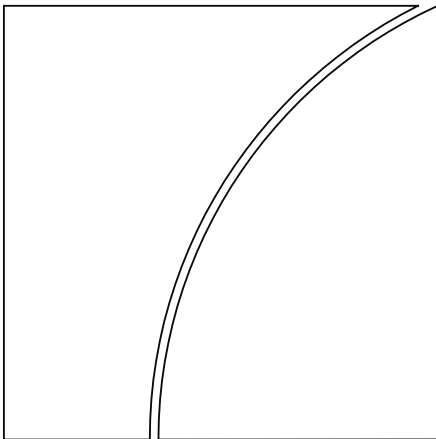




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The role of central banks in macroeconomic and financial stability

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Contents

The role of central banks in macroeconomic and financial stability Jaime Caruana	1
Speech by Paul Collier	7
Financial integration in Africa: implications for monetary policy and financial stability Benedicte Vibe Christensen	11
Government debt issuance: issues for central banks Stephen Vajs	29
Financial stability objectives and arrangements – what’s new? Serge Jeanneau	47
Macroprudential policies, commodity prices and capital inflows Paul Masson	59
Government debt issuance and central banks – Kenya’s experience Central Bank of Kenya	77
Cross-border expansion of Nigerian banks: has it improved the continent’s regulatory and supervisory frameworks? Sarah O. Alade	83
List of participants	97

The role of central banks in macroeconomic and financial stability

Jaime Caruana

Introduction

Central banks in Africa are changing as the continent becomes increasingly integrated with the global financial system. Four important challenges were analysed at this meeting.

1. The recent surge in **pan-African banking** is driving a new wave of financial integration. This has many benefits for the region, but confronts central banks and supervisors with new challenges in monitoring and managing risks.
2. Central banks have a key role in **developing local debt markets**. The development of local currency bond markets is critical to Africa's financial development and resilience to shocks. Government fiscal and debt management policies should not undermine effective monetary policy. Good macroeconomic policy requires mechanisms that ensure appropriate coordination but avoid potential conflicts of interest.
3. **Financial stability frameworks** need to be strengthened. Central banks must have a major voice in financial stability policy which is closely linked with monetary policy. Central banks are naturally the official institution closest to financial markets. Nevertheless, responsibility for financial stability will almost always be shared with other bodies. How this is done will differ from country to country. But, however done, supervisors need the independence and the powers to act quickly and impartially.
4. The prolonged period of higher-than-average commodity prices, often attracting heavy capital inflows, has boosted growth but may also have created its own financial stability risks. In this context, a **macroprudential perspective** to policymaking – one that attempts to “look through” these long swings of commodity prices – can help to address systemic threats.

This meeting allowed central banks from different continents to compare notes on their experiences in dealing with such challenges. Nevertheless, each country has its own special context. Paul Collier urged policymakers to focus on Africa's distinct problems and to take account of their own situation. They need, he said, to modernise Africa's financial system to enhance investment and growth opportunities, and to develop robust institutions and rules for managing Africa's natural resources to their best advantage.

1. Financial integration in Africa: implications for monetary policy and financial stability

Over the past five years, cross-border capital flows into Africa have been driven up both by easy global monetary conditions and by the continent's own improved macroeconomic performance. As banks in advanced economies shed assets and risks, a greater share of cross-border bank flows into Africa has come from banks domiciled in major EMEs such as Brazil, China and India. Another new development, discussed in the paper by Benedicte Christensen in this volume, is the spread of pan-African banking groups (those domiciled in Africa with subsidiaries in several African countries). Pan-African banks typically bring expertise and competition to the host country, improving the functioning of interbank and foreign exchange markets and broadening access to banking services. At the same time, host country supervisors are well aware of the new financial stability risks that could arise from the global operations of these banks. To deal with such risks and monitor them, improvements in the regulatory and supervisory framework are required. They need more timely information about the health of foreign banks. Host supervisors also face the challenge of devising appropriate cross-border contingency plans for winding down unviable or failed banks. Moral hazard issues need to be carefully taken into account when designing the lender-of-last-resort assistance to pan-African banks.

The paper by Sarah Alade, Deputy Governor of the Central Bank of Nigeria, notes the challenges from the home country perspective. The rapid growth in the operations of Nigerian banks in the rest of Africa has prompted the central bank to introduce a new regulatory and supervisory system. Deputy Governor Alade highlights two basic aspects of supervision: first, all foreign banks should be subject to supervision and, second, supervision should be consistent with international standards. In addition, all foreign operations of domestic banks must be brought under consolidated supervision. She notes that in Nigeria all banks – whether domestic and foreign – are treated equally and supervised under a uniform framework. In the event of a liquidity crisis, the central bank is the lender of last resort to all banks operating in Nigeria.

In evaluating the importance of intra-regional financial integration, the discussions highlighted a cautious view that, while greater financial integration is beneficial to Africa, it should not be pursued with the goal of establishing a single currency or monetary union. The experience of the existing monetary unions in Africa suggested that strong fiscal discipline and a banking union is required to sustain them. These are the elements that differentiate the Central and Western African monetary unions, for instance, from the euro area.

The supervisory challenges posed by international banks were mentioned by many African central banks. Active information-sharing among supervisors is critical. In many cases, home and host countries have signed Memoranda of Understanding for consolidated supervision. However, the effectiveness of such agreements during times of stress is yet to be tested. Some argued for the establishment of cross-border crisis resolution frameworks. Others warned that major pan-African banks could become a threat to financial stability on account of their scale and equity cross-holdings. In crisis situations, the host central bank may have little choice but to act as the lender of last resort.

2. Government debt issuance and central banks

Domestic bond markets underpin the economy and the financial system in several ways. Sovereign bonds set the benchmark yield curve, and provide high-quality collateral for financial transactions. Indeed, deeper domestic bond markets in many emerging market economies, including in Africa, tend to be associated with more efficient and stable financial systems.

The paper by Stephen Vajs in this volume shows that some of Africa's new and fast-growing domestic bond markets are supporting the issuance of long-maturity bonds and greater foreign participation. Improved macroeconomic stability has helped. Low and stable inflation has whetted investors' appetite for fixed-income assets. Market fragmentation has been reduced as interest rates become more market-determined. And many central banks have played an important role in developing the necessary market infrastructure.

Kenya's experience, summarised in the paper by Governor Njuguna Ndung'u in this volume, is an excellent example. Kenya has developed a Medium-Term Debt Strategy (MTDS) programme that formally links debt management with government's medium-term fiscal framework. MTDS helps to increase public awareness about fiscal sustainability, improve investor relations and develop a dynamic debt market. As a complementary strategy, the central bank has established a Market Leader Forum that acts as a catalyst for the debt market's development.

The discussion highlighted a number of challenges in developing liquid bond markets. Many participants noted that Africa's underdeveloped banking systems meant that the domestic market's capacity to absorb new issues is quite limited. In some cases the central bank has had to act as a market-maker. In addition, the lack of adequate competition in the banking system (and the danger of collusion between just a few banks) compromises price discovery in the bond market, reducing the usefulness of the yield curve in the monetary policy transmission mechanism. Finally, government bond issuance can crowd out much-needed credit for the private sector as banks typically prefer to hold lower-risk government bonds to maturity.

Another important issue was the coordination of debt management with monetary policy. Debt managers are primarily responsible for keeping the government's interest costs and funding risks to a minimum. But their decisions on the volume and the maturity of debt have major implications for the yield curve and monetary conditions. Coordination between the central bank and the government is therefore essential if monetary policy is to be effectively transmitted and financial stability preserved. Stephen Vajs argues that central banks should take a keen interest in ensuring that no additional financial vulnerabilities are created for the economy by the structure of government debt (currency and maturity composition). And the government's cash management should be consistent with the central bank's overall management of liquidity.

The discussions revealed that many African countries are working hard to coordinate with the government in terms of the amounts, maturity and methods of issuance as well as on cost allocation. Sustainable domestic bond markets require a credible monetary policy framework. Governments should assist by removing institutional and infrastructural impediments to market development.

3. Financial stability objectives and arrangements – what’s new?

The financial crisis has added impetus to policies to strengthen financial stability in most African countries. Thanks to their strong governance and credibility, central banks have often been tasked with this work: how should central banks fulfil this role? Africa’s central banks are still at an early stage of integrating microprudential and macroprudential regulation with monetary policy. Coordinating these new financial stability activities raises some institutional challenges. Serge Jeanneau’s paper summarises recent work on this important question. One issue is the difference between the analytical frameworks for traditional central bank activities (such as monetary policy or payments systems) and those needed for financial stability work. Such differences are further accentuated by the differing types of talent that these two fields attract. However, it will be vital to harmonise these cultures and build an interface between macroeconomists and financial stability experts: as one participant from an advanced economy explained, a more efficient exchange of information before the financial crisis could have allowed the growing financial strains to be identified much earlier.

Many central banks have created financial stability committees that involve all major stakeholders. These committees seem to be useful in accessing the decentralised information necessary for financial stability work. In addition, most participants found the participation of the finance ministry to be crucial in such financial stability-related committees, given the potential fiscal costs of any resolution mechanism.

Yet the involvement of the finance ministry does raise several issues. Some participants warned that the involvement of politicians in financial stability work can give rise to “inaction bias”: politicians could in principle respond forcefully to an actual crisis but they might fail to get agreement on pre-emptive measures to be taken before a crisis. Central banks might be better placed to run countercyclical policies. One participant said that one solution would be for central banks to take a more prominent role before the crisis (to limit the build-up of vulnerabilities) while the finance ministry shows its hand decisively during the crisis (in dealing with the fiscal costs of the resolution).

Several central banks have also started to issue financial stability reports. Organising this work and acquiring the necessary human capital and confidential data, while embedding these activities within the central bank structure, took some time and effort for most African central banks. Furthermore, whereas inflation targeting has created a clear benchmark for measuring central bank effectiveness, financial stability goals are harder to define and performance against them is more difficult to track.

The increased responsibilities of central banks are not without risks. The additional financial stability remit of central banks reflects their improved credibility with the public, and can improve their monetary policy. But too many or too unrealistic objectives may eventually hurt their hard-won credibility.

Participants agreed that there is no “one size fits all” approach to financial stability. The decision on whether banking supervision should be inside or outside the central bank was, in part, a political decision. But many participants argued that, notwithstanding the variety of formal arrangements, public perceptions tend to

make central banks responsible for financial stability, whatever the official mandate may say.

4. Macroprudential policies, commodity prices and capital inflows

The final session considered how to frame macroprudential perspectives to policies in Africa. Many countries in Africa face large swings in commodity prices and capital flows (which often follow commodity price swings). The usual countercyclical fiscal and monetary policies may not be enough to deal with the system-wide consequences for the financial system. Paul Masson's paper argues that macroprudential policies aimed at moderating excessive swings in credit growth can play a useful stabilising role.

There was a discussion about intervention in the foreign exchange market. Many central banks have found that the exchange rates can move well beyond the bounds that fundamentals would appear to justify. Sometimes over-depreciation creates an inflation shock. At other times, over-appreciation threatens to strangle the tradable sectors, which do not depend on raw materials. A seriously mis-aligned currency that suddenly corrects is a danger to financial stability. At the same time, prolonged intervention, particularly a long period of high commodity prices and strong capital inflows, has large costs for the central bank. First, buying foreign currency for years in order to resist appreciation involves substantial carrying costs (because local debt paper has a higher interest rate than the reserves) and runs the risk of capital losses. This can expose the central bank to political criticism. Second, the swollen central bank balance sheets that result from such interventions can undermine the central bank's control of domestic monetary conditions.

In conclusion, Africa's central banks have done much over the past decade to modernise their monetary and financial systems, making them more resilient. As the integration of the African economies into the global economy proceeds, new challenges will arise. I hope the BIS's roundtable meeting of governors illuminated some of these new challenges in monitoring and regulating the financial system and in defending hard-won reductions in inflation.

Speech by Paul Collier on 11 May 2013

I wanted to start with a word about the late Andrew Crockett, who was, of course, the General Manager of the BIS. I attended his memorial service, where he was eulogised for opening the Bank up to emerging market economies. I know he felt passionately about that. Among his many achievements, he thought that valuable meetings like this one were too infrequent. So the BIS founded a roundtable which meets each year to discuss issues relevant to African economies.

Now what I want to say is that Africa has distinctive characteristics and distinctive challenges. And because Africa is different, it will need distinctive solutions. Thus, policymakers should be wary of just picking up global monetary guidelines. Sometimes the guidelines aren't right anyway; before the financial crisis they were obviously not even right for the countries that faced these crises. Now the guidelines are being adopted by African countries that didn't face that type of crisis. So, the African central banks need to do quite a lot of their own thinking as part of this.

The next distinctive feature about Africa is that central banks are a much more important source of economic information than the typical central bank, like the Bank of England in my country. The Bank of England is one voice of economic information for citizens and government but it's only one voice. There are many other authoritative voices. But in Africa central banks loom very much larger, and so the job of communication is much more important. Building the capacity to communicate is enormously important. In a democracy the central bank needs to build a critical mass of informed citizens. The Bank of England routinely publishes an inflation report and the minutes of its monetary policy meeting. That's just one of the many things that it does in seeking to keep citizens and the government informed, and so I urge central banks to recognise that distinctive responsibility and role that they have.

Let me say a few words about what's coming down the pike; what I think the next decade will hold. There is a saying that you should never listen to economists making forecasts. But I'm going to forecast two things. One is that the 2010s will be a decade of African growth. The last decade was a decade of resource discoveries and those discoveries will be coming on-stream in the next decade; gas in Mozambique and Tanzania, and oil in Kenya and Uganda. Around the continent, the rate of growth is going to be higher than it has been in most of the past. This has important implications for the financial sector. When economies are stagnant they don't actually need a financial sector because firms can pretty well self-finance from retained earnings. Once the economy starts to grow, firms need finance. They need more money for working capital because last year's sales won't pay for next year's inputs. And they need to invest. So, whole classes of financial activity are missing in an economy that's had a long period of stagnation. The financial sector needs to grow much more rapidly than the growth of the economy. You need a bigger financial sector relative to the economy. And so you need to gear up.

To finance a lot of investment by small and medium firms is going to be risky. So Africa will need a class of financial actors accustomed to risky investment: venture capital. It's ironic that today you find plenty of venture capital in Britain and America, which have less need for it. In Africa there are precious few venture capital financial firms at the moment. So, it is important for African central banks to try to

build that sector beyond the commercial banks. The banks don't have the skills or appetite to do that sort of risky lending.

Related to this, households as well as firms will wish to invest more. Housing is the most obvious thing that households invest in. At present, Africa has an amazingly small financial sector for housing. Mortgages serve about 3% of the population. One reason is that central banks haven't fully cracked inflation. So Africa might have to learn to live with inflation rates of around 8–12%. That's perfectly all right for an economy, but it's a disaster for a mortgage market. It forces mortgages to be repaid much too fast, so one thing that central banks might want to think about is learning to live with the problem. If inflation is going to be hovering around 10% for a while, what about indexed mortgages? The only African country I know that does this is Ghana. I talked to the Ghanaian mortgage firms and they said that 80% of their mortgages are indexed. Such indexation has helped Ghana develop a mortgage market of its own. This is just an example of what Africa can do to live with moderate inflation, rather than try achieving inflation target of 2%, which is a typical norm in advanced economies.

The other prediction I wish to make is that, in future, Africa may have to live with greater degree of macroeconomic volatility. This follows from the fact that Africa is going to be more dependent on natural resource exports. Prices for natural resource exports will be somewhat lower than the heady levels they reached during the peak of the supercycle. This means that the rents on natural resources will fall much more than the actual prices of those resources. And as prices wobble around, those rents will become more volatile; and rents are what the government captures as revenue. Learning to live with government revenue volatility implies the need for institutions that smooth public spending. The agent that should be managing this is the central bank, in terms of both advising on what rules should be established and actually running the process. It might be a stabilisation fund, or just better hedging. Again, Ghana is an interesting example of a country that has been quite successful in hedging revenue volatility by locking the budget into a base of commodity prices.

Let me now focus on a few received wisdoms. One is inflation targeting. There's a lot to be said for inflation targeting but there are also a couple of negatives. Indeed, on the whole now, central banks are moving away from inflation targeting as the only act. For the typical African country, the real exchange rate matters as well as the rate of inflation. Within inflation, it's not clear what things central banks should target. If central banks leave food and fuel out – as has been the case in many IT regimes – because these are volatile, they lose what matters to ordinary people. The central bank is targeting something that does not relate well to the lives of ordinary people.

The same applies to asset bubbles. I suspect that Africa is not immune to such bubbles and that its central banks may have to cope with rather more of them over the next decade. I remember being at a Bank of England seminar in 2007. I tried to raise the issue of asset bubbles and the response was: "Oh you can never tell when an asset bubble is forming; we just ignore them." One no longer hears things like this. So that was an example of a mantra that became a guiding ideology, yet was just plain wrong. You can't afford to allow the fluctuating enthusiasms of foreign investors to send capital washing in and out of Africa and blow up property bubbles all the time. There needs to be some way of dampening the exuberance.

The other received wisdom we've already touched upon relates to monetary union. I want to contrast this sort of idealistic goal with the practical problem of achieving economic integration. There's a lot that central banks can do here. African

countries could think about holding each other's monetary instruments. We talked this afternoon about central banks issuing monetary instruments and the need to develop deeper bond markets. Well, if central banks could actually hold each other's liabilities, that would be a real example of central bank cooperation. I think it should be done carefully because holding dollars, euros and yen as reserves implies exposure to significant future losses. To give an example, the portfolios of North American universities, which are managed by smart people, have all massively moved out of US government bonds following the recent global crisis. So you're in danger of holding a lot of loss-making assets.

Finally, let me mention something about foreign aid flows to Africa from my latest book, "The Plundered Planet". I suggested to the British prime minister, who is hosting the forthcoming G8 meeting, that, rather than promising to double aid to Africa, the G8 should try to put its own house in order in ways that are helpful to Africa. The focus should be on reducing corporate tax avoidance and money laundering, cleaning up and clarifying issues of beneficial ownership, and enhancing transparency in the extractive industries. Those are the big three challenges. There's also a fourth one; that is, trying to get western pension funds and other investors to invest in the bonds and equity of African utilities. The huge amount of money in European and North American portfolios, which at the margin is earning practically nothing at the moment, could finance some of the scale-up in infrastructure that Africa really needs.

Financial integration in Africa: implications for monetary policy and financial stability

Benedicte Vibe Christensen¹

1. Introduction

Most African countries were not directly affected by the global financial crisis because their financial integration with global markets was limited. With the benefit of hindsight, it might be tempting to conclude that this lack of financial integration was a blessing, and that it would serve the continent well not to seek greater integration into global financial markets. But financial development and integration are indispensable if Africa is to increase its economic growth rates and reduce poverty. African financial systems have less depth than in other regions in the world, and financial services reach fewer people than elsewhere. The question is therefore not *if* but rather *how* to integrate the financial systems with the rest of the world, and *how fast* the pace of such integration should be if it is to avoid the pitfalls of cross-border banking experienced by advanced and emerging market countries during the global financial crisis.

The paper begins with a brief review of Africa's financial depth (Section 2), followed by an analysis of cross-border integration of banking flows (Section 3). The main drivers of cross-border financial integration within Africa are: agreements for regional financial cooperation (the East African Community is a good example) and the spread of pan-African banking. The impact of this integration on the transmission mechanisms of monetary policy is discussed in Section 4. Finally, the growth of pan-African banking is likely to raise new financial stability issues, notably about the role of home and host central banks as lenders of last resort: this is discussed in Section 5. Conclusions are presented in Section 6.

2. Financial depth

The effectiveness of monetary policy in Africa has long been constrained by the lack of financial depth. Africa is a diverse continent with a broad range of experiences. These range from emerging market countries such as Morocco and South Africa, through frontier countries (eg Ghana, Kenya, and Uganda) to financially developing countries, such as Chad or the Democratic Republic of Congo, at the other end of the spectrum. Indicators of financial depth – private sector credit relative to GDP and the intermediation of deposits to lending (Table 1) – suggest low financial depth relative to other regions in the world. In addition, the banking systems in Africa are characterised by a relatively large interest margin that reflects the lack of

¹ The author wishes to thank Robert Corker, Anne-Marie Gulde, Serge Jeanneau, Madhusudan Mohanty and Philip Turner for helpful comments and suggestions, and Bat-el Berger and Michela Scatigna for research assistance.

financial infrastructure (eg credit rating agencies), low competition in domestic banking, and riskiness of lending combined with weak property rights. Conditions for effective monetary policy include the use of interest rates to allocate savings and credit, and smoothly functioning secondary markets to influence the value of key financial indicators such as the interbank interest rate. Integration with international markets influences the arbitrage between domestic and foreign financial assets. When examining the recent developments in the banking systems below, these are the factors that will be used to evaluate the impact on monetary policy.

