interest rates in the US, including the 10-year treasury-bill rate (see Figure 9). Investors looking for yields invested more in the US stock market but also searched for yield abroad. When the Fed. started talking about tapering its QE programme, US Treasury bill (10-year) interest rates increased by around 100 basis points (1 percentage point), and they are currently (January 2014) at around 3.0 (despite the announcement that short rates would remain at close to zero during 2014), up from 1.7 12 months ago. Market expectations are factoring in a further increase to around 3.5 during 2014. The risks of further tapering appear high in markets that are more sensitive to a reduction in liquidity, such as emerging market bonds, preferred securities and high yield bonds.

Figure 9: US (10-year) Treasury bill rates



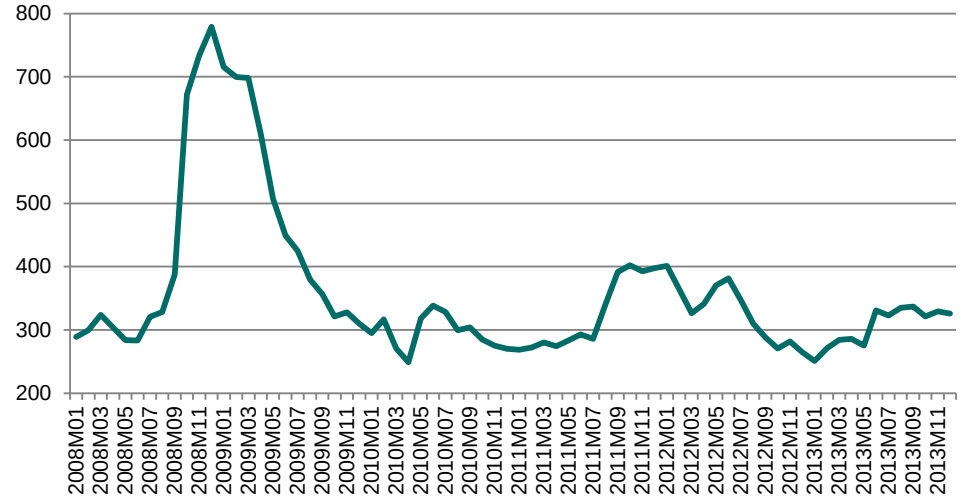
Source: US Treasury.

Not only did the base rate increase, so also did the (global financial) risk premium as measured by the sovereign bond interest rate spread over US Treasury bills (Figure 10). The premium for emerging markets increased by around 75 basis points after the Fed.'s May 2013 announcement.

The expectations of the QE tapering led to a reallocation of portfolios and a sell-off in financial markets from developing countries (Figure 11). Bond outflows amounted to US$40 billion over June–September 2013 (World Bank, 2013c). But there was some bouncing back afterwards. While there was a sharp drop in bond issuance levels in June, global bond sales from emerging markets reached US$506 billion in 2013, exceeding the previous record of US$488 billion in 2012. Bond issuances recovered in Q4/2013 as the Fed. taper did not materialise in September. The private sector issued US$345 billion in bonds while the public sector raised US$100 billion in 2013.[2]

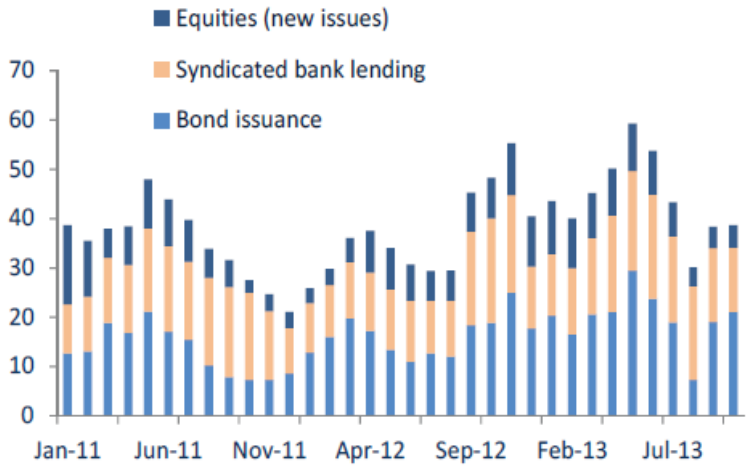
[2] http://on.ft.com/1lY3tHu.

Figure 10: Interest rate spread on bond yields for emerging markets (over US Treasury bills), basis points



Source: World Bank Global Economic Prospects website (http://bit.ly/1bUc5ta).

Figure 11: Gross capital flows to developing countries (US$ billion)



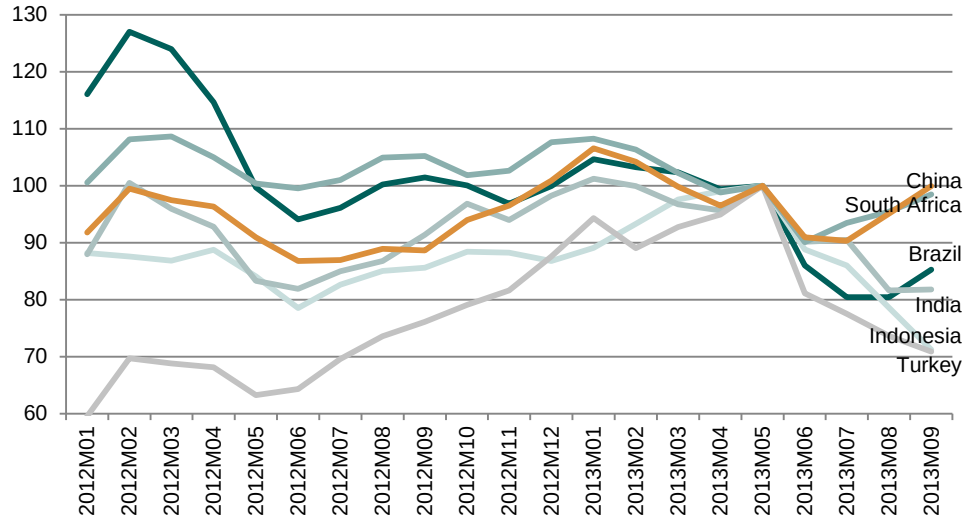
Source: World Bank (2013c).

There were marked changes in stock markets immediately following the Fed.'s tapering announcement (Figure 12). There were sharp drops in Turkey and Indonesia, but these followed rapid increases prior to May 2013. There were also drops in other markets; the drops in China and South Africa were lowest. Over the year 2013 as a whole, stock markets fell (in US$ terms) by 4% in China and India, 22% in Indonesia, 27% in Brazil and 28% in Turkey.[3]

Exchange rates also changed markedly (Figure 13). There were sharp depreciations in Indonesia, Brazil, India, Turkey and South Africa (but not China) over May–November 2013.

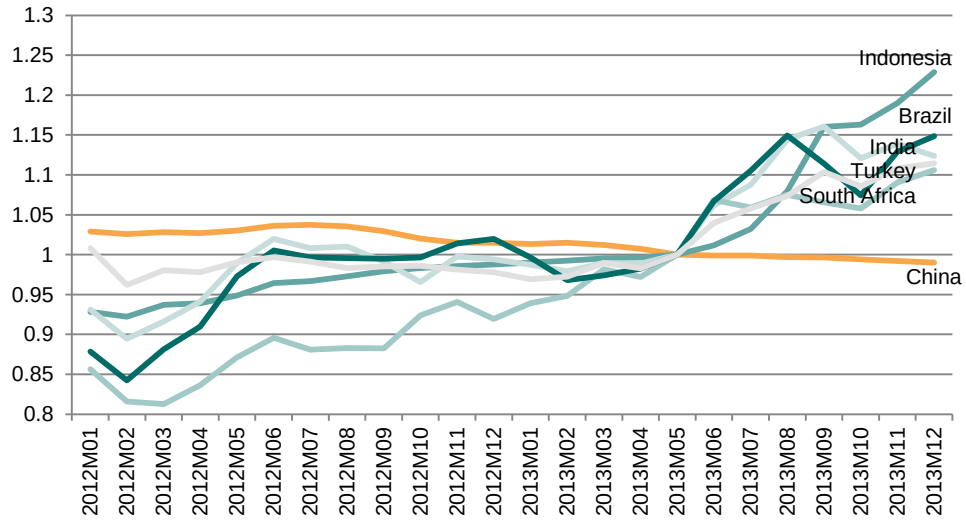
[3] *The Economist*, 4 January 2014: data appendix.

Figure 12: Stock markets in US$ terms (May 2013 =100)



Source: Data from World Bank Global Economic Prospects website (http://bit.ly/1bUc5ta).

Figure 13: Exchange rates: local currency units per US$ (May 2013=100), January 2012–November 2013



Source: Data from World Bank Global Economic Prospects website (http://bit.ly/1bUc5ta).

3 The spill-over effects of global monetary policy

3.1 Monetary policies in times of crisis

Before the outbreak of the global financial crisis (which followed the collapse of Lehman Brothers in September 2008) central banks in high-income countries (HICs) were mostly targeting inflation rates, since low and stable inflation rates were believed to guarantee a stable growth path for the economy. They were therefore using 'conventional' policy tools such as short-term interest rates: raising these would discourage borrowing and reduce inflation; lowering interest rates would encourage cheaper credit and therefore foster growth and employment.

However, the recession that followed the 2008–9 financial and economic crisis provoked an unprecedented policy response from central banks, including lowering policy rates to close to zero and employing 'unconventional' monetary policy measures. Initially the central banks of several rich economies cut benchmark interest rates to levels close to zero (0–0.25% in the US, 0–0.1% in Japan, 0.5% in the UK and 0.75% in the euro zone; see CEPII, 2012).

Nevertheless, this was not enough to offset the impact of the crisis, as even after the sharp cuts in policy rates, improvements on growth and unemployment were feeble and insufficient to embark on a sustained full recovery. As a consequence, central banks started to use 'unconventional' monetary policy tools. These measures can be categorised into three main groups (CEPII, 2012):

- expectation management strategy;
- changes in the composition of the central bank balance sheets;
- QE.

Through an expectation management strategy, the central bank commits to keep policy rates at low levels in an attempt to influence expectations about future interest rates, thus reducing long-term interest rates.

Changes in the composition of the central bank balance sheets are made by purchasing unconventional assets such as long-term securities and risky assets (e.g. mortgage-backed securities) rather than traditional short-term safe assets such as Treasury bills and other bonds with short-term maturities. In such a way the central bank aims to bring down long-run borrowing costs.

Finally, QE refers to massive expansion of the monetary base. This is done by printing money to buy assets in order to provide banks with excess reserves at the central bank. In the past this policy was usually seen as a temporary emergency measure, but nowadays it is being used more and more by central banks.

3.2 Widespread use of quantitative easing

QE has now become a tool used extensively by the central banks of HICs such as the US, Japan, the euro zone and the UK.[4] Under the pressure of global recession, the US Fed. carried out a first round of QE (QE1) between December 2008 and March 2010. Initially it pledged to purchase US$600 billion in mortgage-backed securities and debt. In 2009 it announced it would purchase an additional US$750 billion in mortgage-backed securities and debt as well as US$300 billion in treasury securities.

Between November 2010 and June 2011 the Fed. carried out a second round of QE (QE2) by purchasing US$600 billion of long-term Treasury bills, at a rate of around US$75 billion per month.

In September 2012 the Fed. engaged in a further programme of QE (QE3), this time with an open-ended commitment to purchase US$40 billion of mortgage-backed securities per month until labour markets improve 'substantially'. The total bond buying was US$85 billion per month since September 2012. In December 2013 it announced it would taper the QE programme from January 2014 onwards, reducing purchases from US$85 billion to US$75 billion per month. But even if the Fed. makes a $10 billion cut at each of its meetings in 2014, its assets will increase to US$4.6 trillion by the end of the year. In December 2007 the Fed. had US$891 billion (of which US$770 billion-worth of Treasury bills, but in December 2013 it owned US$4 trillion, of which US$2.2 trillion was in US Treasury bills and US$1.5 trillion in mortgage backed securities.[5]

The effectiveness of these rounds of QE monetary policy is difficult to assess. Some suggest that the Fed.'s purchase programmes have reduced the US unemployment rate by 1.5 percentage points and that real GDP is 3% higher than it would have been in the absence of QE policy measures.[6] Others suggest that the huge growth in bank reserves could contribute to making it harder to control inflation in the near future, and additional concerns arise with regard to the future costs of government debt since QE has led to extremely low borrowing costs for governments at present.[7]

The Bank of England and the European Central Bank also carried out their own QE programmes. Since the crisis the UK has pumped UK£375 billion into the economy, while the European Central Bank QE has reached a level of €489 billion.[8] The Bank of Japan has also announced a QE programme under which US$1.4 trillion-worth of assets will be purchased.[9]

In the next section, the channels through which HICs' QE programmes may affect poor countries are analysed in detail.

