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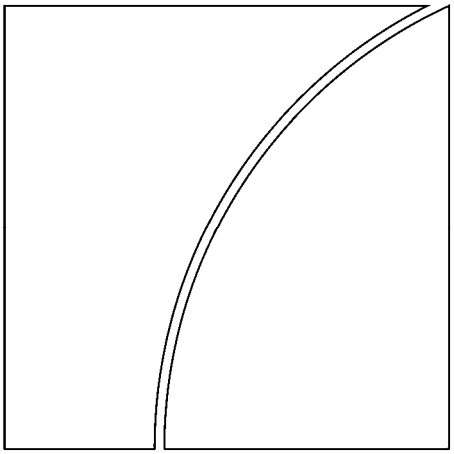

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Central banking in Africa: prospects in a changing world

Jaime Caruana

1. Introduction

Governors and senior officials representing some two dozen central banks met at the BIS in May 2011 to discuss the monetary policy and financial stability issues facing Africa after the global financial crisis.[1] It was encouraging to note the progress that much of Africa has made in recent years. African economies have on the whole performed well over the past decade. From the early 2000s until the start of the crisis in 2008, growth was generally high, with inflation on the decline and fiscal balances strengthening. The good performance was due partly to a prolonged upswing of the global economy, which led to a sustained increase in commodity prices, and partly to improved domestic policies. The crisis of 2008–10 has led to a marked but only temporary slowdown in growth. The conditions of macroeconomic and financial stability have been preserved, and by mid-2011 there were encouraging signs that many African countries were returning to the pre-crisis growth path.

Against this background, the agenda for this meeting covered four broad areas where the crisis could have made potentially the largest impact on central banking in Africa: financial access; governance arrangements for financial stability; changes in monetary policy transmission mechanisms; and capital flows, commodity prices and exchange rates.

To initiate proceedings, Professor Muhammad Yunus, the 2006 Nobel Peace Prize laureate, gave a talk on financial inclusion and the regulation of microfinance, and discussed related issues via a video link from Dhaka, Bangladesh. Professor Yunus's stimulating talk and the following exchange of opinions provided much food for thought. Many of the themes he touched upon resurfaced in the discussion during subsequent sessions. Professor Yunus argued, among other things, that central banks should not be directly involved with microfinance. Instead, he recommended, microlending should be regulated and supervised by a separate entity whose staff would have specialised skills and an understanding of poverty issues. He also addressed questions such as how to ensure that microfinance institutions funded investment rather than consumption; differences between microfinance and lending to small and medium-sized enterprises; and how new technologies and financial innovation affected the environment for microfinance.

The notes that follow are not intended to be comprehensive but distil what I saw as some of the main points raised in the discussions and in the BIS background papers. They are organised, as was the meeting, around the four topics mentioned above, which are further elaborated in the background papers published in this volume.

2. Financial access

One of the most significant financial innovations in Africa over the past five to six years has been the ability to conduct financial transactions, such as payments and money transfers,

[1] Earlier BIS roundtables focusing on Africa are reported in BIS (2006) and South African Reserve Bank and BIS (2007).

through mobile phones. Mobile phone technology has played a critical role in broadening financial access. In Kenya, for instance, over 80% of the population has access to mobile phones but only 20% has a bank account. Customers can pay in funds at a mobile phone shop and alert recipients via text message that they can collect the funds from their nearest mobile phone shop against proof of identity and payment of a small commission. Another example is the biometric national identification cards developed in Uganda. Without such identification, access to debit and credit facilities, mobile banking and electronic transfer facilities would be almost impossible for a large population that lives in rural areas, often with no fixed address.

As discussed in the paper by Penelope Hawkins in this volume, these and other innovations have greatly improved the access of poor African households to basic financial services. While the crisis has dealt a temporary setback to financial inclusion, the process is set to continue. For central banks, this development raises the question of how best to manage the trade-off between promoting the spread of financial services, on the one hand, and limiting the potential financial stability risks from such innovation, on the other.

Most African central banks participating in the discussion had a cautious approach to financial innovation. They noted that new and inadequately regulated financial instruments had contributed to the recent crisis in advanced economies. Mobile phone banking had implications for the functioning of the payment, settlement and clearing systems. It could also affect a central bank's liquidity management – and hence its lender of last resort function – not least because it could potentially account for a large part of the float in countries where mobile banking is popular. The resilience of the payment system worldwide during the financial crisis at a time when many other parts of the system malfunctioned provides strong support for a more cautious approach.

To ensure that financial access through new technologies is appropriately designed and does not conflict with their stability mandates, central banks in Africa will probably have to widen the scope of their regulatory oversight. While this will impose some additional burdens, central banks agreed that the benefits of wider financial access far outweighed the costs of any additional tasks that they will have to perform.

3. Central bank governance and financial stability

The global financial crisis has led central banks worldwide to re-examine their role in the area of financial stability. The need for central banks to look beyond the risk position of individual institutions to risks affecting the system as a whole – the macroprudential dimension of financial stability policy – is now widely accepted. The authorities in many advanced economies are introducing new arrangements that attempt to deal with identified weaknesses. The macroprudential dimension to supervision is also relevant for African countries, given that their financial markets are generally concentrated and thin.

The paper by Serge Jeanneau in this volume argues that, although many countries in the region are less developed financially, they are eventually expected to face some of the same issues that have prompted a review of financial stability arrangements in other parts of the world. This could lead to calls for a reconfiguration of existing financial stability arrangements, and potentially a stronger involvement of central banks in macroprudential oversight. This raises governance questions, such as how best to specify a financial stability mandate and how to give central banks the tools they need to implement such mandates. Further, it could result in challenges to central banks' policy autonomy.

How can central banks best position themselves in such an environment? The discussions revealed that the concept of financial stability was not firmly incorporated in the law of many African countries. Financial oversight is often in the hands of several authorities that do not have the capacity to act jointly and rapidly. Together with thin and concentrated banking

systems, this creates substantial systemic risks. In an effort to manage these risks, a number of central banks in Africa have established a macroprudential framework that comprises a financial stability committee. These committees are usually expected to monitor financial sector developments and facilitate the exchange of information between the central bank and the microprudential supervisor. But the lack of skills needed to fulfil the financial stability mandate hampers such arrangements.

Like their counterparts around the world, African central banks are also starting to ask how the financial and price stability mandates could best be coordinated. There were several approaches to this issue. Some central banks had established an internal macroprudential framework and drafted legislation restricting the scope of universal banking. All saw that central banks faced a major challenge in fulfilling multiple mandates. Some thought it more important to strengthen domestic banking systems than to draft new governance arrangements for financial stability. One Governor noted that any potential conflicts between mandates disappeared when an appropriate time horizon was applied. Several central banks also noted a need for better cooperation with foreign banking regulators, either in neighbouring countries or in the home countries of foreign-owned banks operating in their jurisdictions.

All in all, much remains to be done in this area. The good news is that central banks in Africa recognise the importance of solid financial stability arrangements and are well aware of ongoing policy debates on this issue worldwide.

4. Monetary policy transmission

African economies and their financial systems were, in general, not directly affected by the global financial crisis, but many – if not most – felt an impact through the trade and investment channels. The effects were stronger for middle-income economies with close financial linkages to international capital markets. But most African countries were also in a stronger economic position in terms of fiscal and external balances as well as inflation performance than during previous exogenous shocks. This allowed a number of central banks, especially those with flexible exchange rate regimes, to pursue countercyclical fiscal and monetary policies during the crisis. In particular, a lessening in fiscal dominance has made monetary policy more effective.

As elaborated in the paper by Benedicte Vibe Christensen in this volume, and confirmed in discussions at the meeting, the main channels for the transmission of monetary policy during the crisis were the exchange rate and credit. Most central banks allowed greater variability in the exchange rate during the crisis. A few initially resisted downward pressures on their currency, in part because depreciation made it more difficult to achieve their inflation objective. But eventually central banks let the exchange rate go, especially in cases where the external deficit pressure had built up. Regarding the credit channel, the crisis led to a sharp slowdown in bank lending throughout Africa. The reasons included tighter regulatory and lending standards, as well as reversals of the capital flows that had helped to fuel credit growth in the run-up to the crisis.

Changes in policy rates have also become more important, although their impact on the whole remains weak. In some cases, the spread between the policy rate and lending rates increased after the hike in policy rates due to general risk aversion on the part of the banks. And where central banks had lowered policy rates in an effort to provide countercyclical support to economic activity, the pass-through in lending rates charged by local banks was often incomplete. In countries with hybrid inflation targeting regimes (eg Ghana and Mauritius), policy rate changes would pass rapidly through the financial system, but they usually had little effect on credit conditions due to inelastic demand or the banks' practice of keeping spreads constant. Another reason for the weak transmission of policy rate changes

was that limited competition allowed banks to change profit margins rather than pass on the policy rate changes to borrowers. And as in other developing regions, countries in Africa face structural changes that make the demand for money unstable and complicate monetary policy implementation.

Despite these differences, the discussion indicated that the essential features, goals and needs of monetary policy were similar in Africa to those in other regions. Governors repeatedly stressed that price stability remained the prime objective of monetary policy; that central banks need independence from the government to pursue monetary policy free of political interference; that public finances must be sound if monetary policy is to be effective; and that central banks must be credible both at home and abroad in their pursuit of monetary policy goals. Several countries, including Angola, Nigeria and Uganda, were moving rapidly towards hybrid inflation targeting regimes. Some central banks have established monetary policy councils with external members. Central bank officials in several countries are communicating closely with the financial industry. And there are concerted efforts to improve coordination with fiscal authorities, though with varied success so far.

Unlike many other developing regions, Africa suffers from the poor state of its economic and financial statistics. This impedes the timely and accurate economic analysis so necessary for effective monetary policy. The effectiveness of monetary policy is also undermined by the shallow financial markets, the poor enforceability of contracts, and the high exposure of the African economies to exogenous shocks. But it was encouraging to see that the African central banks are well aware of these constraints and actively seek solutions that will improve their monetary policy effectiveness.

5. Capital flows, commodity prices and exchange rates

Capital inflows have played a key role in financing investment and external deficits in Africa over the past decade. Higher commodity prices in particular have helped to lift external balances and growth in commodity-exporting countries. But capital inflows tend to rise as commodity prices increase. The combined effect of these two forces is often to increase macroeconomic volatility. This can lead to reduced external competitiveness and the build-up of balance sheet vulnerabilities.

Private capital inflows to Africa have been dominated by foreign direct investment, which accounted for two thirds of all net inflows over the past decade. FDI inflows were essentially unaffected by the crisis, reflecting the strong rise in commodity prices and high real rates of return in Africa's extractive industries. In the past few years, Africa has also strengthened its investment ties with developing countries as a result of growing South-South FDI flows. In particular, there has been a strengthening of investment relations between emerging Asia and Africa.

Portfolio capital inflows were also rising before the crisis, especially to Africa's emerging markets. In the past three years, however, these flows have become very volatile, reversing during the crisis and returning again strongly in 2010.

Regarding other capital flows, the paper by Logan Rangasamy and Dubravko Mihaljek in this volume notes that, unlike other developing regions, African countries held in aggregate more in deposits with BIS reporting banks than they received in loans from them. This imbalance reflects the underdevelopment of Africa's banking systems – a large part of export revenues is not intermediated by local banks but rather placed in overseas banks, which recycle a part of these deposits as cross-border loans back to African banks and the non-bank sector.

For commodity exporters, the effects of higher commodity prices have generally been expansionary. In the past, aggregate demand pressures resulting from positive terms-of-trade shocks have often resulted in inflationary pressures. However, the experience

in the last few years has been more positive – most African countries have improved their inflation performance by not spending fully the windfall gains from commodity price booms. Greater restraint in expenditure, more consistent use of commodity and sovereign wealth funds, and more flexible exchange rate policies have supported these efforts.

Governors confirmed that high commodity prices and capital inflows have contributed greatly to Africa's strong performance since the mid-2000s. But these external factors have also exposed many countries to greater macroeconomic volatility. Governors emphasised the importance of the composition of capital inflows for managing their effects on the domestic economy and financial system. There was a general perception that Africa would continue to benefit from inflows in the future, partly because of the shift in risk perceptions in favour of African investments after the crisis. In this context, there was some concern about the lack of strategy on the part of African governments for dealing with large FDI flows into natural resource industries, including the recent increase in investments from some Asian emerging markets.

Despite greater exchange rate flexibility than in the past, few African central banks were prepared to let the exchange rate fully absorb the external shocks. The role of exchange rates as an anchor for inflation expectations was still judged to be important. In this regard, foreign exchange intervention and sterilisation were seen as costly, though probably unavoidable, policy tools. In addition, Governors emphasised the importance of fiscal sustainability for dealing with the domestic consequences of capital flows.

6. Concluding remarks

All were struck by how well most African economies have performed over the past few years. Despite the global financial crisis, growth has held up well, macroeconomic and financial stability have been preserved, and African countries have by and large continued to pursue prudent policies and promote market-friendly initiatives. African central banks have played a key role in promoting these developments. Central bankers from Africa see essentially eye to eye with their colleagues from other parts of the world on the analysis of key policy issues. This roundtable also provided a great opportunity to exchange views on the lessons learned from the recent financial crisis, and to strengthen ties among African central banks.

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Opening remarks: financial inclusion and the regulation of microfinance

Muhammad Yunus

Financial crises illustrate a fundamental flaw in the way the current financial system is organised. The financial institutions and banking systems of advanced economies focused on big banks and big customers. This system embodies a kind of financial apartheid; two thirds of the world's population are excluded. Unless we bring these people into the financial system, crises will keep recurring.

Grameen finances everyone. It has demonstrated that even beggars can be financed. We have around 100,000 beggars in the programme: they borrow small amounts of money to buy goods that they can offer for sale when begging from door to door. Some have left begging this way and started their own businesses.

Grameen Bank has 8.3 million borrowers, of whom 97% are women. The bank borrows no money from the outside, it is entirely self-financed. It takes deposits from people and gives small loans to poor people. So far it has given more than $10 billion in microloans, with a recovery rate of 97%.

The issue for this audience is how to make this story happen in Africa. Women in Africa are at the forefront of the fight for equality of financial access. Microfinance already exists in Africa. But, in my view, it should be done by specialised institutions, not commercial banks or NGOs. The issue is how to make such microfinance institutions part of the mainstream banking system. In Bangladesh, a special banking law was created for Grameen Bank. I think we should aim for a banking law for banks for the poor.

Grameen is the reverse image of existing banking systems. Banks finance rich people; Grameen finances the poor. Banks finance men; we finance women. Banks lend in cities; we lend in villages. Banks lend money against collateral; we ask for no collateral. Banks depend on lawyers; Grameen has no lawyers. In fact, we knew nothing about banking when we set out to establish Grameen. But, in a way, this did not matter – our goal was to create self-employment, not profit.

Today it is easier to establish such a bank with the new technology that is available. Young people should be job-givers, not job-seekers. They should think of how to create jobs, not how to make themselves employable. Developing an open financial system and making available the benefits of new technologies will help us reach the UN's Millennium Development Goals.

Recently there has been some controversy about microfinance in Mexico, and lately also in India. The controversy stems from the fact that the original goal of microfinance from the 1970s was abandoned when microfinance institutions turned to profit-making rather than supporting self-employment and job creation. Microfinance led some people to strive for profit rather than social goals.

This is the reason why a special legal framework is needed to support microfinance. Microfinance cannot operate in a vacuum; it has to be regulated. But the regulatory authority needs to be separate from the central bank because regulating microfinance is different from regulating conventional banks. Microfinance is about "social business", not profit-making business. The social dimension concerns the selfless part of human beings, ie solving problems such as creating jobs for others, not the selfish part, which is concerned with profit-making. Traditional banking regulation deals with banking as a profit-making business. It is not equipped to regulate microfinance.

Question and answer session between central bank governors from Africa and Muhammad Yunus

Q: What can central banks do to facilitate microfinance? How should regulation of microfinance differ from regulation of commercial banking?

A: Some banks in the West, such as Raiffeisen and Banque Populaire, started out as credit cooperatives, taking deposits from members and granting them small loans. But, over time and with commercial success, they have all turned to conventional banking. That is why a special law is needed for microfinance. Without such a law, microfinance will end up being a collection of different lending programmes.

Central banks can help draft and pass microfinance legislation. But they are not well placed to regulate microfinance. One needs a separate institution, where people with different skills and a different mindset work. It should work as a fully separate entity. Central banks don't understand the concept of lending without collateral. To use an analogy, you can't hire a coach from a European football team to train an American football team.

Q: Some central banks have a special unit in charge of microfinance regulation, but have observed that microfinance providers do not like to be regulated. They often lend for consumption. Their main problem is the cost of funds. Some borrow from commercial banks to fund their loans. Others find it difficult to collect microsavings. In view of this, should governments provide seed money for microfinance, eg allocate grants from which low-interest rate loans could be given?

A: Microfinance should not provide loans for consumption. It should provide loans for income-generating activities, not for food purchases.

Regarding funding, promoting microfinance through government funding is not a good idea. Rather, microfinance should be proper banking, ie it should take deposits and lend money, in this case to the poor.

Borrowers can also have savings accounts. Even the poorest women understand how such an account works. Half the deposits in Grameen Bank come from borrowers' deposits.

Q: Taking issue with the idea of separate regulators, some countries had separate regulators for commercial and cooperative banks, the latter often funded by donor money. But cooperative banks in many countries have nevertheless failed. In small countries in particular it might be better for the government to finance targeted groups of the poor via the budget. This would eliminate worries that non-payment problems could contaminate the rest of the banking system.

A: Cooperative banks in Bangladesh are a disaster as well. They are regulated from the ministry of finance, they are politicised and engage in rent-seeking. A group of people can create a cooperative bank in order to catch a pot of government money. In contrast to cooperative banking, microfinance is transparent and does not serve special interests. In Bangladesh, 16 million families are involved in microfinance.

The minute the government gets involved, microfinance gets a very different dynamic: if government money is involved, borrowers take it that they don't have to pay it back. And the government wants to control lending for its own purposes. This is the reason why one needs a separate regulator for microfinance.

Q: Who should supervise microfinance institutions if not the central bank or the government? If the microfinance system fails, the consequences in a poor country could be worse than if the banking system had failed.

A: It should be a separate, specialised institution, preferably outside the central bank, where it is not likely to get enough attention. It can have separate managing and oversight boards, the former working under central bank governor's direction. In Bangladesh, the central bank governor heads the authority for regulating microfinance. But this institution is outside the central bank.

The point on systemic importance is well taken. Remember that 70% of the population in poorer countries doesn't have access to the commercial banking system.

Q: How can one ensure that microfinance institutions fund investment and not consumption? The poor do not all have business acumen.

A: Microfinance should only support income-generating activities, never consumption. The motive behind consumption lending is selling goods and services to the borrowers. The motive behind microfinance is giving people the chance to get out of poverty through self-help and belief in their own abilities. All human beings are entrepreneurial; this is something innate. The human race came into being through work. Society must give opportunities to unlock that potential. Microfinance is in essence a self-exploration process.

Q: How does microfinance differ from lending to small and medium-sized enterprises?

A: Microfinance is about the poor. SMEs are far removed from the object of microfinance. We lend beggars in Bangladesh $12–15. An average microfinance project loan is for less than $200. Microfinance starts from the bottom and grows up. It is about poverty eradication, using the potential that people have.

Q: How far and in what capacity should commercial banks be involved in microfinance?

A: Some commercial banks are starting to promote microfinance as a boutique programme. But they seem to take it up mainly for public relations reasons. It is not where their minds and hearts are. Microfinance institutions should be built outside the conventional banking system.

Commercial bankers do not understand microfinance; they are simply not equipped for it. They try to impose the lending conditions they are familiar with. With microfinance one has to be innovative and take the view that it is also a social responsibility.

Q: How do new technologies such as mobile phones and financial innovation more generally affect the environment for microfinance?

A: We have only started to scratch the surface of the possibilities that mobile phone technology has opened up for microfinance. We all have to think very hard about ways to explore this new technology.

Financial access: what has the crisis changed?

Penelope Hawkins[1]

Introduction

The global financial crisis and the recession have provided an opportunity to reflect on the role of firms, markets and central banks in developing the financial services needed to sustain economic activity. While the crisis did show that access to inappropriate credit may undermine financial stability, poor people nevertheless have a great need for appropriate financial services and products.

Modern technology has opened up possibilities undreamt of a decade ago, and regulation should not inhibit the new forms of financial service that are emerging. In the long run, such developments should facilitate implementation of financial stability measures. The paper identifies approaches that may promote appropriate access by central banks and highlights some African success stories.

Access lessons from the crisis

The financial crisis has become known as the sub-prime crisis. Some see it as a consequence of mortgage extension to low-income households that degenerated into a huge bubble of mis-selling of mortgage products, irresponsible credit-granting and inappropriate re-bundling of assets. Others suggest that it was a consequence of high historical returns on property that dominated mortgage origination models, which resulted in underpricing. Either way, incentives on both the demand and the supply side contributed to the crisis.

The inappropriate inclusion that was a characteristic of the sub-prime crisis does not invalidate the importance of appropriate access of poor households to financial services. As many writers have observed, households in poor countries often manage a large number of diverse financial transactions.[2] Many developing countries have financial inclusion as an explicit objective, and this objective can and should withstand the fallout from the crisis. Development would be held back if households and small businesses were not appropriately included in the financial system. And if inappropriate forms of inclusion were to develop, financial stability would not be served.

Better mechanisms for the safekeeping and transfer of money save time and release resources for more productive activities. Individuals' educational and occupational choices are conditioned by their level of wealth – and with access to appropriate financial services, they can increase their wealth. For example, simple financial services can enable people to become entrepreneurs, which can enhance their ability to save and invest and can provide long-run improvements to growth and the distribution of income (World Bank (2008)). The case for access is not only a matter of equity but also of growth – and hence stability (Shiimi (2010)).

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[1] This paper was written for the BIS by Penelope Hawkins, Feasibility (Pty) Ltd, South Africa (e-mail penelope.hawkins@feasibility.co.za). Stephen Cecchetti, Benedicte Vibe Christensen, Serge Jeanneau, Dubravko Mihaljek and Philip Turner provided helpful comments.

[2] Dittus and Klein (2011) provide an interesting recent review.

Central banks can play a role in providing guidance to the market through appropriate regulation. Traditionally, banks have had high unit costs, which has meant that – even though they have the advantages of incumbency – they have been slow to provide products with costs and services adapted to the needs of low-income individuals. But the development of new information and telecommunication technologies has made possible entirely new low-cost ways of providing financial services to the poor. The regulatory framework needs to enhance both appropriate access and stability: it needs to be aware of and open to the new business models that innovation makes possible.

This regulatory framework will have many dimensions, not all of them under the control of the central bank. One is commercial law and the *regulation of business conduct*. A second is *consumer protection* – simple and transparent mechanisms will be required to win the confidence of poor households in new payment systems. Another is *competition rules* to ensure that the provision of financial services is truly contestable. New technologies will allow non-banks to provide services traditionally reserved for banks. Such technologies may also engender network externalities that may bring with them elements of natural monopoly. And the regulatory framework would not be complete without *prudential supervision*.

Regulation should have several characteristics that are particularly relevant to financial access:

- **Risk-proportionate:** regulation and rules need to flow from the risk assessment of innovation and need to be proportionate. Rules of participation may need to change to allow for the possibility of a diversity of players and channels in delivering financial provision.
- **Enabling:** regulatory processes need to facilitate innovation by being open to the need for, and possibility of, change. This may involve listening to and evaluating innovations that are beyond existing regulatory boundaries. Central banks may have to deal with firms other than banks.
- **Promoting responsible provision:** regulation needs to promote responsible provision of financial services. This means that consumer protection needs to become the focus of regulator, provider and consumer alike. Aspects such as disclosure, transparency, education and redress need attention. But specific attention to the type of provision is also important. In particular, provision of saving facilities – where fees do not erode capital – is indicated.

The discussion below will explore each of these aspects. An overview of financial access in African countries is provided first.

Financial access in Africa

Financial access, also known as financial inclusion, goes substantially beyond access to credit. It also includes the safe-keeping of money, access to appropriate savings products, payment services and insurance.[3] Successful inclusion implies sustained usage and offers choice to consumers. So, for example, a consumer with an appropriate savings product may be able to accumulate funds that limit the need to borrow when household shocks occur.