Indicators of financial depth Table 1

Ratio, in per cent, weighted regional averages¹

	Liquid liabilities to GDP ²		Private sector bank credit to deposits ³	
	2000–02	2010–12 ⁴	2000–02	2010–12 ⁴
Africa				
Emerging market ⁵	52	60	90	78
Frontier market ⁶	18	31	65	74
Financially developing ⁷	17	26	62	69
Selected other emerging market economies ⁸	39	48	73	97

¹ Weighted average based on 2005 GDP and PPP exchange rates. ² Liquid liabilities refer to currency plus demand deposits and interest-bearing liabilities of banks. ³ Bank credit to the private sector is taken from IMF, *International Financial Statistics*, line 22D. ⁴ Latest available data. ⁵ Algeria, Egypt, Morocco, South Africa and Tunisia. ⁶ Angola, Ghana, Kenya, Mauritius, Mozambique, Nigeria, Senegal, Tanzania, Uganda and Zambia. ⁷ Botswana, Cameroon, Cape Verde, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Namibia, Seychelles and Swaziland. ⁸ Brazil, Chile, Czech Republic, Hungary, Indonesia, Malaysia, Mexico, Philippines, Poland, Russia, Thailand and Turkey.

Sources: IMF, *International Financial Statistics* and *World Economic Outlook*; BIS calculations.

3. Cross-border integration of banking flows

During recent years, cross-border capital flows in Africa have reflected several factors. First, the continent's macroeconomic performance has strengthened and its economies have proven more resilient during the recent global financial downturn than in the past (Graph 1). There is greater optimism among foreign investors about private sector activity and the economic potential of Africa. Second, financial flows have reflected the change in composition of flows from North-South to South-South relations, in particular the growing role of major emerging markets such as Brazil, China and India (Graph 2).² Third, there has been increasing integration of financial markets in Africa. This has been promoted by regional initiatives such as the East African Community and by the spread of pan-African banking groups. These groups have been motivated by opportunities to expand their markets across borders, the scope for spreading financial services and know-how, the wish to support their home customers in foreign markets, major increases in capital

² Graph 2 does not reflect flows from banks in China, since they are not BIS reporting banks.

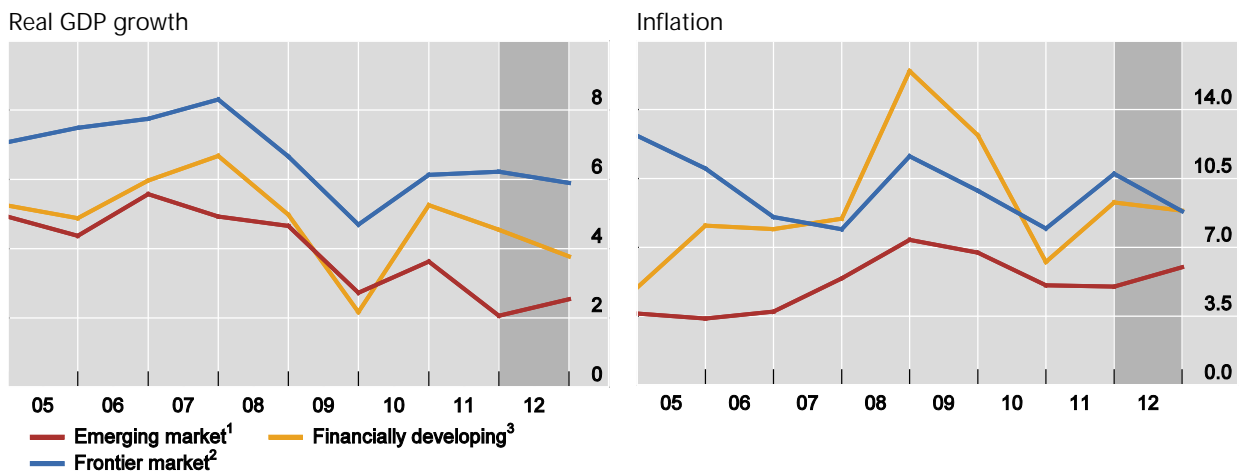
requirements in home countries, and liberalisation of entry rules in host countries. The focus of this paper is on these cross-border banking flows in Africa.

While most of the credit extended by BIS reporting banks is from European banks (about 85% of the total in Graph 3), cross-border lending from European banks accounts for less than 25% of total credit to the African private sector,³ since financial deepening has reduced reliance on foreign financing.

Macroeconomic indicators for Africa, by level of financial depth

In per cent

Graph 1



Shaded areas indicate projections.

¹ Algeria, Egypt, Morocco, South Africa and Tunisia. ² Angola, Ghana, Kenya, Mauritius, Mozambique, Nigeria, Senegal, Tanzania, Uganda and Zambia. ³ Botswana, Cameroon, Cape Verde, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Namibia, Seychelles and Swaziland.

Source: IMF, *World Economic Outlook*.

Regional financial integration

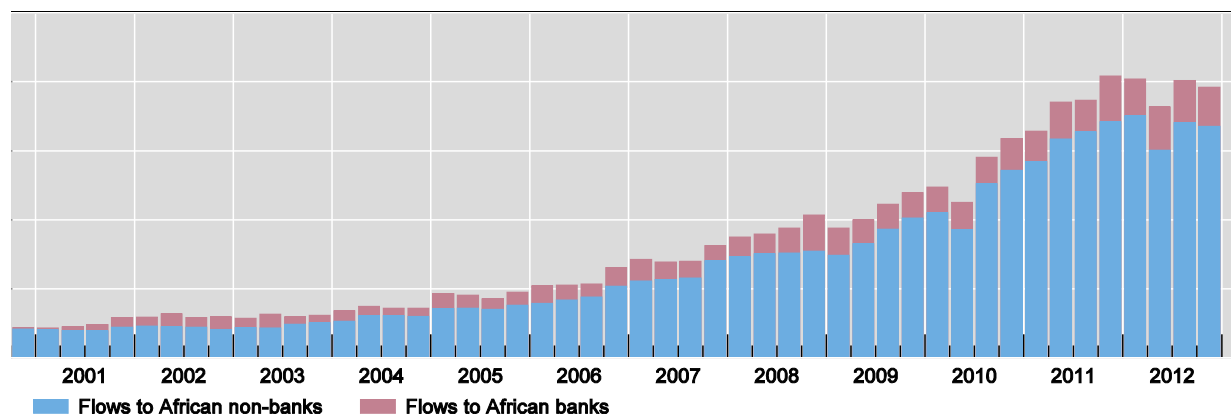
In the past, African countries have embarked on many regional integration initiatives as a way of strengthening their economies by reaping the benefits of scale. A notable example is the two CFA franc zones. While the 14 member countries in these zones have enjoyed the stability of a common currency linked to the euro and low inflation rates, the two zones are also testimony to the difficulties in achieving the integration of payments systems and government debt markets, and harmonisation of monetary policy instruments despite common overarching objectives. To what extent has regional integration played a role in promoting cross-border transactions and how has it influenced financial depth and the transmission mechanisms of monetary policy?

³ World Bank (2012).

Loans to Africa from BIS reporting emerging market economies¹

Amounts outstanding, in billions of USD

Graph 2



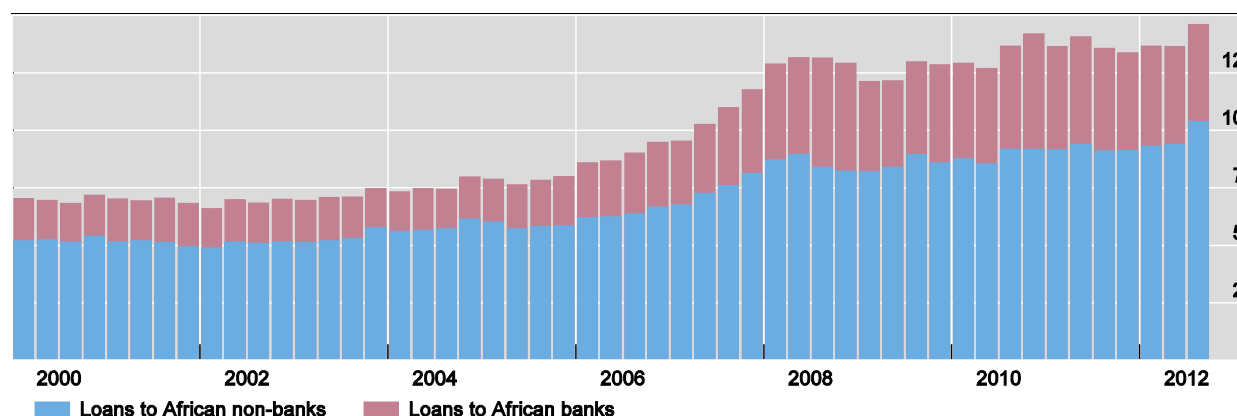
¹ Sum of loans outstanding from Brazil, Chile, Chinese Taipei, India, Indonesia, Korea, Malaysia and Mexico to Africa.

Source: BIS locational banking statistics by residence.

BIS reporting banks' loans to Africa

Amounts outstanding, in billions of USD

Graph 3



Source: BIS locational banking statistics by residence.

In recent years, the East African Community (EAC), comprising five countries Burundi, Kenya, Tanzania, Rwanda and Uganda, has been one of the more active regions in terms of regional financial integration. The EAC is therefore used here to illustrate the impact of regional financial integration. The EAC Treaty, signed in 2000, commits the participating states to establish a customs union (established in 2005), a common market (July 2010) and a monetary union. Important steps are under way towards harmonising the regulatory environment for financial banking and services. In addition, preparations have begun for a common payment and settlement system for the five member states, which would allow settlement in local currencies.⁴

⁴ IMF (2011).

But the countries still have different monetary and exchange policy frameworks. Three of the currencies are floating. Kenya and Uganda are further advanced in using the policy rates as an instrument (Uganda under an “inflation lite” arrangement), while Burundi, Rwanda, and Tanzania still operate under a monetary target framework.

The private banks in Kenya have been leading the regional integration of the banking sector. Four Kenyan banks (Kenya Commercial Bank, Equity Bank, Fina Bank and Commercial Bank of Africa) have opened branches in neighbouring countries.⁵ By contrast, the banks in Uganda and Tanzania do not have a regional presence. Mobile banking that took off in Kenya and spread to Uganda has helped broaden access to financial services.

Studies on the transmission mechanisms of monetary policy and the level of bank competition suggest that the EAC has not yet reaped the full benefits from integration. These studies indicate that the effect of an expansionary monetary policy (decline in the policy rate) varies in different EAC countries, eg it lifts prices significantly in Kenya and Uganda but raises output in Burundi, Kenya, and Rwanda. Among the five countries, Kenya appears to have the most competitive banking system, but further progress needs to be made in all EAC countries in promoting competitive banking systems to ensure that bank lending responds to changes in monetary policy. This will require progress in ensuring property rights, enforcement of collateral, credit information about borrowers, and a more efficient resolution system for commercial disputes.⁶

The EAC experience suggests that regional financial integration is possible but also that it will take time, since it requires difficult institutional changes both at the country and the regional levels. The countries are at different stages of financial development, and while capacity has improved, critical skills are still needed in legal, accounting, and debt management areas.

Pan-African banking

In Africa, banks dominate the financial system. Traditionally, banks from the United Kingdom, France, and Portugal accounted for a large share of the banking in Africa, although their influence is dwindling. With the change from North-South to South-South relations in trade and finance, particularly with emerging market economies such as Brazil, China, and India, cross-border flows have also been increasing (Graph 2). Only in a few cases have these emerging market countries also established subsidiaries or branches in Africa. The most notable exception is the 20% (\$5.5 billion) direct investment by the Industrial and Commercial Bank of China in Standard Bank of South Africa in 2007 to serve its Chinese clientele operating in Africa. Bank of China has also established a presence in Zambia. A number of Chinese banks have established collaboration agreements with African banks.⁷ But more banks from these countries might be on their way.

⁵ World Bank (2011).

⁶ IMF (2012b); IMF (2011–12); Sanya and Gaertner (2012); Davoodi et al (2013).

⁷ In 2008 China Development Bank entered a memorandum of understanding with United Bank of Africa to finance long-term infrastructure projects. In 2009 Bank of China signed a cooperation agreement with Ecobank.

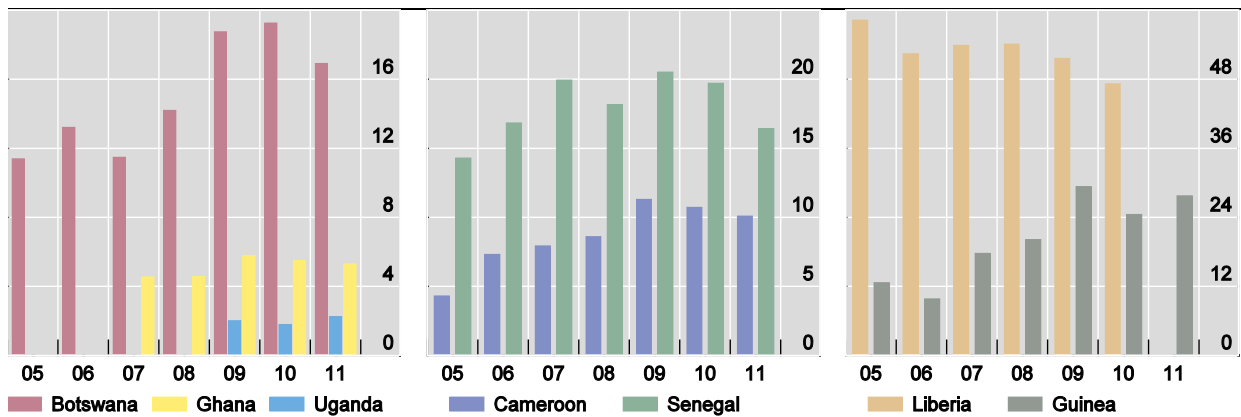
For example, at the first Africa-India Forum Summit held in March 2013, attended by 15 African leaders and the Indian Prime Minister, the two sides agreed to encourage the opening of branches of Indian banks in Africa and African banks in India. Similarly, two of Brazil's three leading banks are reportedly in talks with a major bank in Portugal on a strategic partnership to operate jointly in Africa.⁸

Pan-African banks (banking groups domiciled in Africa with subsidiaries in several countries) have accounted for an increasing share of domestic banking (Graph 4). In the West African Economic and Monetary Union (WAEMU), for example, pan-African banks account for almost a third of credit institutions operating in 2011 with nearly half of the total balance sheet. As Graph 5 shows, major banking groups are domiciled in South Africa, Nigeria, and Morocco, but other groups are headquartered in other countries (eg Ecobank with a 32-country coverage is domiciled in Togo). The banking groups located in South Africa have been present for many years. They tend to cover the southern and eastern African countries (Graph 5), and more recently they have also spread to west Africa. The foreign activity of Nigerian banking groups is relatively new; they expanded after the consolidation phase in the banking industry that started in 2004–05, which resulted in an increase in the capital base. In Morocco, the largest bank, Attijariwafa Bank, started opening subsidiaries in sub-Saharan francophone countries in its search for new market opportunities after the global financial crisis hit the euro area. The bank is reaching out to the part of the population that does not have access to banking. It lends to small and medium-sized enterprises that normally have difficulties in getting financing, but it also finances large infrastructure projects.

Pan-African banks in selected African countries

Deposits in pan-African banks as a percentage of total bank deposits

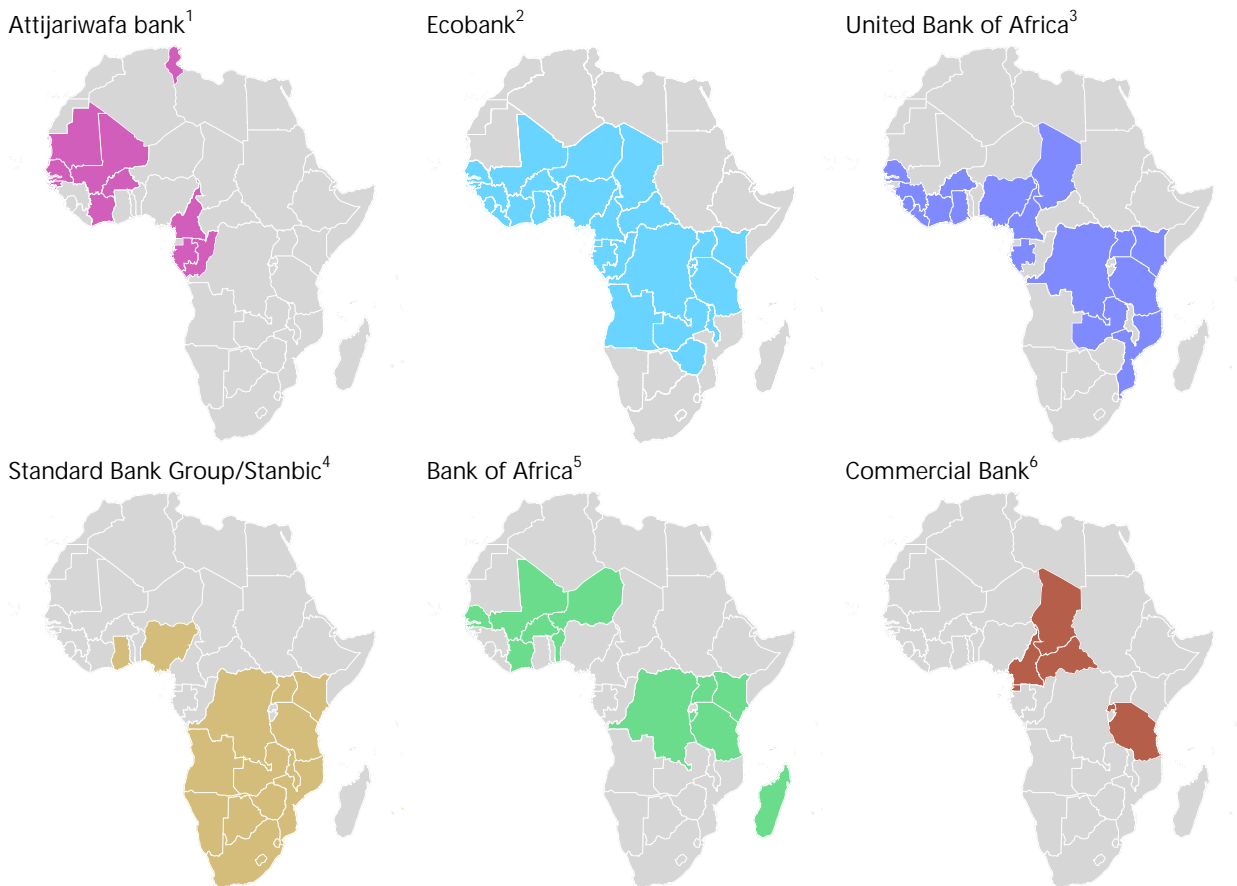
Graph 4



Simple averages across samples of local banks. Botswana: Stanbic Bank. Ghana: Ecobank, Stanbic Bank, United Bank for Africa. Uganda: Bank of Africa, Ecobank. Senegal: CBAO group Attijariwafa bank, Ecobank. For Cameroon, Guinea and Liberia only Ecobank data available.

Sources: Bankscope; IMF, *International Financial Statistics*.

⁸ Latin American Herald Tribune, 13 March 2013.



¹ Burkina-Faso, Cameroon, Congo, Côte d'Ivoire, Gabon, Guinea-Bissau, Mali, Mauritania, Senegal and Tunisia. ² Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Côte d'Ivoire, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Malawi, Mali, Niger, Nigeria, Republic of Congo, Rwanda, São Tomé and Príncipe, Senegal, Sierra Leone, Tanzania, Togo, Uganda, Zambia, Zimbabwe. ³ Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of Congo, Gabon, Ghana, Guinea, Kenya, Liberia, Mozambique, Nigeria, Senegal, Sierra Leone, Tanzania, Uganda and Zambia. ⁴ Angola, Botswana, Democratic Republic of Congo, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. ⁵ Benin, Burkina Faso, Burundi, Côte d'Ivoire, Democratic Republic of Congo, Mali, Niger, Kenya, Madagascar, Senegal, Tanzania and Uganda. ⁶ Cameroon, Central African Republic, Chad, Equatorial Guinea, Rwanda, São Tomé and Príncipe and Tanzania.

Sources: IMF, *Regional Economic Outlook*, April 2011; Attijariwafa bank website.

Pan-African banks are organised as subsidiaries of foreign banks. They behave mainly like domestic banks by taking local currency deposits; but in some countries they also take deposits and lend in foreign currency (Appendix Table 1).⁹ Pan-African banks increase competition in the domestic banking systems. They also provide a transfer of know-how and technology. And they not only broaden the availability of financial services, but they also widen access to banking services.