3.3 Transmission channels

QE monetary policies in the developed world may have a direct or indirect impact on developing economies, including LICs, through different channels, among them:

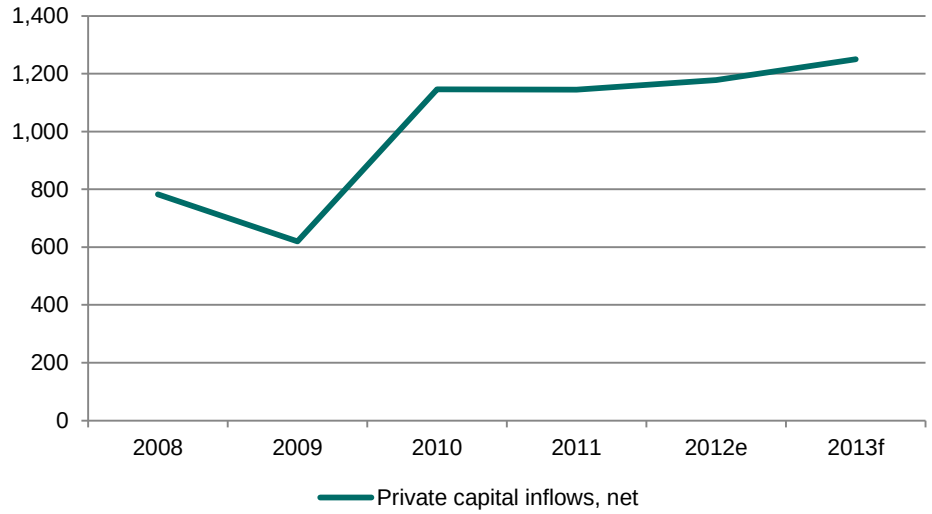
[4] It was the Bank of Japan which first used QE in 2001 in order to raise asset prices and end deflation. Although the effectiveness of the Japanese QE policy is still a subject for debate, when reference interest rates hit zero in the aftermath of the 2008–9 global financial crisis, central banks of several developed countries decided to deploy QE monetary policies to keep their economies afloat.
[5] See http://cnnmon.ie/1iWDfIg.
[6] See http://econ.st/1glg9a6.
[7] Ibid.
[8] See http://bit.ly/1fgqHuF.
[9] Ibid.

- financial channels, through capital flows, stock market prices and interest rates;
- real channels: trade volumes and trade prices (both directly and indirectly via third countries).

3.3.1 Capital flows

The aggressive expansionary monetary policy initiatives adopted by the major developed countries since the financial crisis hit in 2008 have led to a global hunt for yield. As a consequence, developing countries have experienced a significant surge in private capital inflows, as shown in Figure 14.

Figure 14: Net private capital inflows to developing countries, 2008–13 (US$ billion)



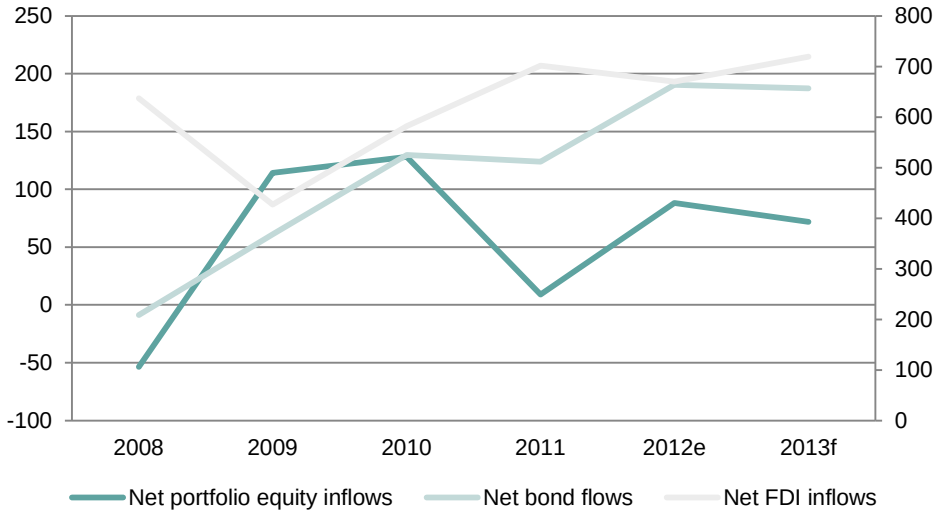
Note: e=estimate; f=forecast.
Source: Adapted from World Bank (2013a).

Among the different types of private capital inflow, there has been a rapid scaling up of bond flows (Figure 15) and several economies, including a number of LICs, entered bond markets for the first time (Hou et al., 2013). Angola and Zambia issued international bonds for the first time in 2012; Bolivia issued its first overseas bond in 90 years; Kenya, Rwanda, Uganda, Tanzania, and Paraguay also prepared to issue international bonds for the first time. In SSA, by February 2013 Ghana, the Democratic Republic of the Congo, Côte d'Ivoire, Senegal, Angola, Nigeria, Namibia, Zambia and Tanzania had collectively raised US$8.1 billion from their first sovereign-bond issues (Stiglitz and Rashid, 2013). This has increased further, as we will discuss later.

The surge of private capital inflows to developing countries may have major impacts (especially in the more fragile LICs) by increasing macro-economic risks, financial stability risks, and risks of capital flow reversal/sudden stop. First, surges in capital inflows may lead to upward pressure on exchange rates as well as to inflationary pressure, thus affecting developing countries' domestic policy objectives such as export promotion, exchange rate stability and national price stability. Recent empirical evidence provided by Gurara and Ncube (2013) shows that the US, euro zone, UK, and Japanese QE programmes raised inflation and led to an appreciation of the nominal exchange rate in a sample of about 80 countries, including 46 African economies (of which 20 are LICs). Among all the African

countries considered, investment-driven economies are found to be particularly exposed to the adverse effects. Gurara and Ncube (2013) confirm that the combined effect on the nominal exchange rate and inflation may lead to real exchange rate appreciation, with adverse consequences for export competitiveness.

Figure 15: Net private capital inflows to developing countries by type of flow, 2008–13 (US$ billion)



Note: e=estimate; f=forecast. Net FDI inflows on secondary axis.
Source: Adapted from World Bank (2013a).

Second, capital inflows may lead to asset price rises and stimulate credit expansions that may undermine developing countries' financial stability. Indeed, equity price bubbles are typically associated with a higher likelihood of financial and banking crises.[10] There is evidence that expansionary monetary policies in developed economies have led to asset bubbles in several emerging economies – including Brazil, the Russian Federation, India, China and South Africa (the BRICS) – especially in 2009 and 2010.[11] Empirical evidence reported by the IMF (2013a) shows that over 2012 and early 2013 the search for yield among international investors led to stock price rallies in a number of African LICs such as Kenya, Tanzania, and Uganda.

Finally, the surge of highly volatile ('hot') capital inflows – in particular portfolio investment flows and short-term loans – may make developing countries vulnerable to capital flow reversals or sudden stops. The impact is expected to be stronger in countries relying on foreign capital to finance their large account deficits (e.g. Kenya, South Africa, and Ghana in the African region).

Developing countries have seen increased capital inflows owing to QE programmes, while a tapering of this is expected to lead to a withdrawal of capital flows. It is therefore crucial that developing countries can manage such capital inflows and use them to their benefit before they are withdrawn.

3.3.2 Trade and trade prices

QE monetary policies in the developed world, especially in the US, have contributed to a rise in commodity prices. There are several channels through which

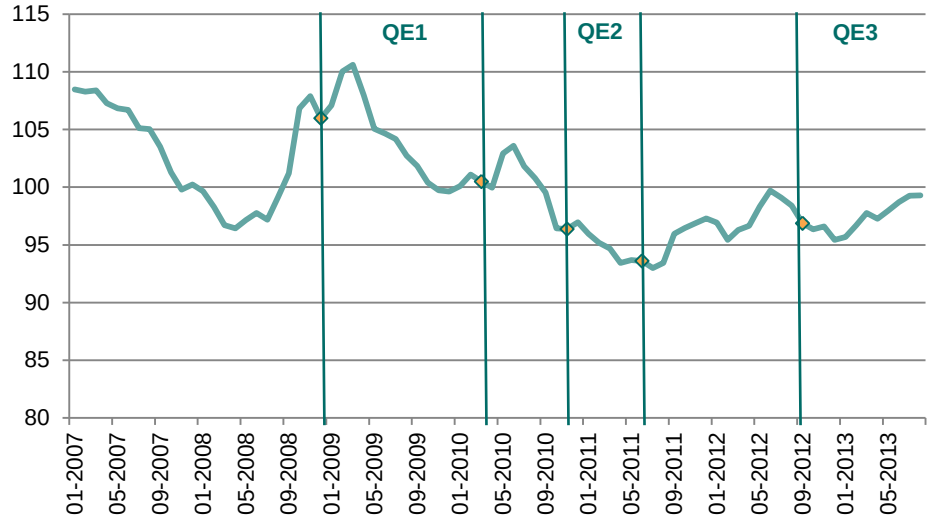
[10] See Massa (2013) for a literature survey on this issue.
[11] See http://bit.ly/1cRLJrR.

these monetary policies may affect commodity prices. For example, a stimulus to aggregate demand realised through a central bank's purchases of long-term treasury securities may boost demand for all goods, including commodities, thus increasing their prices. Moreover, lower long-term interest rates deriving from unconventional monetary policies may lead to lower costs of carrying inventories, thus stimulating inventory demand for commodities and increasing the prices of storable commodities. Finally, since most commodities are priced in US dollars a lower value of the dollar (which is frequently associated with an expansionary monetary policy in the US) may make commodities relatively cheaper for holders of other currencies, thus leading to an increase in demand for and prices of commodities.

The introduction of expansionary monetary policies in the US has led to some increases in commodity prices, although the evidence is not conclusive. As shown in Figure 16, the three rounds of QE launched by the US Fed. in 2008, 2010, and 2012 have been associated somewhat with a devaluation of the dollar, which has caused a rise in (dollar) commodity prices. Figure 17 shows that the All Commodity Price Index experienced significant surges during the first and second rounds of US QE.

The existing quantitative evidence on the impact of developed countries' recent expansionary monetary policies on commodity prices is still mixed,[12] thus suggesting that other factors such as supply constraints or robust demand from emerging market economies are likely to be additional important drivers behind the higher commodity prices.[13]

Figure 16: US real effective exchange rate (index 2010=100), January 2007–August 2013

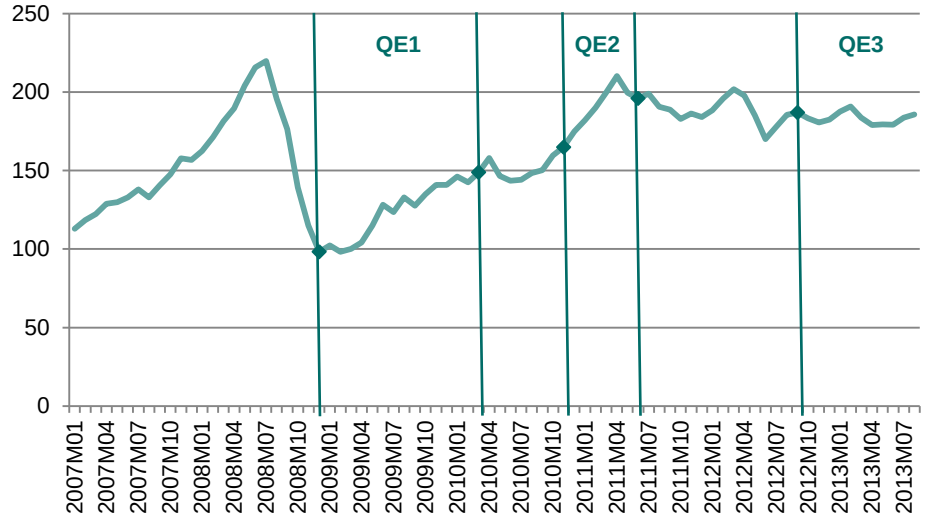


Source: Bank for International Settlements.