Table 1 sets out the change in access indicators between 2005 and 2009 for 23 countries in Africa. The focus is on banking services, as many regard the provision of a bank account to

[3] Princess Máxima (2011) provided the following definition: "Financial inclusion means universal access, at reasonable cost, to a wide range of financial services to everyone needing them, provided by a diversity of sound and sustainable institutions".

be the first step in the provision of formal financial services. The emphasis on automated teller machines (ATMs) is pertinent given that customer evaluation of bank services is strongly associated with the bank's ATM services – in particular, the proximity of the machines and the fees associated with ATM services (see Competition Commission of South Africa (2008) and; Feasibility (2009)).

Since the 2006 meeting of central bank Governors from Africa at the BIS (BIS (2006)), financial access has gained momentum in many developing countries. Access to financial services in terms of both demographic and geographic measures has improved in every country, in some cases markedly. For example, in 11 of the 23 countries, the number of ATMs per 100,000 people has more than doubled over the 2005–09 period (Table 1). In the Democratic Republic of Congo and Zambia, the increase has been more than fivefold (albeit from a low base). Nonetheless, there is need for further improvement.

Table 1

Financial access measures in selected African countries

	Number of commercial bank branches per 100,000 adults		ATMs per 100,000 adults		ATMs per 1,000 square km	
	2005	**2009**	**2005**	**2009**	**2005**	**2009**
Algeria	4.8	5.4	1.5	5.8	0.1	0.6
Angola	0.8	0.6	1.7	9.6	0.1	0.8
Botswana	6.4	8.8	9.0[1]	21.5[2]	0.3	0.5[2]
Congo, Democratic Republic of	1.8	2.4	0.2	1.3	0.0	0.1
Egypt	3.6	...	1.8	...	1.2	…
Ghana	3.0	5.1	…	4.8[2]	...	3.0
Kenya	2.6	2.5	1.6	7.5	0.6	2.9
Lesotho	2.4	2.3	3.7	6.6	1.4	2.7
Madagascar	1.2	1.6	0.7	1.4	0.1	0.3
Malawi	1.8[2]	2.2[2]	...	2.7[2]	..	2.2[2]
Mauritius	20.5	23.2	33.4	39.1	154.2	187.7
Morocco	10.5	15.8	15.8[1]	18.6[2]	...	9.3[2]
Mozambique	2.0	2.9	...	4.9	...	0.8
Namibia	7.3	7.5	12.1[1]	30.3	0.3	0.5
Nigeria	1.6	6.4	...	...	...	...
Rwanda	1.0	2.3	0.2	0.8	0.5	1.9
Seychelles	30.2	34.5	25.3	34.5	45.7	65.2
South Africa	7.2	8.1	25.4	52.4	6.7	14.5
Swaziland	5.8	5.7	11.5	18.7	4.4	7.6
Tanzania	1.2	1.9	0.6	3.4	0.1	0.9
Tunisia	12.4	15.5	9.8	17.7	4.7	9.0
Uganda	0.5	2.3	1.4	3.3	0.9[1]	2.7[2]
Zambia	1.5	3.6	0.7	6.4	0.1[1]	0.6[2]
Average	*5.8*	*7.5*	*7.5*	*14.3*	*13.8*	*18.7*

ATMs = automated teller machines.

[1] Beck et al (2007). [2] CGAP and World Bank Group (2010).

Sources: Beck et al (2007); CGAP and World Bank Group (2009, 2010); IMF, Financial Access Survey (www.fas.imf.org).

Table 2

Indicators of financial usage in selected African countries

As at 2009

	Number of deposit accounts at commercial banks per 1,000 adults	Financial inclusion (use of formal financial services), in per cent of adult population
Algeria	385.3	31.0
Angola	132.2	25.0
Botswana	506.3	47.0
Congo, Democratic Republic of	20.9	1.0[2]
Egypt	…	41.0
Ghana	332.3	19.0[2]
Kenya	379.3	29.0[2]
Lesotho	254.4	17.0
Madagascar	45.2	21.0
Malawi	163.4	21.0
Mauritius	2,109.0	54.0
Morocco	265.3	39.0
Mozambique	140.5	12.0
Namibia	752.0	28.0
Nigeria	461.0[1]	15.0
Rwanda	226.2	23.0[2]
Seychelles	330.2	…
South Africa	839.1	49.0[2]
Swaziland	463.9	35.0
Tanzania	134.7	16.0[2]
Tunisia	639.7	42.0
Uganda	173.2	21.0[2]
Zambia	27.6[1]	15.0
Average for sub-Saharan Africa	*…*	*20.0*
World average	*…*	*46.0*

Note: Number of accounts per 1,000 adults can exceed 1,000 because residents may have more than one account and because the data include non-resident accounts.

[1] Based on CGAP and World Bank Group (2010). [2] Based on Gallup Surveys (2010).

Sources: Chaia et al (2009); Gallup Surveys (2010); CGAP and World Bank Group (2010); IMF, *Financial Access Survey* (www.fas.imf.org).

But the data in Table 1 give only part of the picture in that they provide information about the supply, but not the actual use, of financial services. Data for the number of deposit accounts at commercial banks per 1,000 adults provide a better indicator of actual usage (Table 2),

and this is supplemented with an estimate of the percentage of adults who use formal financial services, sometimes referred to as the Honohan index.[4]

Data for number of bank accounts per 1,000 adults range from lows of 21 for the Democratic Republic of Congo and 28 for Zambia, to 2,109 for Mauritius (Table 2). The high number reported by Mauritius emphasises that these data refer to the number of accounts, not unique depositors, and as an off-shore financial centre, Mauritius has attracted many foreign deposit accounts.

Once again, this is not the whole story, as commercial banks are only one source for deposit accounts. For example, in some countries where the number of commercial bank accounts per 1,000 adults is very low, other providers such as cooperative banks and state institutions may boost the level of formal financial inclusion. For example, Kenya, Mauritius, Seychelles and Uganda all have robust cooperative banking sectors that serve more than 5% of the population. In other countries, specialised state financial institutions provide accounts with deposit and saving services, if not credit. Countries in this category include Botswana, Morocco and Tunisia.

The data on levels of inclusion show a high degree of variability across the countries in the sample (Table 2). Twelve countries have more than the sub-Saharan average of 20% of their adult population making use of formal financial services – including Malawi with 21% and Tunisia with 42%. The level of financial inclusion exceeds the world average of 46% in only three countries, namely Botswana, Mauritius and South Africa.[5]

In general, as with the data on availability of services, the data on use suggest that there is much still to do. A starting point for a number of countries has been a commitment to an explicit financial inclusion strategy. Some 13 (56%) of the 23 countries listed in Tables 1 and 2 have such an explicit strategy (CGAP and World Bank Group (2010)). The next section highlights some general principles and some success stories.

Central banks and financial inclusion

Central banks are traditionally charged with ensuring financial soundness and stability. But they cannot ignore the demand for greater inclusion: by helping shape the form inclusion takes, they can ensure that greater access and stability are mutually reinforcing. Many central banks are therefore looking for ways to promote access within their primary objective of a safe, stable and efficient financial system. The discussion below highlights regulation that is risk-proportionate, enabling and promotes responsible provision.

(a) Risk-proportionate regulation

Technology (and demand for its services) continually drives innovation – witness, for example, the revolution in mobile phone banking. There are two key elements that central banks need to be aware of. One is the risk that an innovation may pose to the soundness of the system compared to its potential access benefits. The other is the risk of regulation compared to leaving the innovation unregulated. This last may involve extending the regulatory boundary of central bank authority.

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[4] Patrick Honohan's estimate of the percentage of adults using formal financial services is incorporated in the IMF's Financial Access data.

[5] Thresholds for sub-Saharan Africa and the world are from CGAP and World Bank Group (2010).

Fundanga (2009), for example, argued that:

> … regulation should facilitate and not impede development and must create an optimal, dynamic and agile banking environment. As regulators we must therefore be open minded to new market solutions while the developers need to constantly engage the regulator in their product development.

Central banks that seek to promote financial inclusion have to consider how innovation might impinge on the soundness of the system even as they evaluate the potential benefits of extending financial services to more consumers. Based on this evaluation, proportionate regulation needs to be designed and implemented. General principles from a report by the Committee on Payment and Settlement Systems and World Bank relating to remittances provide some basic guidelines for central banks (see Box 1).

Box 1

General principles for access – from remittances to saving and insurance

Central banks are charged with ensuring the stability of the financial system while promoting appropriate access. A useful point of departure is the *General principles for international remittances*, a 2007 report by the Committee on Payment and Settlement Systems and the World Bank. The key principles highlighted in that document can be easily translated into general principles for access, as follows:

Transparency and consumer protection

General principle 1. The market for financial services should be transparent and have adequate consumer protection.

Payment system infrastructure

General principle 2. Improvements to the payment system infrastructure that have the potential to increase the efficiency of financial services should be encouraged.

Legal and regulatory environment

General principle 3. Financial services should be supported by a sound, predictable, non-discriminatory and proportionate legal and regulatory framework.

Market structure and competition

General principle 4. Competitive market conditions, including appropriate access to domestic payment infrastructures, should be fostered in the financial services industry.

Governance and risk management

General principle 5. Financial services should be supported by appropriate governance and risk management practices.

These high-level principles are a useful reminder that, just as international remittances can be promoted in the context of a sound and safe financial system, so too can financial access be promoted while ensuing stability.

Of course, central banks may choose to turn a blind eye to innovations and hope that, if there is a failure in the unregulated segment of the sector, there will be no reputational risk to the broader financial sector and only minimal losses to citizens. Extending regulation to providers and products that offer near-substitutes for banking services may be justified if it is likely that the offerings meet a consumer need and will be taken up anyway. In this case, regulation may allow for better consumer outcomes than one that leaves the process exclusively to the market.

A prime example of non-banks offering near-substitutes for banking services is in the payment area. This has led to central banks re-thinking how they should approach participation in the payment system. Zambia, which enacted the National Payment Systems Act in 2007, provides an example. Under the act, the BoZ designates businesses wishing to provide money transfers, mobile banking and other payment services. In doing so, the BoZ is able to monitor transactions and ensure that only safe and efficient institutions are allowed to provide payment services (Kankasa-Mabula (2009)). By creating different tiers in the payment system regulatory structure, explicit criteria for regulation that is proportionate to the risk brought into the system can be established and monitored. Since passage of the 2007 act, the Bank of Zambia (BoZ) has successfully designated four payment systems, 17 payment system participants and 30 payment system businesses (Bank of Zambia (2010)).

Other examples flexible provision of financial service include agent banks, which make use of merchants, post offices and pharmacies to deliver financial services (Hannig and Jansen (2010)); and tiered banking licences, which tailor regulation to the permissible type of banking services offered – without exacerbating instability (Hawkins (2006)).

(b) Enabling regulation

It is something of a truism that technological innovation may run ahead of appropriate regulation. But it is also true that regulation that may be highly effective for dealing with commercial banks can stifle innovation that new entrants from other business areas would bring. In particular, licensing requirements for banks may form a significant barrier to both deposit-taking and payment services. This presents a significant challenge to central banks wanting to promote access while ensuring stability.

An example of how the central bank may allow innovation to run ahead while monitoring its outcomes on the market and consumers is the case of M-PESA in Kenya (see Box 2). M-PESA began as a mechanism to transfer funds using mobile phone technology – with mobile phone shops providing the physical outlets for collection and distribution of funds for a small commission. Known as “mobile money”, a customer could pay in funds to an agent (cash-in) and send a text message to the recipient, who could collect the funds from his or her nearest agent (cash-out) upon proof of identity. These transactions were reflected in the ring-fenced bank accounts of the network. This world-first system answered a need where over 80% of the population had access to mobile phones, but only 20% had bank accounts. Hence transfer of funds exclusively via bank accounts would not meet the needs of many potential recipients. This is a case where the regulatory processes were adaptable enough to permit the innovation to be piloted while being monitored. In this example, the Central Bank of Kenya dealt with non-banks in reaching its objective of improved financial regulation.

Another example is the approach of the authorities to address financial infrastructure and personal identification inadequacies in Uganda through partnering with a non-bank technology company. In this case, biometric national identification cards (approved by the central bank) provide individuals access to debit and credit facilities, mobile banking and electronic funds transfer facilities (MAP International (2009)). In this example, the challenges of extending access to a remote rural population required new technologies.

(c) Promoting responsible provision

Regulators need to be aware of the incentives on both the supply and demand sides of the market. While the regulator can do little to influence demand side incentives, it can try to ensure that the supply side offering is responsible in terms of disclosure, transparency, education and redress. While some of these may not fall directly under the purview of the central bank (for example, ombudsman schemes may exist), the central bank may need to

form part of a national dialogue to ensure that responsible provision is promoted (Pandit (2011)).

Where central bankers may play a more active role is in ensuring that there are sufficient supply side incentives for essential financial services – such as savings accounts. The rationale here is that while providers will have incentives to provide highly profitable products – such as credit – there may be fewer incentives to offer savings facilities.

Box 2

Kenya: Enabling regulation for mobile banking

The success of M-PESA ("m" for mobile, and "pesa", Swahili for cash) in enhancing access to money transmission through mobile telephony, and in ultimately allowing for access to a number of essential financial services, has received widespread acclaim (eg the *Economist*, 24 September 2009). It is a story of harnessing technology successfully for the benefit of previously excluded individuals. But it is also a story of engaged and adaptable regulation.

The Central Bank of Kenya (CBK) has played a pivotal and enabling role in the success of financial inclusion through mobile technology. Underpinning its approach is the acknowledgment that appropriate legislation may lag technological innovation (Kimenyi and Ndung'u (2009)). But empowered with its mandate "to formulate and implement such policies as best to promote the establishment, regulation and supervision of efficient, effective payment, clearing and settlement systems",[1] the CBK chose to permit innovation to run ahead of legislative change. At the same time, it was mindful of the need for stability and of the need to monitor developments.

This meant that, when the CBK was approached in 2007 with the innovation by Safaricom in conjunction with Vodafone,[2] it allowed for a monitored pilot phase, during which time the CBK assessed the risks of the product and determined that the product did not involve deposit-taking, as no intermediation was involved. Moreover, the amounts transferred were ring-fenced and not available for the operations of the firms involved. After a successful pilot, the CBK set out its reporting requirements and provided Safaricom with a letter of no objection. The reporting requirements included monthly reporting of pre-determined metrics and regular meetings with key stakeholders (Nyaoma (2009)). While the risks of mobile phone banking include "fraudulent movement of funds, network hitches and mismatch of cash balances at the pay points" (Kimenyi and Nhung'u (2009)), the CBK was confident that the risks did not outweigh the benefits of the innovation under its oversight.

As the take-up of M-PESA showed significant demand from consumers – for both transfers and short-term storage of money – the CBK evaluated each product extension on a case-by-case basis (Nyaoma (2009)). Subsequently, the CBK has made legislative amendments to bring mobile payments within the purview of the regulatory framework and to allow agents to take deposits on behalf of banks. It has also recently published e-money regulations (Ndung'u (2011)). Meanwhile M-PESA now offers an enhanced suite of financial services through its joint venture with Equity Bank and its more extensive M-KESHO offering. In this way, the M-PESA offering "evolved from the initial concept of transferring money from one individual to another to include other functions, such as payment of utility bills, loans, salaries and deposit mobilisation" (Ndung'u (2011)).

[1] Section 4(A) (1) (d) of the Central Bank of Kenya Act.

[2] Business Call to Action (2011).

A savings facility is important not only because it is a useful financial service, but because it allows for the building of trust in financial institutions – which is important for stability – and because it provides the consumer with choice regarding appropriate use of other financial services. For example, a person who is able to accumulate savings may not be obliged to go into debt to manage a personal financial shock; moreover, such a person may choose to self-insure. Without a savings facility where fees do not erode funds, the consumer loses these options.

Mechanisms to encourage savings facilities include tiered banking, which provides scope for the emergence of cooperative banks and credit unions, and allowing savings of small amounts through e-money directives.

Conclusion

The policies that central banks adopt with respect to financial inclusion need to take into account the fact that inappropriate access may increase the risk of instability. They also need to recognise that new technologies will enable new firms to spread financial services to a large number of poor households. The central bank can play a role in ensuring that this wider access is appropriately designed and not at odds with its stability mandate.

In order to play such a role, central banks are likely to have to extend the perimeter of their regulatory oversight. They will have not only a risk-proportionate role but also an enabling role. These activities, together with promotion of responsible provision, will place additional burdens on central banks. Moreover, central banks will need to strengthen both internal departmental communication and external communication with policymakers and other stakeholders.

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Central bank governance and financial stability: issues of potential relevance to Africa

Serge Jeanneau[1]

1. Introduction

The recent global financial crisis has raised new questions about the role of central banks in maintaining financial stability. How would such a role influence the governance of central banks? Given the difficulty of even defining financial stability, much work remains to be done in designing effective central bank structures for making financial stability operational. This note discusses the main challenges and considers issues that could be of particular relevance to Africa.

2. Reform of financial stability arrangements

There is broad agreement that prudential policy should have a macroprudential dimension if it is to ensure financial stability. The idea is to look beyond the risk position of individual institutions to risks affecting the system as a whole. There are many reasons why such risks are not simply an aggregation of individual risks. One is externalities: interconnections among financial intermediaries and among markets create common exposures that could threaten the whole system (contagion). Another reason is network effects, in which the failure of even a small institution could trigger a cascading effect through the whole system. Common exposures or uniform responses to shocks could magnify such effects. A third reason is procyclicality, which refers to the tendency of the financial system to amplify macroeconomic or global financial shocks.

In a number of countries, the debate on how best to remedy deficiencies in existing financial stability arrangements has been intense over the past few years, with competing proposals being offered by existing agencies with a direct or indirect mandate for financial stability as well as by the financial industry, elected officials and academia. The focus of the debate has been on how to ensure a smoother functioning of the financial system and avoid further episodes of widespread financial distress. Although reform proposals span a variety of arrangements (discussed below), there is broad agreement that the development of a macroprudential policy framework will constitute an essential element in ensuring financial stability and that central banks will play a key role in that process.

Central banks are well placed to assume greater responsibilities for macroprudential oversight:

- The conduct of monetary policy provides central banks with a macroeconomic focus and an understanding of linkages among financial markets, institutions and infrastructures. This gives them a comparative advantage in the exercise of a macroprudential function.

[1] The author wishes to thank David Archer, Anne Mackenzie, Dubravko Mihaljek and Philip Turner for comments, and Emir Emiray and Emese Kuruc for research assistance.

- They have an inherent interest in preventing financial instability given that it can affect economic activity, price stability and the monetary transmission mechanism.
- They are the ultimate source of liquidity (bank reserves) for the economy, and appropriate liquidity provision is crucial to financial stability.

In some countries, central banks are also being given a more prominent role in microprudential supervision. In the United States, for example, the Federal Reserve is now the microprudential supervisor for all systemically important firms (including non-banks). In the United Kingdom, a number of supervisory responsibilities of the existing microprudential supervisor, the Financial Services Authority, will be transferred to the Bank of England in 2012.

The rationale for such an enhanced role for central banks in both macro- and microprudential oversight is that there are synergies between the two functions. Such synergies relate to:

- Cross-fertilisation: microprudential policy is improved by access to information about macroeconomic and financial conditions and about the interconnections between institutions; and macroprudential policy is improved by access to information on the risks faced by individual institutions.
- Reliance on information from the macro- and microprudential policy functions for lender of last resort intervention.
- The need for a close coordination of macroprudential and monetary policies in view of the importance of information on the dynamic behaviour of the financial system for the effectiveness of monetary policy and vice versa (Mishkin (2011)).

Putting both monetary and prudential functions under the central bank's roof has a number of advantages: direct access to information on institutions; more thorough monitoring of markets and the macroeconomy; and faster decision-making. Yet, developing a macroprudential perspective while not losing sight of the key monetary policy function is not an easy task.

3. Issues raised by the reform of financial stability arrangements

Many central bankers regard the maintenance of financial stability as an entirely normal part of their existing policy responsibilities. Even so, it does create some hard choices.

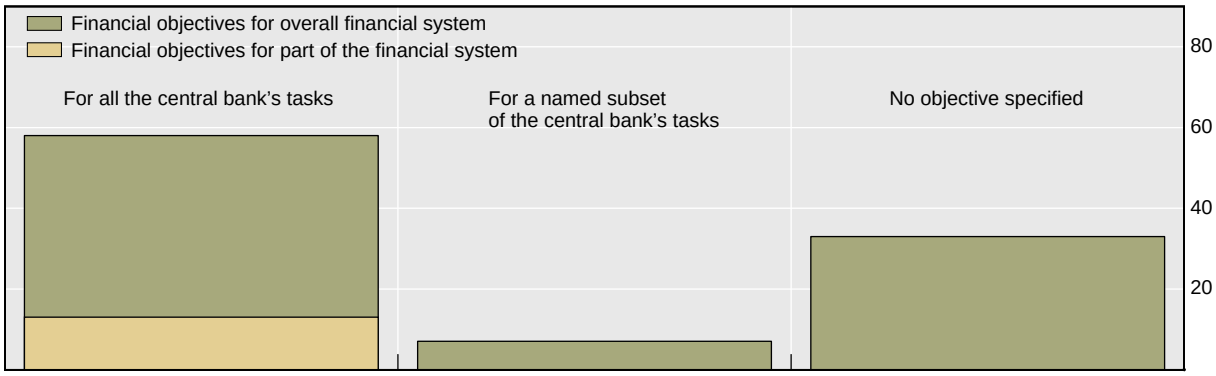
i. Difficulty of specifying mandate and policy instruments

An immediate concern relates to the difficulty of specifying the central bank's mandate in the area of financial stability. Survey evidence shows that an overwhelming majority of central banks consider that they have full or shared responsibility for financial stability oversight and policy (BIS (2009)), but their mandates are rarely explicit because the concept is difficult to define. In about one third of central bank laws, a financial stability objective is not mentioned at all (Graph 1). In many other cases, it is mentioned in connection with a microprudential task, such as supervising financial institutions, ensuring the safe functioning of key components of the financial infrastructure (payment and settlement systems, in particular) or, exceptionally, intervening as lender of last resort. Where they exist at all, financial stability objectives are often more vague than monetary policy objectives. Price stability can be measured, whereas financial stability cannot.

Graph 1

Financial stability objectives in central bank laws

Percentage of central bank laws that mention "stability" or a synonym
At end-2010



Note: Based on review of 97 central bank laws and statues.

Source: BIS.

A major concern of the report of a study group headed by Stefan Ingves, Governor of Sveriges Riksbank (hereafter referred to as the Ingves Report), was that a poorly defined mandate creates significant challenges. An immediate challenge is that without a reasonably precise mandate, policymakers cannot know which actions are desired of them and which are not. Another is that the lack of a clear mandate prevents policymakers from being able to understand society's priorities when circumstances call for actions that conflict with other elements of policy. Yet another is that policymakers might not be held accountable for actions for which they should be accountable, and they might be held accountable for goals for which they are neither clearly responsible nor equipped to achieve. And the lack of a clear mandate makes it nearly impossible for the public to be able to predict the direction of policy actions under different scenarios, creating the risk of a mismatch between the central bank's intentions and the public's expectations.

Moreover, macroprudential policy does not yet encompass a dedicated set of policy instruments. Until recently, the conventional wisdom was that if monetary policies ensured price stability over a sufficiently long time horizon, then financial stability would be ensured over an even longer time horizon. In fact, financial stability was treated as almost a by-product of monetary stability. This is no longer thought to be the case. It is now accepted that such a narrow focus on price stability might on occasion create, or exacerbate, financial imbalances that lead to sharp and destabilising corrections.

Given that monetary policy settings are not sufficient to ensure the twin objectives of monetary and financial stability, additional tools are required to help ensure financial stability. The central bank's lender of last resort function during a crisis is clearly one such tool, but instruments that do not have macro stability as their primary purpose may nonetheless serve a preventive objective. For example, many supervisory regulations designed for the "micro" purpose of preserving the soundness of individual banks or their borrowers could also serve a macroprudential purpose.