The expansion of pan-African banking has characteristics that resemble the major expansion of Spanish banks in Latin America during 1995–98. Spanish banks were on the lookout for new markets, they had cultural and language advantages, and they were able to share their advanced technology and know-how with the Latin American countries. The experience was positive in terms of the impact on

⁹ IMF (2012d).

competition but the negative impact on the quality of the loan portfolio of local banks is also instructive (Box 1).¹⁰

Box 1

The experience of Spanish banks in Latin America¹¹

The experience of pan-African banks spreading in Africa during recent years might be compared to the expansion of Spanish banks in Latin American countries during 1995–98.

Following a period of deregulation in Spain, banks were interested in pursuing more market-oriented strategies. Spanish banks expanded in Latin America rather than in the rest of Europe for several reasons. Latin American emerging markets with their high population growth rates were considered to offer the prospects of higher economic growth than did the saturated markets of Europe. In addition, these new markets offered scope for risk diversification because the economic cycles in Spain and Latin America did not move in tandem. At the same time, the process of liberalisation and privatisation of the banking sector in Latin America had created new opportunities for investments. The banking system also showed higher margins and costs than the European markets, which offered the prospects of higher profits. Non-economic factors such as common language and culture and the presence of Spanish people residing in some Latin American countries also played a role.

For Latin American countries, the opening up of their banking sectors to foreign banks helped break an oligopolistic banking structure and promoted competition. Since Spanish banks often acquired existing banks but brought in their own management, new technologies were spread, competition increased, and financial depth enhanced. At the same time, the deregulation of the banking sector might also have led to a negative impact on the quality of the loan portfolios of local banks, either because of the increase in competition and reduction in profit margin or due to a loss of the more creditworthy customers to the foreign banks. This underlines the importance of accompanying liberalisation with solid regulation and supervision.

4. Implications for monetary policy transmission

What is the impact of these developments on the transmission channels of monetary policy? The three main channels are the interest rate channel, the exchange rate channel and the credit channel.

Interest rate channel

The interest rate channel is particularly important as a transmission mechanism for monetary policy in the more developed countries, such as South Africa, Ghana, Kenya, and Mauritius.¹² In those countries, changes in policy rates lead to changes in domestic interest rates, although this occurs sometimes with a delay and without a full pass-through. However, the existence of an oligopolistic banking structure in many countries restricts competition and thereby also the responsiveness of market interest rates to changes in policy rates. This reflects in part market concentration

¹⁰ Sebastián and Hernansanz (2000).

¹¹ Calderon and Casilda (2000).

¹² For a more detailed discussion of monetary policy transmission mechanisms, see Christensen (2011).

but also risks. In fact, sub-Saharan Africa has the highest interest margins in the world.¹³ It is also the region with the highest concentration ratio for banks.

To the extent that the increase in cross-border banking increases competition in domestic banking, it could help reduce the interest margin. In Nigeria, for example, the participation of pan-African banks in open market operations has helped moderate the level of the interest rate structure. In Uganda, it has increased competition in the banking sector and it is likely that it has enhanced the interest rate channel of monetary policy, although the empirical evidence is still missing. In other cases, it is too early to discern the impact on the interest rate channel.

Exchange rate channel

In countries that are open and have flexible exchange rates, the exchange rate channel can be a powerful transmission mechanism for monetary policy. A monetary expansion, for example, would tend to lower the real interest rate and cause the currency to depreciate. The exchange rate is also a very visible sign of monetary conditions in countries where timely statistics might not be available. Therefore, central banks in countries such as Ghana, Kenya, Mauritius and Morocco have reported that the exchange rate channel is among the more important transmission mechanisms for monetary policy.¹⁴

In several countries, foreign banks participating actively in the foreign exchange market can also change monetary conditions and the exchange rate. In Nigeria, this is reportedly the case, because pan-African banks are active in foreign exchange auctions. In Malawi, depending on the developments in the exchange rate, pan-African banks remove or inject into the system foreign exchange that is partly obtained from their parent institution. While local currency deposits and lending account for most deposits held by pan-African banks in Malawi, there is also a sizeable share of foreign currency deposits and lending and therefore scope for currency substitution.

Credit channel

The role of banks is to intermediate between savings (ie deposits) and lending for investment or consumption purposes. The intermediation ratio, ie the ratio between lending and deposits, is relatively low in Africa compared to other regions (Table 1), which has an impact on the effectiveness of monetary policy.

Have the operations of pan-African banks boosted the intermediation ratio? It is still too early to say with confidence. First, pan-African banks have to some extent replaced domestic banks or other foreign banks by buying up existing banks, often those in financial difficulties. Generally they operate like domestic banks, but it varies from country to country. To the extent that they are able to modernise the infrastructure, including through improvements in the payments system across their own network, it might be possible for them to increase the intermediation ratio.

¹³ Ahokpessi (2013).

¹⁴ See Christensen (2011).

In the WAEMU, the increased presence of pan-African banks has increased competition in the credit market and stimulated the interbank market and helped strengthen the transmission mechanism of monetary policy. In Uganda, pan-African banks have also increased competition in the banking system. This has led to a rapid increase in branch networks. Pan-African banks are also more willing to serve non-prime borrowers than the major international banks and thereby have made a contribution to the strong growth in intermediation that has occurred in Uganda. It is likely that they have strengthened the credit channel of monetary policy transmission mechanism. In the wake of the global financial crisis, the growth rate of bank lending declined in many countries (for example Angola, Egypt, Malawi, Morocco, Nigeria, Uganda and Zambia (Appendix Table 3). This followed a period of very strong credit growth to the private sector before the crisis, which partly fuelled inflation. Such a drastic expansion is also likely to have led to some deterioration in the quality of the loan portfolio, which has only in part showed up in the statistics for non-performing loans because of “evergreening” loans (ie the rollover of principal into a new loan when it falls due).¹⁵

5. Pan-African banks and financial stability

Many of the pan-African banks have systemic importance for both the home and host countries. They account for a large share of deposits; they are often important players in the Treasury bill markets, foreign exchange markets, and the payments system.^{16,17} Banks are generally well capitalised. But there may be weakness in supervision. The key issue is whether regulations and supervision are keeping up with the innovation and sophistication of activities of foreign banks.

Are banks supervised on a consolidated basis, including their subsidiaries abroad? This is normally the task of bank supervisory bodies in home countries. The practice of South African banking supervision is particularly important because South African banks have spread to a number of countries in southern and eastern Africa and account for a major share of the deposits of the banking systems in these countries. Since 2001, the South African Reserve Bank Supervision department (BSD) has conducted consolidated supervision and the BSD has established procedures and regulatory returns for banking groups, including for banking operations outside South Africa. It intends to establish a conglomerate supervision unit in line with international principles. The risk-based supervision methodology followed by the BSD requires that additional resources are concentrated on systemically important banking groups, which typically include South African banking groups with foreign operations.

Nigeria has implemented consolidated supervision in line with the Basel Committee's *Core Principles for Effective Banking Supervision*.¹⁸ A framework for cross-border supervision for banks was developed and implemented in 2011. The framework sets as a precondition for the presence of Nigerian banks in other

¹⁵ World Bank (2012).

¹⁶ Lukonga and Chung (2010).

¹⁷ IMF (2012e).

¹⁸ Basel Committee on Banking Supervision (2012).

countries the execution of a memorandum of understanding (MoU) with the host regulators. Nigerian banks that operate foreign subsidiaries are subject to higher capital requirements.

But not all pan-African banks are subject to consolidated supervision. When Ecobank was established, it was granted the status of an international organisation and a non-resident financial institution by the government of Togo, where it is domiciled, and is therefore not supervised by the Banking Commission of the WAEMU in Abidjan.

Home/host relationships and information-sharing are of paramount importance for consolidated supervision. Here again, practice is not uniform throughout Africa. A major financial centre such as South Africa employs a standard procedure to contact foreign supervisors before agreeing that a South African banking group can establish a foreign banking operation. The BSD has also held supervisory colleges with the supervisors of South African banking group units in other African countries. The Bank of Uganda is also striving to work with the home supervisors of all foreign banks with subsidiaries in Uganda, with a view to facilitating effective consolidated supervision and to obtaining information on the financial position of the parent bank (so far, it has signed MoUs with five of nine bank regulators in the home countries of those banking groups). In other countries, regular contacts across borders are missing, or MoUs are not followed up with regular contacts or operational procedures for contacts and exchange of information. There are also examples of countries introducing regulations that do not provide a level playing field between domestic and foreign-owned banks in a country, which has led to retaliation from a home country regulatory authority. Thus equal treatment for locally and foreign-owned banks and the provision of a level playing field are important for maintaining the trust that is essential for good collaboration across borders.

Even with consolidated bank supervision and collaboration between host/home regulators and supervisory bodies, bank supervision can only be as good as the underlying information and data. Africa covers a wide range of countries with bank supervisory bodies of differing institutional strength. In low-income countries, in particular, timely and good-quality data are often not available to bank supervisors. This includes information on intra-group risk exposure, which reportedly is also an issue in pan-African banking groups.¹⁹ In addition, credit rating agencies either do not exist or have arrived only recently, which means that it is difficult to evaluate the underlying riskiness of a bank asset. This undermines the reliability of risk analysis for a parent bank. In emerging countries outside Africa, by comparison, foreign-owned banks, in particular, have tended to underestimate the build-up in credit risk arising from a rapid expansion in credit growth compared with domestically owned banks.²⁰

Finally, open foreign currency positions are a potential risk factor. In many emerging countries, such positions have proven to be the banking system's Achilles heel, depending on the regulatory requirements that exist in each country. As seen in Appendix Table 1, there is some currency mismatch among foreign banks although it does not appear to be large (with the exception of Swaziland). But even

¹⁹ Lukonga and Chung (2010).

²⁰ Mihaljek (2009).

if there is no currency mismatch, as pointed out by Mihaljek (2009), extending foreign currency loans can be transformed into a credit risk in the case that a country devalues its currency, thus obliging domestic borrowers to repay a higher amount of debt as measured in domestic currency.

Lender of last resort

If a pan-African banking group with a systemic importance (“too big to fail”) experienced serious financial problems, could the central bank in a host country consider being a lender of last resort for this bank, or provide emergency liquidity assistance to it? If so, under which circumstances would assistance be offered? What conditions would be applied? Such assistance is one of the foremost instruments in the arsenal of central banks. But often central banks have either not formulated their views on how to perform this role or they have hesitated to express their intentions to the public for fear of moral hazard issues.

In recent years, we have seen several instances where central banks in advanced countries have resorted to lender of last resort operations. To name a few, in 2008 the Bank of England provided emergency liquidity assistance to banks during the financial crisis, and during 2008–10, the Federal Reserve provided liquidity support to financial institutions (short-term) backed by collateral. This helped stabilise the financial system. In addition, the Federal Reserve provided foreign currency swaps to supply foreign central banks with dollars in exchange for foreign currencies. The swaps allowed foreign central banks to meet the dollar needs of their own financial institutions. Thus the Federal Reserve performed both a domestic and an international role as lender of last resort.

Pan-African banks in host countries are subsidiaries of foreign-owned banks in Africa, but they are subject to the same rules and regulations as apply to banks with domestic ownership in host countries. As mentioned above, in some countries, they account for a very large share of total deposits in the host country (Graph 4), so it is conceivable that a crisis could be of systemic proportions. If a foreign banking group experiences liquidity problems, it might withdraw capital from its subsidiaries in other countries. This could create financial difficulties for the subsidiary. In such a situation, the parent bank might be the reason for the financial difficulties of the subsidiary. This is also why collaboration and information-sharing with the home supervisory bodies and central banks are so vital. If no help is possible from the parent bank, which is normally the best option, the ring-fencing of the troubled operation might be considered to prevent any further withdrawal of funds. But ring-fencing measures taken in one host country might aggravate the stress in the banking group as a whole. Thus, ring-fencing is clearly a second-best option. (Equally, liquidity problems in a large subsidiary could have serious implications for its parent.)

In such circumstances, a central bank could be called upon to act as lender of last resort.

There are general principles that guide a central bank’s involvement as lender of last resort:

- The central bank normally deals with banks that have liquidity problems but not banks that are insolvent. Insolvent banks are considered the responsibility of a government. In practice, though, it is difficult to differentiate between liquidity and solvency cases, because a problem could start as a liquidity case

but, because of the impact on asset prices, it could develop into an insolvency case.

- The central bank would normally secure its emergency lending with collateral so that its balance sheet does not suffer. In fact, in many countries, good security forms the legal basis for any undertaking by the central bank to provide emergency lending.
- In four out of five cases in which central banks responded to a question on the lender of last resort function in a BIS-conducted survey in 2011,²¹ it was reported that decisions on LoLR lending of last resort are within the remit of the central bank. But there are exceptions. In the United Kingdom, for example, decisions on emergency lending are ultimately the responsibility of the Chancellor.

In the context of an international banking business, a key question is which central bank should assume the lender of last resort role: the host central bank or the home central bank of the bank's parent? This was always a thorny question in discussions between G10 central banks.²² There was no automatic link between responsibility for bank supervision (covered in the 1983 Concordat) and the assumption of a lender of last resort role. However, the general presumption was that the host country central bank would have the initial responsibility for providing liquidity support to a foreign bank. But it was also recognised that the home country central bank might become responsible very soon after such support became necessary.

A further complication arises with lender of last resort operations in foreign currency. A central bank cannot of course create money in a foreign currency. So the central bank of issue may agree to swap arrangements to facilitate central bank support operations in dollars, euros or other foreign currency.

Size matters in any home/host allocation of responsibility. Some of the pan-African banking groups are very large compared to home country GDP (eg Ecobank domiciled in Togo). What needs to be avoided is that any financial support to banks – whether through liquidity support by the central bank or through the government budget – eventually turns into a sovereign default problem. This is why the development of cross-border banking needs to go hand in hand with closer banking supervision and with forethought about cross-border collaboration in the event of liquidity stresses or worse. This might curb the expansion of foreign bank activity in the short term but it would be less costly for the country in the long term.

6. Conclusions

Economic developments in Africa have long been constrained by the lack of well developed financial markets. Regional integration in different parts of Africa as well as the spread of pan-African banking offer the prospects of deepening financial

²¹ BIS Bank for International Settlements, (*Central bank governance and financial stability*, A report by a Study Group, Chaired by Governor Stefan Ingves, May 2011a).

²² See Turner (2009), pp 117–8, for a summary of this debate.

markets, making monetary policy more effective and enhancing access to financial services to a larger population and thereby promoting growth.

The East African Community, which has made significant strides in terms of a customs union and common market, is now making progress in harmonising payments and settlement systems and the regulatory and supervisory framework in the region but much remains to be done before financial integration is a reality. In the meantime, the region is enjoying a growing provision of banking services and the proliferation of new technology (eg mobile banking).

The expansion of pan-African banks has taken off across Africa. These banks know the African continent well and are in a position to transfer know-how to other countries in which they have established subsidiaries. It is still too early to conclude what kind of impact these banks will have on monetary policy transmission mechanisms and on financial stability, but initial indications suggest that in countries where they account for a significant share of banking transactions, they are improving the interbank and foreign exchange markets, creating competition among banks and also reaching the population in rural areas that previously had no access to banking services. They also help spread technology and financial services to “non-banked” areas. Since the banks fund themselves locally for the most part, their business might also be more stable than that provided by international banks domiciled outside Africa.

The spread of pan-African banks needs to go hand in hand with improvements in the regulatory and supervisory framework of banks. The more developed countries have already introduced consolidated supervision for banking groups for which they are the home country. But this is not the case in all countries. The quality of supervision also needs to be boosted by the better and timelier availability of financial information on the banks and their customers. In addition, the spread of pan-African banking would benefit from further cross-border collaboration and contingency plans, including emergency financial assistance under lender of last resort arrangements, in case a banking group should experience financial troubles of a more systemic (“too big to fail”) nature. In this respect, African policymakers can learn from the costly experience of advanced and emerging market economies during the global financial crisis.

Assets of selected African banking systems

In per cent of total assets

Table A1

	End-2000 ¹							End-2005 ²							End-2012 ³									
	Local currency			Foreign currency				Total	Local currency			Foreign currency				Total	Local currency			Foreign currency				Total
	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴		For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵		o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶				
Algeria	94.7	3.8	0.0	1.2	0.4	0.0	100.0	89.2	7.7	0.0	2.8	0.2	0.0	100.0	85.4	13.4	0.0	1.1	0.1	0.0	100.0			
Angola	...	...	...	...	...	...	...	33.0	16.3	...	30.1	20.6	...	100.0	36.1	16.4	0.5	26.0	21.6	0.6	100.0
BCEAO	...	100.0	...	...	...	...	100.0	...	100.0	...	...	...	...	100.0	...	100.0	...	...	...	...	100.0
Congo, DR ⁷	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.8	12.9	9.9	43.4	31.9	18.7	100.0
Egypt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55.3	20.6	...	15.1	8.9	...	100.0
Ghana	25.3	33.3	4.5	17.8	23.5	3.2	100.0	26.6	25.6	3.8	24.3	23.4	3.5	100.0	29.2	36.1	21.5	15.5	19.2	11.4	100.0			
Lesotho	1.2	39.1	0.0	0.1	59.7	0.0	100.0	0.4	77.5	0.0	0.2	21.9	0.0	100.0	2.6	75.7	0.0	1.5	20.3	0.0	100.0			
Malawi	44.6	45.6	36.8	8.6	1.2	0.4	100.0	64.1	29.1	23.6	3.1	3.6	1.9	100.0	58.4	30.0	25.7	6.1	5.6	5.2	100.0			
Mauritius	33.5	12.5	2.3	6.5	47.5	17.9	100.0	28.3	11.0	0.2	6.5	54.3	8.8	100.0	26.9	8.4	0.4	10.8	53.8	11.0	100.0			
Morocco	95.9	0.2	...	1.5	2.3	...	100.0	92.2	1.3	...	1.7	4.8	...	100.0	93.9	0.1	...	3.4	2.6	...	100.0			
Nigeria	95.2	3.9	1.5	0.8	0.0	0.0	100.0	94.7	4.5	1.5	0.7	0.0	0.0	100.0	85.4	14.0	5.1	0.5	0.1	0.0	100.0			
Seychelles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16.7	32.3	25.8	13.9	37.0	27.5	100.0
South Africa	...	...	...	...	...	...	...	69.4	29.1	0.0	0.8	0.6	0.0	100.0	55.0	19.9	0.0	21.9	3.1	0.3	100.0
Swaziland	17.0	69.5	...	1.4	12.1	...	100.0	18.0	75.1	...	0.3	6.6	...	100.0	14.2	67.2	...	1.7	16.9	...	100.0			
Tanzania	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42.1	27.7	8.5	9.5	20.7	5.7	100.0
Tunisia	86.2	13.8	...	...	...	...	100.0	72.3	27.7	...	...	...	...	100.0	71.6	28.4	...	...	...	...	100.0
Uganda	32.4	35.8	8.9	5.5	26.3	7.3	100.0	12.8	59.5	26.0	2.6	25.0	8.8	100.0	14.8	53.6	26.5	3.4	28.2	14.9	100.0			
Zambia	20.4	79.5	0.7	0.0	0.0	0.0	100.0	22.3	77.7	3.6	0.0	0.0	0.0	100.0	20.5	79.5	11.5	0.0	0.0	0.0	100.0			

¹ For Malawi and Nigeria, end-2001. For Swaziland, end-2003. ² For Nigeria, end-2004. ³ End-2012 or latest data available. For Algeria, data are provisional. ⁴ Domestically owned. ⁵ Foreign owned. ⁶ Of which pan-African. ⁷ Democratic Republic of Congo.

Sources: BIS questionnaire on roles of African central banks in macroeconomic and financial stability, May 2013; BIS calculations.