[12] See, for example, the econometric study by Glick and Leduc (2012) on the impact on commodity prices of large-scale asset purchases by the US Federal Reserve and Bank of England since 2008. Results show that at least on the days of announcement of these purchases commodity prices generally declined, probably owing to signalling effects about future economic conditions that make investors reduce their demand for assets such as commodities, thus lowering prices.

[13] A recent discussion on the impact of a Fed. QE tapering on commodity prices by Barclays Capital suggests that 'anyone expecting a sharp move lower in prices across a wide range of different commodities as the Fed gradually reduces its bond buying through 2014, is in for a fruitless wait, in our view' (http://bit.ly/1fgr6NM).

Figure 17: All commodity price index (2005=100), January 2007–August 2013



Source: IMF Primary Commodity Price System.

3.3.3 Spill-over effects on emerging markets

If they occur, increases in the price of international commodities would represent an important channel through which QE monetary policies may affect developing countries. Higher commodity prices may lead to increases in inflation. A rise in commodity prices will improve the external balance of net commodity exporters, but may cause a deterioration in external balances of net commodity importers.

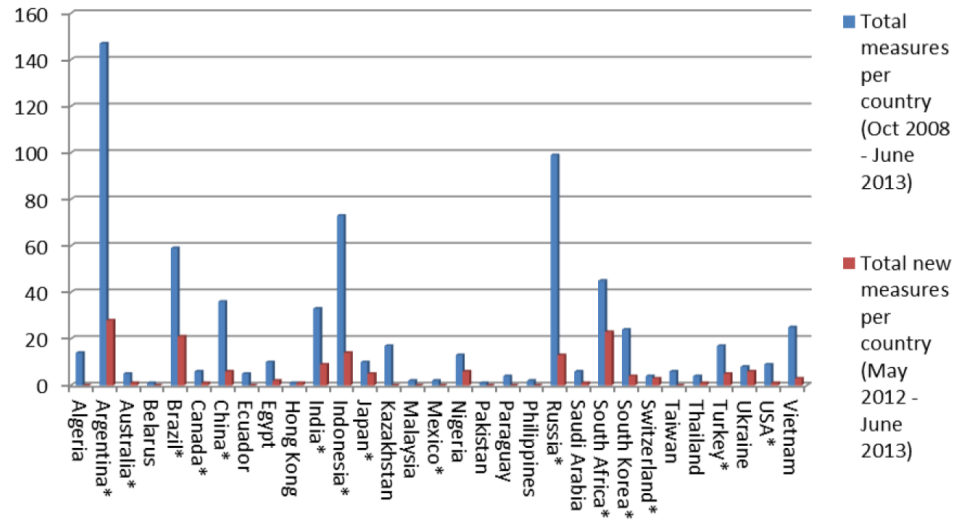
There is evidence that expansionary monetary policies launched in developed countries since the crisis hit in 2008 have had important direct consequences for emerging markets. Changing conditions in emerging economies may then affect directly or indirectly other developing countries, including the poorest economies.

QE policies in HICs have led to significant currency appreciations in emerging markets. For example, in 2012 Latin American countries such as Colombia, Mexico, Peru and Chile experienced appreciations against the US dollar. In response to upward pressure on exchange rates, an increasing number of emerging economies such as Brazil, China, Colombia, Ecuador, Indonesia, the Russian Federation, Ukraine, Thailand, Argentina, Venezuela, Peru and the Philippines imposed or strengthened different forms of capital controls (see, e.g., Massa, 2011; Grabel, 2012). The introduction of capital controls in emerging markets may have significant spill-over effects on other countries, including poor economies. A recent study by Forbes et al. (2011), for instance, finds that capital controls in Brazil had negative spill-over effects on other groups of countries. In particular, they caused investors to increase their portfolio allocations in other Latin American countries such as those closely linked to China through commodity dependence. This implies that capital controls introduced in emerging economies have the potential to shift exposure to other countries, by enhancing for example their risk of bubbles, overheating, and exchange rate appreciation through distortions to global capital flows.

The detrimental effect of real exchange rate appreciation on exports experienced by emerging economies, because of unconventional monetary policies introduced by developed countries, has coincided with the adoption of new forms of trade protectionism in emerging markets in order to protect their domestic markets. A

recent report on trade-restrictive measures released by the European Commission (2013) finds that emerging economies such as Argentina, Brazil, India, Indonesia, the Russian Federation and China, and more recently South Africa and Ukraine, have applied the highest number of potentially trade-restrictive measures since 2008 (Figure 18). These measures include not only tariff barriers, but also licensing barriers, technical regulations, procurement rules, and internal stimulus measures that distort competition. Trade protectionism by emerging economies may have a severe impact on poor economies. Indeed, emerging markets have become key trade partners for several poor economies (e.g. the BRICS have become increasingly important trade partners for several LICs and lower-middle income countries (LMICs) – see Massa et al., 2012 and Figure 7), so that trade with them is now a vital source of economic growth in these economies. Moreover, trade-restrictive measures by emerging markets may undermine the recovery of the global economy, with severe consequences for the developing world. Of course it is possible that less protection could also have occurred as the global recession was smaller due to QE. Also, tapering might in practice coincide with other issues such as an improvement in economic activities which might have offsetting effects.

Figure 18: Potentially trade-restrictive measures by country, since October 2008



*Note: * G20 countries.*
Source: European Commission (2013).

More recently, the announcement of a potential US tapering of QE (together with loss of domestic activity momentum in emerging markets) has put emerging markets at risk of significant market instability, rising financing costs, capital outflows and currency depreciation. The news, indeed, has triggered major sell-offs in currencies, stocks and bonds of emerging economies and has sharply depreciated currencies in Brazil, India, Indonesia, South Africa and Turkey. From January to September 2013 the Brazilian real lost 20% of its value against the dollar, the Indian rupee 15%, the South African rand 16%, and the Turkish lira 10%.

The emerging economies most vulnerable to outflows caused by the potential tightening of US monetary policy are those heavily reliant on short-term capital flows to finance their large current account and budget deficits, such as South Africa, Turkey, India, Chile, Brazil, Peru and Hungary. Particularly at risk also are countries such as Indonesia, where previous increases in capital inflows have fuelled domestic credit booms, as well as those such as Malaysia, Mexico, and

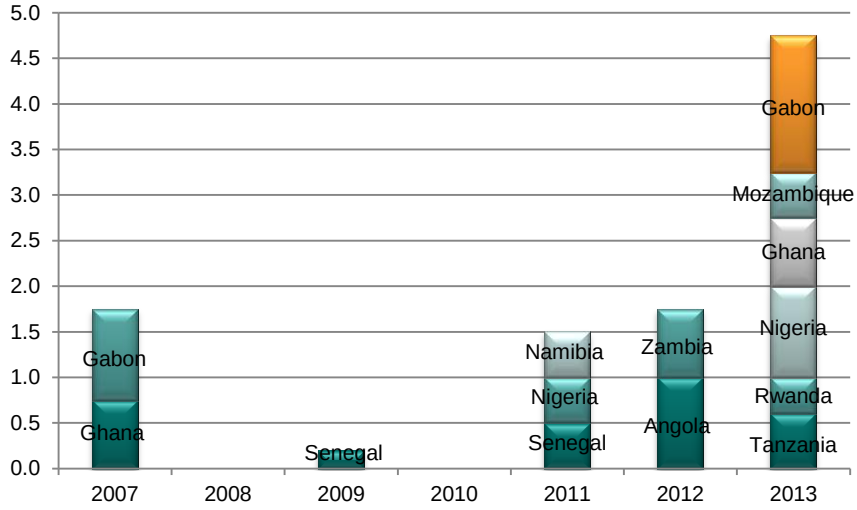
Poland, where foreigners make up a large part of the investor base. Both the OECD and the IMF have revised downwards their growth projections for emerging economies, with Brazil, China and India leading the emerging markets' slow-down (OECD, 2013; IMF, 2013b). The worsening in growth in emerging economies may have severe consequences for poor countries, since so far emerging markets have been the main engine keeping the world economy afloat in a prolonged period of crisis (see previous Shockwatch Bulletins).

Appendix 2 provides a longer-run background on how four emerging markets have fared.

3.4 Financial contagion to African countries

A detailed look at bond issuances in SSA in recent years would suggest there has been little impact from expectations of tapering. Figure 19 shows that SSA countries together issued bonds worth US$4.6 billion in 2013, with Tanzania and Rwanda issuing before the taper announcement of May 2013 and Nigeria, Ghana, Mozambique and Gabon afterwards. Since 2007, SSA has issued US$10 billion-worth in bonds.

Figure 19: Bond issuances in SSA (excl. South Africa), 2007–13, US$ billion

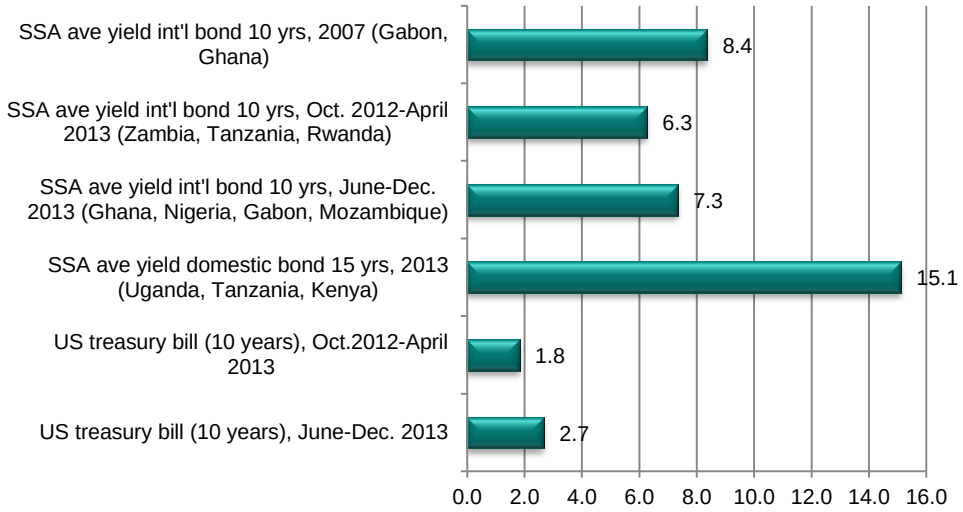


Source: See Appendix 3.

However, whilst African government bonds were still being issued, and were oversubscribed, in Ghana and Nigeria after May 2013, the yields on African bonds at issue declined between 2007 (Ghana, the first issuer in SSA) and April 2013 in average terms (Figure 20). Since then yields at issue have increased by around 100 basis points, in a similar way to US Treasury bill rates. Nigeria's bond in 2011 had a coupon rate of 6.75, and its yield fell to 3.64 in early 2013 but then increased to 6.24 in June 2013, after the Fed. tapering announcement.

The tapering discussion has led to a withdrawal of capital from developing countries, and, while Africa may not have been affected in the same way as some emerging markets, the interest of bond investors in African countries will have been affected as a result. But note that international bond yields are still much lower than domestic bond yields (e.g. in East Africa), even after adjusting for exchange rate depreciation, and there are of course other determinants of bond flows to Africa than global monetary conditions.

Figure 20: Yields on government bonds



Note: For African countries, yields are at time of issuance.
Source: Authors' analysis.

As shown in Table 4, investors from the US and UK were the main buyers of African bonds (more than two-thirds of total order books in Namibia, Senegal and Ghana), pointing to direct financial interdependencies between African countries and the US and the UK.

Table 4: Composition of order book for government bonds

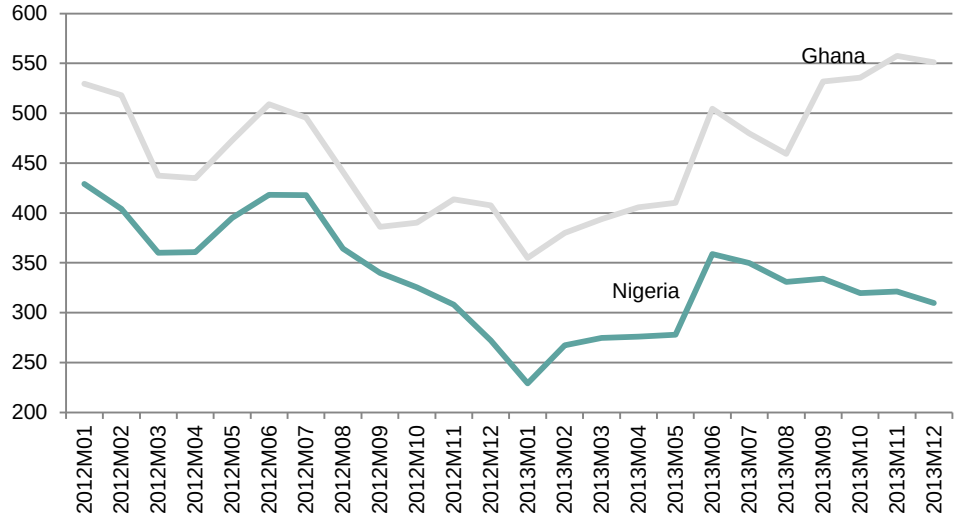
	No of investors	US	UK	Europe	Asia	Other
Ghana (August 2013)	158	60%	21%	15%	2%	2%
Namibia (October 2011)	160	25%	40%	30%	5%	
Senegal (May 2011)	125	30%	37%	29%	4%	

Source: See Appendix 3.