Table 1

Macroprudential instruments by vulnerability and financial system component

		Financial system component				
		Bank or deposit-taker		Non-bank investor	Securities market	Financial infra-structure
		Balance sheet[1]	Lending contract			
Vulnerability	Leverage	• capital ratio • risk weights • provisioning • profit distribution restrictions • credit growth cap	• LTV cap • debt service/ income cap • maturity cap		• margin/ haircut limit	
	Liquidity or market risk	• liquidity / reserve requirements • FX lending restriction • currency mismatch limit • open FX position limit	• valuation rules (eg MMMFs)	• local currency or FX reserve require-ments	• central bank balance sheet operations	• exchange trading
	Interconnect-edness	• concentration limits • systemic capital surcharge • subsidiarisation				• central counter-parties (CCP)

[1] Capital and other balance sheet requirements also apply to insurers and pension funds, but we restrict our attention here to the types of institutions most relevant for credit intermediation.

Source: CGFS (2010).

Discussions about which instruments would be best suited to macroprudential policy are at an early stage (see CGFS (2010), Galati and Moessner (2011) and Moreno (2011)). A number of instruments could potentially be used for macroprudential purposes (Table 1). However, policymakers are not entirely sure about how they should be used, and there is much uncertainty about their effectiveness in ensuring financial stability (Blanchard (2011)). Nor are the possible interactions between different instruments well understood. Having several instruments of unproven effectiveness runs the risk of misuse.

Many broad policy questions remain to be resolved and policy risks assessed. For example, is the aim of macroprudential policy to make the banks more resilient or to moderate cyclical movements in asset prices? Could constraints imposed under macroprudential policy run the risk of overregulation and protectionism (with the additional risk that this would pose to innovation and growth)?

ii. Challenges to policymaking autonomy

A further issue is whether new powers for financial stability policy could undermine autonomy in monetary policy decisions. Many central banks have been able to set monetary policy

independently of short-term political pressures because monetary policy objectives are sufficiently easy to specify; because the outcome of policy actions is readily observable relative to mandated objectives; and because coordination with fiscal policy is generally conducted at arm's length. However, monetary policy and financial stability objectives will sometimes conflict. The addition of a less clearly defined macroprudential mandate, and the possibility of a more activist use of regulatory levers, may challenge this understanding. The practical difficulty of implementing macroprudential policy and of measuring success at doing so may lead politicians to want to exercise greater day-to-day influence over policymaking. Indeed, some would see the concentration of several public policy functions in one institution as running counter to the checks and balances of an open society.

The central bank could also face greater lobbying from interest groups. Financial stability policy decisions are more likely to be seen as directly affecting particular interest groups than decisions on monetary policy. The financial services and real estate industries, for example, might lobby hard against any tightening of prudential standards. Emergency lending actions, in the form of sharp reductions in policy rates or emergency rescue operations, could also benefit certain financial actors at the expense of others.

iii. Potential loss of policy focus

Another concern is that adding new policy functions could increase the risks of management distraction. The intellectual frameworks and the skills necessary to conduct monetary, macro- and microprudential policies differ substantially. In several countries, concerns about undermining the effectiveness and credibility of the monetary policy process have played a significant role in keeping the central bank narrowly focused on a price stability objective. Such a focus would be more difficult to preserve with the addition of a new overlapping mandate.

iv. Possible weakening of accountability

Ensuring accountability for financial stability policy will prove particularly challenging for central banks. As noted above, objectives and actions cannot be specified for financial policy with the same degree of precision as they can for monetary policy. They may also involve conflict with other policy objectives. The evaluation of the central bank's effectiveness in meeting such objectives will necessarily be imprecise – and this could weaken accountability.

v. Challenge of coordinating policy actions

Financial stability policy has many dimensions: policy development, rule-making, supervision and emergency intervention. Any central bank responsibility for these dimensions will by necessity be shared with other government agencies. Thus, the overlapping interests of those agencies, and their interaction with government decision-makers, must be managed. Effective coordination mechanisms are particularly important for crisis management but they are also relevant to crisis prevention. Assigning a focal role to the central bank in macroprudential policy would require the creation of decision-making structures that provide for the internally coordinated calibration of monetary, macro- and microprudential settings. The central bank's analysis and actions would have to be coordinated with those of other agencies.

4. Looking for an appropriate institutional arrangement

Several possible configurations for the assignment of policy functions among responsible agencies could be considered, each calling for different governance arrangements. The Ingves Report identified four main configurations for preventive macroprudential policy assignments among responsible agencies, each of which has advantages and disadvantages with respect to the issues identified earlier.

i. Macroprudential policy as a shared responsibility

One approach is to form a macroprudential or systemic risk council to coordinate the work of the various agencies responsible for financial stability. This is an approach that has been adopted in the European Union and the United States (see Appendix Table 1, which summarises the arrangements adopted in selected countries). The fact that macroprudential policy will require both macro- and microeconomic analytical inputs, and will be implemented primarily through monetary and microprudential policy instruments, suggests that coordination of decision-making by otherwise separate and independent agencies would be a natural approach.

A crucial issue is whether such a council is simply a vehicle for joint analysis and peer pressure or a decision-making body in its own right. In other words, the question is whether the agencies represented on the council retain autonomy over their sphere of interest or whether the council can direct policy actions by member (and even non-member) agencies.

The European Systemic Risk Board (ESRB), which became operational in early 2011, has no formal directive powers.[2] It operates under a peer review approach and is allowed to issue recommendations or warnings to a wide range of European supervisory agencies and to member states directly where systemic risks are deemed to be significant. The potential recipients of such recommendations or warnings may be invited by the governing body of the ESRB to present their views before final action. The same body will decide on the extent to which recommendations or warnings have been followed. However, publication of recommendations or warnings will be subject to majority decision by the governing body of the ESRB.

In the United States, the Financial Stability Oversight Council (FSOC), which was established in 2010, has formal decision-making powers and can designate institutions and financial services providers that would require heightened prudential standards, and make binding recommendations to primary supervisors with respect to heightened regulatory requirements.[3]

ii. Macroprudential policy as a responsibility of the central bank; separate microprudential regulators

A second approach, which exists in various incarnations in Japan, the Netherlands and Sweden, is to delegate responsibility for macroprudential policy primarily to the central bank while leaving responsibility for microprudential policy to other agencies. Such an approach is sometimes seen as an easier option in countries where there is already an institutional separation between monetary and microprudential functions. It may also be adopted where the sharing of responsibilities among several agencies is not appealing, either because of a

[2] www.esrb.europa.eu/home/html/index.en.html.

[3] www.treasury.gov/initiatives/Pages/FSOC-index.aspx.

concern that sharing could weaken focus, be a source of friction between agencies or simply be too cumbersome to manage.

The relationship of the central bank with microprudential authorities will depend on what the central bank's macroprudential function will entail. If it entails the central bank's "leaning against the wind" in executing monetary policy, the need for interaction with microprudential authorities will be limited. By contrast, if it involves regulatory measures, such as determining a macroprudential overlay on capital or liquidity requirements, much greater interaction will be needed. In essence, the central bank would then become the regulator and the microprudential agencies would become the policy implementers. This arrangement could trigger inter-agency rivalry and complicate the independence of the microprudential regulators with respect to their spheres of responsibility. But it is by no means rare for microprudential regulators to implement policy settings determined by others.

The choice of internal decision-making structures within the central bank will have important implications when it comes to dealing with potential conflicts and trade-offs. Where the same committee makes decisions on both monetary and financial stability policy, coordination costs will be reduced, allowing in principle for maximum synergies and more rapid reactions. If actions of the single decision-making body are subject to disclosure requirements, it would be important to clearly articulate the nature of the trade-offs and the reasons for specific choices in any given situation. Decision processes that are delegated to separate decision-making boards will presumably make trade-offs more evident, since each decision-making group will relatively quickly identify the other as a barrier to success. Especially where each decision stream is subject to disclosure requirements, this would probably make the existence of difficult choices more obvious to the public.

iii. Central bank as macro- and microprudential policy agency; separate financial product safety regulator

A third variant, which will be introduced in the United Kingdom, is to integrate macro- and microprudential policy within the central bank while maintaining a separate financial product safety regulator. Such a structure can be adopted on the basis of existing arrangements in which the central bank is already the microprudential supervisor, or it can be the result of a redesign of arrangements that brings microprudential supervision within the central bank.

A major potential advantage of assembling the main financial policy functions within the central bank is improved access to information and expertise.[4] However, potential advantage and actual gain are not necessarily the same. Even if functions are brought under one roof, silos of responsibility within the organisation could still fragment information and analysis. More generally, the differing intellectual frameworks implied by the various functions could inhibit communication. It would seem from experience that systemic analysis is less natural to the analysts typically employed in microprudential supervision (who tend to focus on balance sheet and institutional risk analysis). The limited attention given to financial factors in formal macroeconomic models also speaks to the large gaps between the training of macroeconomic and macroprudential analysts. Moreover, crossing divisional boundaries is not easy and may indeed be inappropriate in some instances (eg with respect to commercial secrets, yet-to-be-announced policy actions, etc). Whether these gaps can be bridged, and silos avoided, by bringing these functions together under forceful management is an open question.

[4] Federal Reserve Board Chairman Ben Bernanke has stressed the value of the Federal Reserve's supervisory role for its other activities, including monetary policy, lender of last resort functions and crisis management (see www.federalreserve.gov/BoardDocs/RptCongress/supervision/supervision_report.pdf).

In the new arrangement considered for the United Kingdom, the various policy functions will be clearly separated. Microprudential oversight will be brought back to the central bank in the form of an operationally independent subsidiary of the Bank of England, the Prudential Regulation Authority. Macroprudental oversight will be under the responsibility of the Financial Policy Committee, which will be a subcommittee of the Court of Directors but will function along lines similar to those of the existing Monetary Policy Committee.[5] The legislation will also devolve responsibility for the regulation of business practices across the entire spectrum of financial services to a new specialist regulator, the Financial Conduct Authority. Coordination of the analysis and decisions of the dedicated decision-making bodies will be ensured in part by cross-membership of the top officials represented in the committees and authorities. However, given the diversity of organisational structures adopted for each main policy function, other mechanisms will be introduced to ensure a smooth interaction between them (see HM Treasury (2011)).

The prospective UK approach has already been largely adopted in France. Reforms introduced last year consolidate several regulators into an autonomous super-regulator, the Prudential Supervisory Authority (PSA), which is located within the Bank of France, is chaired by the Governor of the central bank and has an explicit mandate for financial stability. Measures were also taken to improve consumer protection under the Financial Markets Authority, which will remain independent but will work in close cooperation with the PSA.

iv. Separate macroprudential agency with distributed implementation

The last approach involves the creation of a specialist agency for the macroprudential function. A separate agency would probably have advantages over a shared responsibility model with respect to clear dedication to macroprudential issues, coordination and speed of action. However, it would raise questions with respect to implementation since the policy instruments used to implement macroprudential policy are usually assigned to other policy obectives or are under the control of other agencies. It would also raise issues with respect to the autonomy of the other agencies, as is the case with arrangements involving macroprudential councils. While it is conceivable that such an agency could be given authority to require action by microprudential supervisors, it would probably be less sensible to give it authority (even if partial) over interest rate settings. Interestingly, only one of the reform proposals identified by the Ingves Report considered the creation of a truly separate agency, but this proposal did not materialise in any final legislation.[6]

5. How is this relevant to Africa?

Before African central banks can contemplate more active involvement in financial stability, the value of reforming existing arrangements has to be carefully considered. As the previous discussion illustrated, reforming financial stability arrangements raises a complex set of issues, and a “one size fits all” approach is unlikely to be of much practical use.

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[5] Inter alia through the inclusion of external experts, publication of meeting records and responsibility for the Bank’s Financial Stability Report.

[6] The discussion draft of the US Senate Committee on Banking, Housing and Urban Affairs envisaged the creation of such an agency, the Agency for Financial Stability.

i. Level of development of financial systems

One consideration is the level of development of African financial systems. Macroprudential policy analysis focuses on externalities – systemic risks arising from common exposures and interlinkages among financial institutions and markets. Leverage can magnify such risks (Caruana (2010)).

In Africa, informal financial channels play an important role (see the paper by Hawkins in this volume). The small scale, simplicity and lack of leverage in such mechanisms may limit systemic risks. But financial markets that are thin or comparatively underdeveloped still pose risks. Most financial systems in Africa tend to be dominated by a limited number of banks; non-bank financial institutions (NBFIs) remain small; and markets for securities and interbank claims are in their infancy (see Quintyn and Taylor (2007) and Beck et al (forthcoming)). The risks of market participants trying to move in the same direction at the same time (herding) may be greater when markets are dominated by a few similar institutions. Market volatility is typically higher and financial assets are less reliable as collateral. The risks of market manipulation are also higher.[7]

In a number of higher-income African countries, NBFIs and financal markets are growing rapidly. They are also becoming more international. The past couple of decades have seen growing penetration of domestic banking markets by international banking groups and the emergence of a number of pan-African banking groups, which would increase the potential for cross-border financial contagion. As countries in Africa become more financially advanced, their financial stability considerations will become more like those in the industrial economies, and the governance-related issues discussed earlier in the context of European and North American countries will acquire greater relevance.

ii. Quality of supervisory arrangements

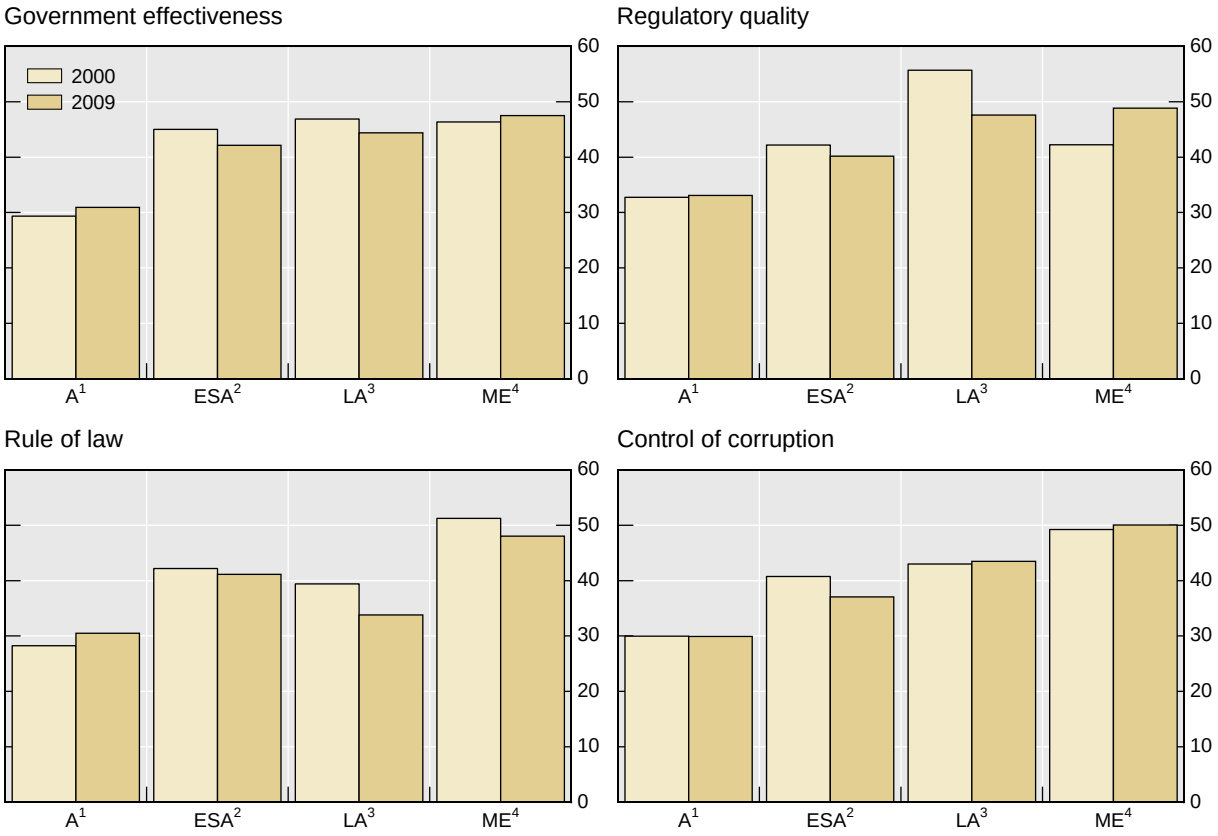
According to the assessment in Beck et al (forthcoming), most banking systems in Africa are stable and well capitalised thanks to banking sector reform and regulation. However, they also note that better rule-making has not been accompanied by a corresponding improvement in the quality of banking sector oversight. According to them, supervisory resources, including qualified staff and availability of analytical tools, are limited in most African countries. Many regulators are not independent of the Ministry of Finance or other government agencies, and legal frameworks often limit the corrective and remedial powers of supervisors to intervene in failing banks. Critically, supervisory processes focus on compliance with regulatory standards but are not set up to identify and manage the changing risks in the financial system. In addition, the ability to monitor risks on the institutional and systemic level is hampered by insufficient data and reporting processes. They emphasise that an upgrade of supervisory arrangements along the lines of Basel II would entail, both for banks and for regulators, human resource and infrastructure costs that would be beyond the means of many countries in Africa. They conclude that without a significant strengthening of supervisory capacity, the implementation of more complex supervisory arrangements would be built on shaky ground and would not provide an adequate framework to enhance financial stability.

[7] For a discussion of the financial implications of “smallness”, see BIS (1996), pp 16–18.

Graph 2

Governance indicators for selected regions

Y-axis represents average score for each region



Note: The World Governance Indicators comprise six measures of the quality of governance in more than 200 countries. Four of the measures are shown here.

[1] Africa. [2] East and South Asia. [3] Latin America. [4] Middle East.

Source: Brookings Institution, World Bank Institute, and Development Research Group of the World Bank.

Given this analysis, a first step would be to concentrate on the foundations of sound banking supervision rather than on developing more complex oversight schemes. Yet, as Barth et al (2006) note, the right institutional environment is an essential precondition for a strengthening of bank supervision.[8] The quality of governance arrangements seems to be of relevance to Africa given the readings provided by well known governance indicators (see Graph 2).

If supervisory agencies have substantial influence over bank business and strategies, elected officials and supervisors may try to abuse that influence to force banks to divert the flow of credit to satisfy private rather broader interests. If they do, strengthening official oversight of banks without establishing proper governance arrangements might in fact reduce banking sector efficiency and stability. Barth et al (2006) note that an important step in promoting sound banking would be to introduce measures aimed at improving the ability of the private sector to monitor banks. The disclosure of reliable, comprehensive and timely

[8] In an empirical analysis of the relationship between governance, financial liberalisation and development in sub-Saharan Africa, Karikari (2010) suggests that the impact of liberalisation on development depends on the quality of institutions as measured by the Worldwide Governance Indicators (Graph 2).

information on banks' operations, along the lines of Basel II's Pillar 3 on market discipline, would help. The authors also urge strengthening the rights of private investors.

iii. Political economy

Another set of challenges will be faced by central banks that feel ready to develop a macroprudential framework. As noted above, the implementation of a macroprudential function could lead to a more activist use of policy tools, but their use by several distinct agencies could lead to coordination problems. Another challenge is that, rather than correcting inappropriate macroeconomic policies, governments may instead pressure the relevant authorities to use macro- and microprudential tools. This could open the door to arbitrary policy decisions, particularly in countries where transparency in policymaking is limited. It could even encourage rent-seeking behaviour in countries where the rule of law is not firmly established.

In countries where central bank autonomy is not yet well established, the introduction of a new financial stability mandate could create an additional pretext for political interference. This could threaten monetary policy autonomy. As is the case for banking supervision, it might be preferable to introduce solid governance arrangements for the central bank before trying to introduce more complex policymaking into the central bank's mandate.

iv. Monetary policy frameworks

Another element that could complicate the design of a macroprudential policy framework is the evolving environment within which monetary policy is conducted. A few countries have moved from exchange rate or monetary targeting to various forms of inflation targeting (see the paper by Vibe Christensen in this volume) and a number of countries are now considering moving in this direction. Such a transition involves an intricate set of governance, policy and technical issues. Introducing a macroprudential policy framework in such an evolving environment will inevitably be a challenging task.

6. What arrangements would be suitable?

On balance, the relatively simple and bank-centred nature of African financial systems and the shortage of qualified personnel would argue for the central bank playing an important role in maintaining financial stability. Often the central bank is one of the few institutions that have sufficient resources to attract employees with the type of skills required for working in macroeconomic analysis and banking supervision.

In a review of five stylised models of banking supervision in sub-Saharan Africa (SSA), Quintyn and Taylor (2007) found that two of the models were best suited to the circumstances of the sub-continent.[9] In one, a unified supervisory entity is linked to the central bank (in terms of infrastructure and logistics) but has a separate governance structure. In the other, supervision of deposit-taking institutions is housed in the central bank, and supervision of all NBFIs is housed in a separate agency. The authors argued that both models would preserve an important supervisory role for the central bank, which they deemed important given local circumstances.

[9] Both can be considered to be variants of options (ii) and (iii) in the typology of the Ingves Report.

There would be advantages to integrating the macro- and microprudential functions within the central bank, either with separate or unified internal decision-making structures. Such an integrated model would keep the most systemically important activities within the central bank, minimise regulatory gaps, allow for a more efficient coordination of policy functions, help ward off external pressure to engage in directed lending or forbearance, and take advantage of the central bank's physical and human resource infrastructure while allowing for an internal deployment of skilled staff.

But it could be argued that giving greater policymaking power to the central bank could lead to a greater risk of monolithic thinking (groupthink) and therefore to a greater risk of policy errors and public criticism. The adoption of one of the two supervision models just discussed would therefore need to be accompanied by some strengthening of the formal accountability mechanisms for the central bank. Disclosure of financial stability decisions and actions, and the reasons for them, would be essential – although some delay might be necessary if immediate disclosure risked triggering instability.

In view of the strong presence of international banking groups in many countries and the expanding web of intraregional banking relationships, particular thought would have to be given to coordination with outside regulators. Regional coordination is already being strengthened in the Central African and West African currency areas, with, for example, the recent establishment of a Comité de Stabilité Financière in the West African Economic and Monetary Union and discussions concerning the creation of a Forum de Stabilité Financière in the Economic Community of Central African States.

7. Concluding comments

The recent global financial crisis raised important questions about what the exact role of central banks should be in the area of financial stability. In a number of countries, new arrangements that attempt to deal with identified weaknesses are being introduced. The macroprudential dimension to supervision is also relevant to the rudimentary financial systems of many African countries given that thin financial markets dominated by a small number of banks also create systemic issues.

As African financial systems grow in complexity, countries in the region will face the same issues that have prompted a review of financial stability arrangements in other parts of the world. This could lead to calls for a reconfiguration of such arrangements, with the possibility of a stronger involvement of central banks in macroprudential oversight.

Stronger central bank involvement in this area could raise delicate issues of governance. Aside from the difficulties of specifying a mandate for financial stability and obtaining the tools necessary to implement it, central banks could face challenges to their decision-making arrangements and policymaking autonomy. Before central banks can contemplate a more active involvement in the area of financial stability, the net value of reforming existing arrangements would therefore have to be carefully considered.