Liabilities of selected African banking systems

In per cent of total liabilities

Table A2

	End-2000 ¹							End-2005 ²							End-2012 ³									
	Local currency			Foreign currency				Total	Local currency			Foreign currency				Total	Local currency			Foreign currency				Total
	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴		For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶	Dom own ⁴	For own ⁵		o.w. p-Af ⁶	Dom own ⁴	For own ⁵	o.w. p-Af ⁶				
Algeria	89.2	3.6	0.0	6.7	0.5	0.0	100.0	85.9	7.2	0.0	6.2	0.7	0.0	100.0	83.1	12.9	0.0	3.4	0.6	0.0	100.0			
Angola	...	...	...	...	...	...	...	33.9	11.4	...	29.4	25.2	...	100.0	35.7	13.7	0.4	26.8	23.9	0.6	100.0
BCEAO	...	100.0	...	...	...	...	100.0	...	100.0	...	...	...	...	100.0	...	100.0	...	...	...	...	100.0
Congo, DR ⁷	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11.1	11.8	8.9	44.2	33.0	19.6	100.0
Egypt	...	...	...	...	...	...	...	...	...	...	...	...	...	...	55.4	20.6	...	15.1	9.0	...	100.0
Ghana	24.7	33.9	4.5	17.4	23.9	3.2	100.0	26.7	25.6	6.2	24.4	23.3	5.7	100.0	29.8	35.5	21.4	15.9	18.9	11.4	100.0			
Lesotho	0.3	99.7	0.0	...	...	...	100.0	0.5	99.2	0.0	0.0	0.3	0.0	100.0	3.3	96.5	0.0	0.0	0.2	0.0	100.0
Malawi	42.9	44.6	36.1	6.6	5.9	5.1	100.0	60.9	28.8	26.3	5.8	4.5	4.1	100.0	56.6	29.1	25.1	7.5	6.8	6.8	100.0			
Mauritius	34.8	12.5	2.4	5.3	47.4	17.8	100.0	28.8	9.6	0.0	5.9	55.7	9.0	100.0	27.6	8.8	0.3	10.1	53.5	11.0	100.0			
Morocco	93.5	0.9	...	0.9	4.8	...	100.0	96.3	0.8	...	1.1	1.7	...	100.0	95.1	0.6	...	2.6	1.7	...	100.0			
Nigeria	95.4	3.7	1.4	0.8	0.0	0.0	100.0	95.0	4.3	1.4	0.7	0.0	0.0	100.0	85.0	14.3	4.8	0.5	0.1	0.0	100.0			
Seychelles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17.7	29.5	24.4	13.0	39.9	28.8	100.0
South Africa	...	...	...	...	...	...	...	69.7	29.6	0.0	0.4	0.3	0.0	100.0	58.8	22.3	0.0	17.5	1.5	0.3	100.0
Swaziland	18.4	80.1	...	0.0	1.4	...	100.0	19.5	79.0	...	0.0	1.4	...	100.0	15.8	78.7	...	0.0	5.4	...	100.0			
Tanzania	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40.6	26.0	8.2	10.6	22.8	6.2	100.0
Tunisia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Uganda	32.8	36.5	9.0	5.1	25.6	7.1	100.0	13.0	59.9	26.7	2.4	24.7	8.1	100.0	15.3	54.4	26.9	2.8	27.4	14.6	100.0			
Zambia	20.4	79.5	0.7	0.0	0.0	0.0	100.0	22.3	77.7	3.6	0.0	0.0	0.0	100.0	20.5	79.5	11.5	0.0	0.0	0.0	100.0			

¹ For Malawi and Nigeria, end-2001. For Swaziland, end-2003. ² For Nigeria, end-2004. ³ End-2012 or latest data available. For Algeria, data are provisional. ⁴ Domestically owned. ⁵ Foreign owned. ⁶ Of which pan-African. ⁷ Democratic Republic of Congo.

Sources: BIS questionnaire on roles of African central banks in macroeconomic and financial stability, May 2013; BIS calculations.

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

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

Table A3

	Before the crisis January 05 – September 08	During the crisis October 08 – April 09 ¹	After the crisis May 09 – latest
<i>Emerging market</i>			
Algeria	20.5	14.5	13.5
Egypt	8.8	11.9	4.6
Morocco	17.7	21.4	9.3
South Africa	20.8	11.4	4.8
Tunisia	8.8	14.8	13.9
<i>Frontier market</i>			
Angola	72.4	64.8	38.6
Ghana	44.9	48.6	24.6
Kenya	15.7	25.5	20.7
Mauritius	13.6	24.1	10.5
Mozambique	27.5	54.3	27.9
Nigeria	53.0	53.6	2.0
Senegal	14.3	15.7	11.2
Tanzania	33.7	24.5	21.2
Uganda	25.6	46.1	26.3
Zambia	40.4	48.8	16.9
<i>Selected financially developing</i>			
Botswana	18.5	27.0	15.4
Cameroon	7.1	19.3	16.3
Cape Verde	21.5	26.3	10.9
Congo (Dem. Rep. Of)	77.8	130.7	28.6
Ethiopia	31.3	36.0	...
Lesotho	29.6	23.9	23.2
Madagascar	24.6	22.4	7.3
Malawi	37.8	100.0	44.3
Namibia	14.5	10.7	11.2
Seychelles	14.9	29.0	11.3
Swaziland	24.9	4.9	10.8

¹ For Ethiopia, until December 2008.

Source: IMF, *International Financial Statistics*.

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Government debt issuance: issues for central banks

Stephen Vajs¹

Introduction

The domestic bond market is critical to the economy and the financial system for many reasons. First, sovereign debt issued by either the central bank or the central government plays a major role in the development of a credit market.² It is generally safer than debt instruments issued by private parties. Second, the yield on sovereign debt serves as the baseline from which all other debt instruments in the same market can be priced by adding appropriate risk, liquidity and term premia to the underlying pure interest rate. Third, high-quality securities aid market development by providing quality collateral to secure financial transactions. Finally, a well developed domestic bond market helps the government to finance its fiscal deficit in a non-inflationary way.

Central banks have a natural interest in developing bond markets. Yet the crisp distinction between debt management and monetary policy in economics theory is far less sharp in the actual practice of government fiscal operations. Debt issuance by the government can constrain the options and outcomes of monetary policy. Similarly, debt issued by the central bank for monetary policy purposes can impact the market for government debt. It can also have implications for financial stability. Government decisions about the currency denomination and the maturity of the government's own debt have had a major impact on the development of local currency debt markets. As BIS (2007) notes, such debt issuance strategies were in the past opportunistic, paying scant attention to the possible implications for financial stability (or to the medium-term fiscal consequences). But in recent years, governments have taken a more principles-based approach to the management of debt. This involved avoiding issuance policies that undermined macroeconomic control. A more deliberate focus on balance sheets was developed, leading to efforts to quantify risk exposures.³

This brief note examines the role that the central bank can play in supporting and developing debt markets and how central bank policy could complement, or interfere with, government fiscal operations and debt management. It briefly reviews developments in African bond markets and then focuses on three aspects of the central banks' role in sovereign debt management: (i) as the manager of

¹ Retired from the US Treasury and now global consultant on sovereign debt and cash management. The paper benefited greatly from the statistical research work of Tracy Chan and Matina Negka working under the direction of Ken Miyajima. Thanks are also due to Sonja Fritz for support on all aspects of the project. I would also like to thank Madhusudan Mohanty for many helpful discussions.

² This principle was recognised at least as early as 1789 when the first Secretary of the US Treasury, Alexander Hamilton, deliberately created a national debt by consolidating debts of the individual states as a means of promoting commerce in the new nation.

³ See BIS (2007).

government debt; (ii) as an issuer of debt; and (iii) as the promoter of debt markets. It will discuss the effects on monetary policy and local financial markets. The central bank is a natural choice for this task because of its links to the financial sector. It can advise the government on the strength and capacity of local debt markets to ensure a receptive market for government debt. In acting to promote stability in the market, it can make use of its own balance sheet. This can be particularly important in emerging economies, where markets are often undeveloped and consequently thin and unstable.

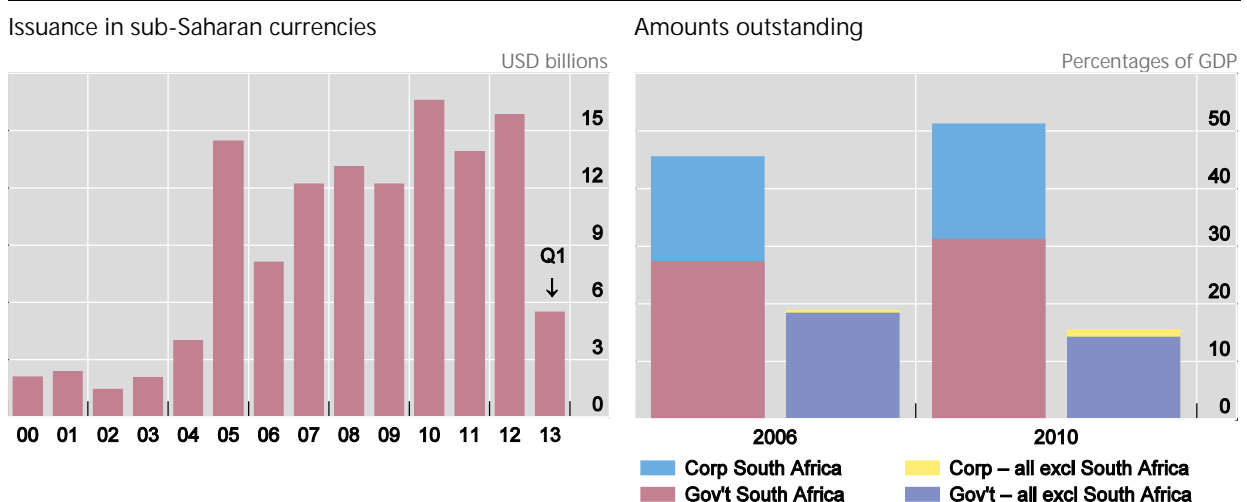
1. Domestic bond markets in Africa

Although domestic bond markets are relatively new in Africa compared with other emerging market regions, they are developing very fast. As the left-hand panel of Graph 1 shows, issuance of bonds denominated in sub-Saharan currencies by all sectors was resilient to market stress during the global financial crisis that began in 2008. This year, economies in sub-Saharan Africa have witnessed the strongest first quarter issuance ever. As the right-hand panel of Graph 1 shows, the outstanding debt stock in South Africa, which boasts the largest bond market in the region, grew from 45% of GDP in 2006 to 51% of GDP in 2010, with both government and corporate bond markets expanding. In other sub-Saharan African economies, the size of the corporate bond market grew notably, despite remaining small relative to the size of the government bond market.

Country-wise stock data are available for marketable central government bonds. As Table A in the Annex shows, South Africa is by far the largest market, with a size of €51 billion at the end of 2010, followed by Morocco (€25 billion), Nigeria (€13 billion), Angola (€10 billion) and Kenya (€6 billion).⁴ Although relatively small, the market is growing rapidly in Tanzania, Uganda, and Zambia.

Bond market in sub-Saharan Africa

Graph 1



Sources: Mu et al (2013); Bloomberg.

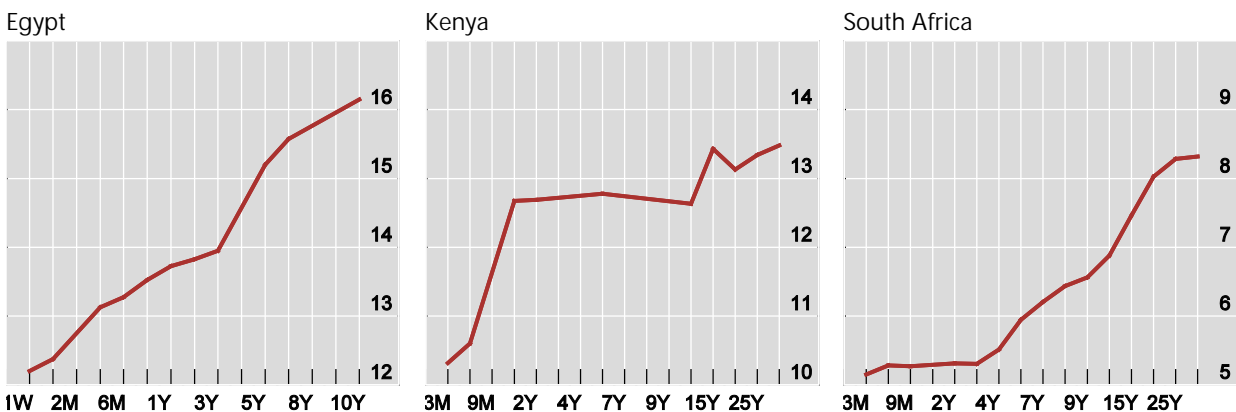
⁴ 2009 data for Angola and 2008 data for Nigeria.

Some African economies have issued long-maturity bonds. Responses to the survey for this meeting, summarised in Table B in the Annex, suggest that many countries issue bonds with a maturity of up to five years and several have issued bonds with a maturity of up to 10 years and above. Morocco has issued bonds up to 30 years of maturity, Nigeria up to 20 years, and Algeria and Zambia up to 15 years. Information from Bloomberg suggests that the 20- to 30-year segment of the yield curve is being traded in Kenya and South Africa (Graph 2). Even though more information is needed to gauge the length and solidity of the benchmark yield curve, this suggests that these bond markets are probably expanding.

Domestic government bond yield curve¹

In per cent

Graph 2



¹ As of 25 March 2013.

Source: Bloomberg.

Foreign investors appear to have become increasingly attracted to African bond markets. Data compiled by the OECD show that foreign holdings of government debt are significant only in South Africa. Information based on international investment position (IIP), however, suggests that in 2011 foreigners held Seychelles and South African debt equivalent to about 10% of those countries' respective GDP. The share was around 5% for Ghana, Mauritius, Swaziland and Tunisia. Long-term debt represented the largest share. Moreover, monthly inflows into mutual funds dedicated to African bonds suggest global investors are increasingly attracted by the asset class.

Many potential constraints on developing domestic bond markets still remain. Cassimon and Essers (2012) identify three main challenges for Africa. First, sustained monetary policy credibility is needed in order to attract investors to longer-term fixed rate bonds. Second, there is a need to diversify the investor base by attracting institutional investors that add to market sophistication and liquidity. Finally, the African authorities have to overcome many infrastructure constraints that impede development of bond markets. In each of these aspects, central banks can play a key role, as both managers and issuers of government debt.

2. The central bank as manager of government debt

The smooth operation of debt markets is critical to monetary policy. The central bank is often the fiscal agent and so helps to ensure that markets function effectively. The relationship between government and central bank is often spelt out in a fiscal agency agreement. As agent, the central bank acts on the instructions of the principal and, accordingly, it should have no independent authority over sovereign debt management. By contrast, when central banks act as debt managers, they are more directly involved in the decisions regarding the cost and the maturity structure of government debt.

Debt management and monetary policy

Whichever model is chosen, there are potential sources of conflict. Central banks are assigned the goal of macroeconomic stabilisation (ie price stability), while debt managers are typically mandated to keep governments' funding costs to the minimum. Government debt managers evaluate the trade-offs and risks of different ways of financing government borrowing. Although sovereign debt management deals primarily with fiscal policy actions, it has implications for monetary policy. Consider a simple accounting identity of the government budget that governs fiscal balance. Defining terms as follows (time is indicated by the subscript t):

D_t = budget deficit

B_t = stock of government bonds (ie paper with a maturity greater than one year)

TB_t = stock of treasury bills (with a maturity of less than one year)

M_t = base money

The simplest representation of the financing of the government is given in Table 1. Monetary policy refers to the determination of demand debt.

The government budget constraint and links between fiscal policy, debt management and monetary policy

Table 1

Fiscal policy		Debt management		Debt management or monetary policy?		Monetary policy
D_t	=	$[B_t - B_{t-1}]$	+	$[TB_t - TB_{t-1}]$	+	$[M_t - M_{t-1}]$

The maturity of long-term government bonds is the domain of debt management. But decisions about treasury bill issuance are part of debt management and part of monetary policy.⁵ The shorter the maturity of treasury bills,

⁵ Historically, the monetary authorities have often expressed their concerns about the impact of the sovereign issuance of very short treasury bills (T-notes) on the stance of monetary policy. Until the mid-1990s, for instance, the Deutsche Bundesbank took the view that the government should finance itself with medium- and long-term securities only. One compromise solution to potential policy conflicts about this is not only to coordinate the timing and to exchange information on new issuance, but in addition to agree on an issuance ceiling for bills.

the closer they are to “money”. More generally, the structure of public debt (eg maturity, currency of denomination) and its holders (eg banks, institutional investors, non-residents) will affect the transmission mechanism of monetary policy.⁶

One implication of the maturity structure of debt is that it has a significant effect on the term premium, and hence the shape and the slope of the yield curve. Excess demand for long-term securities (relative to supply) can reduce term premia, leading to a flatter yield curve; conversely, an excess supply may increase term premia, steepening the yield curve. Thus monetary conditions – hence aggregated demand – can change, without changes in the policy rate.

Another implication of debt maturity relates to its effect on bank credit. In the conventional monetary transmission mechanism, bank credit is determined primarily by demand forces, so that issuance of short-term debt or bank reserves should play little role in the determination of credit. In this case, when banks increase their holding of government bonds, they may crowd out credit to the private sector.

Under imperfect market conditions, however, debt maturity can affect banks’ lending behaviour. There are two major channels through which this may occur. One is that banks may face financing constraints. Short-term government and central bank bills could then act as liquidity buffers (bank reserves in waiting), relaxing these constraints and enhancing banks’ capacity to lend. Another is that liquid assets provide an easy way for investors to leverage up their balance sheets. Banks and other investors may use their bond holdings to build riskier exposures.

Coordination with debt management

Coordination between debt managers and monetary authority is essential, not just for the smooth operation of various monetary transmission mechanisms but also for monetary and financial system stability. One aspect of this coordination relates to the portfolio of public debt, which must be sustainable. The timing and size of debt and scheduled repayments must not overwhelm the public budget. For this reason, debt managers are expected to prepare a medium-term debt management strategy with explicit assessments of economic stresses likely to impact the cost or subsequent marketability of the debt portfolio. By sharing its assessment about probable exogenous factors and endogenous developments as well as the associated risks, the central bank can help the central government develop a debt strategy.

Public debt should be structured in ways that do not magnify the macroeconomic or financial consequences of market shocks. Such shocks could include: a sudden drop in the exchange rate; a sharp rise in domestic short-term interest rates; and a temporary loss of market access. This means limiting reliance on foreign-currency debt, even if this carries a lower coupon. It also means avoiding heavy reliance on short-term debt.

Allowing too much debt to mature at any one time may provoke market dislocations through the market’s inability to absorb or buy sufficient debt to pay off the maturing issues. A country with too concentrated a debt profile may find itself at the mercy of strong market pressures when debt is to be renewed.

⁶ See Filardo et al (2012).

Because of its ties to the local markets, the central bank can provide information regarding the local market's capacity for debt. The central bank may measure the capacity of the local market to absorb debt at different maturities. If the central bank can estimate the volume and monthly flow of investable funds, it could assess how much the potential acquisition of sovereign debt by buy-and-hold investors such as pension funds or insurance companies will influence debt auctions.⁷

A second aspect of coordination relates to management of government cash balances. This is required to avoid conflicts between debt or cash management by the treasury and the open market operations of the central bank. How does the central bank incorporate the government's short-term debt issuance into its estimate of what reserves are available and how much liquidity is in the economy? The government has the key information in its cash forecast, and it should be expected to share such data with the central bank.⁸

The key revenue and expenditure transactions are those that shift funds between the government's accounts at the central bank and accounts at commercial banks and alter the government's net position at the central bank. A shared forecast may be useful in assisting the central bank in planning monetary policy action; detailed cash forecasts are important also for the government's purposes. Building the network of information flows to consolidate the disparate data sources can support better cash management and highlight inefficiencies in the current system.

Further, an effective cash management programme can be expected to take actions to maintain cash balances within a targeted range. The effect of these cash management operations – assuming the government's funds are kept at the central bank – may tend to neutralise the effect of these receipt and expenditure flows on banking reserves. During periods of surplus, when funds are drawn in from the economy, the cash manager may place balances in bank accounts to earn interest on excess balances and add reserves to the banking sector. During spells of cash stringency, with large expenditure flows out to the economy, the ministry of finance might issue treasury bills or take other forms of short-term credit⁹ that would drain reserves from the banking system. These actions are similar to the choices that would be made by the central bank in its open market operations. Financing and cash management actions by the ministry of finance can thus be seen as liquidity shocks that the central bank must address.

Complications might arise if the government's cash management operations are conducted with the same market participants and with instruments comparable to those of the central bank. Careful coordination will be required between the ministry of finance and the central bank. Such coordination may actually curtail the central bank's use of its own bills, particularly if similar maturities are being used by

⁷ Similar analyses are common in the fixed income markets of advanced economies, where weekly estimates of investable funds and funds available for rollover are important parts of private forecasts of interest rate movements.

⁸ Ideally, a daily forecast should be made. It should be noted that a daily forecast is often assumed to be a difficult undertaking. Many countries feel they lack the capacity to build a daily forecast and settle for a weekly cash balance forecast at best.

⁹ For example, some smaller countries have tested using lines of credit from international or regional commercial banks.

both managers. Each party should keep the other well informed of its own actions and seek cooperative solutions whenever policies appear to conflict.