As a further sign of contagion and risk aversion, the interest rate spread on government bonds has increased in Ghana and Nigeria (Figure 21). The average increase since May 2013 is around 100 basis points (although individual performances differ markedly, perhaps reflecting the fact that Ghana has a much worse current account and government deficit than Nigeria). Coupled with an increase of around 100 basis points in the US Treasury bills, this suggests that African long rates (a proxy of the cost of long-term capital) have increased by around 200 basis points, or 2 percentage points. This could mean higher annual costs of US$10 million to service a typical bond issue of US$500 million, when countries do not have financing alternatives. Or the cost of servicing a total of US$10 billion of African bonds would go up by US$200 million.

The indirect consequences could be much larger when greater-than-usual volatility and slower growth in emerging markets (e.g. the IMF forecast for growth in India in 2013 was cut by 1.8 percentage points from April to October 2013) more than offsets positive news from the US and euro zone (growth forecast increased by 0.1 percentage points over the same period), worsening the global conditions in which LICs grow. The IMF estimates that a 1% decrease in China's investment would decrease SSA's exports by 0.3% (see also Massa et al., 2012). On the other hand, Fed. tapering coincides with an upturn in US real economy activity which could be good news for the global economy and ultimately African countries.

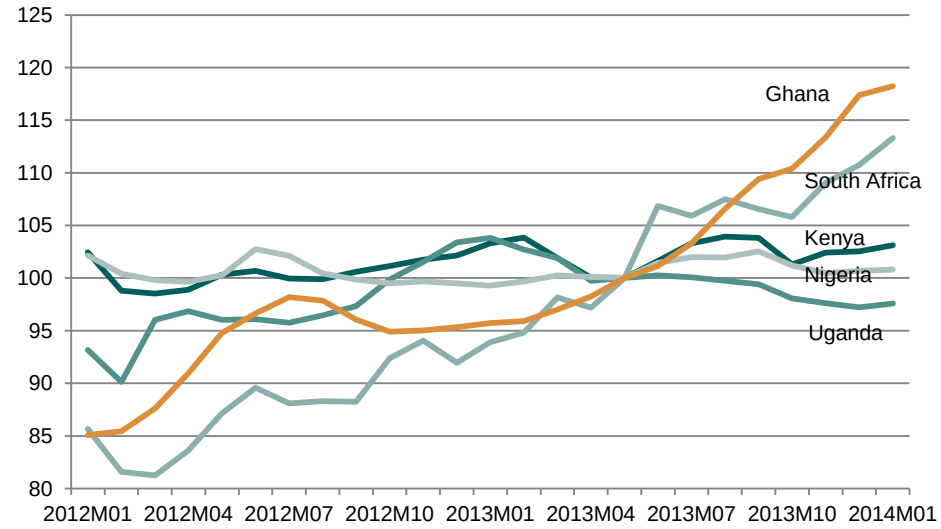
Figure 21: Interest rate spreads on 10-year government bonds (compared to US Treasury bill)



Source: World Bank Global Economic Prospects website (http://bit.ly/1bUc5ta).

The effects of actual tapering are likely to be felt more strongly in SSA countries with weak fundamentals (in the same way as emerging markets with high current account and government deficits experience more negative effects, such as greater stock market and exchange rate falls): Nigeria, with more reserves, fares better than Ghana, which has large current account and government deficits. Coupon rates in Ghana were higher than those in Nigeria in 2013. Similarly, we would expect exchange rates to be more affected in vulnerable economies. Figure 22 shows that the exchange rate in Ghana and South Africa, both of which have relatively weak fundamentals, has depreciated more than those in other African countries.

Figure 22: Exchange rates in Africa (local currency units per US$ (May 2013=100)



Source: World Bank Global Economic Prospects website (http://bit.ly/1bUc5ta).

3.5 Conclusions and reflections for African countries: maximising the benefits and mitigating the negative effects of a new form of financial integration

The financial integration that has been taking place between African countries and the rest of the world in recent decades continued in 2013. FDI increased, and while cross-border bank lending decreased bond issuances increased markedly and short-term equity flows also increased. Hou et al. (2013) noted that short-term capital inflows have become relatively more important in recent years after the global financial crisis. Such a new form of financial integration raises three issues:

1. What are the determinants of short term inflows?
2. What are planned and actual impacts of short term inflows?
3. How can a beneficial impact of short term inflows be secured and improved?

The heightened interest in African bonds from 2011–13 suggests that global monetary conditions affected bond inflows into Africa. Table 5 summarises a number of factors that could affect portfolio inflows. These include national and international factors that have been cited in recent press, IMF and academic articles, although there have been few rigorous assessments.

Table 5: Factors affecting portfolio (equity and bond) inflows

National	International
Developing a clear plan for using proceeds to plug economic and social infra gaps	Global monetary conditions (incl. interest rates, QE)
Economic growth potentials	Global risk perceptions
Commodity exports and prices, inflation and exchange rates	Reassessment of African risk, demonstration effects and portfolio diversification
Deficits on current account and government balances	
Capital account convertibility	
Financial market development	
Marketing drive, appropriate pricing and size of (sovereign) bond transactions	

How do African governments intend to use the proceeds? Overwhelmingly, the reason for bond issuance is said to be to manage debt and finance infrastructure (Table 6). Countries have used low interest rates to access international capital markets rather than the high interest rates needed to mobilise domestic capital. Ghana reduced annual costs by an estimated US$1.4 million through the difference in interest costs between the Ghana 2017 bond (8.50%) and the new Ghana 2023 Bond (7.875%). The authorities further estimate that the proposed refinancing of maturing domestic debt (cost 19–23%) with Eurobond (7.875%) proceeds will lead to annual interest savings after adjusting for estimated exchange rate depreciation of GH¢21–48 million (US$9–21 million). However, while replacing domestic debt with foreign debt might currently be cost saving, it does increase the exposure of Ghana to global fluctuations in monetary conditions and exchange rates. Finance to invest in infrastructure, when managed appropriately, can lead to an expansion of productive capacity, growth and an ability to repay debt.

Table 6: Plans for using bond proceeds

Country	Value	Use
Zambia (2012)	US$750 million	To invest in infrastructure.
Rwanda (2013)	US$400 million	Construction of a 28- megawatt hydropower plant, the construction of a hotel and pay off some of state-owned RwandAir's debt
Nigeria (2013)	US$1,000 million	To finance projects in the electricity sector, which is undergoing privatisation; desire to shift from domestic borrowing towards cheaper foreign credit
Ghana (2013)	US$750 million	For capital expenditure and refinancing public debt to reduce the cost of borrowing
Gabon (2013)	US$1,500 million	US$ 610 million will be used to replace existing debt for better debt management
South Africa (2013)	US$2,000 million	Extend maturity of debt, use low financing costs, finance roads and power

Source: The sources listed in Appendix 3.

It should be said that the impact of short-term portfolio flows in LICs and in Africa is mixed. Massa (2013) provides a review of the debate in LICs, and here we focus on five studies that include an examination of short-term portfolio flows:

- Choong et al. (2010) find for a sample of 16 LICs between 1988 and 2006 that FDI, portfolio investment and foreign debt have a negative and significant impact on economic growth, but the effect of all private capital flows on growth is positive in LICs with well-developed financial sectors.
- Shen et al. (2010) find for a sample of 80 countries (31 HICs, 25 middle-income countries (MICS), and 24 LICS) over the period 1976–2007 that FDI has a positive effect on growth, while portfolio investment (i.e. bond and equity flows) has a negative effect on growth.
- Brambila-Macias and Massa (2010) examine the long-run relationship between FDI, cross-border bank lending, bond flows, portfolio equity flows and economic growth in a sample of selected SSA countries over the period 1980–2007. They show that FDI and cross-border bank lending have a significant and positive impact on SSA's growth, whereas portfolio equity flows and bonds flows have no growth impact.
- Brambila-Macias et al. (2011) find that FDI has a larger impact than cross-border bank lending on growth in African economies. When the sample is split between oil and non-oil countries, the authors find that cross-border bank lending appears to exert a negative and significant impact on growth in the sub-sample of natural resource economies.
- Reisen and Soto (2001) measure the individual growth effects of bond flows, FDI, portfolio equity flows, official flows and short- and long-term bank lending in a sample of 44 countries, including a few LICs, over the period 1986–1997. They find that FDI and portfolio equity flows exert a significant impact on growth, whereas bonds and official flows do not have any significant effect on growth.

The review suggests that many studies have found that portfolio bond flows in LICs or African countries have had a neutral or even negative effect on growth. Some studies suggest policies and country characteristics matter, which can make the impact of short-term inflows positive.

The IMF (2013a) discusses the impact of short-term capital inflows (equity and bond) in African countries:

- with the exception of Nigeria, Kenya, and Mauritius, portfolio inflows may have contributed to expansionary fiscal policies;
- inflows generally induced declining government bond yields;
- inflows often funded government bond purchases, but in Nigeria and Kenya inflows also funded purchases of equities and private bonds, resulting in more-than-average stock price increases (and a bubble in Nigeria);
- capital inflows in the form of cross-border bank loans fuelled more-than-average credit growth only in some countries.

Some of these impacts can be useful, but only under certain circumstances. We discuss a number of general policy suggestions which African countries could consider in responding to short-term capital flows.

- Use **macro-economic policies** (fiscal, monetary and exchange rate policies) to smooth the potential impact of increased inflows on inflation, exchange rate appreciation, fiscal expansion and heightened limit volatility. This requires the availability of good data. Moreover, different country characteristics allow or preclude the use of different instruments: Nigeria can intervene using its reserves, but Ghana – which has low reserves – cannot and hence needs a flexible exchange rate to smooth impacts (IMF, 2013a).
- Develop **financial sector policies** to manage, regulate and maximise the potential of short-term equity and private bond flows. While prudential regulations (e.g. on capital adequacy ratios) tend to be stricter in Africa than elsewhere, new cross-border activities (including regional) need to be monitored with great care. For example, Nigerian banks with branches abroad have consequences across borders when they are in difficulties in Nigeria.
- Ensure the proceeds of **government bonds are put to effective use**, either by investing in developing productive capacities or by a cost-lowering restructuring of debt flows but not, for example, covering recurrent costs. This requires institutional strengthening in some cases.
- **Monitor global monetary conditions** in order to determine the appropriate timing of bond issuances. At the moment African countries are lining up to issue bonds before yields rise further.
- Consider the use of **capital account management measures** in cases of excessive volatility, but this may only be needed if the above policies are exhausted or do not work.

This is an old agenda in parts, but it takes on increased importance in the light of Africa's new financial integration.

Countries face different challenges when using these suggested policy tools to address and smooth the impact of short-term capital inflows and outflows. Some African countries use exchange rate policy effectively to address the impact of global shocks; other countries that should use the flexibility in exchange rates do not do this; and yet other countries maintain too much control over their currencies, serving multiple policy objectives so that exchange rate policy cannot be used to address shocks.

A brief review of four African countries in Appendix 1 suggests widely varying experiences in the role played by exchange rate and related policies. In Ethiopia the exchange rate seems to have had multiple objectives, not just to smooth the impact of a financial crisis. Malawi has had a few major policy interventions in its exchange rate, but its management of the exchange rate implies that the country seems ill equipped to use its exchange rate to address cyclical variations. In contrast, the flexibility of Zambia's exchange rate has helped to mitigate external shocks since the global financial and euro zone crises. But in Ghana, as reserves are run down, and current and government balances are in large deficits, the exchange rate has become an important tool to address financial shocks.