Appendix Table 1

Selection of recently established inter-agency financial stability councils				
Country/region	**Name of council**	***Membership***	***Mandate (s)***	***Main powers***
European Union	European Systemic Risk Board (ESRB) Became operational in January 2011	**Number of members:** 33 voting, 28 non-voting (General Board) ***Chair:*** President of European Central Bank (ECB, for next 5 years) - must be a member of the ECB's General Council ***Other voting members:*** Governors of European System of Central Banks member banks (27), VP of ECB, member of European Commission, Chairs of European Supervisory Authorities (ESAs, 3) ***Non-voting members:*** President of Economic and Financial Committee, high level representatives of EU member state supervisory authorities (27)	Development of a macro-prudential framework Identification of systemic risks issuance of recommendations for action and warnings	Powers to require information from member agencies but no formal directive powers. Based on a peer review approach. Allowed to issue recommendations and warnings to ESAs, member states, individual member state agencies, or Europe wide, on an act-or-explain basis Addressees of recommendations and warnings may be invited to present their views before the adoption of recommendations and warnings However, publication of such recommendations and warnings is subject to majority voting of General Board Reporting to EU Parliament and ECOFIN Council
France	Financial Regulation and Systemic Risk Council (FRSRC) To be established	***Number of members***: 5 ***Chair:*** Minister for Finance (or his representative) ***Other members:*** Governor of the Banque de France (as President of the Prudential Supervisory Authority (PSA), Vice-President of the PSA), President of the Financial Markets Authority (or their representative), President of the Accounting Standards Authority	Foster cooperation and information exchange Consider French market/institution developments from a macro-prudential perspective Taking account of ESRB recommendations Coordinate with European/ international initiatives	Will be able to issue opinions and position statements with respect to European and international initiatives

Selection of recently established inter-agency financial stability councils (cont)				
Country/region	**Name of council**	**Membership**	**Mandate (s)**	**Main powers**
India	Financial Stability and Development Council (FSDC) December 2010	***Number of members:*** 8 to 9 voting members ***Chair:*** Minister for Finance ***Other members:*** Governor of the Reserve Bank of India (RBI) Finance Secretary and/or Secretary of Department of Economic Affairs Secretary of Department of Financial Services Chief Economic Advisor of Ministry of Finance Chairman of Securities and Exchange Board of India Chairman of Insurance Regulatory and Development Authority Chairman of Pension Fund Regulatory and Development Authority A sub-committee headed by the Governor of the RBI will replace the existing High Level Coordination Committee on Financial markets	Strengthen the mechanism for maintaining financial stability, financial sector development, and inter-regulatory coordination The council will be responsible for dealing with issues relating to: Financial stability Financial sector development Inter-regulatory coordination Financial literacy and inclusion Macroprudential supervision, including the functioning of large financial conglomerates Coordinating India's interface with international financial bodies	Information not yet public

Selection of recently established inter-agency financial stability councils (cont)				
Country/region	**Name of council**	**Membership**	**Mandate (s)**	**Main powers**
United States	Financial Stability Oversight Council (FSOC) Became operational in October 2010	**Total number of members:** 10 voting, 5 non-voting ***Chair:*** Secretary of the Treasury ***Other voting members:*** Chairman of Federal Reserve, Comptroller of Currency, Director of Bureau of Consumer Financial Protection, Chair of Securities and Exchange Commission, Chair of FDIC, Chair of CFTC, Director of Federal Housing Finance Agency, Chair of National Credit Union Administration Board, an independent member (with insurance expertise) ***Non-voting advisory members:*** Director of Office of Financial Research, Director of Federal Insurance Office, a state insurance commissioner, a state banking supervisor, a state securities commissioner	Identify financial risks Promote market discipline by eliminating expectations of government support Respond to emerging threats	Designate institutions and financial service providers as requiring heightened regulatory standards by the Federal Reserve Make recommendations to primary supervisors, including member agencies, with respect to heightened regulatory requirements; such recommendations requiring implementation, or explanation as to why not Call for information from members agencies or other agencies or direct from companies Advise Congress Annual report to Congress; Chair will testify on behalf of the Council. Each voting member will be required to affirm that the federal government is taking all reasonable steps to assure financial stability, or describe steps necessary. Reporting to Congress on particular topics, as appropriate

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Have monetary transmission mechanisms in Africa changed?

Benedicte Vibe Christensen[1]

1. Introduction

African countries generally performed very well economically from the early 2000s to 2008 – a prolonged period of record high growth of real GDP, a decline in the inflation rate to single digits in most countries, and increases in external reserves (Graph 1). The good performance was due partly to a prolonged upswing abroad, which also fuelled commodity prices (Graph 2), and partly to debt relief. But improved domestic policies also played an important role. The ability of African countries to weather exogenous shocks was demonstrated during the recent global financial crisis. While African countries typically have lagged cyclical upswings abroad, this time they have rebounded with other developing countries. To be sure, greater integration with rapidly growing economies in Asia played a role, but the rebound has also been due to the pursuit of countercyclical fiscal and monetary policies in many African countries.

This note discusses how monetary policy was conducted in Africa during the global financial crisis and whether there were any indications that the transmission mechanisms of monetary policy had changed – a development seen in emerging markets in other regions. It also examines the lessons from the crisis and asks how African central banks should manage monetary policy in response to exogenous shocks – from both trade and capital flows – as the continent attains greater integration in the global economy.[2]

The paper is structured as follows. Section 2 discusses some general economic conditions required for the conduct of effective monetary policy and notes four specific features of African economies that constrain policy effectiveness: low financial depth; widespread dollarisation; fiscal dominance; and the so-called excess liquidity of the banking systems. Section 3 reviews the main monetary policy frameworks currently in place in Africa. Section 4 discusses the conduct of monetary policy in Africa during the global financial crisis and in particular the performance of the different transmission channels of monetary policy during the crisis. Section 5 summarises the main findings of the paper.

2. Conditions for effective monetary policy

The effective transmission of monetary policy requires several conditions: The independence and credibility of the central bank must influence not only the formulation of monetary policy but also public expectations as to the effectiveness of such policy. Transmission mechanisms based on interest rates are better than direct controls on bank credit; a system based on large reserve requirements can be seen as part of the transition away from direct controls to reliance on interest rates. Well functioning secondary markets help the central

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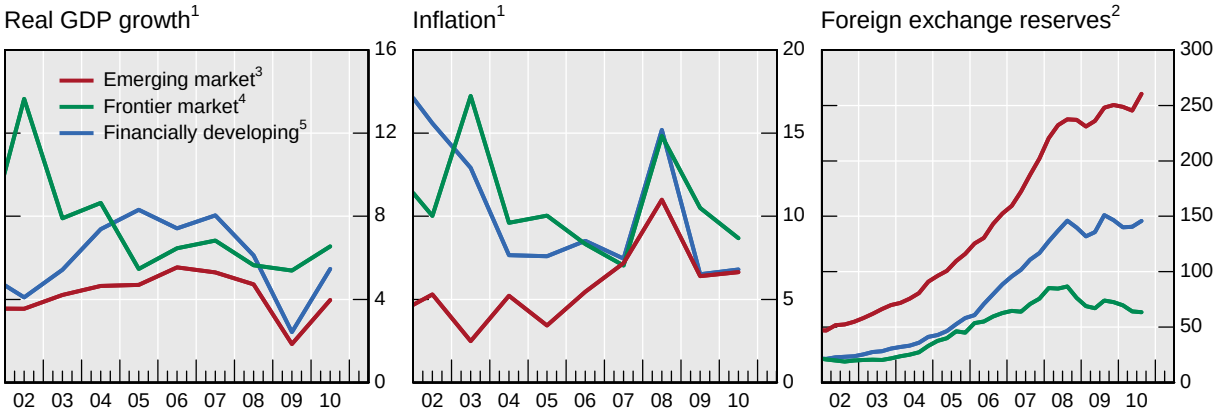
[1] This paper was written for the BIS by Benedicte Vibe Christensen (e-mail benedictevibechristensen@gmail.com). Andrew Berg, Stephen Cecchetti, Robert Corker, Anne-Marie Gulde, Serge Jeanneau, Saul Lizondo, Dubravko Mihaljek and Philip Turner provided valuable comments and Emir Emiray, Emese Kuruc and Agne Subelyte provided research assistance.

[2] For a discussion of the financial stability issues, see the paper by Jeanneau in this volume.

bank influence the value of financial market variables such as the interbank market interest rate and the money stock (Mishra et al (2010)). Competition in the banking sector is necessary if changes in the policy rates are to have an impact on market rates; banks in a non-competitive market might not pass-on changes in policy rates to the lending or deposits rates of customers. The existence of long-term bonds is a prerequisite for the establishment of a market-based term structure; it also helps to hedge uncertainty about future short-term rates. Finally, a substantial degree of international financial integration is required to influence the arbitrage between domestic and foreign financial assets.

Graph 1

Macroeconomic indicators for Africa, by level of financial depth



[1] In per cent. [2] In billions of US dollars. [3] Economies with relatively well developed financial markets that resemble those of emerging market economies (EMEs) in the rest of the world, consisting of five countries: Algeria, Egypt, South Africa, Morocco and Tunisia. [4] Economies whose financial markets are advancing but do not yet have the same access to global capital markets as EMEs, consisting of 12 countries: Botswana, Cape Verde, Ghana, Kenya, Mauritius, Mozambique, Namibia, Nigeria, Seychelles, Tanzania, Uganda, and Zambia. The peak in GDP growth in 2002 was due to 21% growth in Nigeria. [5] Economies with the least well developed financial markets, consisting of 36 countries.

Source: IMF, International Financial Statistics.

It is useful to examine first how monetary regimes have developed in emerging market economies (EMEs) in other regions of the world. In EMEs outside Africa, three broad trends can be discerned: first, a trend towards independent monetary policy regimes with greater emphasis on inflation control and inflation targeting; second, development of financial markets with less government intervention and reduced fiscal dominance; and third, greater economic (especially trade) and financial market integration with the global economy (BIS (2008)).

Reflecting these developments, EMEs have built up significant gross foreign asset and liability positions, and correlations between asset prices in emerging markets and developed countries have strengthened. Together with the rapid development of EMEs, their greater integration into the global economy has strengthened the transmission mechanisms of monetary policy, including the interest rate channel. However, it has also made control more difficult in some cases, eg by making interest rates, capital flows, and exchange rates highly sensitive to external developments.

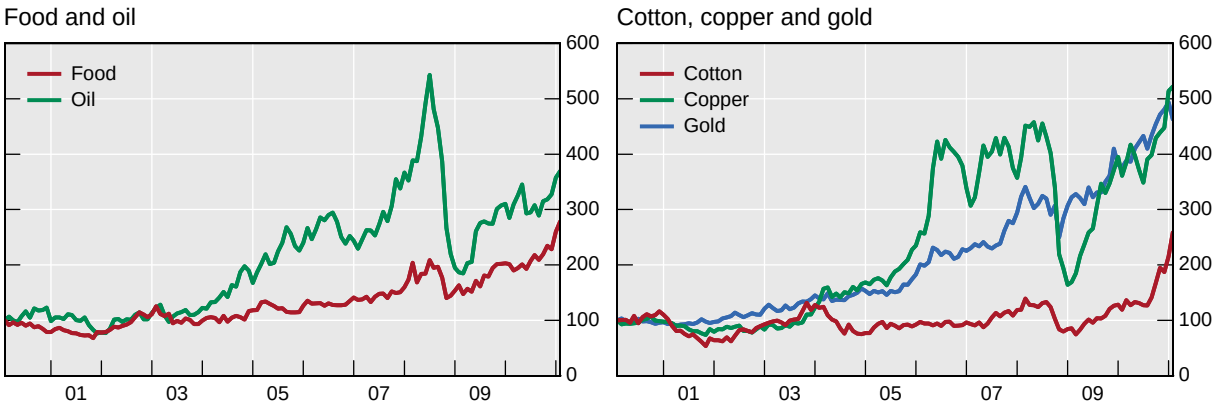
In low-income countries, by contrast, one would expect the lack of developed financial markets to weaken the interest rate channel, and the lack of a secondary market for equities and real estate to weaken the asset channel. The exchange rate channel would depend on the actual flexibility of the exchange rate.

In Africa, the monetary policy environment is gradually changing. The remainder of this section examines some specific features of African economies that have constrained the effectiveness of monetary policy in the past – the level of financial depth, dollarisation, fiscal dominance and excess liquidity – and recent changes in those features.

Graph 2

Commodity prices[1]

1 January 2000 = 100



[1] Month-end data.

Source: Bloomberg.

Financial depth

Africa has trailed the rest of the world in terms of financial development. Apart from a few countries, most notably South Africa, the continent has been characterised by less developed financial markets, limited competition in the banking sector and few non-bank financial institutions. Long-term financing, which is critical for infrastructure investment, has been virtually non-existent.

Africa comprises a diverse group of 53 countries, and this paper considers them in three groups (see Table A1):[3]

- **Emerging market economies**, which have relatively well developed financial markets that resemble those of EMEs in the rest of the world. This group comprises five countries: Algeria, Egypt, Morocco, South Africa and Tunisia.
- **Frontier market economies**, whose financial markets are advancing but are yet to have the same access to global capital markets as EMEs. This group comprises 12 countries – five middle-income countries: Botswana, Cape Verde, Mauritius, Namibia and Seychelles; and seven low-income countries: Ghana, Kenya, Mozambique, Nigeria, Tanzania, Uganda and Zambia.
- **Financially developing economies**, which have the least well developed financial markets. This group comprises the remaining 36 countries, all of them low income.

During the past decade, financial depth in Africa has increased, although not uniformly. Measured in terms of the ratio of banks' liquid liabilities to GDP, it has increased in all three groups but particularly in the emerging and frontier market economies (Table 1). The measurement of financial depth should ideally also include liquid liabilities of bank-like institutions and non-bank financial institutions (eg microfinance institutions), but the data for this category are incomplete. Banks have also become more efficient in transformation of deposits to private sector credit except in the financially developing countries.

[3] The groups are defined according to the ratio of bank assets to GDP and degree of capital market development (see IMF (2009a)).

Table 1

Indicators of financial depth

Ratio, in per cent, weighted by country GDP

	Liquid liabilities to GDP[1]		Private sector bank credit to deposits[2]	
	1998–2000	**2008–10**	**1998–2000**	**2008–10**
Africa				
Emerging market	48	63	93	96
Frontier market	18	34	73	88
Financially developing	20	23	71	61
Selected emerging market economies[3]	39	50	87	92

[1] Liquid liabilities are currency plus demand deposits and interest bearing liabilities of banks. [2] Bank credit to the private sector is taken from line 22d of the IFS data. [3] Brazil, Chile, the Czech Republic, Egypt, Hungary, Indonesia, Malaysia, Mexico, the Philippines, Poland, Russia, South Africa, Thailand and Turkey.

Source: IMF, International Financial Statistics.

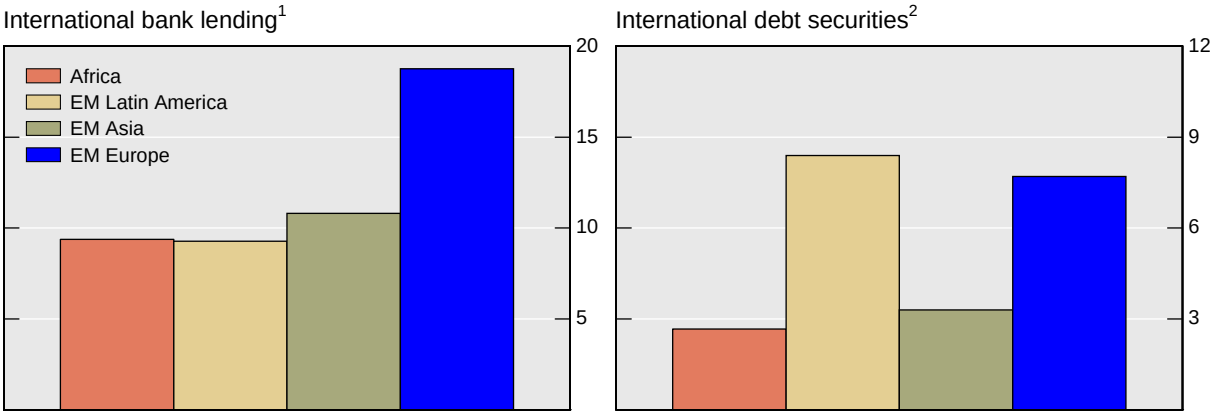
Financial depth indicators suggest that emerging and frontier market economies in Africa are approaching the average levels of comparator groups in other EME regions of the world. However, financially developing economies in Africa continue to lag in financial depth according to most commonly used measurements. In fact, they appear to have regressed during the global crisis, which might be due to high credit expansion before the crisis that turned out to be very risky in a recession setting. As a result, in many African countries, banks stepped on the brakes, and credit even declined in a few cases (see Section 4 below).

Regarding integration with international capital markets, Africa compares relatively well with other developing country regions in terms of cross-border bank transactions (Graph 3, left-hand panel). However, it lags behind in terms of issuance of international debt securities (Graph 3, right-hand panel).

Graph 3

International bank lending and issuance of international debt securities

Amounts outstanding, as a percentage of GDP, September 2010



[1] External loans of BIS reporting banks vis-à-vis all sectors in individual countries. [2] International debt securities, all issuers.

Source: BIS locational banking statistics and international debt securities statistics.

Table 2

Commercial banks' assets and liabilities in foreign currency

Share of total liabilities or assets, in per cent

		2005	2010
Botswana	Liabilities	15.5	12.1
	Assets	15.8	10.9
Ghana	Liabilities	27.4	28.5
	Assets	24.5	23.0
Kenya	Liabilities	21.2[1]	14.3
	Assets	23.3[1]	15.9
Lesotho[2]	Liabilities	2.7	1.4
	Assets	31.7	47.2
Madagascar	Liabilities	24.5	20.5
	Assets	20.9	19.0
Mauritius	Liabilities	52.0	60.0
	Assets	57.0	62.0
Morocco	Liabilities	2.8	3.6
	Assets	6.5	6.6
Mozambique	Liabilities	33.5	31.2
	Assets	34.6	33.4
South Africa	Liabilities	8.7	5.7
	Assets	3.7	4.1
Seychelles	Liabilities	41.0	41.0
	Assets	11.0	10.0
Swaziland[2]	Liabilities	0.0	0.2
	Assets	3.1	5.9
Tanzania	Liabilities	33.2	26.6
	Assets	30.9	27.9
Tunisia	Liabilities	11.3	14.0
	Assets	9.5	11.6
Uganda	Liabilities	26.9	25.2
	Assets	27.4	24.7
Zambia	Liabilities	2.1	5.6
	Assets	20.7	14.9

[1] Refers to 2008, earliest figure available. [2] Part of the rand area.

Source: Central bank responses to BIS questionnaire.

Dollarisation

Monetary policy can affect financial claims and liabilities in local currencies but not in foreign currencies. The greater the dollarisation of an economy, the less scope there is for an independent monetary policy. Dollarisation or the use of foreign currencies might indicate that confidence in the stability of the local currency is lacking. A number of countries still have banking systems in which foreign currencies account for one fifth to one third of total

assets and liabilities (Table 2).[4] In most cases, the share of instruments denominated in foreign currency is similar on the asset and liability side, suggesting that there might not be a foreign exchange mismatch on the books of the banks (depending on the currency of denomination). However, lending in foreign currency for domestic purposes implies indirect currency mismatches because the customers of banks might face currency mismatches.

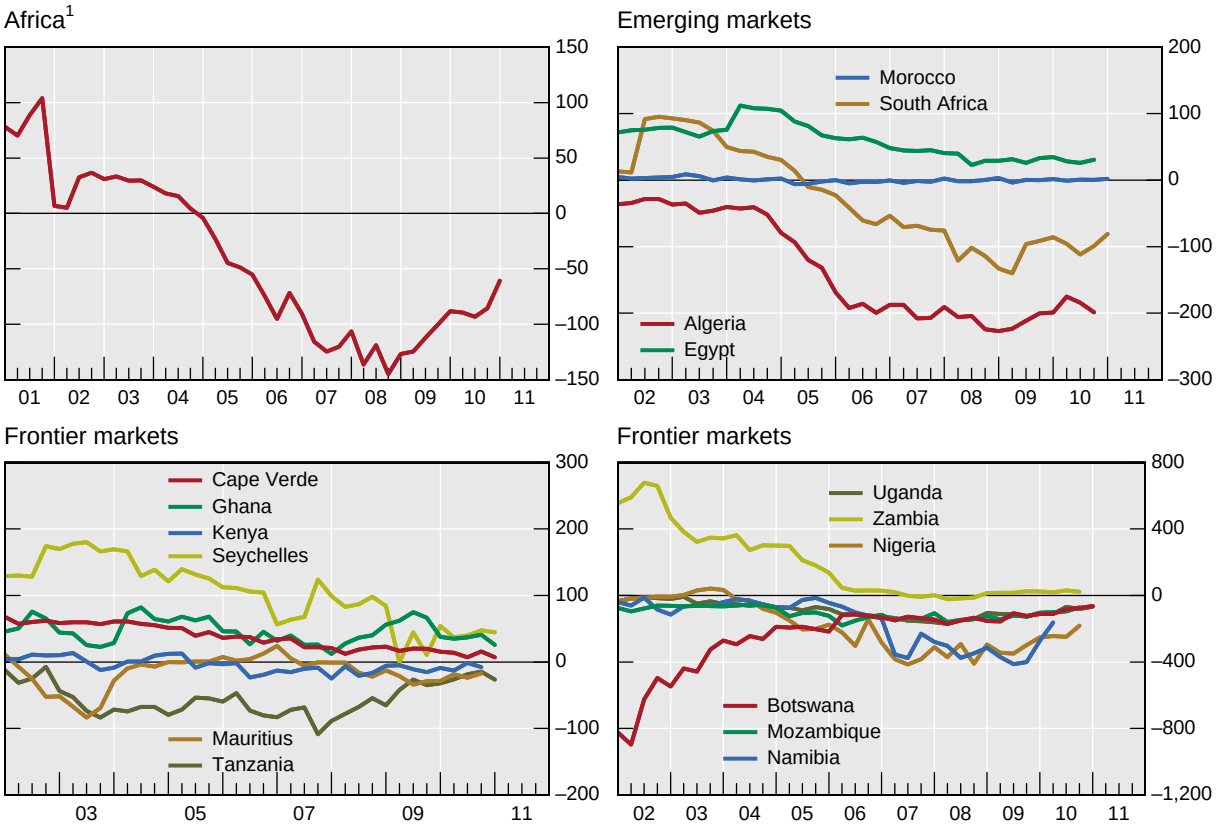
Fiscal dominance

Monetary policy in many African countries has suffered from fiscal dominance. Fiscal dominance implies that expectations about inflation are intrinsically linked to fiscal performance. Under fiscal dominance, for example, a monetary policy tightening might have a perverse effect on the economy. Instead of leading to an increase in real interest rates, appreciation of the currency, and reduction in aggregate demand and inflation, such tightening might fuel expectations of default on government debt and thereby lead to a depreciation of the currency and increase in inflation. Under fiscal dominance, inflation expectations react to fiscal events and reflect lack of a credible anchor. Fiscal dominance can also compromise central bank independence if the government openly resists moves by the central bank to raise interest rates. More importantly, fiscal dominance generally crowds out private sector credit.

Graph 4

Net claims on central governments as a share of reserve money

In per cent



[1] Weighted by GDP.

Source: IMF, International Financial Statistics.

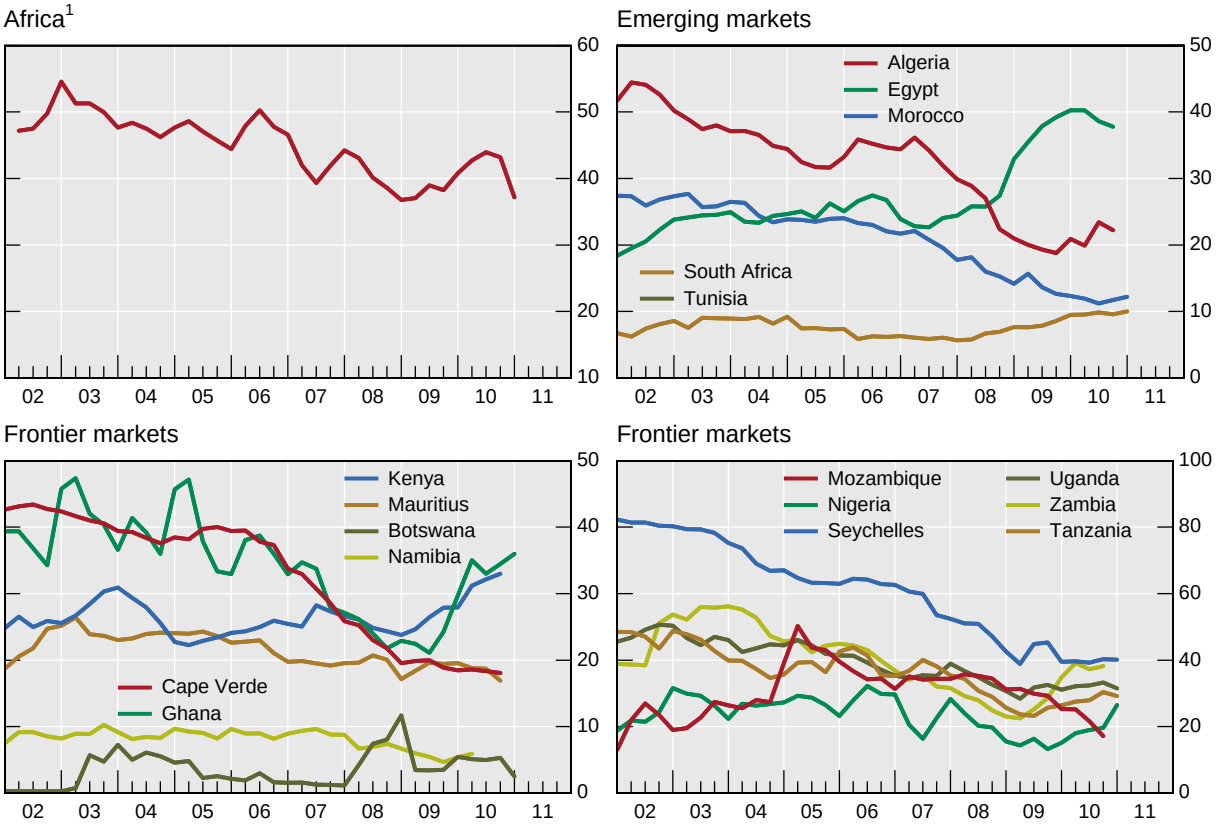
[4] The high shares of foreign currency assets and liabilities in Mauritius reflect its status as an offshore financial centre.