A final aspect of coordination requires reducing the adverse monetary effect of debt issuance, particularly short-term debt. An annual budget law will give an early forecast of how much additional government debt can be expected in the market over the coming year, but it will generally lack specificity as to timing and the actual maturities that will be issued. The financing activities of the government will alter bank reserves, interest rates and the marketability of other securities. The central bank will need to maintain effective liaison and coordination with the government throughout the budget cycle.

What are the central bank's options if, despite coordination, government debt issuance actions are contrary to monetary policy actions? The timing and amounts of government securities issuance will not always coincide with the needs of the central bank's open market policy. The government may need to issue securities when the market is already short of liquidity. The central bank must then choose the extent to which it will provide additional liquidity to the market to meet the government's needs. At a minimum, coordination requires that the issuer inform the central bank of its intentions in advance of taking action. The central bank should inform the issuer if it is advisable to adjust the timing and amount of borrowing to better conform to market conditions.

3. The central bank as an issuer of debt

In recent years, many emerging market central banks have been issuing their own securities. A review of responses to the questionnaire by African central banks, shown in Annex Table C, reveals that many central banks issue government or their own securities. When central banks issue securities, they have a direct impact on bank reserves, market liquidity and the sovereign yield curve.

There might be various reasons why central banks prefer to issue their own securities. First, central banks may issue them to neutralise the liquidity effects of other operations such as the purchase of foreign exchange reserves. They may have a strong incentive to issue short-term debt because it is often the most liquid part of the yield curve, which reduces their exposure to carrying costs and interest rate risks. Second, issuing their own securities may provide central banks with operational independence and flexibility in dealing with liquidity shocks. Their dependence on the government to conduct monetary operations can thus be greatly reduced.

Yet the twin uses of bills by both the central bank and the ministry of finance call for coordination between them. Coordination may seem to be simplified if the central bank acts both as agent for the government in securities issuance and in its own capacity for open market operations. This solution has been found, in some countries, to lead to policy conflicts within the central bank. It becomes difficult for a single institution to pursue a consistent policy course when it is confronted by the sometimes contrary objectives of debt management and monetary policy. The central bank may need to indicate clearly to the market when it is operating as an agent of government and when it is seeking to alter money market conditions for monetary policy purposes.

When debt instruments, particularly bills, are issued by both the central bank and the government, is market growth hurt and is monetary policy affected?^{10, 11} It is possible for the cumulative issuance of both parties to overwhelm the local market's capacity. Emerging market economies generally have very limited capacity for debt securities because personal savings may be low and markets are small. Each party must take account of the actions of the other.

Further, if both the central bank and the government issue securities of overlapping tenors, how should the market interpret any spread between them? The two sources of debt should be equally risk-free. Can the spread in yields be attributed to liquidity concerns? Is there something implied by the market about the two institutions? Can the difference be attributed to small variations in the date of issuance? The problem is that a spread between two seemingly equivalent debt issues can have implications for future auctions of both securities.

Similarly, the situation where one entity – usually the central bank acting as a fiscal agent – issues bills for both liquidity and cash management purposes may engender uncertainty among investors regarding the fiscal state of the government. Unless the purpose of each bill – liquidity or cash balances – is clearly reported to the market in the offering announcement, bill purchasers may misinterpret the meaning of the issuance and this may affect bidding. For example, an effort to drain a large pool of liquidity might be interpreted as a near-term worsening of the government's fiscal position.

Because it is common for central banks to issue bills for purposes of monetary policy, attention should be paid to the practical issues of credit markets and central bank securities. Does bill issuance for monetary policy purposes restrict the short-term credit market for ministry of finance debt? In many advanced economies, this problem is solved by letting the ministry of finance or debt management office issue debt in tenors as needed to manage its deficits and cash balances. The central bank acquires a portfolio of treasury securities from the market and engages in open market operations using the holdings in its portfolio. This solution offers the advantage of clarity: the market knows that if the government is issuing debt, it is for fiscal purposes and that any central bank activity is strictly for monetary policy. The problem in emerging market economies is the absence of a healthy secondary market. If there is no functioning secondary market, does the central bank have any means to achieve its monetary policy goals without issuing its own debt, that is, through open market operations using government debt?

Another item of concern is how the central bank should choose the maturity of its issuance. To the extent that central bank bill issuance is tied to waves of reserves flowing into or out of the local banking sector, the tenors of the bills issued must relate to the expected term of the liquidity events. In setting maturities, there must also be recognition of the needs of the buyers of debt. In the case of publicly traded firms holding sovereign debt, particularly banks, there will be accounting cycles that affect the demand for quality assets. This is particularly true at quarter- and year-end, when portfolios are restructured to improve the appearance of financial statements, and during central bank reporting periods. The selection of tenors

¹⁰ See the list in Annex Table B.

¹¹ Angola, Mauritania, Morocco, Nigeria, Zambia and the West African Economic and Monetary Union are reported by the OECD as having debt issued by both the central bank and the ministry of finance or the debt management office (OECD (2012)).

should balance the expected term of liquidity events and the accounting cycles used by debt buyers.

Can regular and predictable issuance of debt instruments assist issuance? Some sovereign debt issuers approach the market opportunistically: they issue debt only when funds are needed and they issue to exploit maturities that are selling dear to the yield curve, that is, at interest rates favourable to the issuer. But such a strategy may, in the long run, work against the issuer. Greater predictability (and less opportunism) would help buyers and intermediaries, such as primary dealers, to better anticipate the task ahead of them and to make the necessary arrangements to accomplish it. Therefore there will be more buyers than if the issuer insists on surprising the market with the supply of debt coming to market.

4. The central bank and the development of bond markets

The full range of monetary policy tools can be deployed only if there is an active, liquid and deep secondary market. An active secondary market, in turn, depends on many factors, including a well developed primary market, a diversified investor base and a modern market infrastructure. In addition, adherence to market-determined interest rates is essential. However, it is common practice in many developing countries to severely restrict price determination in government securities markets by constructing barriers to entry (eg foreigners), imposing mandatory investment requirements on domestic financial institutions or rejecting bids which diverge from a predetermined interest rate range.

A key question is how far the central bank should be involved in the development of debt markets. In the simplest case where it has only one objective (price stability), the central bank sets the overnight rate (or very short-term rate) appropriate to macroeconomic conditions. It is then up to the market to determine longer-term rates without central bank intervention. Many feel it is best not to tamper with market rates which convey valuable information about market expectations and about the perceived impact of policy changes. On the other hand, central banks may have a special interest in developing debt markets and, given their knowledge about markets, they may be best suited for this responsibility. Balance therefore needs to be maintained between the market and development perspectives.

Developing fair-price auction systems

One area where central banks' involvement could be important is in developing primary dealers to help ensure the success of primary issuance and the maintenance of liquidity in secondary markets. Although primary dealers are principally intended to be market-makers, they may be forced to warehouse stock in markets with a thin investor base. Given the risks and benefits of a primary dealer network, there are strong arguments for the central bank, with its closer involvement with local markets, to lead in establishing the network. The central bank may have a better understanding of the means by which it can encourage real participation by financial institutions in debt sales. Primary dealers could then be charged with supporting the sovereign debt auctions and with assisting in open market operations. In return, the dealers could be extended certain privileges, such as access to central bank liquidity.

Another important aspect of market development is ensuring a fair price discovery system. An auction market that is allowed to operate freely can be critical in facilitating price discovery in the local markets. What criteria might lead the central bank and the government to prefer either multi-price or single-price (Dutch) auctions? The US Treasury conducted its debt auctions via multiple price awards until the 1990s. It changed to a single-price auction format as a means of encouraging more aggressive bidding for its securities.

In developed auction markets, single-price auctions are seen as advantageous for the government because they encourage more aggressive bidding by market participants and lower financing costs for the borrower. This benefit, however, may not be automatic when auctions take place in the thin markets with a small number of bidders that characterise many emerging market countries. In thin markets, marginal bids can cause more volatility in the price from auction to auction under a single price regime. This is particularly true when auction coverage rates approach unity.¹²

The advantage for the seller in using multi-price auctions lies in capturing the additional revenue forgone by the seller in single-price markets.¹³ In multi-price auctions, an unintended second consideration comes into play – that is, by paying more than was necessary, the successful bidders are plagued by the “winner’s curse” paradox in which a successful bid itself is evidence of having paid too much for an asset. The rational response from all bidders in auctions in this case is to bid less aggressively by including a risk premium in the bid. Repeated instances of this are likely to generate more cautious bidding by all parties. The net effect across all bidders is to lower the full set of bids with an increase in financing costs for the government.

What can be done in small, thin markets to prevent participants from gaining an advantage over the system?¹⁴ As reviewed in Annex Table D, auction systems vary significantly across Africa. Many developing markets are characterised by a small number of banks or other financial institutions that are actively bidding for sovereign debt. Given the small number of institutions designated as primary dealers in most markets, there is always the risk of collusive behaviour in bidding and market pricing. Further, such thin markets may be highly volatile in price movements. The use of open outcry auctions assumes that no one bidder has significant market strength to affect market prices or affect other bidders’ decisions. For countries with a nascent sovereign debt market, this is rarely true. An open outcry market makes it easier for a collusive scheme to be successful because it is easy to determine who has broken faith and this allows group discipline to be enforced. A secret bid weakens the power of collusive arrangements because it is not immediately clear who has broken ranks. Once the number of bidders becomes sufficiently large, even if some brokers are serving as order-takers for other bidders, the risk of collusive behaviour abates.

¹² The effect is more pronounced in Dutch auctions than in multi-price auctions because, in the former, the last successful bid determines the price for all. In the latter, the last bid will gain an advantageous price, but it will not affect the price at which the first winning bids are won.

¹³ That is, the “consumer surplus” or the amount is equal to the area under the demand curve that is above the market-clearing price.

¹⁴ See Mohanty (2002) for a discussion of liquidity issues in emerging markets.

Scaling back buy-and-hold strategy

The central bank has a critical role in the development of a secondary market. Are there commercial or institutional impediments to an active secondary market? Central banks must find ways of dealing with local financial institutions that lack experience or authority to trade in the secondary market. Many emerging markets are characterised by debt buyers who follow a buy-and-hold strategy. This leads to thin trading markets with more volatile prices. This further discourages trading as price risks increase with each reduction in market depth. There are various reasons why market participants may choose to use a buy-and-hold strategy. Some, such as insurance or pension firms, are timing asset maturity with anticipated cash outflows. Investment restrictions, coupled with accounting rules, may discourage them from marking their portfolio to market. Other firms may be constrained by internal policies or by inexperience in how it may be done. In this situation, the foreign banks in the economy are more likely to have the staff capacity, the tools and the incentive to become traders of outstanding sovereign debt. This gives an advantage to foreign banks in conducting local business. Because of its stake in a viable secondary market, the central bank may need to educate or otherwise assist local financial institutions in actively trading debt.

There have been attempts to encourage the trading of sovereign debt as a way to induce a more liquid market. As reported in the survey responses from many African central banks, most countries have selected financial entities to serve as primary dealers with the requirement that they function as market-makers in government securities. The survey also notes that this effort has been stymied in a buy-and-hold market. Some central banks will buy tendered securities after they reach a certain point towards maturity. Pricing such trades is challenging. It can be assisted by reference to debt in more liquid markets, but this requires a strong argument for similarity of the redeemed debt instrument to the reference security. The process may also carry an arbitrage risk.

Developing debt products and foreign investor participation

A final issue relates to attracting investors by designing new debt products. In cases where investors doubt the government's commitment to price stability, inflation-indexed securities enhance the credibility of central bank policy. The survey results, reported in Annex Table E, show that four out of nine African countries for which information is available issue inflation-indexed securities.

In cases where the economy has seen very high inflation in the recent past, it is necessary for the issuer to offer such terms as will reassure the market about future inflation risks. The issuer bears the additional risk of maintaining the asset's purchasing power. It is also argued that the break-even rate of such indexed securities provides a measure of inflation expectations. This assumes that only the real rate of interest and the expected inflation rate are the significant components of the nominal interest rate, as the premium for inflation risk is eliminated by indexing. If, however, the market for indexed securities is thin or illiquid, there will also be a liquidity premium embedded in the yield. This can lead to difficulties in the measurement of inflation expectations using the break-even rate.

What are the concerns regarding foreign investors buying longer-term securities in local currency? How does the central bank accommodate these buyers? Although up to 2010 the holders of public debt in Africa were generally residents, in

recent months several countries have begun to issue foreign currency loans. These have met a ready audience searching for yield in a world where major market interest rates are at historic lows. Some resource-rich countries are now witnessing an increase of investor interest in domestic currency issues of debt. If this continues, countries will see an inflow of foreign currency which can create challenges for monetary policy and financial stability, particularly by increasing the volatility of the exchange rate. Nevertheless, to the extent that such volatility can be managed by appropriate policy instruments (eg FX intervention), a broader investor base is likely to lead to a more liquid market.

5. Conclusion

This note has discussed a number of aspects about central banks' involvement in debt markets. Sovereign debt issued either by the central bank or by the ministry of finance benefits the economy by serving as a risk-free asset for financial markets and by establishing a yield curve for market pricing. And, the usual separation between debt management and monetary policy objectives is less relevant today because both the size and the maturity of sovereign debt have significant implications for the long-term interest rate and monetary conditions in the economy. This requires close coordination between the debt management and monetary authorities in designing an appropriate debt structure that not only reduces government borrowing costs but also leads to better management of monetary conditions.

In addition, when central banks issue their own debt, such issuance needs to be closely coordinated with the government. Both government debt and central bank debt can have the same results for banking system reserves, yield curves, and market conditions more generally. For this reason, the two institutions must coordinate their operations to avoid conflicts or overlapping efforts. Finally, central bank involvement in developing markets might be essential for setting up a benchmark yield curve and improving market liquidity, but such efforts need to be carefully designed so as not to stifle private incentives and dilute emphasis on central banks' primary price stability mandate.

Appendix

Ownership of debt by residency in Africa

Amounts outstanding at end of period (in millions of euros)

Table A

	2003	2004	2005	2006	2007	2008	2009	2010
Angola	627	1,221	1,670	1,991	3,614	9,855	9,509	...
Resident	627	1,221	1,670	1,969	3,614	9,855	9,509	...
Non-resident	...	...	...	23	...	...	...	...
Cameroon	814	401	383	295	262	249	248	520
Resident	814	401	383	295	262	249	248	456
Non-resident	...	...	...	...	...	...	...	64
Gabon	...	...	...	...	...	104	83	...
Resident	...	...	...	...	...	42	34	...
Non-resident	...	...	...	...	...	61	49	...
Kenya	3,010	2,889	3,660	3,875	4,295	3,929	4,753	6,134
Resident	2,915	2,851	3,584	3,820	4,284	3,903	4,729	6,105
Non-resident	96	38	75	55	12	26	24	29
Madagascar	714	396	411	437	461	371	378	417
Resident	714	396	411	437	461	371	378	417
Non-resident	...	...	...	...	...	...	...	...
Malawi	376	418	492	363	446	...	...	...
Resident	376	418	492	342	415	...	...	...
Non-resident	...	...	...	22	31	...	...	...
Mauritius	...	...	...	...	...	2,355	2,745	3,052
Resident	...	...	...	...	...	2,348	2,739	3,049
Non-resident	...	...	...	...	...	7	6	3
Morocco	17,842	19,104	23,058	23,334	22,857	22,468	22,794	24,870
Resident	17,842	19,104	23,058	23,334	22,857	22,468	22,794	24,870
Non-resident	...	...	...	...	...	...	...	...
Nigeria	7,696	7,552	9,995	10,472	12,622	12,644	...	...
Resident	7,696	7,552	9,995	10,472	12,622	12,644	...	...
Non-resident	...	...	...	...	...	...	...	...
Sierra Leone	100	112	146	147	145	173	170	156
Resident	100	112	146	147	145	173	170	156
Non-resident	...	...	...	...	...	...	...	...
South Africa	...	45,229	47,528	53,795	41,837	33,499	34,127	51,554
Resident	...	42,887	44,922	50,164	38,538	30,153	29,856	43,808
Non-resident	...	2,342	2,606	3,631	3,300	3,346	4,271	7,746
Tanzania	954	1,029	1,748	1,488	1,855	1,387	1,164	1,714
Resident	954	1,029	1,748	1,488	1,855	1,387	1,164	1,714
Non-resident	...	...	...	...	...	...	...	...
Tunisia	3,066	3,152	3,244	3,503	3,491	3,120	3,165	3,033
Resident	3,066	3,152	3,244	3,503	3,491	3,120	3,164	3,032
Non-resident	...	...	...	0.058	0.111	0.061	1	1
Uganda	498	580	801	830	1,117	990	971	1,568
Resident	498	580	801	830	1,117	990	971	1,568
Non-resident	...	...	...	...	...	...	...	...
Zambia	775	680	1,286	1,154	1,360	1,169	1,429	1,564
Resident	775	680	1,286	1,154	1,360	1,169	1,429	1,564
Non-resident	...	...	...	...	...	...	...	...

Source: OECD (2012).

Debt maturities in Africa

Table B

Country	Bills (in weeks)				Notes and bonds (in years)									
	13	26	39	52	2	3	4	5	7	10	15	20	30	
Algeria	X	X			X			X	X		X			
Angola	X	X		X	X	X	X	X						
BCEAO ¹	X													
Egypt	X	X	X	X		X		X	X	X				
Lesotho	X	X	X	X		X		X	X	X				
Malawi	X	X		X	X	X	X	X						
Mauritius	X	X	X	X		X		X		X	X			
Morocco	X	X		X	X			X		X	X	X	X	
Nigeria	X	X		X		X		X	X	X		X		
Seychelles		Various												
South Africa														
Swaziland	X	X	X	X		X		X	X					
Tunisia	X	X		X	X			Various			X			
Uganda	X	X		X	X	X		X		X				
Zambia	X	X	X	X	X	X		X	X	X	X			

Source: Responses to BIS survey of conference participants, 2013.

¹ Central Bank of West African States (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo).

Issuer of government securities in Africa

Table C

Country	Government bill/bond issuer		
	Central bank	Ministry of finance	Debt management office
Algeria		X	
Angola	X	X	
Botswana	X		
Burundi	X		
Cameroon	X		
DRC ¹	X		
Egypt		X	
Gabon			X
Gambia	X		
Ghana	X		
Guinea	X		
Kenya	X		
Madagascar	X		
Malawi	X		
Mauritania	X	X	
Morocco	X	X	
Mozambique		X	
Namibia	X		
Nigeria	X		X
Rwanda	X		
Seychelles	X		
Sierra Leone		X	
South Africa		X	
Swaziland	X		
Tanzania	X		
Tunisia		X	
Uganda	X		
Zambia	X	X	
WAEMU ²	X	X	

Source: OECD (2012).

¹ Democratic Republic of the Congo. ² West African Economic and Monetary Union, comprising Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo.

Auction mechanics in Africa

Table D

Country	Auction rules						
	Competitive auctions?	Limit set on price?	Single-price	Multi-price	Primary dealers	Other usual bidders?	Central Bank-issue debt?
Algeria	X	Treasury accepts all bids	X			13, incl insurance companies	No
Angola	X	Longer-term debt set by MoF	X	X		22 banks, incl 6 domestic	Yes
BCEAO ¹	X	Maximum rate		X		General	Yes
Egypt	X	No		X	15	Banks and other funds	No
Lesotho	X	Yes	X		No	4–12, incl banks, insurance companies and firms	Yes
Malawi	X	Yes	X		No	12 banks and 2 insurance companies	Yes
Mauritius	X	No		X	12 banks	Other financial entities	No
Morocco	X	Yes		X	6 banks	10 other banks	Allowed but not done
Nigeria	X	No		X	Yes, as market-makers	Many entities	Yes
Seychelles	X	By committee		X		7 banks and others	No
South Africa	Yes, and by other means	Yes	X		Yes	Approx 40 entities	No
Swaziland	Yes, mostly	Yes		X	Yes	Banks	No
Tunisia	X	Yes		X	Yes		
Uganda	X	Yes, but informal guide	X		Yes	Mostly banks	No
Zambia	Yes, mostly	Yes	X			Banks and financial institutions	No

Source: Responses to BIS survey of conference participants, 2013.

¹ Central Bank of West African States (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo).

Indexed securities in Africa¹

Table E

Use of indexed securities by selected governments			
Country	Indexed securities	Type	Source
Algeria	No info		
Angola	Yes	Inflation-indexed, foreign exchange-indexed	OECD
Botswana	No info		
DRC ²	No info		
Egypt	No info		
Ethiopia	No info		
Ghana	No info		
Kenya	No info		OECD
Lesotho	No info		
Malawi	No info		OECD
Mauritius	Yes	15-year inflation-indexed	OECD
Morocco	No		OECD
Mozambique	Yes		OECD
Nigeria	No info		OECD
Seychelles	No info		
South Africa	Yes	Inflation-indexed	OECD
Swaziland	No info		
Tanzania	No		OECD
Tunisia	No		OECD
Uganda	No		OECD
Zambia	No		OECD

¹ OECD (2012).² Democratic Republic of the Congo.