4 Conclusion

A different and more intense financial integration of SSA countries with the global economy has been apparent in recent years. FDI flows are back to pre-crisis levels, cross-border lending is much higher now than a decade ago, and portfolio bond flows are booming. This brings new opportunities which need to be seized but also new risks which need to be managed. This Bulletin has examined how the expectations on the Fed. tapering throughout 2013 and global monetary shocks more generally affected emerging economies and African countries, and has analysed potential policy issues in responding to these, including the potential role of exchange rate policy as one of a range of policies that African countries can use to respond to global monetary shocks.

We conclude that, while the impact has been slight so far, the actual tapering of monetary support is likely to lead to weaker conditions which may make it more costly and difficult to attract short-term capital in countries with weak fundamentals (e.g. high current account and government deficits).

Five years of unconventional monetary policies in developed countries to address the impact of the global financial crisis led to increased capital flows to developing countries as investors searched for yields as developed countries interest rates were kept at historic lows. The expectation on the withdrawal of these unconventional policies caused global instability from May 2013, especially in emerging economies such as India (initially), Indonesia, South Africa, Turkey and Brazil.

A typical view of SSA is that it is not financially integrated and that the financial crises affected African countries only through the real sector, but this Bulletin (and our previous work) confirms that African countries have indeed benefited from monetary easing in developed countries through the receipt of bond flows, but now that such QE will be rolled back in 2014 they are likely to experience less benign consequences (although the overall impact will depend on the range of all factors). This points to the need for better management and monitoring of private capital flows in African countries.

Chapter 2 provided a macro-economic update (based on analyses, forecasts and data from various sources including the AfDB, World Bank, IMF and others). Key points include:

- World GDP is expected to have slowed down slightly in 2013 (2.9% growth) compared to 2012 (3.2% growth), driven by a slow-down in both emerging markets and developed countries (IMF). However, the IMF is expected to raise its forecasts at the end of January.
- Commodity prices dropped during 2013, by more than 10% for food products and 5% for metals and minerals. Oil prices remained roughly constant in 2013 (but with some oscillation during the year), hovering at around US$110 per barrel. The volatility in commodity prices in 2013 is down to pre-2006 levels (IMF).

- SSA GDP grew at 4.2% in 2012 and is expected to accelerate to around 5% in 2013 and 5.5% in 2014 (IMF, World Bank and AfDB).
- Sierra Leone is expected to be the second-fastest grower in the world in 2013, with real GDP *per capita* growth of 10%. Liberia, Rwanda, Ghana and Gabon are expected to achieve more than 5% real GDP *per capita* growth, putting them among the world's top 20 growth performers.

The above summary paints a global economic picture of weak but improving world growth, continued strong performance in SSA and reduced global economic shocks, although we have still to witness the effects of actual as opposed to expected tapering.

Capital flows to SSA continue evolve.

- FDI in 2013 has been estimated to rise by 10–20% to around US$40 billion (which is, for example, more than the US$25 billion aid going to the region), back to its pre-crisis levels (UNCTAD, IMF).
- Bank lending (outstanding) declined by some 5% to just over US$135 billion by the middle of 2013, suggesting the withdrawal of foreign bank capital from SSA.
- Sovereign bond issuances in SSA (excluding South Africa) increased rapidly in 2013 (more than doubling from US$1.7 billion in 2012 to US$4.6 billion in 2013). SSA countries have issued US$10 billion-worth in sovereign bonds since 2007, with a marked upturn in 2013.

The above summary paints a new picture of Africa's financial integration with the world economy. Long-term capital flows in the form of FDI were back at pre-crisis levels in 2013, but portfolio inflows are increasing fast and cross-border bank lending, while decreasing somewhat, is much higher now than a decade ago.

Other notable points from Chapter 2 include:

- The value of Chinese imports from SSA grew by an annual average 27% from 2005 to 2012 and those of the EU by 10%, while the value of US imports fell by 0.4% over the same period. According to the data available so far, China's imports from SSA held up in 2013, but those of both the EU and the US were down in quarterly year-on-year terms.
- Government deficits increased in SSA between 2011 and 2013, with external debt to GDP ratios expected to have increased slightly from 23.3% in 2011 to 24.5% in 2013.
- While many LICs remain vulnerable, progress in rebuilding policy buffers in SSA LICs has increased the number of resilient countries. The median scores on a number of macro-economic indicators for African LICs indicate improving growth rates, lower government deficits, and current account balances which are still negative but not increasing, although reserves expressed as number of months of imports have declined.

The main risk and source of instability in 2013 was the timing and extent of the reversal of unconventional monetary policies in developed countries, especially the US. Testimony by the Fed. to the US Congress in May 2013 was interpreted to mean that it would taper the QE programme. It eventually announced it would taper its support from January 2014 onwards. But despite tapering the Fed.'s assets will

increase to US$4.6 trillion by the end of 2014 (from US$4 trillion at the end of 2013). The discussions on US tapering have affected long-term interest rates, stock markets and exchange rates across the world (at least during May–September 2013 and depending on country characteristics). The base rate increased by 100 basis points after May 2013 and the (global financial) risk premium as measured by the sovereign bond interest rate spread over US Treasury bills increased by around 75 basis points for emerging markets.

Chapter 3 discussed the spill-over effects of global monetary policies. Central banks across developed countries began to use 'unconventional' monetary policy tools, categorised as:

- expectation management strategy;
- changes in the composition of the central bank balance sheets; and
- QE (a massive expansion of the monetary base).

QE monetary policies in the developed world may have a direct or indirect impact on developing economies, including LICs, through different channels, among them:

- financial channels, through capital flows, stock market prices and interest rates;
- real channels: trade volumes and trade prices (both directly and indirectly);

Developing countries have seen increased capital inflows owing to QE programmes, while a tapering of these (or expectations of this) is expected to lead to a withdrawal of capital flows (although at present the US Fed. tapering coincides with an upturn in economic activities which may lead to more capital flows). It is therefore crucial that developing countries can manage such capital volatility and manage inflows to their benefit before they are withdrawn.

Some emerging markets were affected badly during mid-2013, but there was a rebound in several markets towards the end of 2013. But a question remains as to what will happen to emerging markets now that tapering is a reality. A further question is whether SSA has been or is likely to be affected.

A detailed look at bond issuances in SSA in recent years would suggest there has been little impact of tapering on bond flows. SSA countries together issued bonds worth US$4.6 billion in 2013, with Tanzania and Rwanda issuing before the taper announcement of May 2013 and Nigeria, Ghana, Mozambique and Gabon afterwards. Since 2007, SSA has issued US$10 billion-worth in bonds. US and UK investors were the main buyers of African bonds (more than two-thirds of total order books in Namibia, Senegal and Ghana), illustrating the direct short-term financial links between developed and African countries.

However, while African government bonds were still being issued, and were oversubscribed, in Ghana and Nigeria after May 2013, the yields on African bonds had already increased under the expectation that US interest rates will rise. Nigeria's bond in 2011 had a coupon rate of 6.75, and its yield fell to 3.64 in January 2013 but then increased to 6.24 in late June 2013, after the Fed. tapering discussion. Moreover, while yields of African bonds at issue declined between 2007 (Ghana, the first issuer in Africa) and April 2013 in average terms, since then yields at issue have increased by around 100 basis points, in a similar way to US Treasury bill rates.

The heightened interest in African bonds in 2013 suggests that global monetary conditions affect short-term bond and equity inflows into Africa. But there are other factors, national and international.

But will increased short-term equity and bond inflows help African countries? African countries intend to use bond receipts to manage debt and finance infrastructure. Short-term capital inflows have contributed in some African countries to expansionary fiscal policies, declining government bond yields, funded government bond purchases or purchases of equities and private bonds (especially in Kenya and Nigeria), resulting in more than average stock price increases (and a bubble in Nigeria) and more-than-average credit growth only in some countries.

However, a thorough survey of the econometric evidence on the effects of such flows suggests that portfolio bond flows in LICs or African countries have had a neutral or even negative effect on growth, although some studies suggest policies and country characteristics matter and can make the impact more positive.

Some impacts of short-term capital inflows can be useful, but only under certain circumstances. Indeed, African countries could consider the following issues:

- use macro-economic policies (fiscal, monetary and exchange rate) to smooth the potential impact of increased inflows on inflation, exchange rate appreciation, fiscal expansion and limit volatility;
- develop financial sector policies to manage, regulate and maximise the potential of short-term equity and private bond flows;
- ensure that the proceeds of government bonds are used to invest in developing productive capacities or to fund a cost-lowering restructuring of debt flows;
- monitor global monetary conditions in order to determine the appropriate timing of bond issuances;
- consider the use of capital account management measures in cases of excessive volatility, but these may only be needed if the above policies are exhausted or do not work.

Countries face different challenges when using these policy tools to smooth the impact of short-term capital inflows. We examined the role of African exchange rates in more detail as exchange rates varied widely in emerging markets in 2013. A brief review of four countries suggests a widely varying experience of the role played by exchange rate and related policies. In Ethiopia the exchange rate seems to have had multiple objectives, and not just to smooth the impact of a financial crisis. Malawi has also had major policy interventions in its exchange rate and the exchange rate stickiness implies that Malawi seems ill equipped to use its exchange rate to address cyclical variations. In contrast, the flexibility of Zambia's exchange rate has been posited as helping to mitigate external shocks since the global financial and euro zone crises. But in Ghana, as reserves are run down, and current and government balances are in large deficits, the exchange rate has become an important tool to address financial shocks.

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Appendix 1. Exchange rate policy in selected African countries

All financial crises are followed by a re-examination of macro-economic policy in smoothing the effects of crises – a debate which continues in the developed and developing economies. The conventional wisdom on macro-economic policy more broadly, and exchange rate management in particular, has been challenged since the global financial crisis. The policies implemented by the developed countries are not only controversial, but there may be also spill-over effects on emerging economies and effects on other countries directly, through the effects on emerging economies, and through any mitigating measures adopted by these. This has led to a realisation of the need to consider more unorthodox exchange rate management and more active policies more broadly.[14]

In Section 1 we focus on particular challenges facing exchange rate management in LICs. Section 2 provides an overview of LIC exchange rate systems. We then proceed to discuss recent experiences for four African countries (Section 3). Section 4 concludes.

1. How has conventional wisdom been challenged since the global financial crisis?

There has been little formal cooperation amongst countries on exchange rate management since the recent financial crisis. However there is an implicit understanding that capital flow management will be necessary to stem any adverse effects of QE on developing countries. In this section we explore the implications for LICs in relation to their exchange rate management. First, however, it is important to point out that the question of the optimal exchange rate regime for open economies is not a straightforward one.

As Frankel (2003) states:

> On the one hand, the big selling points of floating exchange rates – monetary independence and accommodation of terms of trade shocks – have not lived up to their promise; on the other hand, proposals for credible institutional monetary commitments to nominal anchors have each run aground; rigid pegs to specific currencies can be dangerous when they appreciate. All types of regime may face difficulties when confronted with an external shock: money targeting does not work when there is a velocity shock; [Consumer Price Index] targeting is not viable when there is a large import price shock.

This is a central point: no regime is a perfect insurance against a major crisis because countries cannot isolate themselves (and of course some cause the crises).

[14] This trend is part of a broader movement which has been termed by some the 'return of industrial policy (Rodrik, 2010).

Any choice of regime is in effect a choice between different types of vulnerability to external effects.

Because developed countries have induced exchange rate depreciation through their expansionary monetary policies to mitigate any adverse effects on growth, other countries have reacted to maintain domestic price stability.[15] Despite these new types of exchange rate management (QE), the growth effects of exchange rate changes are far from certain and depend on a whole host of interactions between different types of variables. Box A1.1 summarises some pre-crisis empirical literature on the relationship between exchange rate depreciation and economic growth. After the crisis, in 2013, the IMF updated its position on capital account management and capital controls. IMF (2013b) says that:

> the IMF has revisited the toolkit for addressing the risks from surges in capital flows. In its institutional view, the IMF notes that in certain circumstances [capital flow management] can play a complementary role in supporting macro-economic adjustment and safeguarding financial stability.

The next section examines in more detail the current challenges facing LICs related to developments at the macro-economic level.

Box A1.1: Exchange rate movements and economic growth

A decline in the value of a country's exchange rate can arise due to market forces, or exchange rate depreciation. Under fixed exchange rate systems, a devaluation results from a new rate of exchange being set by policy.

The empirical evidence of exchange rate depreciation on growth is mixed. For example, Bahmani-Oskooee (1998) finds that currency depreciation has no long-run effect on output in most of the 23 least developed countries under study. Upadhyaya et al. (2004) find an expansionary effect of exchange rate depreciation on growth in the short-run, but no impact in the medium and long-run. With respect to OECD countries, as well as other emerging markets, Rodrik (2008) shows that sustained real depreciations increase economic growth, especially in low-income economies. By performing a regression analysis between undervaluation and growth, it is found that the growth effects are significant, including for countries such as Ethiopia, Brazil, India and China.