Before the global financial crisis, fiscal dominance had been reduced in many countries, as illustrated by indicators of central bank credit to the government and banks' claims on the government sector (mostly treasury bills) (Graphs 4 and 5). But it is also evident that some of this progress was reversed during the crisis, as some governments increased spending to cushion the effects of economic downturn. As economic growth picks up, governments might need to regain fiscal space through the pursuit of medium-term fiscal discipline. Otherwise, the effectiveness of monetary policies could become circumscribed in the future.

Graph 5

Claims on central government in per cent of claims on other sectors

In per cent



[1] Weighted by GDP.

Source: IMF, International Financial Statistics.

Excess liquidity

The effectiveness of monetary policy in Africa has often been hampered in the past by large pools of banking system liquidity in excess of required reserves (or required liquidity). The larger the liquid reserves on commercial bank balance sheets, the less sensitive the banks are to interest rate or reserve ratio increases and the stronger any central bank tightening measure must be to have the desired effect.

Why have banks in Africa held such excess reserves, which are largely unremunerated, instead of making alternative placements? One reason is the lack of money market instruments in which banks can invest. A higher level of precautionary reserves might also reflect the fact that there is no effective interbank market in which banks can borrow if their reserve positions fall below the minimum. But the practice is also explained by the perceived lack of low-risk lending opportunities. In many African countries, weaknesses in property rights, poor enforceability of contracts, and lack of credit rating agencies have held banks

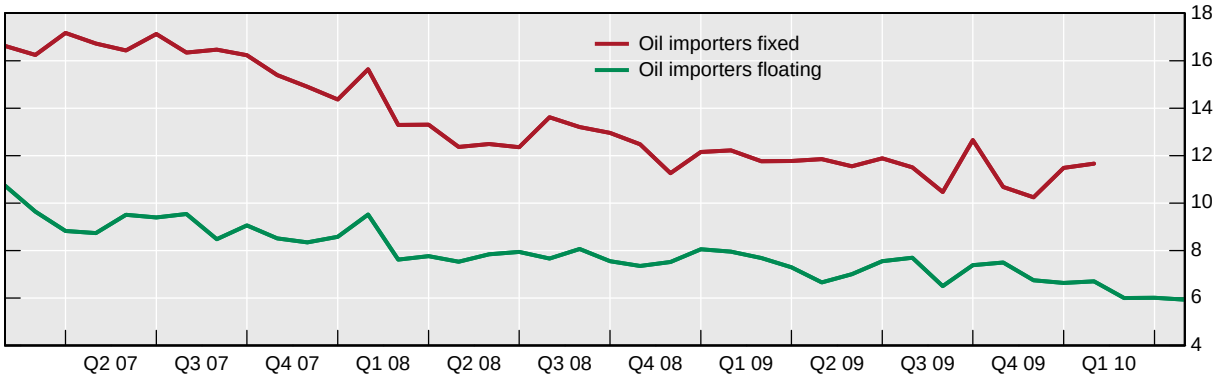
back from lending to the private sector.[5] It is also linked to controls on capital outflows. However, some changes have started to appear among these causes of excess liquidity.

Since 2007, free reserves of the banking system have decreased markedly, thereby potentially making monetary policy more effective (Graph 6). In some countries this was brought about by an increase in the level of required reserves. This has improved the prospects that changes in policy rates of the central banks and changes in reserve money get passed through to private sector saving and lending, thereby possibly influencing real activity in the economy. However, this decline has not been uniform. In some countries, for instance in Madagascar, excess liquidity still hampers the transmission of monetary policy, as changes in policy rates are not passed on to interest rates in the banking system (Banque Centrale de Madagascar (2008)).

Graph 6

Banking sector reserves in Sub-Saharan Africa[1]

As a percentage of deposits



[1] Total less required reserve deposits of the banking sector.

Source: IMF, International Financial Statistics.

In summary, the effectiveness of monetary policy in Africa has been enhanced over the past decade in countries where fiscal dominance and excess liquidity in the banking system have been reduced or eliminated and where financial depth has increased. In most African countries, and in particular the financially developing low-income countries, financial markets remain seriously underdeveloped, with limited bond markets and little or no supply of longer-term securities. As discussed in Section 4, these structural weaknesses continue to undermine the transmission mechanisms of monetary policy. To provide a background for that discussion, the next section briefly reviews the main monetary policy frameworks currently used in Africa.

3. Monetary policy frameworks

During the past decade, many countries have moved away from an exchange rate anchor towards greater exchange rate flexibility as a way of supporting external competitiveness (Table A1). In addition, the need to get inflation under control has led central banks to adopt intermediate targets such as monetary aggregates. But de facto, many African countries still pay attention to the exchange rate and try to limit its flexibility. Exchange rate anchors are

[5] See the paper by Hawkins in this volume.

still used in the countries of the CFA zone and the rand zone (Common Monetary Area) and in a few other countries.[6]

In contrast to the trend in other emerging market economies, only three countries in Africa have adopted an inflation targeting (IT) framework so far: Mauritius, in a modified form, in 1996; South Africa in 2002; and Ghana in 2007.

Only South Africa has developed a fully fledged IT framework. Ghana's framework is referred to as "IT lite", which indicates that inflation targeting is the primary objective while exchange rate targeting is a secondary objective. Ghana was the first low-income country in the world to adopt the IT framework. The rationale for this approach is that the scope for monetary policy to be independent of external factors is limited in a small and highly open economy such as Ghana. Policy interest rates are set to place significant weight on the interest rate differential to the US federal funds rate, while reacting to domestic inflation when it is above the tolerance level. At the same time, foreign exchange intervention is limited to smoothing operations (IMF (2010b)). Similarly, Mauritius introduced a new framework for the conduct of monetary policy in 2004, in which the primary objective of the central bank is to maintain price stability and to promote orderly and balanced economic development (Bank of Mauritius (2006)).

Among the four emerging economies in North Africa, Algeria, Egypt, and Tunisia use a range of monetary indicators to guide monetary policy within flexible or managed exchange rate systems, while Morocco has a pegged exchange rate. In Egypt and Morocco, the authorities have a medium-term goal of greater exchange rate flexibility within an inflation targeting framework.

A number of countries with flexible exchange rate regimes have used reserve money targeting to guide monetary policy and provide a clear signal on the stance of monetary policy to the public. The basic rationale for this approach is that reserve money is within the control of the central bank. Indeed, reserve money targeting is still a hallmark of monetary policy in Africa, even though other developing countries have moved away from this operational target (IMF (2008)). Broad money is also often used as an intermediate target (Kasekende and Brownbridge (2010)). Reserve money targeting was appropriate when inflation was at high levels: studies show a strong relationship between inflation and changes in monetary aggregates when inflation is high (Thornton (2008) and Banque Centrale de Madagascar (2009)) and a weaker relationship at low levels of inflation. As inflation has been reduced in the majority of African economies, central banks – particularly in Africa's frontier markets – are in the process of adapting their monetary policy framework so as to facilitate the achievement of objectives for output, prices and the exchange rate. This might call for a number of different intermediate targets.

Most countries with fixed exchange rates have different challenges. The CFA franc zone – the largest fixed exchange rate zone in Africa – comprises 14 countries in two monetary unions: the Central African Economic and Monetary Community (CEMAC) and the West African Economic and Monetary Union (WAEMU). Although the two monetary unions have separate currencies, each is pegged to the euro at the same rate of exchange, which has not moved since 1994 (Gulde and Tsangarides (2008)). The monetary unions have been widely credited for the very low rate of inflation and macroeconomic stability in the region. But they have also faced challenges because the two regions are exposed to different exogenous shocks: all of CEMAC's members are oil exporters except one, while all of WAEMU's members are oil importers. In the absence of the exchange rate as an instrument, the adjustment in the real exchange rate is left to fiscal and structural policies, notably

[6] Cape Verde, Comoros, Eritrea, Libya, Morocco, and Sao Tome & Principe have pegged exchange rates; Botswana has a crawling peg.

adjustments in wages and prices. In addition, both regions face challenges in terms of regional conflicts, most recently in Ivory Coast (the largest economy in the WAEMU), which have impeded financial integration. Although the exchange rates in the two unions are fixed to the euro, the two central banks, BEAC and BCEAO, have some scope for pursuing monetary targets, given limited capital mobility and incomplete regional financial integration.

Monetary policy instruments

While African countries have made some progress in moving away from distortive regulatory instruments (eg credit ceilings, directed lending and interest rate controls), they still rely on a limited number of mainly direct instruments (Table 3). Market-based instruments include sales of foreign exchange and primary auctions of treasury bills, while interest rates play a secondary role in monetary targeting regimes.

Table 3

Primary instruments of monetary policy

	Credit ceilings	Reserve/ liquid asset require-ments	Discount/ policy rate	Open market operations	Foreign exchange market operations	Moral suasion	Others
Botswana		✓	✓	✓		✓	
Ghana		✓	✓	✓			
Kenya		✓	✓	✓	✓	✓	
Lesotho		✓		✓			
Madagascar		✓	✓	✓	✓	✓	
Mauritius		✓	✓	✓	✓	✓	
Morocco		✓		✓	✓		
Mozambique				✓			
South Africa				✓	✓		
Seychelles		✓					
Swaziland			✓				
Tanzania		✓	✓	✓	✓	✓	
Tunisia		✓		✓	✓		
Uganda				✓			
Zambia		✓		✓	✓	✓	

Source: Central bank responses to BIS questionnaire.

Effective reserve ratios for banks are relatively high in African countries. Reserve requirements might serve different purposes: as a monetary policy instrument; to reduce the cost of government deficit financing; and as a prudential tool. Changes in reserve ratios have in part been used to regulate liquidity in the banking system because of the lack of a functioning interbank money market. Even the market for treasury bills is often illiquid. This has limited the scope for open market operations of central banks. In some countries, reserve requirements are supplemented by a liquid asset requirement that is used as a monetary and prudential tool and is sometimes also motivated by the need to reduce the cost of deficit financing. Studies have generally found such tools ineffective and distortive for monetary policy purposes, although they might be effective for other purposes (Gulde (1995)). Since many central banks only partially remunerate required reserves, the reserves constitute a tax on banks and partly explain the large margin between deposit and lending rates in the banking system.

4. Monetary policy during the global financial crisis

For most of Africa, the global financial crisis did not involve insolvent banks or malign financial engineering but rather the impact of the global recession on export demand and commodity prices, tourism receipts, remittances and foreign direct investment. But for middle-income countries with stronger financial linkages to international capital markets – predictably – the effects of the crisis were also related to portfolio flows, and these countries were hit particularly hard.

For instance, South Africa's current account deficit ranked high among emerging market economies because of a low saving rate relative to its investment rate – the so-called "chink in the armour" (Reuters (2008)) – and tended to be financed by large portfolio inflows, which are more volatile than foreign direct investment flows. Indirectly, the impact on the South African banking system was also felt in other countries, as South African banks cut their lending to branches in other countries (World Bank (2010)). The South African banking sector was also affected by the sharp decline in equity prices during the crisis. The fall in equity prices had a further negative impact on private consumption via the wealth effect.

Nigeria's banking system was also affected by the crisis since the banks had expanded lending significantly in the years before the crisis and relied heavily on foreign financing. They were also engaged in margin lending for equity investments. With the sharp decline in equity prices, banks' assets declined in tandem. Some banks also had sizeable off-balance sheet instruments that concealed nonperforming loans. In fact, it was a home-made problem accentuated by the global financial crisis. In the end, the Central Bank of Nigeria intervened in five banks in August 2009. Liquidity support amounted to about $2.8 billion (2½% of non-oil GDP) (IMF (2009b)). Other countries where declines in local equities affected the banking sector were Kenya and Uganda.

In Ghana, the crisis revealed weaknesses in selected banks (eg, loan concentration in the petroleum sector). Those weaknesses, as well as a slowdown in economic growth, weaknesses in banks' risk management and losses by some state-owned energy enterprises, led to a sharp increase in nonperforming loans (IMF (2010b)).

In the CFA franc zone, Benin and Togo experienced financial sector distress, which partly originated in the domestic economy but was accentuated by the global recession.

While African banks are partly owned by foreign banks, these parent banks did not in most cases withdraw funds to a large extent. However, local banks nevertheless got into difficulties. In South Africa, some foreign-owned banks reduced their lending in order to avoid maturity mismatches on their balance sheets (South African Reserve Bank (2010)).

African countries were generally spared from currency mismatches on the balance sheets of the government, banks and the private sector. As a result, currency valuation losses in the face of significant local currency depreciations were in general limited. Governments had benefitted from debt relief, which had reduced their foreign currency obligations. Moreover, only a few countries had begun to tap international capital markets (eg Gabon and Ghana). One should note in particular that several countries were on the verge of issuing international bonds when the crisis hit (eg Kenya, Nigeria, Tanzania and Zambia).

Africa nevertheless suffered from the indirect effects of the crisis on the balance sheets of the banks. These effects included a drop in export demand and commodity prices and thereby also a decline in the quality of bank loan portfolios. In addition, interest rate spreads increased and the availability of foreign credit declined. Equity markets declined across the board in line with equity markets globally. Likewise, African currencies depreciated in line with developments in other emerging regions (Graph 7). And capital flowed out of the countries where foreign investors had been attracted by the high local currency yields (eg Ghana, Uganda and Zambia).

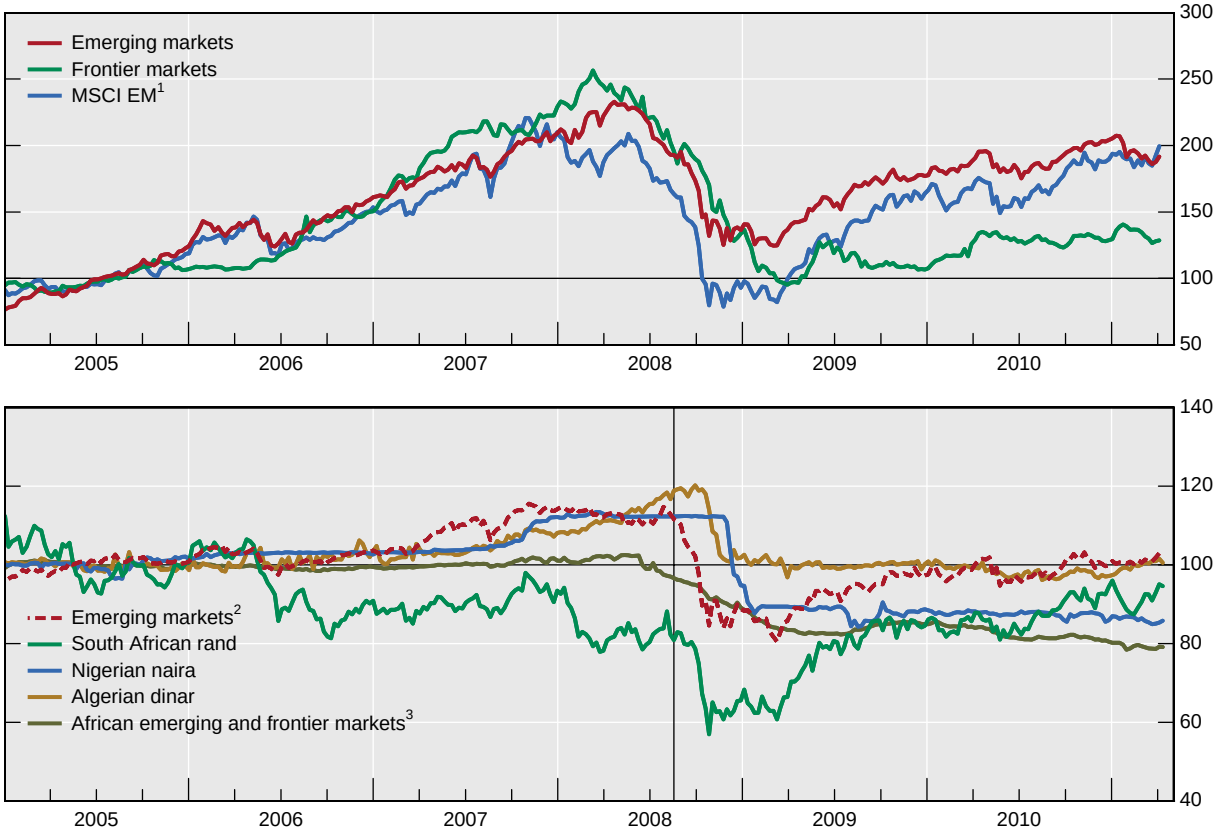
During the recent crisis, African countries were generally in a stronger economic position in terms of fiscal and debt positions and inflation performance than during previous exogenous

shocks. This allowed the countries with flexible exchange rate regimes to pursue countercyclical fiscal and monetary policies. However, food comprises a large share of the consumer price index. A rise in food prices could have therefore easily affected inflation expectations. On this occasion, central banks generally made the right call in judging that the pick-up in inflation was largely due to commodity price shocks and was therefore likely to be temporary provided there were no second-round effects on the rate of inflation. The central banks therefore shifted to easing monetary policy in line with the policies pursued in advanced economies. To dampen the impact on exchange rates, many central banks used their foreign exchange reserve cushions. If the circumstances had been different, eg if the commodity price increases had not been followed by the global recession, which took the wind out of inflation expectations, the policy response might well have been different.

Graph 7

Stock market indices and exchange rates for emerging and frontier market economies

2005 = 100



Note: Vertical line marks 15 September 2008, when Lehman Brothers filed for bankruptcy.

[1] Morgan Stanley Emerging Market Composite price index. [2] 2005 PPP weighted average of exchange rates for Brazil, India, South Korea, Mexico and Turkey. [3] 2005 PPP weighted average of exchange rates against US dollars for Egypt, Tunisia, Kenya, Mauritius, Mozambique, Ghana, Seychelles, Uganda and Zambia. An increase indicates appreciation of the local currency.

Source: Bloomberg.

Against this background, the main issue was whether central banks shifted gears too late after the food price shock and eased liquidity and interest rates too late (or not by enough) to soften the impact of recession abroad on domestic growth. In fact, because inflation came down quickly in many countries, real interest rates might have increased (IMF (2010c)). Moreover, the build-up of liquidity in the banking system also reflected growing risk aversion, which might have called for monetary accommodation (eg in Zambia) (Baldini et al

(forthcoming)). One important consideration for policymakers was therefore how long the exogenous shocks would last. This was more difficult to evaluate during the global financial crisis because, in addition to the multitude of channels by which external shocks affect policy, the risk premium on domestic assets increased as banks and investors became more risk averse during the global slowdown.

The next section discusses in more detail how different monetary policy transmission channels have operated during the crisis.

Transmission channels of monetary policy during the crisis

Interest rate channel

Policy rates were initially increased in many countries during 2008 in response to the inflationary threat from food price increases. However, as export demand, tourism, remittances and foreign direct investment weakened, central banks lowered policy rates. In responses to a BIS questionnaire, most central banks indicated that they attach high importance to this transmission channel (Table 4). Movements in policy rates are only effective to the extent they influence the deposit and lending rates of banks and thereby possibly economic activity.

Table 4

Monetary policy transmission mechanism

5 (most important) to 0 (least important)

	Interest rate channel	Asset price channel	Exchange rate channel	Credit/bank lending channel	Expectations channel
Botswana	✓	0	0	✓	✓
Ghana	5	1	4	3	2
Kenya	5	3	4	5	3
Lesotho	✓	0	✓	0	0
Madagascar	✓	0	0	✓	0
Mauritius	4	1	5	3	2
Morocco	0	0	5	5	0
Mozambique	5	0	0	0	0
South Africa	5	3	3	5	2
Seychelles	✓	0	✓	✓	0
Swaziland	5	0	3	2	0
Tanzania	3	0	1	2	0
Tunisia	1	0	3	3	0
Uganda	✓				
Zambia	3	3	0	3	2

Note: A tick indicates that only those channels are used, with no ranking given.

Source: Central bank responses to BIS questionnaire.

Although many central banks lowered their policy rates to reduce domestic interest rates and stimulate domestic activity (Graph 8), domestic rates often drifted upwards in response to rising global risk premiums. This happened in particular in countries with open capital accounts and a floating exchange rate system, thus negating the intended relaxation of monetary policy (IMF (2010a)).

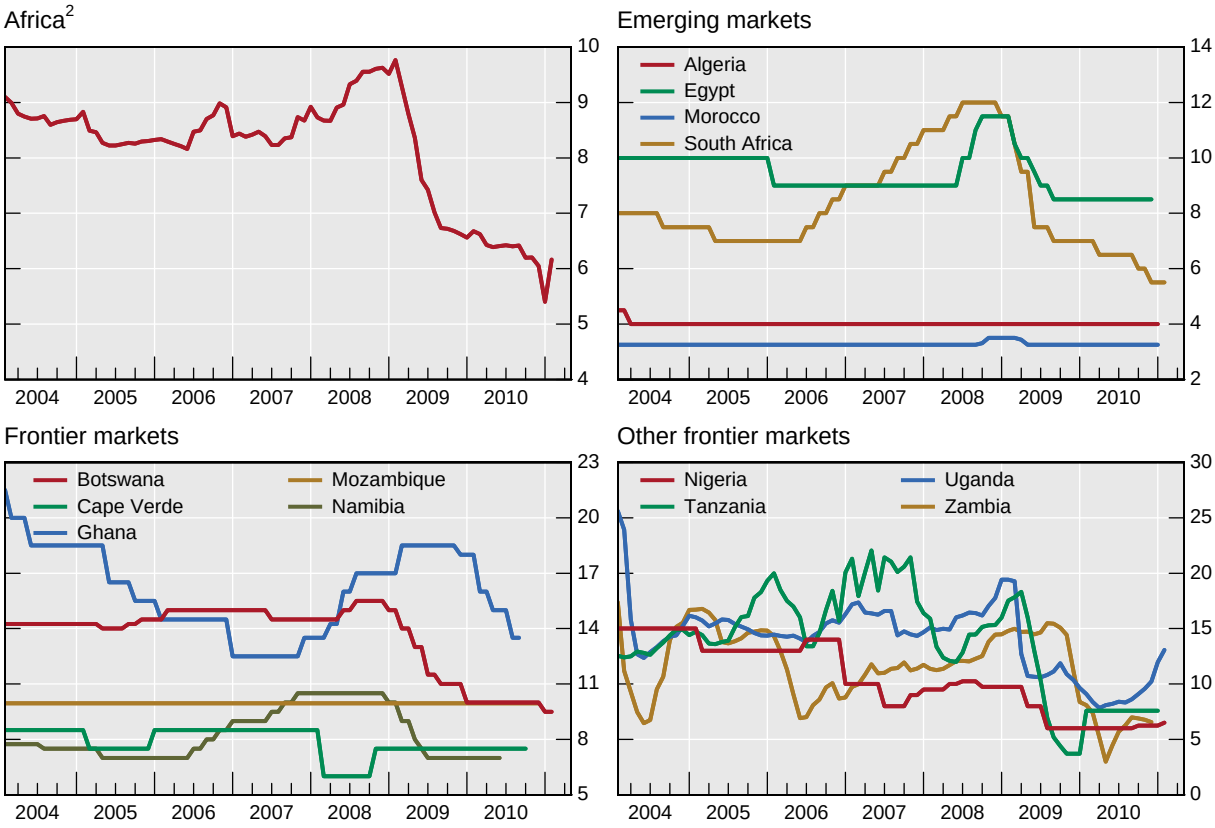
An additional complication in assessing the interest rate channel is the importance of informal credit markets in Africa. For instance, tighter monetary policies may divert demand to the large informal credit sector and so lead to a sharp rise in the cost of credit (informal market rates may rise faster than formal market rates). Because demand effects may come with a considerable lag, tighter monetary policies may be associated with a short-run rise in cost-push inflation, with implications for the effectiveness of monetary policy to stabilise the economy.