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Financial stability objectives and arrangements – what’s new?

Serge Jeanneau

Introduction

The global financial crisis has raised a number of questions concerning the role of central banks in the area of financial stability. Any changes in their role may affect the suitability of their governance arrangements. One of the immediate challenges is the difficulty of specifying a mandate for financial stability. Another is ensuring that any financial stability mandate is consistent with the other mandate(s) of the central bank. Yet another is the need to design structures to operationalise the mandate. This paper briefly surveys the issues relating to the setting of financial stability mandates in law and examines recent changes to financial stability arrangements involving the central bank.

1. Financial stability objectives – what is the issue?

The report of a study group headed by Stefan Ingves, Governor of Sveriges Riksbank, noted the heightened need for accountability in financial stability actions; the special role that clear objectives play in accountability; and the difficulties in creating such objectives.¹

Three problems beset objective-setting for financial stability: defining what is meant by the term; quantifying the objective; and dealing with the large number of dimensions, many involving trade-offs. Together, these problems make the pursuit of financial stability objectives much more difficult to achieve than those of price stability. To use the inflation targeting example, price stability objectives commonly indicate a numerical reference level or range for a specific index (representing the relevant set of prices), and a time frame that reflects concern about a particular trade-off (ie not to add unnecessary real economic volatility). While the contrast with objectives for price stability may be exaggerated, “financial stability” alone as an objective leaves wide open the important questions of how much stability is desired, in what elements of financial system behaviour it is desired, and at what expense with respect to other policy concerns?

1.1 Defining financial stability

Defining “financial stability” with sufficient clarity to guide actions and create a structure for accountability is difficult. The Ingves Report noted five different types

¹ Bank for International Settlements (2011): *Central bank governance and financial stability*, a report from a Study Group of the Central Bank Governance Group.

of definition for financial stability (including, for example, the smooth functioning and robustness of the financial system). These various definitions emphasise rather different aspects of economic functioning that might be subject to market failures, or different externalities that motivate policy intervention. Financial stability is remarkably multidimensional.

1.2 Quantifying financial stability

A few characteristics highlighted in the different definitions are potentially quantifiable (eg what proportion of certain financial services have stopped functioning), but most are not. The quantification problem is perhaps overstated in comparisons with price stability objectives. The concept of general economic welfare is difficult to quantify, yet the equivalent of such a concept can be found in many stated policy objectives for price stability. Also, very few legally specified price stability objectives feature quantification (or, for that matter, define what is meant by price stability). Almost all inflation targeting arrangements are documented in lower level, non-statutory forms (eg within a central bank's strategy statement). And even if some elements were quantifiable, multiple trade-offs would nevertheless be faced by policy makers in the absence of a straightforward method for (eg) setting off, say, x units of services not functioning against y units of mitigated asset price cycles. Still, some quantification could be useful, wherever possible.

1.3 Multidimensionality and trade-offs

The core problem examined in this paper is the multidimensionality of financial stability policy, and especially the potential for conflict between the different dimensions. To make the multidimensionality question and the potential for conflict more tangible, consider the nine potential components of a financial stability objective as listed in Box 1.

Box 1

Considerations relevant to the regulation of financial activity

1. Ensure support for economic growth from efficient and innovative financial intermediation.
2. Allow some asset price fluctuations that send useful signals about evolving resource values, but resist others.
3. Allow some variations in credit conditions and non-price signals (eg degrees of credit rationing) that correlate well with fundamental changes in intertemporal values, but resist others.
4. Provide support for economic activity by ensuring continued availability of critical services.
5. Provide certainty of property rights for investors in financial service provision, as for others.
6. Provide creditor protection, especially for naïve creditors.
7. Protect the taxpayer from unpriced or subsidised insurance of private profits.
8. Compromise price stability objectives only if the long-run costs are clearly dominant.
9. Ensure scope for reaping the rewards of internationally competitive financial services.

Note: This list is intended to be illustrative rather than exhaustive.

The potential for internal conflicts within this list is immediately apparent. Arising partly as a result of problems inherent in the use of regulatory instruments, such conflicts may include the following: regulatory constraints designed to achieve 2 and 3 may conflict with 1 and 9. Failure of regulation to fully achieve 2 and 3 may also impact on 8. The pursuit of 6 may harm the attainment of 7, as may the attempt to meet objective 4 when things go wrong. One could easily find other potential instances. Of course, these potential conflicts are, in many cases, only relevant in the short term. They may be mutually consistent in the long term. But that is also true with the stability of prices and the real economy – conflicts appear most acutely in the short term, yet they are highly relevant to practical policy implementation.

Practical guidance on how to resolve such conflicts in legislation is next to non-existent. Most financial stability objectives tend to be set at a high level of generality. The most comprehensive example of an attempt to spell out the range of considerations relevant to a multidimensional objective is found in the UK Banking Act (2009) – albeit for a single component of financial stability policy, namely bank resolution. Section 4 of this Act sets out five objectives that are to be considered when special resolution regime powers are used:

1. to protect and enhance the stability of the financial systems of the United Kingdom, with particular reference to the continuity of banking services;
2. to protect and enhance public confidence in the stability of the banking systems of the United Kingdom;
3. to protect depositors;
4. to protect public funds; and
5. to avoid interfering with property rights in contravention of EU treaties.

The Act further says that the order in which the objectives are listed is not significant; that they are to be balanced as appropriate in each case; and that, after consultation with other authorities, the Treasury shall issue a policy strategy (a “code of practice”) that may provide guidance on how the special resolution objectives are to be understood and achieved, and the choice between different options. In other words, the legislature has established a multidimensional objective, recognised that the various dimensions may conflict, and set down a process for further elaboration on how to understand and apply the objectives in practice.

1.4 An overview of financial stability objectives in central bank laws

As noted, most financial stability objectives in law, being high level, are limited in detail. Graph 1 (left-hand panel) categorises the existing financial stability objectives applying explicitly to central banks found in the laws of 114 countries (see also Appendix Table 1 for further details). Coverage does not reflect financial stability objectives that may be implicit in functions, tasks, traditions, and membership of inter-agency councils (IACs) that have such objectives (unless the IAC’s objectives explicitly apply to or override the central bank’s own). The focus on explicit statements makes the researcher’s task easier, but it also reflects the fact that implicit objectives are necessarily fuzzier, being formed in the eye of the beholder. They may well differ between people and over time.

The basic messages obtained from the categorisation presented in Graph 1 (left-hand panel) are:

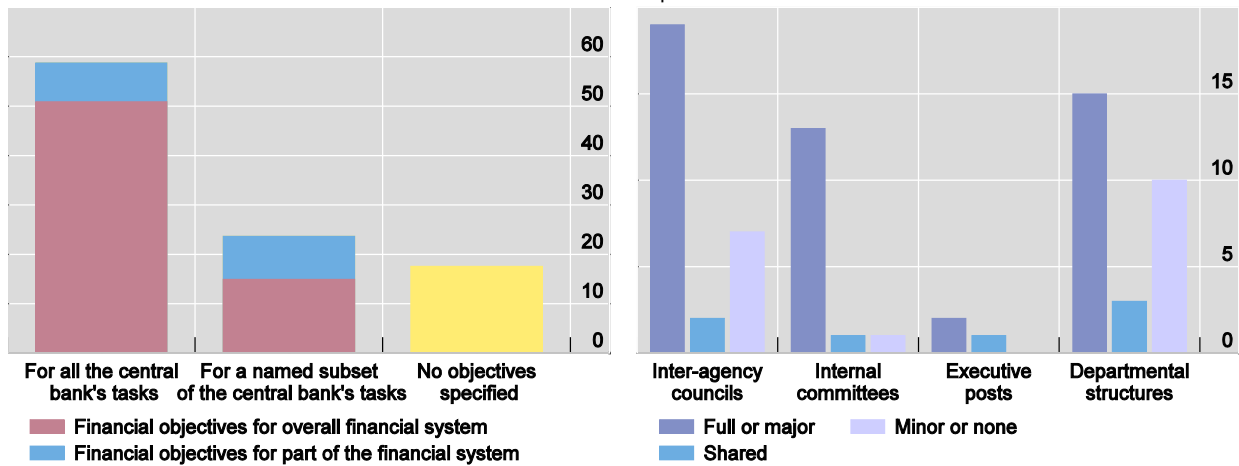
- A high proportion (82%) of central banks have some form of explicit financial stability objective.

Financial stability objectives in central bank laws; number of organisational changes related to financial stability observed at central banks

Graph 1

Percentage of central bank laws that mention “stability” or a close synonym¹

Absolute number of changes since 2005, across surveyed institutions by type and involvement in banking supervision²



¹ Based on a review of 114 central bank laws and statutes. ² Based on a survey of 40 central banks and monetary authorities.

Source: BIS.

- Of these:
 - for four fifths, the objective pertains to the entire financial system; for the others the objective formally pertains only to a part of the system (typically the banking system or the payments system);
 - for more than two thirds, the objective appears to be generic, applying to all of the central bank's functions; for the others it explicitly relates to a particular task or function (such as bank licencing, lender of last resort actions);
 - for just over half, the objective is explicitly secondary to another (usually price stability) objective (shown as bracketed countries in Appendix Table 1); and
 - for also just over half, the objective is expressed in qualified (rather than “absolute”) language, such that the central bank is required to contribute to, or work towards, or use best endeavours in the pursuit of (rather than to ensure, guarantee, maintain, safeguard) financial stability.
- In almost one fifth of the central banks with a financial stability objective, the objective appears to go further than many would see as realistically achievable. The objective appears to cover all functions and activities, be equal-ranking with other objectives, to pertain to the entire financial system, and be absolute in form (in principle, requiring the unqualified assurance or guaranteeing of financial stability).

1.5 Some recent objective specifications in more detail

Looking at legislative changes that have occurred since 2009, there are at least 21 cases where the central bank itself has seen a revision to its financial stability mandate by way of a change in the statement(s) of objective(s). However, within this group, only two laws elaborate on the meaning of “financial stability”.

The Central Bank of Malaysia’s law is explicit in that the continuity of services and public confidence are stated to be prime elements of financial stability. Thus, in the chapter dealing with financial stability powers, a risk to financial stability is defined as something that “disrupts, or is likely to disrupt, the financial intermediation process ... or affects, or is likely to affect, public confidence in the financial system or the stability of the financial system” (Section 29).

The new Financial Services Act in the United Kingdom also elaborates on the meaning of financial stability, in the course of establishing objectives for the relevant actors. This legislation is of particular interest for outside observers, for two reasons. First, objectives are being written simultaneously for several agencies, covering both macro- and microprudential policies as well as those related to market conduct. And second, the above-mentioned example from the 2009 Banking Act – an unranked multidimensional objective with a defined process for strategic interpretation – is, in principle, a viable model for the setting of new financial stability objectives. For each of the agencies, the new legislation will enact multidimensional objectives that explicitly intersect. There is an elaboration of the features of financial stability that are of most interest to the legislature: namely financial system resilience such that continuity of critical services is assured, and credit bubbles are avoided. The new macroprudential agency (the Financial Policy Committee) will also have the explicit secondary objective of facilitating growth. These objectives will (not surprisingly) be more complex to implement than those of the Banking Act, but there is some ranking of priorities.

1.6 Interactions between price and financial stability objectives

One of the main potential trade-offs of concern has to do with the price stability objective of monetary policy. Here the Malaysian case is again worth particular mention. Since 2009, the Central Bank of Malaysia has had a financial stability objective that ranks equally with price stability (“The principal object of the Bank shall be to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy” (Section 5(1)), and amongst the Bank’s “primary functions” is “to promote a sound, progressive and inclusive financial system” (Section 5(2)). The Law of the Central Bank of Montenegro (Article 4) is also noteworthy in that it makes financial stability the prime objective.

In all the other cases of legislative change, financial stability is subordinated to price stability, or the law is silent on the issue. As an example of the former case, the Reserve Bank of New Zealand Act 1989 states in its Purpose clauses ((Section 1A) that the central bank is responsible for “(a) formulating and implementing monetary policy designed to promote stability in the general level of prices ... and (b) promoting the maintenance of a sound and efficient financial system ...”, yet later sections say “The primary function of the Bank is ... stability in the general level of prices” and “In formulating and implementing monetary policy the Bank shall ... have regard to the efficiency and soundness of the financial system” (Sections 8 and 10 respectively).

It worth noting that, in some countries, new legislation has led to far-reaching changes in financial stability arrangements without providing the central bank with a financial stability objective. For example, the Dodd-Frank Act did not create an explicit financial stability objective for the Federal Reserve. Financial stability is mentioned in Dodd-Frank's preamble as a purpose of the legislation, but the remainder of the legislation focuses on aims to be achieved (eg increasing accountability and transparency; reducing the risk of too big to fail; ending bailouts; protecting consumers from abusive practices) without linking those aims specifically to the various agencies mentioned in the law.

2. Organisational changes relating to the financial stability function

2.1 A typology of institutional arrangements

Over the past few years, numerous countries have made substantial reforms to their financial stability arrangements. The report prepared under Governor Ingves identified four main possible configurations for the assignment of policy functions among responsible agencies, each having advantages and disadvantages.

2.1.1 Macroprudential policy as a shared responsibility

A first approach is to form a macroprudential or systemic risk council to coordinate the work of the various agencies responsible for financial stability. 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. Do the agencies represented on the council retain autonomy over their own spheres of interest, or can the council 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 but 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. Publication of recommendations or warnings will be subject to majority decision by the ESRB's governing body. In the United States, the Financial Stability Oversight Council (FSOC), established in 2010, has some formal decision-making powers and can designate institutions and financial services providers that require heightened prudential standards, and make binding recommendations to primary supervisors with respect to heightened regulatory requirements.

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

A second approach, which exists for example in various incarnations in Japan and Sweden, is to delegate responsibility for macroprudential policy primarily to the central bank while leaving responsibility for microprudential policy to other agencies. The relationship of the central bank with microprudential authorities will depend on what the central bank's macroprudential function involves. If this requires the central bank only to "lean against the wind" in executing monetary policy, the need for interaction with microprudential authorities will be limited. But greater interaction will be needed if the central bank's macroprudential role involves

regulatory measures, such as determining a macroprudential overlay on capital or liquidity requirements. In such cases, the central bank could 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.

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

A third variant, which was recently introduced in the United Kingdom, is to integrate macro- and microprudential policy within the central bank while maintaining a separate financial product safety regulator. In principle, this provides improved access to information and expertise. However, potential advantage and actual gain are not necessarily the same. Silos of responsibility within the organisation could still fragment information and analysis. Differing intellectual frameworks implied by the various functions could inhibit communication. 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.

In the new arrangements implemented in United Kingdom, the various policy functions will be clearly separated, with a Prudential Regulation Authority (PRA), a Financial Policy Committee (FPC) and a Monetary Policy Committee (MPC).² Coordination of the analysis are ensured in part by cross-membership of the top officials represented in the committees and authorities. But coordination of decision-making is strictly limited to specified actions, which do not include anything that alters the role and independence of the MPC.

Several elements of the UK approach have already been adopted in France. Reforms introduced in 2010 consolidate several regulators into an autonomous super-regulator, the Prudential Supervisory Authority (PSA), which is located within the Bank of France, chaired by the Governor and explicitly mandated 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.

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. But for accountability, the actions and analysis of a single committee would need substantial disclosure in order 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 – each with their own disclosure requirements – presumably make

² 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 (FCA).

trade-offs more obvious, since each decision-making group will relatively quickly identify the other as a barrier to success.

2.1.4 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 of a clear dedication to macroprudential issues and speed of decision-making. However, implementation could be a problem, since the policy instruments used to implement macroprudential policy are usually assigned to other policy objectives 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. Interestingly, the United States was the only country where such a reform proposal was considered. But it did not materialise in the final legislation.

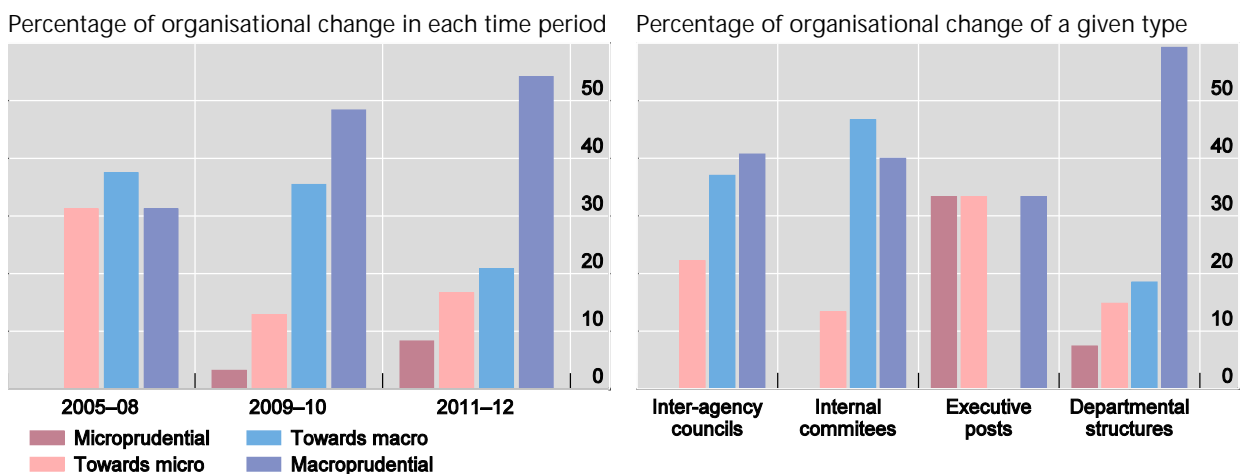
2.2 The choices being made on institutional arrangements

Based on a 2012 survey of 40 countries, institutional and organisational changes related to financial stability were commonplace over seven years up to 2012. Only three central banks made no change at all during the period. New or reformed inter-agency councils (IACs) and new or changed internal structures were the most frequent. The creation or substantial modification of top-level positions related to financial stability were the least frequent.

Graph 1 (right-hand panel) shows the survey data, subdivided by the extent to which the relevant central banks have supervisory responsibility. Relatively speaking, those with full or major supervisory responsibility were more likely to be involved with a new IAC than to have changed their own departmental structure, whereas the opposite was true for those with little or no supervisory responsibility. Organisational changes were often made in tandem. The most frequent pairing –

The micro- or macroprudential orientation of changes, by type of change and over time

Graph 2



Based on a survey of 40 central banks and monetary authorities.

Source: BIS.

observed in about a third of central banks – was a new IAC and a parallel (or closely related) change in departmental structure. Other pairings involved a new IAC and a new internal committee, or a new internal committee coupled with a change in departmental structure.

From this data we can also observe the choices made regarding the four institutional designs identified in the report prepared under Governor Ingves. As one would expect, most of these institutional and organisational changes involved bringing macroprudential considerations to the fore. That tended to be more the case in the most recent period than in the earlier one (Graph 2 left-hand panel). And it was more the case for new departmental structures than for the other types of change (Graph 2 right-hand panel).

2.3 A more detailed look at new financial stability arrangements

2.3.1 New IACs

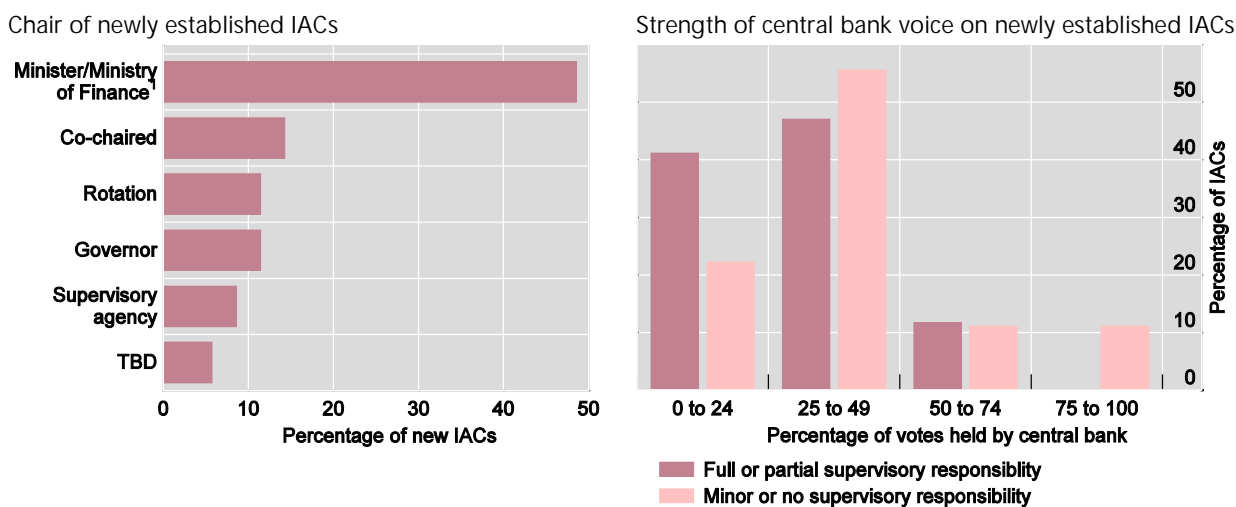
IACs focused on financial stability are not completely new.³ But more than two thirds of central banks in our sample reported being involved in at least one new (or substantially changed) IAC since 2005. Most IACs were reportedly established to share information and to conduct a coordinated monitoring of financial conditions. Fewer were described as also being responsible for crisis management.