With respect to Asian countries after the financial crisis which erupted in that region in the 1990s, Bahmani-Oskooee et al. (2002) find that exchange rate devaluation negatively affects growth, and Chou and Chao (2001) get the same result in the short run but find no impact in the long run (except for Indonesia). However Christopoulos (2004) finds that in three Asian countries exchange rate devaluation exerts an expansionary effect on growth in the long run.

Source: Adapted from te Velde and Massa (2009).

The challenge for LICs at the current time is to address various combinations of a number of sometimes opposing forces, which include:

- sluggish export growth to developed country markets with resultant effects on foreign exchange availability;
- conversely, an increase in the flow of export receipts which may result in an exchange rate appreciation;

[15] Given that inflation and exchange rates for firms and the private sector are central elements in maintaining competitiveness.

- rapid fluctuations in the prices of some commodities comprising a large share of exports from LICs – which can result in rapid and large exchange rate fluctuations;
- rapid capital inflows which may require counteractive measures to prevent exchange rate appreciation;
- high import prices for net food and fuel importers, affecting trade balances; and
- exchange rate depreciations in developed country markets such as the US, and EU, which can affect the relative competiveness of exports.

Exchange rates play a central role in balancing a country's net position in terms of international trade and payments and hence are affected by different factors. For example, an increase in commodity prices can lead to an exchange rate appreciation but so too can capital inflows (so long as they are not spent on tradeable goods). Hence, exchange rate policy will not only respond to short-term capital inflows discussed in this appendix. On the other hand, given the extent of financial liberalisation that has taken place to date, trade flows can no longer be assumed to be necessarily the primary determinants of exchange rates. Exchange rates themselves have become important determinants of trade.

2. Current exchange rate classifications

As can be seen from Table A1.1, the majority of LICs and LMICs operate conventional fixed peg arrangements, usually against the US dollar and the euro. Hence, any movement in these currencies will directly affect the relative competitiveness of their exports on world markets. Depending on the degree of market dependence on developed country markets as both traders and investors, there will be different implications for macro-economic management.

As discussed by Massa et al. (2011), in the *Communauté Financière Africaine* (CFA) zone in West Africa – which comprises the West African Economic and Monetary Union and the Central African Economic and Monetary Community[16] – a weaker euro could help exporters because the depreciation of the euro could help to make CFA zone exports more competitive in world markets – especially in the case of the region's dollar-based exports – crude oil, cocoa, coffee and groundnuts. On the other hand, however, since the currency peg to the euro also implies that most of the CFA zone countries have their reserves in euros, these would depreciate in real terms,

3. Exchange rate experiences in LICs

In this section we explore the exchange rate experiences for two least developed countries: (i) Ethiopia, which operates a crawling peg, and (ii) Malawi, which operates a conventional fixed peg arrangement. We then compare their experiences to those of middle income countries (MICs): (i) Ghana, which operates a managed float with no pre-determined path, and (ii) Zambia, which operates an independently floating exchange rate.

For all countries we seek to explore the following questions:

- What is the exchange rate policy?
- What are the main drivers of exchange rate movements?

[16] Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo Democratic Republic, Côte d'Ivoire, Equatorial Guinea, Gabon, Guinea-Bissau, Mali, Niger, Senegal and Togo.

Table A1.1: IMF exchange rate classification

Exchange rate arrangement (Number of countries)	Monetary Policy Framework							
	Exchange rate anchor				Monetary aggregate target	Inflation targeting framework	Other	
	US dollar (66)		Euro (27)	Composite (15)	Other (7)	(22)	(44)	(11)
Exchange arrangement with no separate legal tender (10)	Ecuador El Salvador Marshall Islands Micronesia, Fed. States of	Palau Panama Timor-Leste	Montenegro San Marino		Kiribati			
Currency board arrangement (13)	Antigua and Barbuda[2] Djibouti Dominica[2] Grenada[2]	Hong Kong SAR St. Kitts and Nevis[2] St. Lucia[2] St. Vincent and the Grenadines[2]	Bosnia and Herzegovina Bulgaria Estonia[3] Lithuania[3]		Brunei Darussalam			
Other conventional fixed peg arrangement (68)	Angola Argentina Aruba Bahamas, The Bahrain Bangladesh Barbados Belarus Belize Eritrea Guyana Honduras Jordan Kazakhstan Lebanon	Saudi Arabia Seychelles Sierra Leone Solomon Islands Sri Lanka Suriname Tajikistan Trinidad and Tobago Turkmenistan United Arab Emirates Venezuela Vietnam Yemen	Benin[4] Burkina Faso[4] Cameroon[5] Cape Verde Central African Rep. [5] Chad[5] Comoros Congo Rep. Côte d'Ivoire Croatia Denmark[3] Equatorial Guinea[5] Gabon[5]	Fiji Kuwait Libya Morocco Russian Fed. Samoa Tunisia	Bhutan Lesotho Namibia Nepal Swaziland	Argentina Malawi Rwanda Sierra Leone		

Exchange rate arrangement (Number of countries)	Monetary Policy Framework							
	Exchange rate anchor				Monetary aggregate target	Inflation targeting framework	Other	
	US dollar (66)		Euro (27)	Composite (15)	Other (7)	(22)	(44)	(11)
	Malawi Maldives Mongolia Netherlands Antilles Qatar Rwanda	Zimbabwe	Guinea-Bissau[4] Latvia[3] Macedonia, FYR Mali[4] Niger[4] Senegal[4] Togo[4]					
Pegged exchange rate within horizontal bands (3)			Slovak Rep.[3]	Syria Tonga				
Crawling peg (8)	Bolivia China Ethiopia Iraq Nicaragua Uzbekistan			Botswana Iran				
Crawling band (2)	Costa Rica			Azerbaijan				
Managed floating with no pre-determined path for the exchange rate (44)	Cambodia Kyrgyz Rep. Lao PDR Liberia Mauritania Mauritius Myanmar			Algeria Singapore Vanuatu	Afghanistan Burundi Gambia, The Georgia Guinea Haiti Jamaica	Armenia[6] Colombia Ghana Guatemala Indonesia Peru Romania	Dominican Rep. Egypt India Malaysia Pakistan Paraguay	

Exchange rate arrangement (Number of countries)	Monetary Policy Framework							
	Exchange rate anchor				Monetary aggregate target	Inflation targeting framework		Other
	US dollar (66)	Euro (27)	Composite (15)	Other (7)	(22)	(44)		(11)
	Ukraine				Kenya Madagascar Moldova Mozambique Nigeria Papua New Guinea São Tomé and Príncipe Sudan Tanzania Uganda	Serbia[6] Thailand Uruguay		
Independently floating (40)					Zambia	Albania Australia Austria[7] Belgium[7] Brazil Canada Chile Cyprus[7] Czech Rep. Finland[7] France[7] Germany[7] Greece[7] Hungary Iceland	Luxembourg[7] Malta[7] Mexico Netherlands[7] New Zealand Norway Philippines Poland Portugal[7] Slovenia[7] South Africa Spain[7] Sweden Turkey United Kingdom	Congo, Dem. Rep. Japan Somalia[8] Switzerland United States

Exchange rate arrangement (Number of countries)	Monetary Policy Framework						
	Exchange rate anchor				Monetary aggregate target	Inflation targeting framework	Other
	US dollar (66)	Euro (27)	Composite (15)	Other (7)	(22)	(44)	(11)
						Ireland[7] Israel Italy[7] Korea Rep.	

Notes:
1. Includes countries that have no explicitly stated nominal anchor, but rather monitor various indicators in conducting monetary policy.
2. The member participates in the Eastern Caribbean Currency Union.
3. The member participates in the ERM II.
4. The member participates in the West African Economic and Monetary Union.
5. The member participates in the Central African Economic and Monetary Community.
6. The central bank has taken preliminary step toward inflation targeting and is preparing for the transition to full-fledged inflation targeting.
7. The member participates in the European Economic and Monetary Union.
8. As of end-December 1989.
Source: Adapted from IMF de facto classification of exchange rate regimes (http://bit.ly/1imDcmb).

- Has exchange rate policy been used and changed since the global financial crisis?

We aim to identify whether exchange rate policy can be regarded as a useful policy to address global monetary shocks in African countries as suggested in theory.

We examine both nominal and real exchange rate developments. The main difference between these terms is that the latter is the weighted average of a country's currency relative to an index or basket of other major currencies adjusted for the effects of inflation (adjusted for changes in purchasing power). The former is simply the price of one currency in another. The nominal effective exchange rate is an unadjusted weighted average value of a country's currency relative to the currencies of major trading partners. The following sub-sections discuss each country case study sequentially.

Ethiopia

Ethiopia has come under pressure at various times during the financial crisis to devalue its exchange rate, As noted by the IMF (2013h) there is scope to improve the functioning of the foreign exchange market which may entail greater exchange rate flexibility. The real effective exchange rate (REER) was estimated to be overvalued by 11–23% according to IMF (2012c) estimates (see Box A1.2).

Box A1.2: Ethiopia's exchange rate assessment

The IMF approach to assessing whether or not an exchange rate is overvalued is based on the following three methods, which have been used to assess Ethiopia:

i. **the macro-economic balance approach**: a REER depreciation of 11% is required to close the gap between the underlying current account projection and an estimated equilibrium current account balance.
ii. **the equilibrium REER approach**: suggests an overvaluation of 11% from an equilibrium REER estimated with medium-term fundamentals.
iii. **the external sustainability approach:** a higher level of overvaluation is estimated at 23%. The approach calculates the current account balance that would stabilise the net foreign asset (NFA) position at an appropriate level. With projected nominal growth of 14.7% in Ethiopia, the underlying current account deficit of 6.1% would result in a long-run NFA position equal to -48% of GDP; results suggest this should be reduced to 4%.

Source: Adapted from IMF (2012c).

Foreign exchange reserves were significantly run down in 2011 as a result of foreign exchange sales to sterilise liquidity (further to their increase in 2008).[17] This means that reserves became lower than recommended (1.8 months of coverage). An improvement in the current account balance which occurred during 2010/11 has been reversed owing to strong growth in imports during 2011/12. On the export side, growth has been maintained. However, since the REER is considered to be overvalued and suffering from the effects of recent inflation, the competitiveness of Ethiopia's exports may be adversely affected. Hence, some flexibility in the nominal exchange rate is being called for. Capital inflows are not reported as being

[17] In the absence of an active Treasury bill market, foreign exchange reserves have been the primary monetary policy tool to affect the level of liquidity.

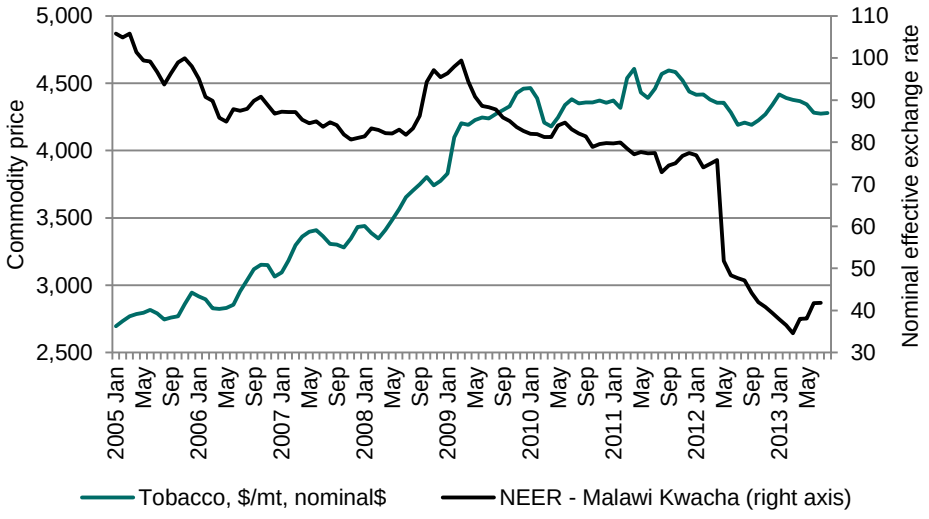
problematic since Ethiopia maintains several exchange restrictions on payments and transfers.