The transmission of interest rates varied among countries. In some cases, an oligopolistic market structure limits competition and allows banks to change profit margins rather than pass on the policy rate changes to borrowers. In the more developed emerging market economies, such as South Africa, there is typically a close link between the policy rates and lending rates. But while the link was still present, the spread between the policy rate and the lending rates increased due to general risk aversion strategies practiced by the banks. In Egypt, the response in lending rates to a reduction in the policy rate was also modest. In several frontier market economies, lending rates also lagged the decline in the policy rate. For instance, at several banks in Zambia, the lower policy rate did not pass through to lending rates (Fundanga (2009)). The link was weakest when policy rates were reduced, thereby also lowering the effectiveness of the interest rate channel in providing countercyclical support to economic activity.

Graph 8

Policy rates[1]

In per cent



[1] Policy rates are from line 60 in the IMF's IFS. [2] Weighted by GDP.

Source: IMF, International Financial Statistics.

Fixed exchange rate countries (members of the CFA franc zone and the rand Common Monetary Area) had only a limited opportunity for pursuing an independent monetary policy. The BCEAO and the BEAC central banks reduced their policy rates to only a very limited

extent, although there might have been more room for cuts when the European Central Bank started to reduce its policy rate. In mid-2009, for example, the ECB reduced its lending rate by 200 basis points, while the BEAC responded with a 50 basis point reduction (Wakeman-Linn et al (2009)).

Credit channel

Bank lending to the private sector had been expanding rapidly in many African countries before the crisis. The annual growth rate reached some 20–55% in half the cases, although it was more modest in the fixed rate CFA franc zone (for example about 7% in Cameroon and 14% in Senegal) (Table 5). The growth was fuelled in part by large capital inflows and by a monetary policy that in some cases was too accommodative to stem rising inflation (apart from that induced by rising food and oil prices).

Table 5

Growth of bank credit to the private sector in selected African countries

Year-on-year growth rates, in per cent, period averages[1]

	January 2005–September 2008	**September 2008–April 2009**	**April 2009–latest[2]**
Emerging market			
Algeria	20.7	16.2	15.5
Egypt	9.1	9.3	3.0
Morocco	18.3	18.2	10.0
South Africa	20.8	9.2	2.9
Tunisia	8.9	14.6	13.4
Frontier market			
Botswana	19.2	22.7	11.3
Cape Verde	22.0	23.7	11.2
Ghana	46.4	46.3	
Kenya	15.5	24.4	15.8
Mauritius	13.9	20.0	5.6
Mozambique	28.5	56.9	48.8
Namibia	14.7	9.4	9.3
Nigeria	54.4	37.9	18.6
Seychelles	15.0	32.5	9.5
Tanzania	32.9	26.9	16.1
Uganda	26.0	43.5	21.2
Zambia	40.3	42.3	–0.4
Selected financially developing			
Angola	72.7	60.2	53.2
Cameroon	7.1	16.2	9.1
Congo, Dem Rep of	13.3	66.0	31.9
Ethiopia	31.9	37.5	
Lesotho	30.8	19.4	21.4
Madagascar	24.1	17.6	9.4
Senegal	14.4	13.6	4.8
Swaziland	25.0	3.7	6.8
Malawi	38.7	106.0	56.3

[1] Calculated from end-of-quarter claims on the private sector. [2] Q3 2010 if available.

Source: IMF, International Financial Statistics; BIS calculations.

In the case of Nigeria, bank lending before the crisis grew at the expense of loan quality – annual growth rates of credit exceeded 50% during first quarter of 2005 and the third quarter of 2008 (World Bank (2010)). The crisis put a brake on bank lending in several countries, particularly those in the rand area. The emerging market economies in North Africa continued the modest rates of expansion, with some slowdown in Egypt and Morocco in the most recent period.

Buoyant credit growth to the private sector has raised prudential concerns, since many countries do not confer legal rights whereby credit reference bureaus can pool information on borrowers and creditors can foreclose on defaulters (Kasekende and Brownbridge (2010)).

Asset price channel

Underdeveloped financial markets have an important impact on the effectiveness of monetary instruments. In particular, changes in policy interest rates might not affect the economy at large if interbank markets are weak or bond and treasury bill markets shallow. For example, the development of markets for securities enhances the flexibility of lending rates (Cottarelli and Kourelis (1994)). In the low-income countries, bond markets are still in the early stages of development and are dominated by short-term government bonds. Corporate debt markets are largely non-existent except in the emerging market economies. Interbank markets are also weak. While the financial sector in Africa, in particular in the low-income countries, has been among the least developed in the world, important changes have taken place to deepen the markets during the past decade.

In the years before the global financial crisis, international investors showed increasing interest in local currency bond markets in Kenya, Nigeria, Uganda and Zambia. They sought diversification of risks and high yields when the exchange rates of the local currencies in Africa were relatively stable. Some of these factors have changed.

Fuelled by easing monetary conditions, the local currency bond yields are no longer as attractive, especially considering the required risk premium. In addition, the higher variability in exchange rates has increased the risk of investment in African securities. Moreover, the markets remain shallow and secondary markets almost non-existent because the base of institutional investors (eg pension funds and insurance companies) in African countries is still weak. This entails costs in terms of exiting the market. The degree to which the global financial crisis damaged the nascent financial markets in Africa remains to be seen. There are signs that foreign investors are coming back to African markets, although it is still too early to tell whether the inflows will be at the same level as before.

Some of the frontier market economies with relatively developed financial markets have taken several measures to deepen the local markets. In Kenya, the government during 2010 executed four large bond issues to finance infrastructure at maturities of up to 25 years, which is highly unusual in Sub-Saharan Africa. In early 2011, the Central Bank of Kenya auctioned a 30-year development bond, the longest maturity ever issued in Kenya. In addition, the East African Community (Burundi, Kenya, Tanzania, Uganda and Rwanda) has started to harmonise capital market regulations to ease the movement of capital among the EAC member countries. The work includes creation of a single stock exchange for the region and common regulatory and accounting frameworks (*Business Daily* (2011)). In the short term, the best prospect for African countries might be to develop their local currency markets through a broadening in the domestic investor base.

The exchange rate channel

The exchange rate channel is particularly important in small open economies with a flexible exchange rate. A monetary expansion would tend to reduce the real interest rate and lead to a depreciation of the currency, which would increase exports, reduce imports and thereby boost aggregate demand. A depreciation is also likely to raise domestic inflation in the short term by raising import prices. This impact is often accentuated through expectations about inflation, as the exchange rate is a visible real-time indicator of financial conditions. This is

particularly the case in countries with few timely statistics and information available to the general public about the health of the economy. In such countries, the exchange rate is often an early indicator of the monetary conditions and inflationary pressures in the economy.

The exchange rate is also an additional instrument for central banks. In the words of Stanley Fischer, "I see the instrument of intervention in the foreign exchange market as in effect giving the central bank an extra instrument (or at least an extra half instrument) of policy, which enables it not only to target inflation but also to have some influence on the behaviour of the exchange rate" (Fischer (2011)).

Responses to a BIS questionnaire suggest that, for Mauritius, the exchange rate channel is the most important channel for transmission of monetary policy (Table 4). It is considered the second most important transmission channel in Kenya and among the most important ones in South Africa (as important as the asset price channel).

Table 6

Volatility of African countries' exchange rates[1]

	January 2005–September 2008	September 2008–April 2009	April 2009–February 2011
Against the US dollar			
Emerging market			
Algeria	0.65	0.75	0.30
Egypt	0.08	0.17	0.13
Morocco	0.38	0.89	0.53
South Africa	1.07	3.28	1.17
Tunisia	0.35	0.84	0.53
Frontier market			
Botswana	0.48	0.64	0.36
Cape Verde	0.50	1.23	0.60
Kenya	0.38	0.65	0.34
Mauritius	0.32	1.24	0.92
Mozambique	0.99	0.83	1.06
Namibia	1.07	3.28	1.17
Ghana	0.33	0.45	0.39
Nigeria	0.18	0.55	0.33
Seychelles	0.69	3.86	1.80
Tanzania	0.58	1.07	0.54
Uganda	0.37	0.86	0.59
Zambia	0.78	1.54	0.75
Selected financially developing			
Angola	0.08	0.12	0.16
Congo, Dem Rep of	0.56	1.55	0.77
Ethiopia	0.10	0.22	0.30
Lesotho	1.07	3.28	1.17
Madagascar	0.27	0.00	0.21
Malawi	0.27	0.00	0.21
Swaziland	1.07	3.28	1.17
Against the euro			
Algeria	0.70	1.04	0.56
Egypt	0.42	0.98	0.59
Morocco	0.13	0.38	0.18
South Africa	0.95	2.69	1.02
Tunisia	0.21	0.54	0.30

[1] Unweighted average of five-day moving standard deviation of exchange rates.

Source: Bloomberg; BIS calculations.

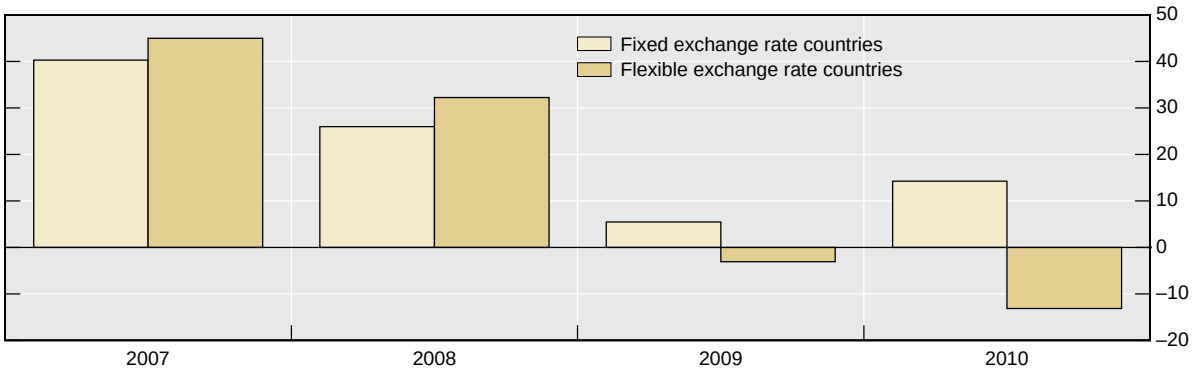
How has the exchange rate regime helped countries manage the effects of the global financial crisis? Most central banks allowed greater variability in the exchange rate during the crisis (September 2008–April 2009) than in the preceding period (Table 6). A few countries (eg Nigeria) tried initially to resist the downward pressure on the currency, in part because depreciation made it more difficult to achieve the inflation objective. Eventually, however, in the cases where the balance of payments pressure mounted, central banks let the exchange rate go. This helped protect the level of reserves, and there were no major losses (Graph 9). Interestingly, the countries with flexible exchange rate regimes seem to have had larger movements in their reserves than the fixed exchange rate countries. This might be explained by the fact that several so-called flexible exchange rate countries have in practice tried to stabilise the exchange rate, which has led to a decline in reserves. The exchange rate fluctuated quite dramatically in some countries. For example, in Zambia, the kwacha depreciated by 38% against the US dollar between mid-2008 and mid-2009.

In general, the deceleration in growth was smaller for the floating exchange rate countries. The fixed exchange rates helped contain the inflationary pressures, as could be expected, but they also made the deterioration of the external current account balance worse than for the floating exchange rate countries. The crisis was weathered best by countries that allowed currency depreciation.

Graph 9

Growth of foreign exchange reserves[1]

Annual percentage change



[1] Weighted by GDP.

Source: IMF, International Financial Statistics.

The expectations channel

Expectations of changes in interest rates, prices and the exchange rate have an important bearing on the effectiveness of monetary policy because they can influence transmission through any of the other channels of monetary policy. This is particularly the case when the central bank has gained credibility and its actions become predictable, ie, when the central bank actively communicates its policy to the public.

While this is a more recent development of monetary policy, there are indications that it is also gaining significance in Africa. In responses to a BIS questionnaire, the central banks in the more developed financial centres indicated that the expectations channel was important. In South Africa it was considered one of the transmission mechanisms. In Kenya, there are indications that the expectations channel is also becoming more significant after the introduction of the Monetary Policy Committee (MPC) market surveys on key economic indicators in September 2009. These surveys have improved the signalling of monetary policy through enhanced communication with the market. In Mauritius, the expectations channel is also believed to have gained in importance, as the decisions of its MPC have

been communicated and explained to the public. The MPC's assessment of inflation and economic growth receives extensive discussion in the media, which could affect wage and price setting behaviour in the economy.

5. Conclusion

African countries span a highly diverse set of financial and monetary policy circumstances ranging from very rudimentary financial systems with limited transmission mechanisms to relatively well developed systems and mechanisms. But irrespective of country and monetary regime, all central banks in Africa share the objectives of price stability, economic growth and financial stability.

Across the continent, the reductions in fiscal dominance and excess liquidity have tended to make monetary policy more effective. What is still missing in many countries is the development of financial markets, including efficient interbank markets, securities of longer maturities to establish yield curves and deeper equity markets. In that regard, financially developing economies in Africa lag behind low-income countries in other regions, including Asia. Unfortunately, the global financial crisis was a setback for many frontier market economies that had begun to build up local currency debt markets. But this was the risk of relying mainly on a foreign investor base. On the positive side, the setback might also have been a wake-up call for policymakers to examine whether all the prudential conditions for development of such markets were in place. And policymakers in Africa have to prepare for greater reliance on private capital flows.

During the global financial crisis, policymakers used monetary policy actively to counter the recessionary impact of the collapse in demand from abroad. The crisis also demonstrated the importance of the initial economic conditions. Countries that had policy space in terms of both fiscal and monetary conditions, were in a better position than others to pursue countercyclical policies. For countries that had large fiscal and external imbalances, however, the initial weaknesses were intensified, and the banking systems suffered additional losses in terms of nonperforming loans. In some cases, it was a challenge to shift quickly from a tight monetary policy following the food price shock to the easing of monetary policy during the global recession. It showed the importance of a forward-looking monetary policy.

While the global financial crisis is ebbing, other exogenous shocks are again hitting Africa, as well as the rest of the world.[7] Prices for food and oil are again rising as of the beginning of 2011, which poses dilemmas for monetary policy. To the extent that these shocks reflect temporary declines in the terms of trade for food and oil importers, monetary policy might accommodate the initial impact of the shocks. The challenge is to not accommodate any secondary impact on prices from these price adjustments so that inflation will again come down. This is particularly difficult for countries with a recent history of high rates of inflation because price increases in those cases can quickly fuel inflationary expectations.

The oil price increases of 2008 might be a poor predictor of the required policy response for the current oil price increase – the oil price came down quickly in 2009 because of the global recession and therefore had a transitory effect on inflation. If oil prices remain high in a different cyclical setting, the appropriate stance of monetary policy might have to be somewhat tighter than in 2009.

As to whether monetary policy is inherently different in Africa, its essential features, goals and needs are similar to those in other regions of the world: the objectives of supporting low inflation and economic growth and financial stability; the need for central bank independence

[7] The latest IMF forecasts for Africa are summarised in Appendix Table A2.

from the government to pursue monetary policy free of political interference; the importance of sound public finances for the effectiveness of monetary policy; the key transmission mechanisms of monetary policy; and, importantly, the need for credibility of the central bank in pursuit of monetary policy, both domestically and internationally. And like other developing regions, it faces structural changes, which render the demand for money unstable and make monetary policy implementation difficult. What is different about Africa is the state of its information and statistics, which impedes timely and accurate economic analysis; the poor enforceability of contracts; the shallow financial markets that undermine the effectiveness of monetary policy; and the high exposure of the African economies to exogenous shocks

Finally, and importantly, central banks always need to be aware that the short track record most of them have had in achieving low inflation will continue to test their credibility and limit the space for monetary policy (Plenderleith (2003)).

Appendix

Table A1

African countries, by level of financial depth

	Fixed exchange rate	Flexible/managed exchange rates	Oil exporters
Emerging market economies (5)			
Algeria		X	X
Egypt		X	
Morocco	X		
South Africa		X	
Tunisia		X	
Frontier market economies (12)[1]			
Botswana	X (currency basket)[2]		
Cape Verde	X (euro)		
Ghana		X	
Kenya		X	
Mauritius		X	
Mozambique		X	
Namibia	X (CMA)		
Nigeria		X	X
Seychelles		X	
Tanzania		X	
Uganda		X	
Zambia		X	
Financially developing economies (36)			
Angola		X	X
Benin	X (CFA franc)		
Burkina Faso	X (CFA franc)		
Burundi		X	
Central African Republic	X (CFA franc)		
Cameroon	X (CFA franc)		X
Chad	X (CFA franc)		X
Comoros	X (euro)		
Congo, Democratic Republic of		X	
Congo, Republic of	X (CFA franc)		X
Djibouti	X (US dollar)		
Eritrea	X (US dollar)		
Equatorial Guinea	X (CFA franc)		X
Ethiopia		X	
Gabon	X (CFA franc)		X
The Gambia		X	
Guinea		X	
Guinea-Bissau	X (CFA franc)		
Ivory Coast	X (CFA franc)		
Lesotho	X (CMA)		
Liberia		X	

Table A1 (cont)

African countries, by level of financial depth

	Fixed exchange rate	Flexible/managed exchange rates	Oil exporters
Libya	X (SDR)		X
Madagascar		X	
Malawi		X	
Mali	X (CFA franc)		
Mauritania		X	
Niger	X (CFA franc)		
Rwanda		X	
São Tome & Principe	X (euro)		
Senegal	X (CFA franc)		
Sierra Leone		X	
Somalia		X	
Sudan		X	X
Swaziland	X (CMA)		
Togo	X (CFA franc)		
Zimbabwe	No separate legal tender – US dollar is the principal currency		

[1] Countries that have either tapped international capital markets or have attracted foreign investors into local currency markets. The selection criteria include bank assets to GDP and the degree of capital market development (see IMF (2009)). [2] Botswana has a crawling peg to a basket comprising the currencies of the SDR and the South African rand, which is adjusted to the prospective rate of inflation in the countries of the basket.

Table A2

The outlook for Africa in 2011

	Real GDP		Inflation[1]		Current account[2]	
	2010	**2011**	**2010**	**2011**	**2010**	**2011**
North Africa	**3.8**	**2.5**	**5.4**	**5.9**	**–0.4**	**0.4**
Algeria	3.3	3.6	4.3	5.0	9.4	17.8
Egypt	5.1	1.0	11.7	11.5	–2.0	–2.7
Morocco	3.2	3.9	1.0	2.9	–4.2	–5.7
Tunisia	3.7	1.3	4.4	4.0	–4.8	–7.8
Sub-Saharan Africa	**5.0**	**5.5**	**7.5**	**7.8**	**–2.4**	**0.4**
Angola	1.6	7.8	14.5	14.6	–1.8	6.2
Botswana	8.6	6.0	7.0	7.8	–2.5	–2.4
Congo, Dem Rep of	7.2	6.5	23.5	12.0	–6.8	–2.8
Ethiopia	8.0	8.5	2.8	12.9	–4.3	–8.1
Ghana	5.7	13.7	10.7	8.7	–7.2	–6.8
Ivory Coast	2.6	–7.5	1.4	5.0	3.9	…
Kenya	5.0	5.7	3.9	7.2	–7.9	–9.3
Lesotho	2.4	3.1	3.8	5.4	–16.2	–23.4
Madagascar	–2.0	0.6	9.0	8.9	–13.4	–7.1
Malawi	6.6	6.1	6.9	6.6	–1.3	–3.8
Mauritius	4.0	4.1	2.9	7.4	–9.5	–11.6
Mozambique	7.0	7.5	12.7	9.5	–12.7	–12.0
Namibia	4.4	4.8	4.5	5.9	–1.1	–0.9
Nigeria	8.4	6.9	13.7	11.1	6.4	14.6
Senegal	4.2	4.5	1.2	3.9	–8.3	–11.5
Seychelles	6.2	4.0	–2.4	3.1	–50.7	–32.7
South Africa	2.8	3.5	4.3	4.9	–2.8	–4.4
Swaziland	2.0	0.5	4.5	7.9	–20.6	–16.0
Tanzania	6.5	6.4	10.5	6.3	–8.6	–9.5
Uganda	5.2	6.0	9.4	6.1	–9.9	–10.6
Zambia	7.6	6.8	8.5	9.0	3.8	5.9

Source: IMF, *World Economic Outlook*, April 2010.

[1] Changes in annual averages. [2] As a percentage of GDP.

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Capital flows, commodity price movements and foreign exchange intervention

Logan Rangasamy and Dubravko Mihaljek[1]

1. Introduction

Economic growth for the African continent averaged 5.8% per annum between 2001 and 2008, significantly higher than the 2.3% average growth rate achieved during the 1990s. Key external factors that supported this improved growth performance have been strong capital inflows and rising commodity prices. Their beneficial impact on growth has been reinforced by the adoption of prudent macroeconomic policies, which promoted market-friendly initiatives after decades of heavy state intervention in many economies.

Capital inflows have played an important role in financing investment and external deficits in many African countries. At the same time, higher commodity prices have helped improve external balances and growth outcomes in commodity-exporting countries. But large capital flows and volatile commodity prices have also led to greater macroeconomic volatility, real exchange rate appreciation, reduced external competitiveness and the build-up of balance sheet vulnerabilities in some countries.

To inform a discussion of these issues, this note provides a broad outline of developments in capital flows and commodity price movements in Africa over the past decade. Section 2 analyses trends in capital flows before, during and after the global financial crisis, and discusses briefly some effects of these developments on African economies. Section 3 looks at commodity prices and their macroeconomic effects in Africa. Section 4 discusses some policy challenges associated with foreign exchange market intervention in the context of volatile capital flows and commodity price movements. Section 5 concludes.

2. Capital flows

Developing countries and Africa

During 2001–07, net private capital inflows to developing countries increased fivefold, peaking at around $1.1 trillion in 2007 (Table 1).[2] As a ratio of GDP, net private capital inflows rose from around 4% in 2001 to just over 9% in 2007. The largest recipients at the regional level were East Asia and the Pacific, Latin America and the Caribbean, and Europe and Central Asia; together they accounted for 83% of all net private capital inflows to developing countries in 2007 (89% in 2001).

There has also been a rapid increase in net private capital inflows to Africa: the inflows to sub-Saharan Africa amounted to $51 billion in 2007, four times higher than in 2001. While the share of sub-Saharan Africa in net capital inflows to developing countries remained fairly constant at around 5% during this period, the inflows increased as a share of the region's GDP from 3% in 2001 to 7% in 2007. This compares quite favourably to most of the other developing country regions (Table 1).

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[1] The authors wish to thank Stephen Cecchetti, Serge Jeanneau, Philip Turner and Benedicte Vibe Christensen for comments, and Emir Emiray, Emese Kuruc and Agne Subelyte for research assistance.

[2] For recent analyses of developments in capital flows to emerging market economies (EMEs), see BIS (2008) and CGFS (2009).

After the outbreak of the financial crisis, net private capital inflows to developing countries declined by 53% between 2007 and 2009. There has also been a regional redistribution of inflows: all developing regions were able to increase their shares at the expense of Europe and Central Asia. In particular, the share of sub-Saharan Africa increased to 8% of all net inflows to developing countries in 2009, from 5% in 2007, the peak year of inflows (see also Chauvin and Geis (2011); and IMF (2010a) and (2010b)).

Table 1

Net private capital inflows by region

	In billions of US dollars				As a percentage of total flows			As a percentage of GDP	
	2001	2007	2008	2009	2001	2007	2009	2001	2007
Developing countries	223	1,110	716	522	100	100	100	4	9
East Asia and Pacific	83	286	184	186	37	24	32	5	7
South Asia	8	113	53	68	4	10	13	1	8
Europe and Central Asia	29	413	251	58	13	40	15	3	15
Middle East and North Africa	5	28	23	26	2	2	5	1	3
Sub-Saharan Africa	11	51	34	36	5	5	8	3	7
Latin America and Caribbean	87	219	171	148	39	19	28	4	6

Source: World Bank (2011).