While central banks are receiving stronger mandates in the area of financial stability, they do not often have the main say in IACs. In only about one tenth of the 37 new IACs is the Governor in the chair (Graph 3, left-hand panel). In about one quarter, the central bank (normally the Governor) shares the chair with others, on either an ongoing or a rotating basis. Otherwise, the chair is typically occupied by a representative from the ministry of finance (often the minister) or from a regulatory agency.

In terms of the strength of the central bank's voice on the newly established councils, Graph 3 (right-hand panel) shows the number of council members belonging to the central bank as a percentage of total council membership (abstracting from observers whenever this information is known).⁴ The central bank is most often in the minority, particularly when the central bank is the prime supervisor or has an active supervisory role. It should be highlighted, however, that these numbers are based only on councils for which the membership could be established. In about one quarter of cases, membership is left open or has yet to be determined, which shows either that arrangements are not yet fully settled or that the authorities want to maintain a degree of flexibility in membership.

³ Including the Council of Financial Regulators in Australia (1998), the Financial Institutions Supervisory Committee in Canada (1987), the Forum for Financial Market Supervision in Germany (2000), the Council of Financial Supervisors in the Netherlands (1999), the Financial Supervisors National Council in Portugal (2000) and the Tripartite Standing Committee on Financial Stability in the UK (1998).

⁴ The total size of IACs varies widely, from (at least) two members in one of the groupings in Switzerland to 36 (plus 28 non-voting) for the European Systemic Risk Board (ESRB).



Based on a survey of 40 central banks and monetary authorities.

¹ Or similar.

Source: BIS.

2.3.2 New internal committees

Since 2005, 11 central banks (about three tenths of respondents) have created at least one high-level internal committee focusing on financial stability issues. A few central banks have created more than one (eg the Bank of England, Bank of Thailand and Central Bank of Malaysia).

New top-level internal committees tend to have the same information exchange and coordination functions as IACs. They are sometimes supporting bodies – for example, the (recently disbanded) Financial Stability Committee at the Bank of England recommended overall strategy on financial stability matters to the Court, and the Macro Financial Committee at the Reserve Bank of New Zealand advises the Governor.

Top-level internal committees are usually headed by the Governor. As is the case with IACs, membership is not always precisely defined (eg top executives plus heads of “relevant” departments). It is worth noting that at a few central banks the top-level internal committees include varying degrees of external representation, either from the government or regulatory sectors, or from the public.⁵

2.3.3 New departmental structures and positions

Two thirds of responding central banks made changes related to financial stability in their internal divisional/departmental structures since 2005. Most involved the creation of one or more specialised units for financial stability or macroprudential

⁵ At the Bank of England, the new FPC, which is a sub-committee of the Court of Directors, comprises four external members. At the Bank of Thailand, the Financial Institutions Policy Board includes five experts appointed by the Board. At the Central Bank of Malaysia, the Financial Stability Executive Committee includes not less than three but not more than five other members appointed from the directors or other persons.

policy. At many central banks, internal changes led to a stronger institutional framework for macroprudential oversight, including clearer mandates for the relevant units, a carving out of units into new specialised entities focusing on financial stability, or the elevation of such units within the internal hierarchy.

Since 2005, of the central banks in this survey, only the Bank of England and the Federal Reserve have created entirely new board-level positions with a prime financial stability focus (a Deputy Governor and a Vice Governor, respectively). But substantial adjustments to the responsibilities of existing high-level posts have been made in a number of cases, and there are several examples of new or substantially changed executive roles at the head of function/head of department level (but below the board level).

Appendix

Classification of the financial stability objectives found in the laws or statutes of 114 countries, as of December 2012

Table 1

1. An explicit financial stability objective exists in law		Central bank is obliged to consider the “stability”, “soundness”, “good order”, or “efficient and effective functioning” of ...			
		... part of the financial system (eg banking system, payments system)		... the overall financial system	
Objective appears to apply in principle to all the central bank’s activities and functions (by virtue of being placed in the law’s preamble or overarching statement of role, duties and obligations)	Objective unqualified (eg to “ensure”, “guarantee”, “maintain”, “safeguard”, “sustain” etc), except where stability or other macroeconomic policy objective (indicated by use of square brackets)	[Azerbaijan] Belarus	Libya	Angola [BCAO] Botswana Cayman Islands China [Cyprus] Gambia [Georgia] Ghana Hong Kong SAR Iraq [Ireland]	[Malta] [Mauritius] [Moldova] [Mongolia] Montenegro Namibia [Philippines] [Tanzania] Thailand Uruguay Zambia
	Objective qualified by being expressed in directional terms (eg “contribute to”, “encourage”, “promote”, “support”, “work towards”, “with best endeavours” etc). Secondary objectives are again set in square brackets	[Albania] Argentina [Armenia]	Egypt [Germany] Sweden	[Afghanistan] Aruba Bahrain Barbados [Belgium] Bermuda [Costa Rica] [Czech Rep.] ECCB [East Timor] Fiji [Finland] Guyana [Hungary] [Iceland] [Indonesia] [Israel]	[Kazakhstan] Kenya [Lesotho] [Luxembourg] [Macedonia] Malawi Malaysia [Mexico] New Zealand Nigeria [Poland] Singapore [Spain] [Slovenia] [Switzerland] [Turkey] United Kingdom Zimbabwe
Objective is clearly attached to a specific function or task (eg licensing, supervision, lender of last resort)	Objective unqualified (eg to “ensure”, “guarantee”, “maintain”, “safeguard”, “sustain” etc)	[Bulgaria] [France] Jordan [Kyrgyz Rep.]	[Latvia] Lebanon [Morocco] Russia	[Austria] [Bhutan] Chile [Estonia]	Jamaica Japan Nepal United States
	Objective qualified by being expressed in directional terms (eg “contribute to”, “encourage”, “promote”, “support”, “work towards”, “with best endeavours” etc)	[Croatia]	[Lithuania]	Australia Canada [ECB] [Greece] Italy	[Korea] Macao SAR [Netherlands] [Slovakia]
2. No explicit financial stability objective exists in law		Algeria Bahamas Bangladesh Belize Brazil Bosnia & H. Cambodia	Colombia Congo Denmark Guatemala India Iran Kuwait	Mozambique Norway Peru Saudi Arabia South Africa Trinidad & T.	[20]

Source: National legislation.

Macroprudential policies, commodity prices and capital inflows

Paul Masson¹

Introduction

The 2008–09 global financial crisis highlighted the extent of externalities and interconnectedness in financial markets. This underlined the importance of going beyond supervision and regulation of *individual* financial institutions to implement measures designed to limit risks to the overall financial *system*. A proper understanding of systemic risks cannot be obtained merely by adding up the risks to individual financial institutions, since problems at one institution can have domino effects. In addition, procyclicality in the financial system can lead to excessive credit growth in the aggregate, even though individual banks may seem to be behaving responsibly. In other words, it is important to supplement a *microeconomic* approach to financial regulation with what are now generally termed *macroprudential* policies that aim to limit systemic risk and adjust regulation in response to economy-wide variables. Such policies address shocks and endogenous mechanisms that could potentially destabilise the financial system as a whole, and thereby cause serious damage to the macro economy.

An important source of shocks for African economies is changes in the value of exports of primary commodities, and associated inflows of capital. African economies are typically more dependent on one or a few commodity exports than are countries on other continents. An increase in the world price for the commodity or a large increase in a country's supply can have a pervasive impact on the domestic economy. For example, the expansion of bank balance sheets and credit could lead to overheating of the economy and higher inflation. The procyclicality of bank lending can amplify the cycle, aggravating the eventual downturn if the shock proves temporary, with potential consequences for financial system stability. To some extent, traditional monetary and fiscal policy tools can be used to dampen the amplitude of the cycle. For instance, tightening monetary policy can choke off some of the demand for credit and lead to exchange rate appreciation, limiting inflationary effects. However, if the shock is temporary this may produce undesirable exchange rate appreciation, and induce "Dutch disease" problems in other sectors. It may be desirable instead to consider other, macroprudential policy tools that limit credit growth in a more targeted way.

While there is a widespread consensus on the need to consider such macroprudential policies, there is much less agreement on what tools should be used, how they should be designed, and how they would interact with other policies, including microsupervision, monetary and fiscal policies, and capital

¹ Weatherstone Consulting and University of Toronto. The author wishes to thank David Archer, M S Mohanty and Philip Turner for their helpful comments and suggestions, and Tracy Chan and Matina Negka for their research assistance.

controls. It also is true that appropriate policies will need to differ from country to country, as the extent of economic and financial development, the economy's degree of openness to outside influences, and the existing institutional division of responsibilities for regulatory and macroeconomic policies – among other factors – should come into play.²

This short note does not pretend to survey the growing literature on macroprudential policies,³ let alone to offer prescriptions for the design of such policies for African countries. Instead, it has the more modest aim of identifying some circumstances in which macroprudential policies may be desirable, while pointing out considerations that might argue for the choice of one or another macroprudential policy tool. The goal of the paper is to promote reflection and stimulate discussion of how macroprudential policies may be used to resist some of the undesirable effects of commodity booms and busts.

We will start with an overview of the importance of commodity exports for African economies. We then make the case for macroprudential policies and provide a catalogue of some of the tools that have been implemented or considered for use. Issues related to the practical use of these policies, and their interaction with other policies – specifically monetary policy and capital controls – will then be considered. Finally, governance issues – what institutions are given which responsibilities in this area – will be raised. Given the range of policy options and the complexity of the financial and real-sector interactions – many of which are not fully understood – it will be obvious that easy solutions are not available. Instead, countries will have to feel their own way, while benefiting wherever possible from the experience of others.

1. The importance of commodities for African economies

Primary commodities, including agricultural products and non-renewable resources, are an important source of exports and fiscal revenues for many African countries (Table 1). This is especially true of oil-exporting countries, where oil often constitutes over half of the country's exports by value and oil royalties and taxes are a dominant source of budget revenues. In addition, the exploitation of non-renewable resources, because capital-intensive, often requires foreign capital, with potential effects on domestic liquidity, the exchange rate, and foreign exchange reserves.

Commodity revenues and inflows pose important challenges for macroeconomic and financial policies. The dangers of being afflicted by the "resource curse" (Auty (1993)) are well recognised. Many countries with abundant resources have found that resource revenues can fuel corruption, economic instability and domestic conflict. It is clear that good governance is essential for mitigating those problems, and better governed countries, such as Botswana, have managed to put their resource revenues to good use, supporting economic development and an improvement in the standard of living of the population.

² See Turner (2012).

³ Galati and Moessler (2011) provide a review of the literature, some of which dates from well before the recent financial crisis.

The macroeconomic challenges in commodity-exporting countries relate to the instability those revenues and capital flows create and the resulting spillovers onto the financial system and the non-resource-producing sectors. Commodity prices, typically determined on world markets, are largely exogenous to African countries; they are also much more volatile than manufactured goods prices (Chart 1). Resource-exporting countries must therefore adapt their policies to mitigate the unfavourable effects of price volatility.

Importance of resource exports and revenues

Table 1

	Fuel exports in 2011 (% of merchandise exports) ¹	Ores and metals exports in 2011 (% of merchandise exports) ¹	Resource revenue in 2010 (% of total government revenue)
Algeria	97.20	0.26	...
Angola	...	...	75.90
Botswana	0.40	8.44	31.30
The Democratic Republic of Congo	...	...	26.50
Egypt	31.70	6.00	...
Ethiopia	0.00	1.16	...
Ghana	54.08	1.83	3.70
Kenya	4.30	2.03	...
Lesotho	0.02	0.11	...
Malawi	0.10	8.82	...
Mauritius	0.00	0.73	...
Morocco	1.07	11.68	...
Mozambique	16.28	50.62	...
Nigeria	87.13	1.08	72.20
Seychelles	0.00	0.00	...
South Africa	11.24	35.12	2.00
Swaziland	1.26	0.54	...
Tanzania	1.19	35.44	...
Tunisia	14.18	1.56	...
Uganda	1.21	1.90	...
Zambia	0.51	85.97	10.90
Sub-Saharan Africa	33.39	17.04	...

¹ For Kenya, Morocco, Nigeria, Tunisia, Uganda, Zambia and Sub-Saharan Africa, 2010, for Lesotho 2009, for Seychelles 2008 and for Swaziland 2007.

Sources: World Bank; IMF *Regional Economic Outlook*, April 2012.

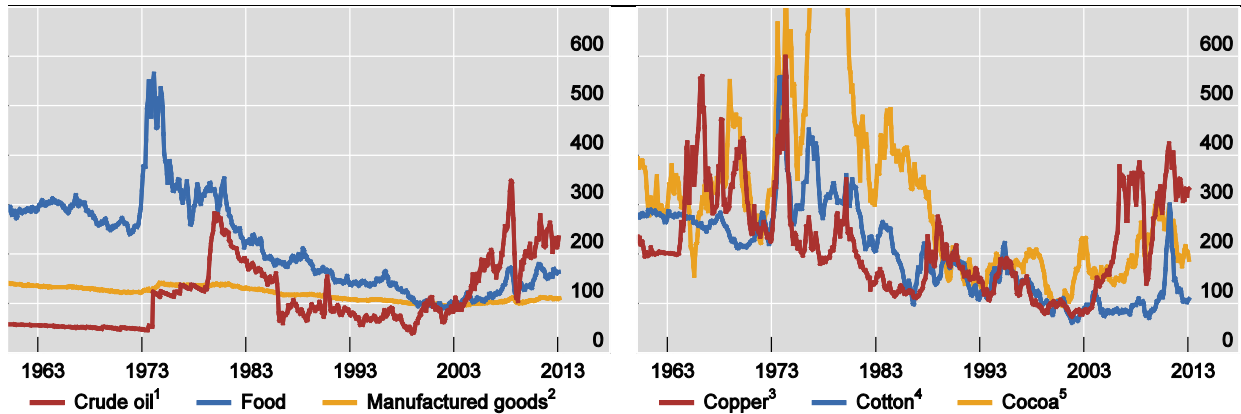
The volatility of resource revenues has deleterious effects on economic development. Countries undertake ambitious spending plans when resource revenues are plentiful, but when they decline, governments are often unwilling or unable to reverse course. They take on excessive debt in some cases, pledging future oil revenues to obtain it, and this detracts from a rational and effective development strategy and mortgages the future (Bainomugisha, Kivengyere and Tusasirwe (2006)). The volatility of world commodity prices and the consequent resource revenues – as well as their non-renewable nature – emphasise the

importance of budgetary procedures that are based on conservative revenue assumptions and the need to constitute resource funds or “funds for future generations” that mandate saving some of the revenue (Davis et al (2001)). But strong institutions and good governance are needed to ensure that such funds are not diverted, as has been the case in Nigeria and Cameroon, among other countries, in the past.

Commodity and manufactured goods prices

In real terms, as deflated by US consumer price index; 2000 = 100

Graph 1



¹ Crude oil (petroleum), West Texas Intermediate 40 API, Midland Texas. ² United States, producer prices, manufactured goods ³ Copper, grade A cathode, LME spot price, CIF European ports. ⁴ Cotton, Cotton Outlook 'A Index', Middling 1–3/32 inch staple, CIF Liverpool. ⁵ Cocoa beans, International Cocoa Organization cash price, CIF US and European ports, index exceeds 700 between April to May 1974 and between August 1976–March 1980 with a maximum value of 1362.

Sources: IMF; Datastream; national data.

Strong resource revenues and capital inflows can lift the real exchange rate, crowd out other sectors (particularly agriculture and manufacturing) and encourage imports – the so-called “Dutch disease.” Thus, countries with large resource sectors progressively get more dependent on them, as other traditional productive activities are crowded out. Inflows can also augment domestic liquidity and cause the banking system to amplify the economic and financial cycle. They may cause banks to take on excessive risk by lending their abundant liquidity to projects that are not viable, threatening financial stability when the boom becomes a bust. Procyclicality and dangers to the financial system make it desirable to consider macroprudential policy tools as a means of augmenting traditional monetary and fiscal policies in order to dampen fluctuations and safeguard the financial system.

2. The case for macroprudential policies

In general, macroprudential policies⁴ aim to fill the gaps in what was often viewed as the “standard policy framework” (at least before the crisis): financial regulation is

⁴ As detailed in Galati and Moessler (2011), the term macroprudential has been given different meanings and reflects distinct motivations, but broadly speaking refers to policies that address risks to the financial sector as a whole.

devoted to maintaining the soundness of individual financial institutions, and macroeconomic policies ensure price stability and growth in output. The “standard policy framework” is too simplistic because of the complex interactions and externalities among financial institutions, two-way feedbacks between the financial and real sectors, and risks that financial cycles may develop well ahead of real cycles – causing problems that are beyond the radar when policymakers look only at real variables and inflation, and ignore financial variables.

There are two obvious difficulties with a simple framework in which financial regulation and macro policies are viewed as separate. First, such a framework pays too little attention to systemic risk, that is, problems that threaten the health of the financial system as a whole. If regulation focuses solely on devising rules that can be applied to financial institutions when they are examined separately, by definition it cannot take into account macro risks: no agency has the responsibility for overall financial stability.⁵ What could those macro risks be? Financial institutions are interconnected in a variety of ways. They may participate in an interbank market, meaning that the risks of counterparty default and liquidity drying up need to be taken into account. Liquidity in financial markets and the soundness of each financial institution will depend on the stability and confidence of the financial sector as a whole. Problems in a single – especially a large – institution will therefore tend to spill over to others. Such problems may ultimately require the monetary and fiscal authorities to recapitalise at public expense a number of financial institutions. Banks provide essential services by operating the payments system and ensuring the flows of credit needed to keep the real economy going, and they cannot be allowed all to go under.

A second problem with the simple “standard policy framework” is that the financial sector can exhibit cycles that are self-amplifying. This can lead to excessive booms and busts that could be avoided by early treatment with appropriate policies. One symptom of this procyclicality can be large fluctuations in the overall level of credit growth (Borio (2003)). Wide experience in advanced and emerging market economies has shown that a credit boom – for instance triggered by capital inflows, speculation in housing markets, or high world prices for a country’s commodity exports – can sow the seeds of a subsequent bust, with widespread damage to the overall economy.

Supervisory policies can attenuate the procyclicality of the financial system by making capital requirements vary with the cycle, introducing forward-looking provisioning, and building up adequate buffers in good times that can be used in periods of stress, as well as introducing liquidity requirements.⁶ However, there are disagreements about how to implement such policies in practice.⁷ Commodity booms in Africa have shown many of the symptoms of procyclicality mentioned above. Increases in credit have gone hand in hand with increased commodity export revenues (Annex Table A1). The period 2003–05 saw very large increases in commodity prices, particularly for crude oil and metals. Oil exporters (Algeria, Angola, Nigeria) and metal-exporting countries (Congo, South Africa, Tanzania,

⁵ See another paper for this meeting, “Financial stability objectives and arrangements – what’s new?” for an elaboration of the concept of financial stability and different governance models for achieving the objective.

⁶ See BCBS (2010; 2011).

⁷ See, for example, Hahn et al (2012); Turner (2012) and Ryoo and Hong (2011).

Zambia) saw strong real credit growth to the private sector, in several cases continuing into 2006–08, although by this time commodity price increases were moderating (Annex Table A2). High credit growth led to inflation, which more than offset nominal exchange rate depreciation. Consequently, real exchange rates appreciated for most of these countries. A notable exception was South Africa, where the inflation targeting regime was able generally to keep inflation under control, and there was little trend real appreciation – although there were substantial fluctuations. Nevertheless, South Africa faced some of the financial stresses associated with the 2001–07 commodity price boom, as discussed by Mboweni (2007). They included concern about the exposure of banks and pension funds to commodity prices, foreign exchange exposure, management of windfall gains, and resisting the second-round effects of higher commodity prices on inflation.