As discussed by te Velde and Massa (2009), with reference to Rodrik (2008), there were two main policy scenarios that could help to ease the chronic shortage of foreign exchange in the Ethiopian economy: the creation of a dual-track exchange rate and a full exchange rate devaluation. There is some recognition that the birr will have to be devalued if foreign reserves are to be increased from their critically low threshold. There are concerns, though, regarding any future devaluation since the high value of the birr has been maintained as part of the government's import promotion strategy. The government-led push for the construction of roads, dams and housing, for instance, benefits from lower-priced imported inputs such as cement and construction materials and fertiliser. Second, the high value of the birr has also been maintained to rein in Ethiopia's high level of inflation. If the birr were to weaken, inflationary pressure would increase given the country's reliance on imported food, fuel and consumer goods.

Malawi

Since 2012 Malawi has experienced some rather dramatic changes in terms of its exchange rate management. Figure A1.1 presents Malawi's nominal exchange rate and world prices for its major export, tobacco. Tobacco prices have increased and then stabilised, and then the nominal exchange rate depreciated. Major shifts in recent years in exchange rate management include: a 33% devaluation of the kwacha, adoption of a floating exchange rate regime, liberalisation of current account transactions, and adoption of an automatic fuel-price adjustment mechanism (IMF, 2012b). These policy shifts have been motivated in part owing to challenges experienced in 2011, but also owing to a change in political leadership. As discussed by IMF (2012b), several donors reduced their financial support when Malawi's IMF-supported programme went off-track in the first half of 2011 and because of human rights and governance concerns; the previous administration's response to reduced supply of foreign exchange was a 10% devaluation of the kwacha in August 2011 accompanied by tighter restrictions on foreign exchange transactions.

Figure A1.1: World tobacco prices and Malawian nominal effective exchange rate (100 in 2005)



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

Changes implemented in relation to liberalisation of currency transactions include:

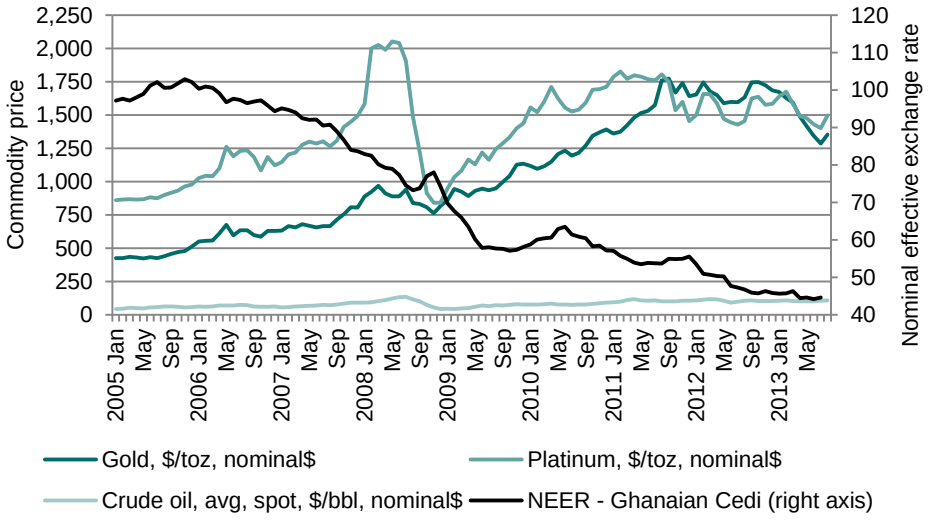
- allowing banks and foreign exchange bureaus to set the rate at which they buy and sell foreign exchange from/to their customers;
- removal of the requirement for foreign exchange earnings to be surrendered to the Reserve Bank of Malawi; they now flow directly to commercial banks;
- cancellation of the requirement for banks to submit to the Reserve Bank of Malawi for review any application for external payments exceeding US$50,000.

Despite these measures which have enhanced the flexibility of the exchange rate, Malawi can still be negatively affected by global spill-over effects; for example, slower growth in the global economy, and in the euro zone in particular, could reduce export earnings (notably for tobacco). Exchange rate policies can smooth these impacts, but only when they are flexible rather than subject to less frequent large shifts. As discussed by Pauw et al. (2013) a relaxation of the exchange rate policy, however, is only part of the solution; in the longer run good governance and sound macro-economic policy that is conducive to growth are needed to address the underlying structural problems in the economy that also contribute to foreign exchange shortages.

Ghana

Ghana is one of the few LMICs that adopted inflation targeting (in 2007) as a formal framework for its monetary policy. Despite this, recent simulations suggest that the Ghanaian cedi is overvalued by approximately 15–20% (IMF, 2013f). The concentration of Ghana's exports in three commodities – gold, cocoa, and oil – makes the economy vulnerable to terms of trade shocks (del Granado, 2013). Price rises in these commodities may bear some responsibility for the overvalued exchange rate. However, as shown by Figure A1.2, recently the Ghanaian cedi has declined in value while commodity prices for platinum, gold and oil have increased.

Figure A1.2: World gold, platinum and crude oil prices and Ghanaian nominal effective exchange rate



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

There are also concerns regarding the effect of new investments in the oil sector and the implications for exchange rate management. Having started to produce oil at the end of 2010, crude oil exports were Ghana's second-largest export earner in 2011 (valued at USS2.6 billion), and oil stands to overtake gold (exports of US$4.5 billion in 2011) as the largest when production peaks (AfDB, 2012). Decisions on how to spend the country's increasing oil revenue, projected at several billion US dollars over the next two decades, will affect future economic transformation. But there may also be exchange rate effects which need to be managed because the increased oil revenue and FDI inflows may result in strong upward pressure on the exchange rate, which could threaten prospects for industrialisation unless counteracted.

There seem to be some differences in opinion regarding the extent to which the Ghanaian cedi is over or undervalued. In 2012 the exchange rate declined owing to outflows of foreign investments. As noted by the Centre for Policy Analysis (2013), the guarantee given to foreign investors that they do not have to hold their medium-term bonds to maturity made all foreign portfolio capital inflows – essentially 'short-term money' – easily reversible; coupled with financial markets' concerns about the excesses of election year spending – the so-called political business cycle observable in all countries – this resulted in financial outflows that put pressure on the cedi to fall. In response, the Bank of Ghana intervened with large injections of foreign exchange into the foreign exchange market. This meant international reserves declined.

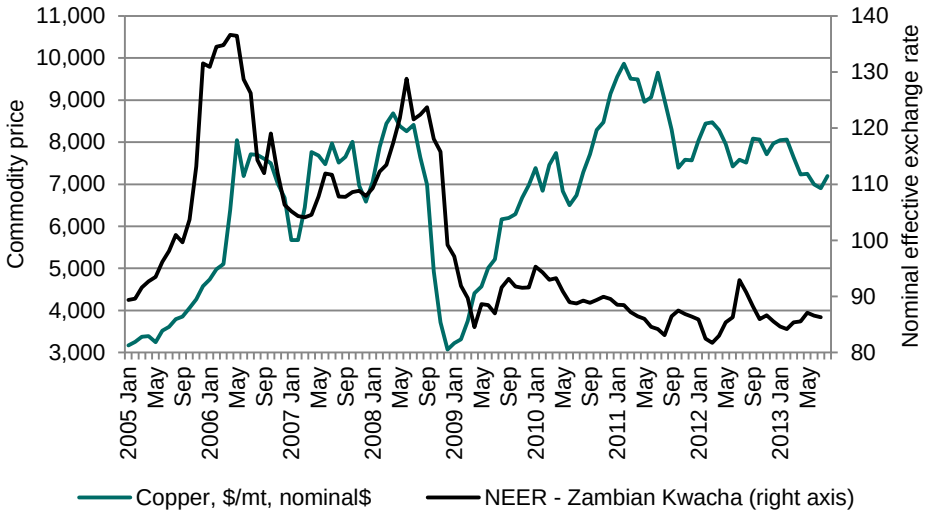
Stability was restored in the foreign exchange market during the second half of 2012, following increased volatility in the first half year. The implementation of policy measures by the Bank to slow down this volatility helped calm the financial markets and largely eased exchange rate pressures (Bank of Ghana, 2013). As noted by the World Bank (2012), generally the foreign exchange is characterised by a structural imbalance in demand and supply which exerts depreciating pressure on the cedi and poses a constraint to the development of the foreign exchange market.

Zambia

Zambia's exchange rate has continued to weaken despite a recovery in copper prices, as shown in Figure A1.3. This weakening in part reflects a decline in foreign investors' holdings of government securities, which is associated with a reduction in Zambian yields relative to other African frontier markets (IMF, 2012a). Despite this, overall the flexibility of Zambia's exchange rate has helped to mitigate external shocks since the global financial and euro zone crises. It also remains broadly in line with macro-economic fundamentals and is not considered by the IMF to be either over or under valued. There still remain concerns regarding a decline in copper prices and resultant implications for the trade balance and macro-economic management more broadly.

Although the euro zone crisis has had little spill-over to the Zambian economy, and mining companies are moving forward with ambitious plans to expand their operations, a marked deterioration in global economic conditions could squeeze trade credit lines, reduce demand for Zambian exports, and lower copper prices (IMF, 2012a). An increase in international reserves could provide some additional resilience and serve as a buffer should external conditions deteriorate in the future. This is because, as the IMF (2012a) notes, although international reserves are at record levels, import coverage is still lower than in many comparable countries.

Figure A1.3: World copper prices and Zambian nominal effective exchange rate



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

Conclusion

This brief review of four countries suggests a widely varying experience in the role played by exchange rate and related policies. In Ethiopia the exchange rate seems to have had multiple objectives, not just to smooth the impact of a financial crisis. Malawi has had a few major policy interventions in its exchange rate, but its management of the exchange rate implies that the country seems ill equipped to use its exchange rate to address cyclical variations. In contrast, the flexibility of Zambia's exchange rate has helped to mitigate external shocks since the global financial and euro zone crises. But in Ghana, as reserves are run down, and current and government balances are in large deficits, the exchange rate has become an important tool to address financial shocks.

More generally, this review also suggests that countries face different challenges when using policy tools suggested in Section 3.5 to address and smooth the impact of short-term capital inflows. Some African countries use exchange rate policy effectively to address the impact of global shocks, Other countries that should use the flexibility in exchange rates do not do this, and yet other countries maintain too much control over their currencies, serving multiple policy objectives so that exchange rate policy cannot be used to address shocks.

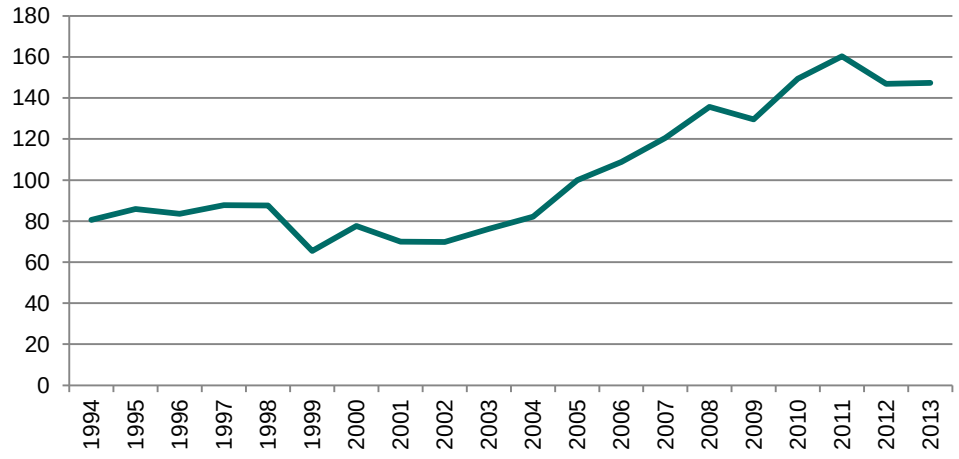
Appendix 2. Brazil, India, China and South Africa: real effective exchange rates 2006–13

We examine how these countries, and especially their exchange rates, have fared since before the financial crisis. Their widely varying backgrounds in terms of how the REER has developed over time mean that it is to be expected that recent experiences have been mixed.

Brazil

The Brazilian real has fluctuated heavily since 2006, mainly influenced by the evolution of commodity prices and international financial conditions. Faced with pressure from spill-over effects from QE in the advanced countries, the Brazilian government adopted a series of capital controls and regulations to avoid an excessive appreciation of the real. More recently the expected end to QE led to a realignment in asset prices and depreciation of the real. Alongside some volatility, the real has shown a tendency to appreciate when compared to other currencies over the last decade (Barbosa, 2013).