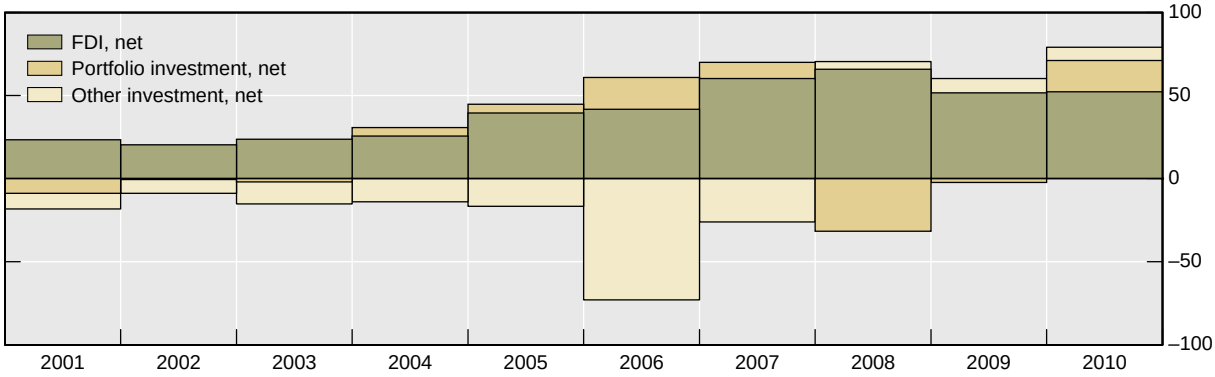
Regions within Africa

For the 53 African nations for which the IMF's *World Economic Outlook* data are available, net private capital inflows increased by a factor of 16 over the past decade, from $5 billion in 2001 to $79 billion in 2010 (Appendix Table A1). The largest increase in net inflows was recorded in Africa's emerging markets (Algeria, Egypt, Morocco, South Africa and Tunisia), followed by frontier markets (Botswana, Cape Verde, Ghana, Kenya, Mauritius, Mozambique, Namibia, Nigeria, Seychelles, Tanzania, Uganda and Zambia) and financially developing countries (all the remaining ones). The emerging markets accounted for 54% of net private capital inflows to Africa in 2010 ($43 billion); the frontier markets for 20% ($16 billion); and financially developing countries for 26% ($21 billion) (Appendix Table A1). In terms of GDP, the net inflows were the highest for Africa's frontier markets (10.3%), followed by the emerging markets (4.9%) and financially developing countries (2.9%).

Graph 1

Net private capital inflows to Africa

In billions of US dollars



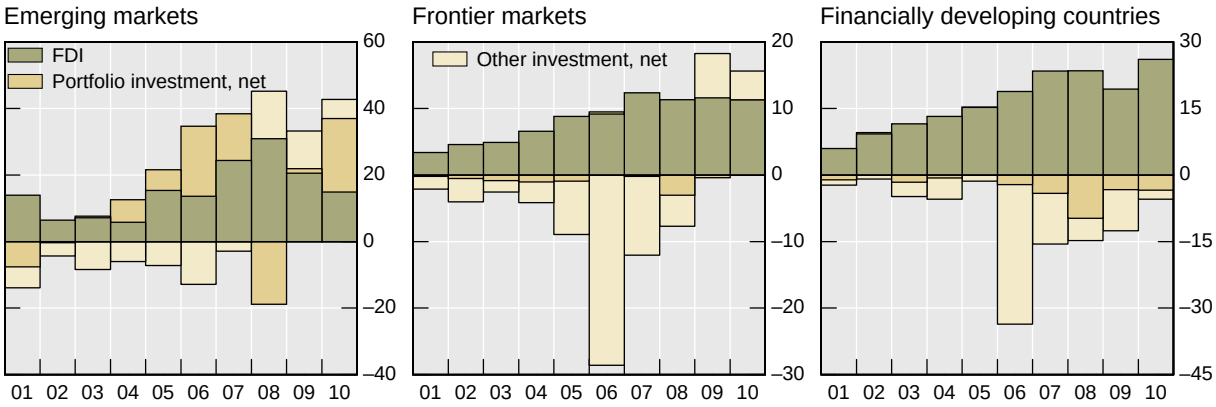
Source: Balance of payments data based on IMF and IFS.

The breakdown of private capital inflows into balance of payments components – foreign direct investment (FDI), portfolio investment and other investment – reveals some interesting cross-regional variation within Africa. Emerging markets experienced a strong increase in FDI from 2002 to 2008. However, over the past two years the crisis has led to the halving of FDI in these markets (Graph 2, left-hand panel). By contrast, portfolio inflows were surprisingly strong in 2010, exceeding FDI by some $5 billion. African emerging markets were also the largest recipients of net portfolio inflows before the crisis, especially in 2006–07. But their reversal in 2008 was pronounced.

Graph 2

Net private capital inflows to Africa

In billions of US dollars



Source: IMF, *World Economic Outlook*, October 2010.

Unlike Africa's emerging markets, FDI inflows to the frontier markets and financially developing countries have been essentially undisturbed by the crisis (Graph 2, centre and right-hand panels). However, there have been very large net outflows of other investment in 2006 (discussed below), and – together with portfolio investment – significant outflows during the crisis in 2007–09, especially from financially developing countries. In frontier markets other investment inflows recovered in 2009 and 2010 (Graph 2, centre panel).

Composition of capital inflows

Private capital inflows to Africa have been dominated by **foreign direct investment**, which accounted for two thirds of all net inflows in 2010 (Graph 1). FDI was rising almost without interruption from 2001 until 2008, when it peaked at around $66 billion. It was remarkably resilient during the crisis, averaging around $50 billion per annum in 2009 and 2010, about 3% of Africa's GDP. The steady growth of FDI in Africa is not surprising considering that the return on such investment is among the highest globally (UNCTAD (2008)). Much of FDI has taken place in natural resource-intensive sectors as a result of the strong rise in prices of metals, crude oil and natural gas. The major recipients have been Algeria, Egypt, Morocco, Nigeria, South Africa and Tunisia (Graph 3, left-hand panel).

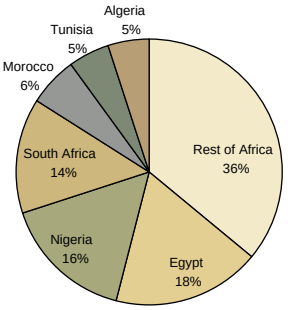
More recently, Africa has also strengthened its investment ties with developing countries as a result of growing South-South FDI flows. In particular, there has been a strengthening of investment relations between Asia and Africa (Graph 3, right-hand panel). Most of these investments involve Asia's state-owned enterprises such as CNOOC (China), Petronas (Malaysia) and ONGC (India). China's FDI stock in Africa amounted to around $8 billion in 2008, of which 40% was in South Africa (UNCTAD (2010)). In recent years, Chinese private investors have also increased their presence in many African countries (Gu (2009)). About 9% of India's total outward FDI is destined for the African continent, with Ivory Coast, Senegal and Sudan being some of the major recipients. Intraregional FDI in Africa has also

increased over time. For example, the share of African countries in South Africa's FDI stock increased from 5% in 2000 to 22% in 2008. According to UNCTAD (2010), there were a total of 2,250 South African projects in African countries in 2009, in areas such as infrastructure, telecommunications, energy and mining.

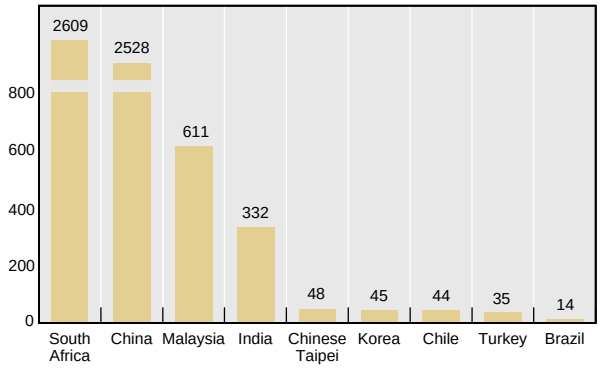
Graph 3

Foreign direct investment in Africa

FDI inflows by country, as a percentage of total



Major developing country investors in Africa[1]



[1] In millions of US dollars, 2006–08.

Sources: OECD (2010); UNCTAD (2010).

In terms of the **sectoral composition** of African FDI, particularly significant has been infrastructure investment, which plays an important role in expanding productive capacity, stimulating aggregate demand and improving resource allocation (McKinley (2009)). Infrastructure development has posed a serious constraint to Africa's economic growth in the past. However, FDI by emerging Asian economies has started to stimulate infrastructure investment on the African continent in recent years. For instance, the World Bank estimates the total value of various multi-year infrastructure related financing agreements signed in 2010 between China and Korea on one side, and Cameroon, Democratic Republic of Congo, Ghana and Nigeria on the other, at over $22 billion (Appendix Table A2).

Despite these developments, the narrowing of Africa's infrastructure gap, especially in power and transport, is estimated to require investments of over $30 billion per annum for the foreseeable future (Foster and Briceño-Garmendia (2010)). There is little doubt that both public and foreign investment are vital to address the infrastructure constraints in many African countries. One should note in this regard that foreign infrastructure investment does not crowd out domestic private investment if it is accompanied by capital inflows. Nor should it stretch domestic resources too far and put pressure on domestic prices – in the case of China's infrastructure investment in Africa, for instance, there is usually a large import content of material, services and labour, so any inflationary impact of such investment would tend to be small.

Net portfolio capital inflows were also rising before the crisis, especially to Africa's emerging markets (Graphs 1 and 2). In the past three years, however, portfolio flows on the continent became very volatile. In 2008, when the crisis struck, some $30 billion in portfolio capital flowed out of Africa. There were also small net outflows in 2009. But in 2010 portfolio capital flows recovered strongly, with some $25 billion returning to the continent (Graph 1). The returning inflows benefited almost entirely Africa's emerging markets (Graph 2, left-hand panel).

A more detailed breakdown for a subset of these flows – into dedicated funds for individual African countries and developing country funds for which country or regional decomposition is available – shows that South Africa has been by far the largest destination for portfolio capital in Africa (Graph 4, upper left-hand panel). Portfolio capital flows to South Africa were quite volatile already before the crisis in 2008. They rebounded very quickly in 2009 and 2010, reaching historical peaks in the second half of 2010. However, in the first quarter of

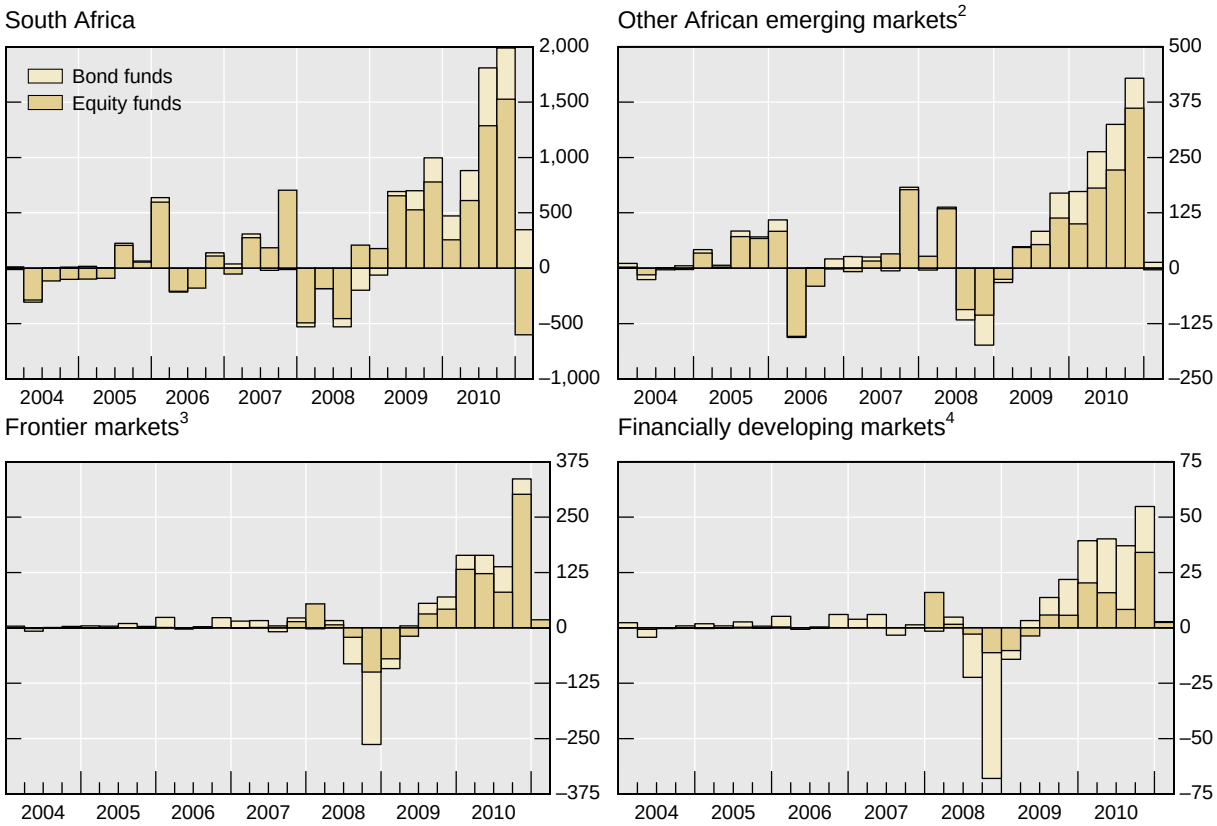
2011 there were net outflows from South Africa's equity funds, though flows into its bond funds remained relatively large.

For other African emerging markets, the pattern of portfolio flows was very similar to that of South Africa; one can notice especially the strong reflows into equity and bond funds in 2010, and the subsequent abrupt stop of inflows in the first quarter of 2011 (Graph 4, upper right-hand panel). The same pattern was repeated – albeit with more volatility – for Africa's frontier markets (lower left-hand panel) and financially developing countries (lower right-hand panel). Notice in particular the large outflows from the bond funds in these markets after the collapse of Lehman Brothers in the fourth quarter of 2008. Portfolio flows to financially developing countries were characterised by a much higher proportion of inflows to bond funds than in other regions and South Africa, where the equity inflows dominated. In 2011, after a strong start in January, virtually all African markets experienced net outflows from equity and bond funds in February and March.

Graph 4

Net portfolio capital flows into African equity and bond funds[1]

In millions of US dollars



[1] Quarterly sums of weekly data up to 30 March 2011. Data cover net portfolio flows (adjusted for exchange rate changes) to dedicated funds for individual African countries and to developing country funds for which country or at least regional decomposition is available. [2] Algeria (bond funds only), Egypt, Morocco and Tunisia. [3] Botswana, Ghana, Kenya, Mauritius, Namibia, Nigeria, Tanzania (equity funds only), Uganda (equity funds only) and Zambia. [4] Bond funds: Democratic Republic of Congo, Gabon, Ivory Coast and Libya; equity funds: Ivory Coast, Malawi, Swaziland and Zimbabwe.

Source: EPFR.

Country decomposition based on the balance of payments data indicates that, in addition to South Africa, which received net portfolio inflows of $4.6 billion per year on average, Nigeria accounted for the bulk of portfolio inflows during 2000–09 ($0.7 billion per year; Appendix Table A3). More recently, some of the other countries, including Ghana, Kenya, Tanzania, Uganda and Zambia, started receiving small amounts of portfolio inflows. But

several countries, in particular Egypt, experienced net outflows of portfolio capital during 2000–09.

Other investment flows, which mostly comprise cross-border bank lending to African countries and deposits placed by African countries in foreign banks, were negative but fairly stable from 2001 to 2005 (Graph 1). In 2006, the outflows jumped to almost $75 billion (Graph 2), due to large placements of deposits by some oil-exporting countries (in particular Nigeria) in overseas banks. Since 2008, the pattern of these flows has reversed. As the crisis began and foreign investors withdrew from Africa and other emerging markets, many African countries withdrew their deposits from overseas banks to compensate for the loss of liquidity in local markets. This resulted in net inflows of other investment of about $10 billion per year.

To obtain better insight into trends in other investment flows, it is useful to look at the BIS locational banking statistics, which provide detailed information on external positions (claims and liabilities) of BIS reporting banks (mostly large international banks from advanced economies) vis-à-vis banks and the non-bank sector in Africa.[3] Claims of BIS reporting banks (which consist mainly of cross-border loans to African countries) vis-à-vis all sectors in Africa doubled between 2001 and 2010, with total amounts outstanding of close to $160 billion in the third quarter of 2010 (Table 2). The increase in cross-border lending was particularly pronounced for Africa's frontier markets.

Table 2

External positions of BIS reporting banks

Amounts outstanding, in millions of US dollars

	2001	2007	2009	Q3 2010
Claims on Africa				
Vis-à-vis all sectors	76,058	144,310	153,302	156,948
Emerging markets	39,669	76,201	72,334	73,732
Frontier markets	7,370	31,306	35,876	35,472
Financially developing economies	29,019	36,803	45,092	47,744
Vis-à-vis banks	20,237	47,987	54,387	56,830
Emerging markets	16,137	33,280	35,528	36,336
Frontier markets	1,799	10,513	11,151	11,309
Financially developing economies	2,301	4,194	7,708	9,185
Vis-à-vis non-banks	55,821	96,323	98,915	100,118
Emerging markets	23,532	42,921	36,806	37,396
Frontier markets	5,571	20,793	24,725	24,163
Financially developing economies	26,718	32,609	37,384	38,559
Liabilities to Africa				
Vis-à-vis all sectors	108,945	358,019	278,595	285,618
Emerging markets	52,466	136,494	93,570	92,279
Frontier markets	21,862	90,089	67,002	69,327
Financially developing economies	34,617	131,436	118,023	124,012

Source: BIS locational banking statistics.

[3] For an analysis of the determinants of cross-border bank lending to the emerging markets using these data, see Herrmann and Mihaljek (2010).

Most of the increase in cross-border lending to Africa took place up to 2007. Since the start of the crisis, there has been a decrease in lending to Africa's emerging markets; a moderate increase (around 13%) in lending to frontier markets; and a strong rebound (30%) in lending to financially developing countries (Table 2).

About two thirds of cross-border loans in the third quarter of 2010 were vis-à-vis the non-bank sector in Africa ($100 billion), and about one-third vis-à-vis African banks ($57 billion). One should note that the non-bank sector includes private non-financial and financial corporations as well as the public sector, including central banks. Relative to GDP, frontier markets had the largest share of total loans outstanding (30% of combined GDP of these markets, of which 20% to the non-bank sector).

Unlike other developing regions of the world, African countries held in aggregate more deposits in the BIS reporting banks than they received loans from them. In the third quarter of 2010, for instance, total liabilities of BIS reporting banks vis-à-vis all sectors in Africa amounted to $286 billion, ie $130 billion more than their assets vis-à-vis all sectors in Africa (Table 2). This imbalance reflects the underdevelopment of Africa's financial systems in general and its banking systems in particular. More specifically, it implies that a large part of revenues from exports of African oil and commodities is not intermediated by local banks. Rather, it lies more or less idle – from the African perspective – in overseas banks, which recycle about 60% of these deposits as cross-border loans back to African banks and the non-bank sector.

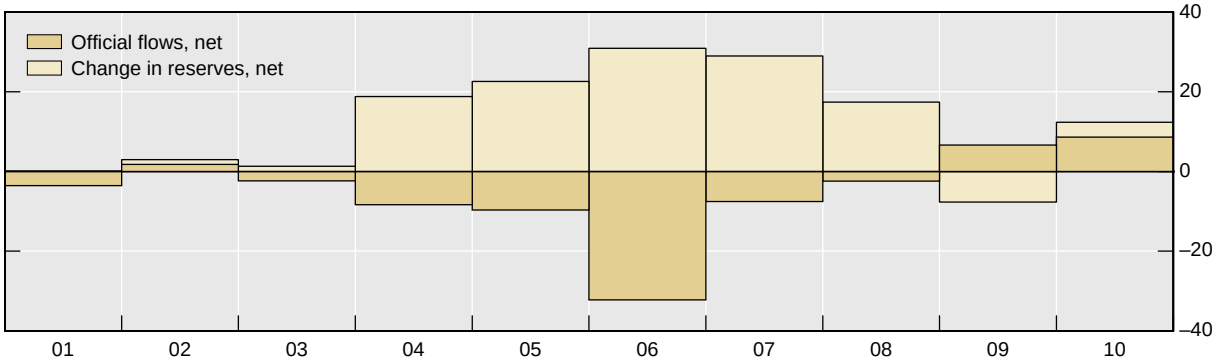
Finally, it is worth noting that official capital flows – bilateral aid to African countries and lending by international financial institutions – became much less significant in the past 10 years compared to the previous decades. As shown in Graph 5, African countries were essentially repaying foreign official loans up to 2008. Particularly large repayments were made in 2006. Since the start of the crisis there has been some return of official capital flows to the continent, but the amounts involved ($6–8 billion per year) are small compared to private capital inflows.

During 2004–08, African central banks also accumulated relatively large foreign currency reserves, on average around $25 billion per year (Graph 5). In 2009, the reserves fell as central banks in several countries provided foreign currency liquidity to the local markets to compensate for the retreat of foreign private capital. Last year, the reserves were partly rebuilt.

Graph 5

Official flows and change in reserves in sub-Saharan Africa

In billions of US dollars



Source: IMF, *World Economic Outlook*, October 2010.

Some consequences of capital inflows

The effects of capital flows depend to a large extent on the structural characteristics of the recipient economy. Several features of African economies are worth noting in this respect.

First, the level of financial market development strongly influences the composition and size of capital inflows and their impact on the domestic economy and financial systems. Developed and highly liquid financial markets help reduce the risks posed by volatile capital inflows. This has been the experience, for instance, of South Africa, which is receiving the bulk of portfolio inflows to Africa. The impact of volatile capital flows on financial markets and the real economy has been attenuated by South Africa's flexible exchange rate and very efficient financial intermediation. Most other African countries have considerably less developed financial markets, so it is not surprising that capital inflows come to them mainly via foreign direct investment. FDI inflows, in turn, affect the recipient economy directly, through investment and increases in output, rather than indirectly through the financial system.

Second, the degree of flexibility of product and labour markets has a large bearing on the macroeconomic impact of capital inflows. For instance, large capital inflows could result in asset price and wage pressures and sub-optimal output outcomes in the presence of rigidities such as insufficient supply of urban land for development or labour shortages due to restrictive labour legislation.

Finally, exchange rate, monetary and fiscal policies also condition the macroeconomic effects of capital inflows. Maintaining an exchange rate target requires the central bank to intervene in the foreign exchange market in order to neutralise the effects of capital inflows or outflows on the exchange rate. Sterilising the impact of FX interventions has consequences for the balance sheets of domestic financial institutions and the central bank, which in turn affects the economy via credit growth.

On the other hand, maintaining an inflation target and letting the exchange rate float freely weakens the link between capital inflows and domestic prices, but affects resource allocation by changing the relative price of tradables and non-tradables. Similarly, a procyclical fiscal policy exacerbates the expansionary effects of capital flows or the contractionary effects of outflows, while a countercyclical fiscal policy attenuates these effects.

How do these considerations relate to the economic circumstances of Africa over the past decade? Regarding **output effects** of the composition of capital inflows, African countries have benefited from the fact that the bulk of inflows has been in the form of foreign direct investment. FDI has made a key contribution to the financing of fixed capital formation in Africa: between 2006 and 2008, FDI on average accounted for 32% of gross fixed capital formation, with much higher shares recorded in Angola (165%), Democratic Republic of Congo (60%), Guinea (95%) and Nigeria (100%).

One should note that FDI statistics include mergers and acquisitions of firms already in existence, so increases in FDI may not necessarily imply higher productive capacity. However, most of the FDI in Africa has involved greenfield investments and hence increased productive capacity along with technology transfers and improved business processes. During the period of surge in capital inflows from 2003 to 2007, the investment rate in sub-Saharan Africa increased from 17% to 21% of GDP on average. Although this rate is much lower than the average for developing countries (28% of GDP), and the increase of 4 percentage points over a four-year period is relatively modest, sub-Saharan Africa experienced the largest increase in potential output among developing country regions over this period (Table 3). About 80% of the increase was due to capital deepening and the remaining 20% to labour and total factor productivity growth. Similarly, in the Middle East and North Africa, two thirds of the increase in potential output was attributable to capital deepening.