Figure A2.1: Brazil: real effective exchange rate (2005=100)



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

Brazil's economy is recovering gradually from the slow-down that began in mid-2011. Consumption remained resilient in 2012, underpinned by low unemployment and broad gains in real wages, although its growth has slowed somewhat more recently. After a protracted period of weakness, investment has begun to recover

while business confidence has firmed. With the economy estimated to be operating close to potential, supply-side constraints have restrained near-term growth and exacerbated inflationary pressures. Low unemployment has also contributed to demand-pull and cost-push inflation pressures. End-of-period inflation, the reference measure for inflation-targeting in Brazil, has been below the upper limit of the 4½ ± 2% target range. It has, however, been running in the upper range of the target band, while medium-term inflation expectations have risen above the mid-point target. The authorities have started to focus on alleviating supply-side constraints (including infrastructure bottlenecks) and containing inflationary pressures by tightening monetary policy.

Over the last year, global financial volatility and higher global risk aversion have further dampened portfolio inflows to Brazil. Equity prices have declined and corporate debt and equity issuances have slowed, in line with other major emerging markets. FDI inflows, however, have remained robust. International reserves have remained broadly stable at a high level following a halt in reserves accumulation since mid-2012 (IMF, 2013i). Although capital inflows to Brazil appear to be on the increase again in the final quarter of 2013,[18] easing investors' fear of the effects of US tapering, they are still lower than the previous year.

India

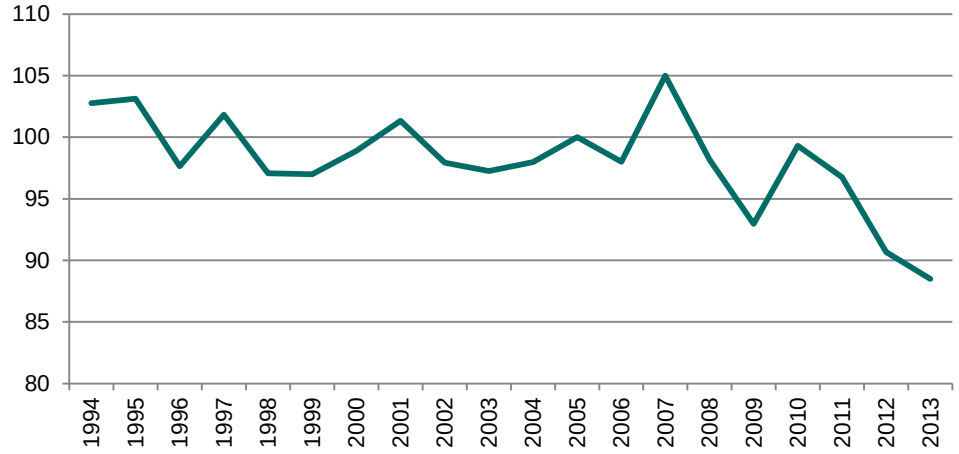
After growing strongly before and after the global financial crisis, India's economy slowed substantially in 2013. Growth averaging 8.5% and expanding social programmes lowered the poverty rate by 1.5 percentage points per year in 2004–9, double the rate of the preceding decade, as shown by the latest quinquennial household survey. Growth returned to this level after the global financial crisis, but decelerated throughout 2011, slumping to only 5.4% in the first three quarters of 2012. Though India's growth remains among the highest in the world, the 2013 slow-down is also very significant – owing to structural factors such as supply constraints and the potential tapering by the Fed.

India's rupee-dollar exchange rate has come under substantial pressure recently as India's current account deficit registered a high of 4.2% of GDP in 2012 as exports declined dramatically in 2011, while imports slowed only moderately (IMF, 2013e). Gold imports rose significantly in this period. Against such macro-economic conditions, the rupee REER has declined substantially since 2011 (Figure A2.2), implying a significant depreciation of the currency. The Reserve Bank of India has remained committed to allowing the rupee to float.

India is arguably the country most affected by the speculation surrounding the Fed.'s tapering in May 2013 (at least initially). Its currency lost more than 20% in value against the US dollar between May and August 2013 and reports suggest that international investors withdrew US$12 billion from India between June and August 2013.[19] In his attempt to resolve the crisis, Reserve Bank of India head Raghuram Rajan began a severe clampdown on gold imports alongside the unexpected success of a scheme designed to attract savings investment from Indian expatriates, aiming to build a reserve buffer for possible speculative attacks on the rupee.[20]

[18] http://bit.ly/1abViSz.
[19] http://bit.ly/1d3kT4p.
[20] http://on.ft.com/1ilGh69.

Figure A2.2: India: real effective exchange rate (2005=100)

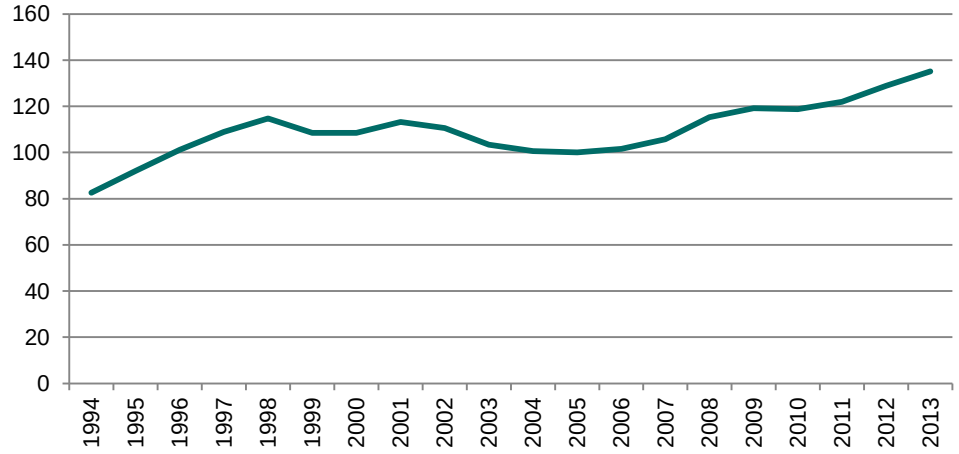


Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

China

China was on a dollar peg as late as 2005. The peg appears to have served China well, and China was one of the few countries in Asia not to succumb to the crises of 1997–8. Indeed, it was praised by the US and others at the time for not letting its currency devalue. The Chinese currency (the renminbi) stayed fixed against the dollar into the new phase of capital inflows to emerging markets that began around 2003 (Frankel and Wei, 2007). It then switched gradually from a dollar peg to a managed peg in 2005 and its REER appreciated steadily by over 30% between 2005 and 2013 (Figure A2.3), owing primarily to ever increasing trade surpluses *vis-à-vis* the US and subsequent pressure from US governments.

Figure A2.3: China: real effective exchange rate (2005=100)



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

Continuing to move to a more market-based exchange rate system is a key part of the rebalancing package. This means reducing intervention and allowing the exchange rate to move more in line with market forces. The next steps should be to widen further the daily band and make the central parity better reflect market conditions, with larger day-to-day fluctuations. A more flexible exchange rate will strengthen liquidity management by reducing the need to sterilise reserve purchases, facilitate further gradual capital account opening, and help ensure that

investment decisions pay due regard to exchange rate risk. A number of quantitative models and indicators are used to assess the external position.

Overall, according to the IMF, the renminbi remains moderately undervalued against a broad basket of currencies. Given this assessment, greater flexibility is likely to result in some further real appreciation of the renminbi over time, which will help with domestic rebalancing by making investment in nontradeables more attractive and boosting household purchasing power (IMF, 2013g).

However, the credit crunch in China that took place in June and December 2013 has led the Chinese Central Bank to inject fresh capital into its commercial banks in order to calm down the Shibor (Shanghai Interbank Offered Rate, a benchmark interest rate), which jumped from 2.5% earlier in the year to 13.91% on 20 June[21] and almost 10% on 23 December.[22] This might indicate a fear of Fed. tapering, combined with domestic concerns.

South Africa

South Africa has a floating exchange rate system. The South African Reserve Bank can buy or sell other currencies, but at present the policy is generally to allow market forces to determine the exchange rate. In recent years, however, the Bank has been building up foreign exchange reserves and this involves the purchase of foreign exchange from the market.

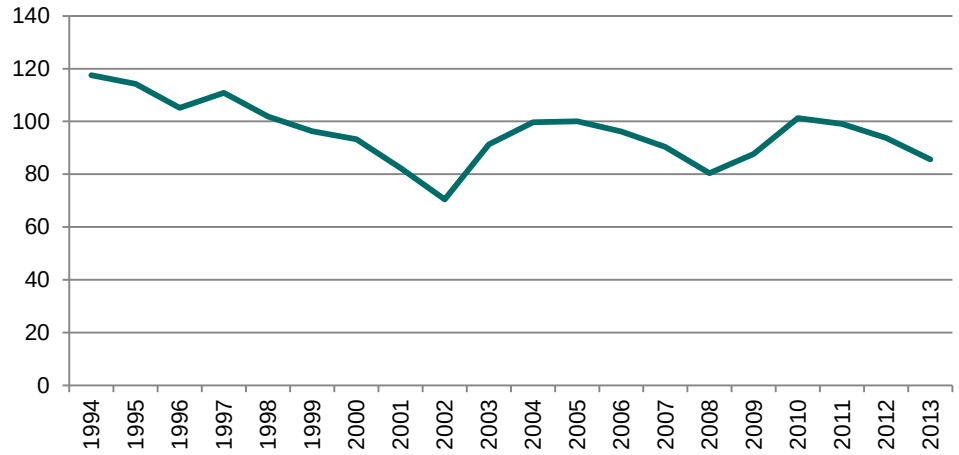
The latest IMF reports point to alarming signs for the South African economy. Problems such as infrastructure bottlenecks, unemployment, lack of education and so on have all come to the fore. The rand was one of the worst-performing emerging market currencies in 2013, and bond yields rose sharply in May and June as concerns over the US Fed.'s tapering of QE and China's growth outlook led to rising global risk aversion and weaker commodity prices (IMF, 2013j).

The outlook for South African growth is sluggish. The IMF growth estimate is 2% for 2013 due to weak private consumption but expected to reach 3% in 2014 (IMF, 2013j). However, this is slow compared to 5% for emerging markets and 4% for commodity exporters. Weak growth in South Africa's main trading partners, in particular Europe, partly explains this.

However, as shown in the last quarter of 2013, South Africa remains vulnerable to capital outflows, and according to Bloomberg its currency depreciated by 15% against the US dollar in 2013 – the most of 16 major currencies tracked by Bloomberg[23] – owing to speculation on the Fed.'s tapering. South Africa also requires short-term capital inflows to help finance the deficit on its current account, which widened to 6.5 percent of GDP in the second quarter of 2013.

[21] http://buswk.co/JKsNEW.
[22] http://bit.ly/1hAvlkI.
[23] http://bloom.bg/1euBw7l.

Figure A2.4: South Africa: real effective exchange rate (2005=100)



Source: World Bank, Global Economic Monitor databank (http://bit.ly/1e6msPo).

Appendix 3. African sovereign bonds

Table A3.1: Sovereign bond issuances in African countries

Country	Month	Year	International (I) or domestic (D) issue	Amount (US$ million)	Maturity (years)	Yield at issue/ coupon rate
Ghana	September	2007	I	750	10	8.5
Gabon	December	2007	I	1000	10	8.2
Senegal	December	2009	I	200	5	9.25
Senegal	May	2011	I	500	10	8.75
Nigeria	May	2011	I	500	10	7
Namibia	Oct	2011	I	500	10	5.835 (5.5 coupon)
Angola	August	2012	I	1000	7	7
Zambia	Oct	2012	I	750	10	5.625 (5.375 coupon)
Tanzania	March	2013	I	600	7	6.284
Rwanda	April	2013	I	400	10	6.625 (6.875 coupon)
Nigeria	July	2013	I	500	5	5.375
Nigeria	July	2013	I	500	10	6.625 (6.375 coupon)
Ghana	August	2013	I	750	10	8 (7.875 coupon)
Mozambique	September	2013	I	500	7	8.5
Gabon	December	2013	I	1500	10	6.375
South Africa	September	2013	I	2000	12	6.06
Uganda	December	2013	D	32 (half was achieved)	15	15
Tanzania	November	2013	D	14.4 (half was achieved)	15	16.65
Kenya	July	2013	D	171.7 (40% was achieved)	15	13.77

Sources: Hou et al. (2013); IMF (2013b); Ghana Ministry of Finance (2013); http://on.ft.com/1cGPQuj; http://bit.ly/1cSspKZ; http://bit.ly/1diKhov; http://bit.ly/1fgVfMP; http://bit.ly/1dzNT06; http://econ.st/1lFIUCv.

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