Table 3

Change in potential output growth

In percentage points

	Change in potential output growth[1]	Change due to capital deepening
Developing countries	1.5	0.6
Middle-income countries	1.5	0.6
Low-income countries	1.3	0.8
East Asia and Pacific (excl China)	0.4	–0.1
China	0.3	0.9
South Asia	1.4	1.1
Europe and Central Asia	0.8	0.6
Latin America and Caribbean	0.3	0.1
Middle East and North Africa	0.8	0.5
Sub-Saharan Africa	1.9	1.5

[1] Change in the growth rate of potential output, 2003–2007 versus 1995–2003.

Source: World Bank (2010).

FDI has taken place not only in the real sector of African economies but also in their financial sectors. Of note is that foreign banks account for almost 50% of financial intermediation in sub-Saharan Africa, measured by the share of foreign-owned banks in total banking system assets (Table 4). This share is the second highest among developing country regions (following Europe and Central Asia), and is considerably higher than 50% in many countries, given that the foreign bank presence in South Africa (which is financially the most developed country in the region) is relatively low.

Reflecting the increased presence of foreign financial institutions, **domestic bank credit** to the private sector in sub-Saharan Africa expanded by almost 7% of GDP, and in the Middle East and North Africa by over 6% of GDP, between 2000 and 2007 (Table 4). This was higher than the average for other developing country regions. One should note, however, that the growth of private sector credit in Sub-Saharan Africa was underpinned by the strong expansion in South Africa (12% of GDP), where foreign-owned banks play a limited role.

Table 4

Foreign banks and domestic financial intermediation

	Private credit by banks, in % of GDP[1]			Share of assets owned by foreign banks (%)	
	2000	2007	Change	2001	2005
Developing countries	29.3	34.8	5.5	…	…
East Asia and Pacific	66.1	55.4	–10.7	13.0	11.1
Europe and Central Asia	16.8	32.5	15.6	42.0	54.4
Latin America and Caribbean	24.9	27.1	2.2	30.4	35.6
Middle East and North Africa	33.0	39.2	6.2	8.3	10.9
South Asia	25.6	40.4	14.8	8.9	7.4
Sub-Saharan Africa	34.8	41.6	6.8	46.2	49.5

[1] Simple average.

Source: World Bank (2010), pp 56–7.

Another consequence of the greater presence of foreign financial institutions has been that **cross-border bank flows** increased considerably, both to the region's banks and to the non-bank sector (Table 2). The empirical literature has generally established a strong positive relationship between financial intermediation and growth (see eg Levine and Zervos (1998)). It has also been shown that the development of financial markets can facilitate efficiency gains in production (Nourzad (2002)) and poverty reduction (Beck et al (2007)). The recent African experience would seem to confirm these findings, especially the important role played by foreign investment in local financial institutions and domestic financial intermediation.

Exchange rate pressures associated with inflows of "hot" money have generally not been a major risk factor for African countries. One exception is South Africa, which has experienced significant currency appreciation as a result of "hot" money inflows. The appreciation of the rand has adversely affected the South African manufacturing sector, which accounts for over 15% of value added in the economy.

The appreciation of the rand has also indirectly affected other currencies in southern Africa which form part of the Common Monetary Area (comprising South Africa, Lesotho, Namibia and Swaziland) and are effectively pegged to the rand, as it implies reduced international competitiveness and potentially reduced growth and employment for these countries. For countries whose currencies are not pegged to the rand, it implies better export prospects to the South African market. Similar effects apply to other African countries with currency pegs: for instance, fluctuations in the euro affect the external competitiveness of producers in the CFA member states (Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea, Gabon, Guinea-Bissau, Ivory Coast, Mali, Niger, Senegal and Togo).

3. Commodity prices

The surge in commodity prices has supported large FDI inflows to the extractive sector in many African countries. The implications of this surge for individual countries have depended, among other things, on whether they are net commodity exporters or importers.

In the case of net commodity exporters, the effects of higher commodity prices have generally been expansionary. A positive terms-of-trade shock resulting from higher export commodity prices has stimulated economic growth, real income and employment. In the past, aggregate demand pressures resulting from terms-of-trade improvements have often resulted in inflationary pressures. However, the experience in the last few years has been more positive – most African countries have improved their inflation performance by not spending fully the windfall gains from commodity price booms. Greater expenditure restraint and the more consistent use of various commodity and sovereign wealth funds have contributed to these efforts.

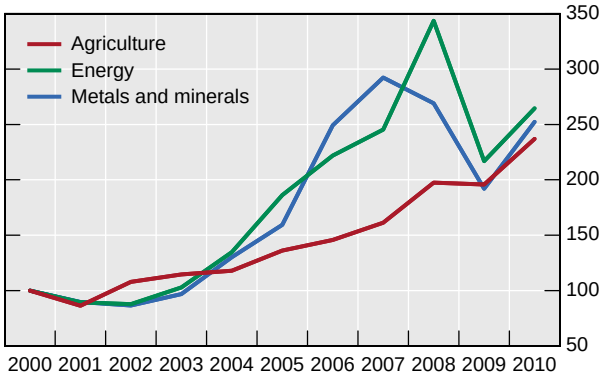
For net commodity importers, the effects of higher commodity prices have been similar to an increase in indirect taxes, ie they have reduced disposable income and domestic demand via income and substitution effects. Higher imported energy prices have also in some cases led to cost-push pressures, which have required particular attention by policymakers.

Between 2002 and 2008, food prices doubled, metals prices nearly tripled, and energy prices almost quadrupled on the world commodity markets (Graph 6, left-hand panel). Since agricultural goods, minerals and crude oil make up almost 80% of African exports, the surge in commodity prices has had a significant positive impact on income and growth performance of many countries. For instance, the GDP growth rate for the group of commodity exporters in sub-Saharan Africa was on average 2¼ percentage points higher than that for the group of non-commodity exporters during 2003–08 (ie 7.6% vs 5.4%; Graph 6, right-hand panel).

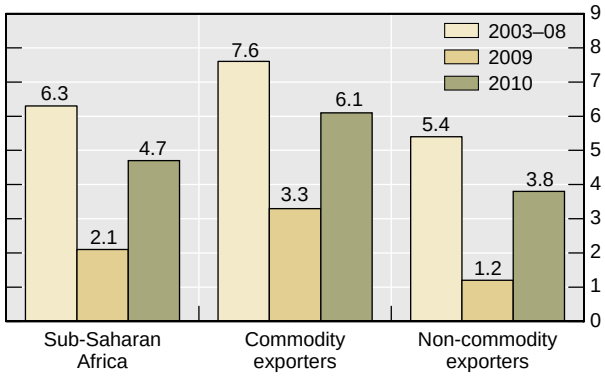
Graph 6

Commodity prices and GDP growth

Commodity prices (2000 = 100)



GDP growth in sub-Saharan Africa



Sources: IMF; World Bank; Bloomberg.

The downturn in global demand following the outbreak of the crisis in 2008 resulted in sharp declines in commodity prices. Between mid-2008 and early 2009, the dollar prices of energy fell by over 35% and those of metals by 30%, while agricultural commodity prices remained more or less stable (Graph 6, left-hand panel). This was reflected in a significant decline in the average **GDP growth rate** of commodity exporters, from 7.6% before the crisis to 3.3% in 2009. The decline in growth reflected the lack of diversification in exports of many African commodity exporters, as well as the sharp contraction in the US and EU markets, which account for two thirds of African exports. However, the steady increase in commodity prices over the past year revived growth in commodity-exporting countries, to over 6% on average in 2010 – almost double the growth rate in 2009. One should note, however, that the non-commodity exporters experienced even greater output variations.

Large fluctuations in primary commodity prices relative to manufactured goods prices have led to significant shifts in the terms of trade for major commodity exporters and importers. These shifts have in turn affected **trade balances and national incomes** of both groups of countries. As shown in Graph 7, African countries relying on exports of primary commodities have experienced far greater trade shocks than the countries with more diversified export structures – shocks to export demand and the terms of trade for commodity exporters ranged from +9% of GDP in 2008 to –11% in 2009.[4] By contrast, countries exporting manufactured goods and those with diversified export structures have experienced considerably milder variations in trade.

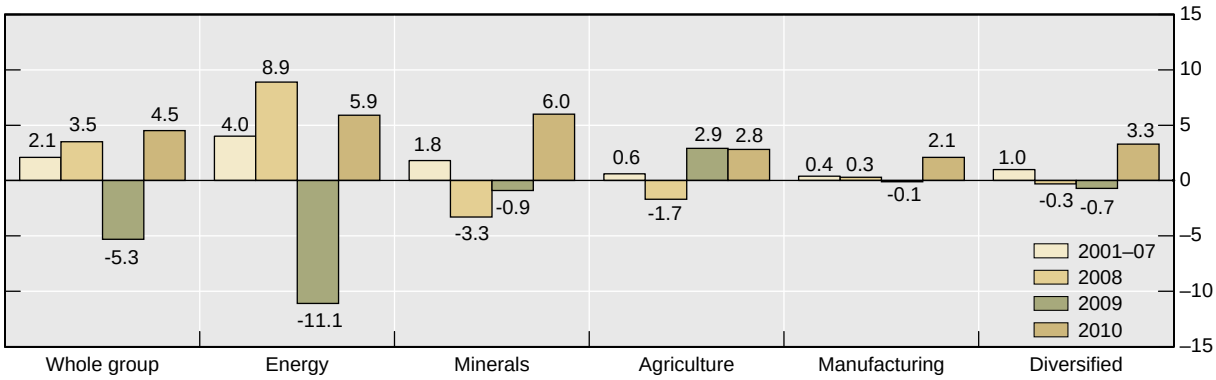
The terms-of-trade shifts have also had very large effects on **government revenue**. As shown in Appendix Table A4, government revenue in commodity- and oil-exporting countries fluctuated from 31–36% of GDP in 2007–08 to 24% in 2009. Other African exporters have experienced considerably less variation in government revenue during the crisis period.

While temporary fiscal – as well as external – deficits do not create major vulnerabilities, lasting imbalances require a tightening of fiscal policy, which has implications for growth performance. As noted above, many African countries also use commodity stabilisation funds to offset the adverse long-term effects of volatility in commodity prices.

[4] Trade shocks in this calculation comprise shocks to export demand and the terms of trade. The export demand shocks reflect changes in the volume of exports, while the terms-of-trade shocks reflect the gains or losses of income arising from the change in export prices relative to import prices.

Graph 7

Trade shocks experienced by African countries classified according to export specialisation[1]



Economies are considered as diversified if no major export category makes up more than 40% (for manufactures, 50%) of total exports. Any concentration exceeding 40% defines the export specialisation.

[1] Changes in the US dollar value of total merchandise trade (exports and imports), as a percentage of GDP.

Source: United Nations (2011).

Since the weight of food and energy in the consumption baskets of many African countries is very high, fluctuations in the prices of food and energy have a significant bearing on **inflation outcomes**. The commodity price shock resulted in a sharp increase in the CPI inflation from 6¾% in 2007 to 11½% in 2008 (Appendix Table A5). Exchange rate depreciation has exacerbated domestic price pressures in many countries during the crisis.

How should monetary policy respond to relative price changes? Theory suggests that monetary policy should not react to relative price changes judged to be temporary – in an economy largely free of distortions, relative prices should return to the configuration prevailing before the temporary disturbance. However, if the shift in relative prices is judged to be permanent, monetary policy should facilitate adjustment that will allow the economy to move to a new equilibrium.

As it is extremely difficult to ascertain in practice if the change in relative prices is temporary or permanent, policymakers often consider the impact of relative price changes on inflation expectations as a guide in their policy decisions. As long as inflation expectations are well anchored and inflation remains in line with the medium-term target, central banks do not react to relative price changes. In practice, this means that one of the main challenges for monetary policy confronted with commodity price increases is to prevent second-round effects of higher commodity prices, ie their spillover to inflation expectations and wages. As discussed in Christensen (2011), the extent to which this is possible depends crucially on the availability of reliable indicators of inflation expectations and the effectiveness of the monetary policy transmission mechanism.

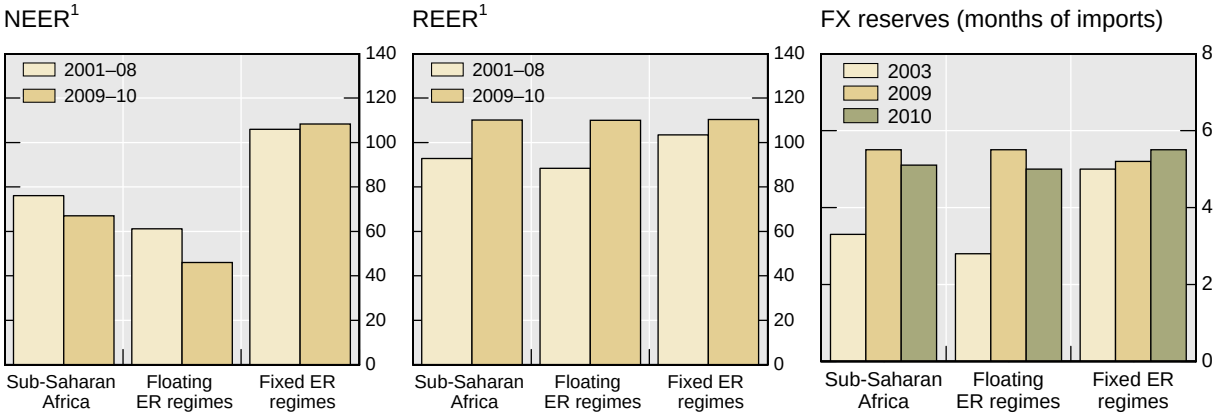
4. Foreign exchange intervention

Monetary policy in EMEs has paid increasing attention to the pursuit of exchange rate stability and, hence, foreign exchange market intervention in recent years. One rationale for this shift is the finding that floating exchange rate regimes often display higher real exchange rate volatility than fixed rate regimes (the so-called "Mussa puzzle").[5] Another concerns the developments during the global financial crisis, but also features of the current conjuncture, including the exchange rate impact of volatile capital flows, low global interest rates and spillovers from changes in risk aversion in global financial markets. Central banks have been concerned about the impact of heightened exchange rate volatility on macroeconomic and financial stability, as well as on external competitiveness and resource allocation. As a result, many central banks are finding greater merit in stabilising exchange rates than in the past.

Like in many other EMEs, exchange rate policies in Africa have tended to be asymmetric in that they generally "lean against the wind" by attempting to prevent currency appreciation but not currency depreciation (IMF (2008)). Thus, over 2001–08 nominal effective exchange rates in sub-Saharan Africa depreciated by 25% on average relative to their level in 2000, and in 2009–10 by a further 10% (Graph 8, left-hand panel). The weakening was entirely due to the floating currencies – before the crisis they depreciated by almost 40% on average relative to the 2000 level, and in 2009–10 by another 15%. By contrast, the sub-Saharan African currencies with fixed exchange rates strengthened by 6% in nominal effective terms before the crisis, and by another 2% after the crisis.

Graph 8

Exchange rates and reserves accumulation



[1] Trade-weighted indices; 2000 = 100. Simple average of monthly indices for 15 countries in sub-Saharan Africa with floating and fixed exchange rate regimes.

Sources: IMF, International Financial Statistics; IMF, World Economic Outlook, October 2010.

The pickup in inflation following the commodity price shock of 2008 has resulted in real appreciation of about 25% on average in countries with floating exchange rates, and 7% in countries with fixed exchange rates (Graph 8, centre panel). A key question is whether this appreciation reflects an improvement in the terms of trade. If this is the case, it could mean that equilibrium exchange rates have adjusted to more elevated levels.

[5] See Filardo et al (2011) for a discussion of the policy dilemmas related to foreign exchange market intervention in EMEs; and Mihaljek (2005) for a review of the effectiveness of intervention in EMEs.

Although high real exchange rate volatility can have significant adverse effects on trade and investment flows, monetary policy has not been particularly successful in influencing real exchange rate movements over the medium term. In fact, evidence suggests that fiscal policy may be more effective in addressing issues of external competitiveness in Africa (Elbadawi et al (2007)). There is also evidence that targeting the exchange rate could lead to higher volatility of interest rates and output, and much higher inflation outcomes (Calvo et al (1995)). In addition, the pursuit of exchange rate smoothing as a secondary objective could confuse the public about the primary objective of monetary policy, and hence affect the credibility of the central bank.

In summary, monetary policy in African developing countries is confronted with some difficult trade-offs in the face of capital inflows. Theory suggests that raising interest rates is appropriate if the upward pressure on the currency occurs at a time when the output gap is positive and inflationary pressures are strong. However, monetary tightening could attract additional capital inflows and fuel the growth of domestic asset prices.

Sterilised interventions could assist in addressing disruptive exchange rate movements in such circumstances, and help build up foreign exchange reserves to cushion the effects of a sudden reversal of capital inflows. However, there are considerable risks and costs associated with prolonged foreign exchange market intervention, including sterilisation costs, valuation losses and domestic credit expansion if the sterilisation is incomplete or ineffective.

On the other hand, while unsterilised intervention could alleviate exchange rate appreciation pressures, the increase in domestic money supply resulting from the expansion of banking system balance sheets could lead to higher inflation outcomes. In this case, countercyclical fiscal policy could assist monetary policy in dampening domestic demand pressures. However, this raises political economy and coordination issues that are difficult to deal with even in advanced economies with well functioning institutions, and all the more so in poorer developing countries with weaker institutions.

5. Conclusion

Capital inflows and volatile commodity price movements pose significant policy challenges for developing countries. These challenges are of particular relevance to policymakers in Africa, where large capital inflows and rising commodity prices in recent years have strongly affected macroeconomic quantities (fixed investment, trade balances, domestic credit growth, government revenue, GDP growth) as well as prices (CPI inflation, terms of trade, exchange rates). How to respond to these developments is an important issue at the current juncture, given the uncertainty about the future course of commodity prices and global capital flows. While the impact of real exchange rate volatility on macroeconomic and financial stability is an important policy consideration in the African context, it remains unclear whether and how far central banks should incorporate exchange rate stability considerations into their monetary policy frameworks.

Appendix

Table A1

Net private capital inflows

Amounts outstanding, in billions of US dollars

	2001	2007	2009	2010
Total private capital inflows, net	**4.9**	**43.8**	**57.9**	**79.1**
Emerging markets	0.0	35.5	33.2	42.8
Frontier markets	1.3	0.3	17.9	15.6
Financially developing countries	3.7	7.9	6.8	20.7
Foreign direct investment	**23.3**	**60.2**	**51.6**	**52.3**
Emerging markets	13.9	24.4	20.6	14.9
Frontier markets	3.4	12.4	11.6	11.3
Financially developing countries	6.0	23.5	19.4	26.1
Portfolio investment	**–8.9**	**9.7**	**–2.3**	**18.7**
Emerging markets	–7.6	14.1	1.3	22.1
Frontier markets	–0.2	–0.2	–0.4	0.0
Financially developing countries	–1.1	–4.1	–3.3	–3.4
Other investments	**–9.5**	**–26.2**	**8.7**	**8.1**
Emerging markets	–6.3	–2.9	11.3	5.8
Frontier markets	–1.9	–11.8	6.6	4.3
Financially developing economies	–1.2	–11.4	–9.3	–2.0

Totals include 53 African countries for which the IMF's *World Economic Outlook* data are available. For the country composition of the subgroups (emerging markets, frontier markets and financially developing countries), see Section 2 of this paper.

Source: IMF, *World Economic Outlook*, October 2010.

Table A2

Selected infrastructure-related financing agreements between Asian and African countries signed in 2010

Country of origin	Beneficiary country	Value (USD billions)
China	Ghana	13.4
Korea	Ghana	1.5
China	Democratic Republic of Congo	6.0
China	Cameroon	0.7
China	Nigeria	0.9

Source: World Bank (2011), based on national data and Thomson Reuters.

Table A3

Net portfolio capital inflows

Annual average for 2000–09, in million of US dollars

South Africa	4,567.4	Mali	1.6
Nigeria	707.0	Cape Verde	0.9
Uganda	45.4	Zambia	0.7
Mauritius	13.6	Niger	0.7
Namibia	9.9	Sierra Leone	0.6
Togo	8.0	Benin	0.4
Botswana	7.2	Mozambique	0.1
Swaziland	4.2	Burkina Faso	–0.1
Tanzania	2.9	Tunisia	–0.9
Ivory Coast	2.8	Cameroon	–3.0
Kenya	1.6	Senegal	–13.2
		Egypt	–209.4

Source: World Bank

Table A4

Government revenue in sub-Saharan Africa[1]

	2004–08	**2007**	**2008**	**2009**
Sub-Saharan Africa	26	26	28	23
Commodity exporters	32	31	34	24
Oil exporters	34	31	36	24
Other exporters	23	23	24	23

[1] Excluding grants, as a percentage of GDP.

Source: IMF.

Table A5

Consumer price inflation

	2000–06	2007	2008	2009	2010
Algeria	2.3	3.6	4.9	5.7	4.3
Angola	109.2	12.2	12.5	13.7	14.5
Benin	3.2	1.3	8.0	2.2	2.1
Botswana	8.5	7.1	12.6	8.1	7.0
Burkina Faso	2.5	–0.2	10.7	2.6	0.4
Burundi	9.6	8.3	24.4	10.7	6.4
Cameroon	2.5	1.1	5.3	3.0	1.3
Cape Verde	1.1	4.4	6.8	1.0	2.1
Central African Republic	3.0	0.9	9.3	3.5	1.5
Chad	3.8	–7.4	8.3	10.1	1.0
Comoros	4.2	4.5	4.8	4.8	2.7
DR Congo	140.6	16.7	18.0	46.2	23.5
Djibouti	2.2	5.0	12.0	1.7	4.0
Egypt	4.6	11.0	11.7	16.2	11.7
Equatorial Guinea	6.1	2.8	4.3	7.2	7.5
Eritrea	18.1	9.3	19.9	33.0	12.7
Ethiopia	5.2	15.8	25.3	36.4	2.8
Gabon	0.7	5.0	5.3	1.9	0.6
Ghana	19.6	10.7	16.5	19.3	10.7
Guinea	15.7	22.9	18.4	4.7	15.5
Guinea-Bissau	2.4	4.6	10.4	–1.6	1.1
Ivory Coast	2.6	1.9	6.3	1.0	1.4
Kenya	7.9	4.3	16.2	9.3	3.9
Lesotho	6.8	8.0	10.7	7.2	3.8
Liberia	8.5	13.7	17.5	7.4	7.3
Libya	–2.6	6.2	10.4	2.8	2.4
Madagascar	10.8	10.4	9.2	9.0	9.0
Malawi	17.8	8.0	8.8	8.7	6.9
Mali	1.9	1.5	9.1	2.2	1.2
Mauritania	7.7	7.3	7.3	2.2	6.1
Mauritius	5.5	8.6	9.7	2.5	2.9
Morocco	1.7	2.0	3.9	1.0	1.0
Mozambique	12.0	8.2	10.3	3.3	12.7
Namibia	6.9	6.7	10.4	8.8	4.5
Niger	2.3	0.1	10.5	1.1	0.9
Nigeria	13.4	5.4	11.6	12.5	13.7
Republic of Congo	2.4	2.6	6.0	4.3	5.0
Rwanda	6.7	9.1	15.4	10.3	2.3
São Tomé and Príncipe	13.2	18.5	26.1	17.0	14.4
Senegal	1.5	5.9	5.8	–1.7	1.2
Seychelles	2.6	5.3	37.0	31.9	–2.4
Sierra Leone	5.9	11.7	14.8	9.2	17.8
South Africa	5.1	7.1	11.5	7.1	4.3
Sudan	7.6	8.0	14.3	11.3	13.0
Swaziland	6.8	9.7	13.1	7.5	4.5
Tanzania	4.7	6.3	8.4	11.8	10.5
The Gambia	7.5	5.4	4.5	4.6	5.0
Togo	2.5	0.9	8.7	1.9	3.2
Tunisia	2.9	3.4	4.9	3.5	4.4
Uganda	4.8	6.8	7.3	14.2	9.4
Zambia	19.5	10.7	12.4	13.4	8.5
Zimbabwe				6.5	3.0
Average	***11.0***	***6.7***	***11.6***	***8.9***	***6.1***

Source: IMF, *World Economic Outlook*, April 2011.

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