Nigeria experienced a much more severe credit cycle and financial crisis associated with the oil price boom. Oil-related inflows and loose monetary policy produced a cumulative real growth of credit to the private sector of 235% over 2006–08 (Annex Table A1). The onset of the global financial crisis and the fall in oil prices late in 2008 increased non-performing loans, leading to bank failures and intervention by the Central Bank of Nigeria. In 2009–11, credit to the private sector contracted by 33%.

3. Macroprudential policy tools

There is some ambiguity concerning what are specifically macroprudential instruments, since some policies that affect the stability of the financial system may also be aimed at other targets.⁸ For instance, microregulatory measures certainly affect financial stability, even if they may not be sufficient to ensure it. Monetary and fiscal policies will also undoubtedly affect financial stability, because of their impacts on economic activity, the level of asset prices, and the supply of credit. The question remains, however (to be discussed further below), whether monetary policy should actually be targeted at financial stability in addition to being assigned to maintain low inflation and adequate economic activity. The following table gives examples of instruments that can serve prudential aims – whether micro- or macroprudential. If they are specifically designed to address systemic risk, they can be said to be macroprudential in orientation.

A number of the instruments listed in Table 2 can address threats to financial stability caused by commodity price booms, in particular, instruments that affect bank balance sheets directly. These include: adjustment to risk weights, rules on loan loss provisioning, reserves deposited with the central bank, and limits on interbank exposures. Other instruments such as caps on the ratio of debt service to household income, and rules on currency mismatches, if already in place when a commodity price boom develops, should help mitigate its effects.

⁸ Hannoun (2010) lists various policy frameworks that influence financial stability.

Examples of instruments serving prudential aims

Table 2

Rules governing	Measures
Bank loans	<p>Caps on loan-to-value for mortgages</p> <p>Caps on the ratio of debt service to household income</p> <p>Rules on the reference interest rate used for mortgage lending</p> <p>Rules on currency mismatches of borrowers</p> <p>Ceilings on credit growth (aggregate or by sector)</p>
Bank balance sheets	<p>Countercyclical capital ratios (possibly including additional capital charges for the speed of any increase in bank lending). Dynamic provisioning</p> <p>Adjustment to asset risk weights</p> <p>Rules on loan loss provisioning</p> <p>Caps on loan-to-deposit ratios, core funding ratios and other liquidity requirements</p> <p>Bank reserves deposited with the central bank</p> <p>Limits on interbank exposures (domestic or cross-border)</p> <p>Capital surcharges for systemically important institutions</p>
Collateral used in wholesale funding	<p>Prevention of procyclical variation in minimum margins or haircuts (or making such variation countercyclical)</p>

Source: Turner (2012).

A study commissioned by the IMF's executive board reviews the effectiveness of 10 macroprudential policies among those listed above, to address four different types of systemic risks, namely (Lim et al (2011, p 9)):

- risks generated by strong credit growth and credit-driven asset price inflation;
- risks arising from excessive leverage and the consequent deleveraging;
- systemic liquidity risk; and
- risks related to large and volatile capital flows, including foreign currency lending.

Each of these risks may be relevant to commodity price booms and busts. The choice of instrument depends on the type of systemic risk faced, though often several instruments were used to target that risk. A number of considerations need to be taken into account in the choice of which instruments to use in particular circumstances. Choices include:

- between a single instrument and multiple instruments. Multiple instruments have the advantage of targeting the same risk from different angles. By analogy with the welfare economics of taxation, the use of many instruments may be less distortionary, and harder to evade, than heavy reliance on just one instrument. Drawbacks of using multiple instruments, however, are the difficulties in implementing them and lack of knowledge about their complex interactions.
- a broad-based versus a targeted approach. A targeted approach may be required for addressing price cycles of a particular commodity, but places more demands on data and analysis.
- rules versus discretion in the application of policies. Rules should be given preference where possible, for instance for dynamic provisioning and capital conservation buffers, but they are not always possible.

- fixed versus time-varying provisions, eg for loan-to-value ratios. In theory, it is useful to vary provisions over the cycle. In practice, however, it may be difficult or undesirable to design automatic rules for such variation. And discretionary policies may prove to be procyclical given the lags involved in recognising the problem, deciding on a course of action and implementing it.
- coordination with other policies. Macroprudential policies that are well coordinated with monetary and fiscal policies will be the most effective. Exactly how they should be linked is, however, complex: see below.

It should not be concluded that every country should try to implement a large menu of possible macroprudential policy measures. Some measures are appropriate for some countries but not others. In some African countries, banks already keep very high levels of liquidity, and further liquidity requirements would have little effect. But it is not necessarily the case that the most advanced economies have made the most use of macroprudential measures; in fact, because emerging market economies are vulnerable to shocks, for instance due to having to borrow in foreign currencies, they have been led to put in place prudential measures to limit currency mismatches and to impose taxes on foreign currency borrowing (Chile is a notable example).

It should also be stressed that macroprudential policies should not be imposed to correct inappropriate monetary and fiscal policies. A credit boom that is the result of excessively low interest rates should not be offset by ceilings on bank lending. In some cases in the past, the very policies that can serve macroprudential purposes were in fact put to quite different uses: for instance, to implement financial repression or to generate low-cost financing for the government by forcing banks to hold government debt as a liquidity requirement.

4. Addressing commodity price booms using macroprudential policies

A difficult challenge for policy is to identify the trend and cycle in commodity prices: it is not obvious when a price increase constitutes a sustained rise to a new level, or whether it is just a temporary shock that will be reversed, and, if so, how quickly.⁹ This challenge is particularly relevant at present, when the prices of many commodities have risen strongly over the past decade, reversing several decades of stability, or even decline, relative to the overall price level (see Graph 1 above). If prices are permanently higher, then the economy can adjust its spending upward, since the country is now richer. But if increases are temporary, policy should try to offset swings in spending, financial flows and asset prices, since these will go into reverse later.

Fiscal policy in resource-exporting countries is likely to be the primary tool for mitigating the effects of commodity price shocks, especially for exporters of oil and gas, since a significant fraction of the export revenues accrues directly to the government in the form of taxes and royalties. By budgeting on the basis of a

⁹ Cashin, McDermott and Pattillo (2004) found that for about half of African countries, the half-life of terms of trade changes was about four years, while for a third of them, it was longer than seven years.

conservative price for the resource, rather than fully reflecting fluctuations in the world price, governments can use fiscal policy in a countercyclical way, smoothing out fluctuations in demand and avoiding unsustainable spending plans. One way of doing so is to use a moving average of commodity prices extending over several years to calculate the revenues that are available for spending, and saving the rest. Accumulated savings should then provide a buffer to cushion the downturn in spending when world prices are below the moving average (Davis, Ossowski and Fedelino (2003)).

Monetary policy may also be called upon to respond to commodity price shocks.¹⁰ In principle, monetary policy should accommodate temporary inflation shocks, since these simply constitute relative price changes, but policy should resist second-round effects that risk building in an inflation spiral. One way of doing this would be to target a core inflation variable that excludes the most volatile (and hence temporary) components. In African countries, given the importance of food and energy in the consumption basket, a measure that excludes them may give misleading signals of underlying inflation pressures, however.

Another dilemma for central banks concerns the “Dutch disease” effects of booms in the price of their commodity exports – particularly resource exports. If monetary policy is tightened to resist inflationary pressures, it may induce an appreciation of the exchange rate that leads to crowding out of non-resource sectors. If the shock is permanent, then this may be unavoidable in the absence of policy measures that boost investment and productivity in the manufacturing sector but, if temporary, it can impart undesirable volatility to the economy and may inflict unnecessary losses on the non-resource sector. If the commodity price boom is accompanied by capital inflows, this heightens the dilemma, since higher interest rates may attract even more foreign capital.

An alternative would be to intervene in foreign exchange markets, acquiring reserves and sterilising their effect on domestic liquidity. However, there are limits to sterilisation, and sterilised intervention may also have fiscal costs if the interest rate on domestic borrowing exceeds that paid on foreign exchange reserves. Sterilisation may thus be incomplete in practice, leading to credit growth that is too strong, suggesting that macroprudential policies to limit bank lending may be desirable. By tightening up on lending criteria, policy can prevent the spillover effects of the commodity boom from leading to later problems for the borrowers (and the banks that lent to them) when the boom ends.

In an economy where the capital account has been liberalised so that domestic residents can borrow abroad, currency mismatches can cause problems when the exchange rate depreciates substantially. Depreciation may make foreign currency debt difficult to service and endanger the solvency of financial institutions. This could threaten the stability of the financial system as a whole. Thus, imposing limits on foreign currency exposure is appropriate when balance of payments restrictions on capital flows are relaxed. Such prudential limits could be varied with the state of the economy, and may be especially necessary during periods of strong capital inflows.

Specific measures to tighten the terms of lending may also be needed, such as reducing loan-to-value ratios or debt-to-income ratios. Such measures may also be

¹⁰ This issue was discussed in a Governors’ meeting at the BIS on 23 June 2012.

targeted at specific sectors, depending on the nature of the spillover effects of the increased liquidity of the banking system. It may also be desirable, as suggested by the IMF report cited above, to use several instruments to target a particular problem. Thus, a detailed understanding of the interlinkages between financial and real sectors and indicators of potential financial sector problems will be necessary.

5. How to decide when to trigger and when to deactivate macroprudential instruments

While the case for using macroprudential instruments is strong, indicators are needed to help decision-makers judge when such instruments should be applied and when they should be removed. In this respect, they are more complicated than traditional microprudential regulatory instruments, since they combine the macroeconomic policy aim of dampening cycles with the prudential goal of financial stability.

The research on this question is still under way, and will no doubt progress as experience in the use of these tools begins to be gained. Financial cycles are not easy to define, and the term is often used to capture quite distinct amplification or cyclical mechanisms. However, a recent study of the Committee on the Global Financial System points to some key indicators of different aspects of financial cycles (CGFS (2012)), reproduced in Table 3 below. They can be matched to relevant macroprudential policy instruments, and used to decide when and by how much to apply them.

Indicators of financial stress		Table 3
Macroeconomic indicators	Broad credit aggregates Measures of debt sustainability (debt to income, debt service ratio)	
Banking sector indicators	Stress tests, bank risk metrics Maturity and currency mismatch Leverage ratios Indicators of funding vulnerabilities Profits and losses	
Market-based indicators	Asset valuations in equity and property markets Corporate bond and CDS spreads and risk premia Margins and haircuts Lending spreads	
Qualitative information	Underwriting standards Asset quality Credit conditions	

Source: CGFS (2012).

In evaluating the effects of commodity price booms, each of the main indicator types can help identify problems in the financial system. In particular, the spillover effects to the whole economy will likely operate through rapid credit growth, which may show up later in indicators of banking sector vulnerability, excessive valuations in equity and property markets, and lax credit conditions and poor asset quality. In deciding about macroprudential measures, Governor Subbarao of the Reserve Bank

of India has underlined that a major difficulty for regulators is steering a course between Type I errors (imposing buffers too early out of excessive caution) and Type II errors (waiting until it is too late to avert an implosion).¹¹ Many crises have demonstrated the dangers of waiting too long. But it may be inappropriate for the regulator to act without convincing evidence that problems have already surfaced. And there have been instances of mistimed policies actually accentuating the cycle.

6. Prudential measures versus capital controls

The distinction between prudential measures and capital controls is not always very clear-cut, and may depend on the instrument itself as well as the reason it was used (IMF (2011)). For instance, restrictions on foreign currency borrowing and lending may be imposed for balance of payments reasons, or in order to safeguard the soundness of financial institutions. Generalised capital controls of a quantitative nature are more likely to be imposed for reasons other than prudential ones, while market-based controls that target particular types of flows are more likely to be prudential (or macroprudential) in nature. An example of the latter is a tax on foreign currency borrowing that penalises short-term flows to a greater extent than long-term flows. It may be desirable to limit short-term inflows because they can be more easily withdrawn, causing volatility and financial instability. A tax which is a particular percentage amount of the principal will have a greater effect on the returns for short holding periods and hence, in principle, discourages shorter-term relative to longer holding periods. However, capital controls are subject to evasion, and Chile, which imposed such a tax on various occasions when inflows were substantial, later abandoned it for that reason.

Prudential measures, moreover, may be more likely to be targeted at particular types of institutions whose stability is essential to the economy, such as the banking system. Given the interconnectedness of the financial sector, however, this distinction may be difficult to maintain. Limits on the foreign currency borrowing of banks may be evaded by off-balance sheet transactions, or by the activities of non-bank financial institutions with ties to banks. Banks would thus be indirectly affected by currency mismatch problems through their off-balance sheet activities or their exposure to non-bank financial institutions. This was the case especially during the Asian financial crisis of 1997–98, and demonstrates the importance of macroprudential measures that capture activity outside the banking system.

7. Prudential measures, monetary policy and the central bank

Macroprudential measures need to be coordinated with monetary and fiscal policies. A corollary is that macroprudential policies should not be used to offset inappropriately tight or loose monetary policy. For instance, if loose monetary policy is fuelling a credit boom, then monetary policy should be tightened in preference to imposing credit restrictions on lenders. In most circumstances, the desired change

¹¹ See Subbarao (2011).

in macroprudential policy and monetary policy would be in the same direction. But sometimes these policies may need to move in different directions. For instance, macroprudential policies may be tightened in response to a commodity price boom, but the authorities may not wish to increase domestic interest rates because a currency appreciation has already tightened monetary conditions.

Another issue is what institutions should be responsible for macroprudential regulation: should it be the central bank, another agency, or should there be shared responsibility? In Africa, as in other regions, different institutional models have been adopted for financial regulation. In some countries (Lesotho, Malawi, Seychelles), the central bank is the sole regulator of the financial system, while in Nigeria it is the apex regulator, under which there are various other regulatory bodies. In South Africa, the SARB regulates only the banks, while the Financial Services Board (FSB-SA) regulates the non-bank financial sector; a similar arrangement has existed in Swaziland since 2010. Other countries (Angola, Egypt, Mauritius, Morocco, Tunisia, Uganda, Zambia) entrust regulation of all deposit-taking institutions to the central bank, while having a separate agency or agencies for the regulation of the insurance and capital markets. In Mauritius there is a specific Memorandum of Understanding detailing cooperation between the central bank and the Financial Services Commission. In Algeria, bank regulations are issued by the Monetary and Credit Council, working with the Bank of Algeria, which implements them. In the West African CFA franc zone (UMOA), a separate Banking Commission shares the regulation of the banking sector with the central bank (BCEAO), but the zone's Council of Ministers has overall prudential responsibility, and national finance ministers have a role in approving banking licenses, suspension of operations, and liquidation of financial institutions in their own territories. Other regional bodies regulate non-bank financial institutions in the zone. A similar institutional setup is in place in the Central African CFA franc zone (CEMAC), with the central bank (BEAC) sharing supervisory responsibilities.

There are several institutional models for designing and implementing macroprudential policies.¹² The case for giving the central bank responsibility for macroprudential policies (or, if other agencies are also involved, primary responsibility) is that it is the institution that combines both macroeconomic and financial system oversight. It is often the government institution with the closest links to the market, and such expertise may be in short supply in many countries. In any case, the central bank would need to know of systemic problems in order to carry out its core responsibilities, and thus would have to be involved in some fashion. But the risk exists that giving the central bank responsibility might overburden it, in a context in which many African central banks, because of lack of independence from the fiscal authorities, have not been able to achieve their primary mandate of maintaining price stability.

In countries where another agency already has the responsibility for the regulation of individual firms, then there may be a case for it to share responsibility for macroprudential policies with the central bank. However, a decentralised model, in which one agency supervises banks, another insurance companies and so forth, does not work well in this context, because of the nature of systemic risks and the interconnectedness of financial systems. Thus, a strong case can be made for an

¹² See the "Financial stability objectives and arrangements – what's new?" paper prepared for this meeting.

overarching body – the central bank or another agency, or a coordinating agency – being given macroprudential oversight over all financial sectors. In Morocco, a draft banking law gives the central bank responsibility over financial stability and provides for coordination among agencies to manage systemic risks. Going further, where regional financial integration is significant, it is important to coordinate effectively the macroprudential activities in the different countries of the region, rather than having them operate independently.

8. Conclusion

Macroprudential policies are in their infancy, and will evolve as more experience is gained. A large number of tools have been identified, but all are not equally targeted or effective, and the appropriate tool to use will depend on the particular circumstances a country faces – the type of shock, the structure of the economy and the institutional setup. Work based on a cross-country study by the IMF (Lim et al (2011)) cited above, concluded that often several tools could best be used together, and that effectiveness was enhanced by coordination with monetary and fiscal policies. In African economies heavily dependent on commodity exports, macroprudential tools can supplement monetary and fiscal policies to prevent a commodity price boom and bust from causing serious harm to the overall economy.

For African countries, the way forward will be influenced by the evolution of their financial systems and the overall economic environment. A generalised move to more liberalised economies, with reduced controls on capital and flexible exchange rates, increases the power of market forces and improves economic efficiency, but may also require a tightening of prudential regulation. Vulnerability to external shocks with widespread effects on the domestic financial system brings to the fore the usefulness of macroprudential instruments. Nevertheless, it is important to keep in mind that macroprudential policies should not be seen as substitutes for monetary and fiscal discipline – in particular, they should not be used to offset the harmful effects of unsustainable macroeconomic policies.

Appendix

Selected macroeconomic indicators

Cumulative percentage change

Table A1

	Real credit growth ¹			CPI inflation ²			Real effective exchange rates ²		
	2003– 2005	2006– 2008	2009– 2011	2003– 2005	2006– 2008	2009– 2011	2003– 2005	2006– 2008	2009– 2011
Algeria	50.8	41.7	23.3	7.8	14.1	15.2	-6.2	1.5	0.6
Angola	68.9	310.0	76.2	174.4	41.9	46.4	58.8	49.1	3.0
Botswana	19.1	42.9	19.3	27.7	33.4	24.1	-9.1	-9.0	10.3
The Democratic Republic of Congo	273.6	371.4	-6.0	38.3	65.8	94.5	...	...	...
Egypt	9.6	7.7	-22.7	21.6	39.9	36.1	-21.1	27.7	13.1
Ethiopia	23.6	13.5	...	28.7	95.4	66.8	3.0	42.0	-15.2
Ghana	55.8	123.9	25.5	58.6	47.7	36.7	18.2	-2.5	-6.6
Kenya	3.1	33.3	37.6	32.8	30.9	33.8	20.2	8.3	-8.3
Lesotho	-35.8	50.2	57.3	15.0	30.1	16.0	49.6	-21.8	25.3
Malawi	68.6	191.2	104.3	45.5	30.2	25.5	-22.5	8.1	-10.0
Mauritius	45.8	28.6	13.0	14.0	29.4	12.9	-8.5	9.2	10.0
Morocco	22.0	63.5	28.8	4.5	9.8	1.5	-4.3	3.1	-7.5
Mozambique	2.7	80.3	57.1	38.0	28.1	28.2	-1.0	17.0	0.2
Nigeria	35.8	234.8	-32.6	52.0	33.1	40.5	24.6	16.8	2.7
Seychelles	49.7	43.7	-12.7	5.7	91.0	3.2	-15.8	-44.7	12.5
South Africa	42.8	34.5	-4.1	7.5	26.9	16.7	26.5	-29.0	24.6
Swaziland	94.0	24.5	18.9	16.3	29.9	17.7	18.2	-14.9	13.0
Tanzania	115.6	99.6	24.8	14.3	28.8	41.9	-21.6	5.1	-6.1
Tunisia	17.0	20.5	32.5	9.6	12.9	12.1	-10.6	-5.1	-2.5
Uganda	33.1	94.9	47.2	18.6	33.2	45.3	-1.8	6.1	14.4
Zambia	46.6	148.0	4.6	59.5	37.4	27.1	68.0	-8.4	1.8
WAEMU (BCEAO) ^{3,4}	34.7	54.0	41.9	5.3	14.4	5.2	-1.4	11.3	-8.4
CEMAC (BEAC) ^{3,5}	31.2	89.3	77.6	5.0	12.8	9.9	1.3	12.1	-6.2

¹ Credit to private sector deflated by year-on-year changes in CPI, in per cent. ² End-of-year data. ³ Weighted average based on 2005 GDP and PPP exchange rates. ⁴ Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. ⁵ Cameroon, the Central African Republic, Chad, the Republic of Congo, Equatorial Guinea and Gabon.

Source: IMF.

Commodity price performance¹

Cumulative percentage change

Table A2

	2003–05	2006–08	2009–11	2012
Crude oil	101.8	-30.2	138.0	-10.6
Non-fuel commodities	30.9	4.8	49.5	4.7
Agricultural raw materials	5.7	-13.3	48.5	3.2
Cotton	2.4	-1.9	72.1	-12.7
Coffee	53.2	42.0	36.1	-10.3
Cocoa	-25.4	60.1	-9.1	10.5
Metals	108.8	-7.1	78.7	0.3
Copper	187.3	-32.2	143.4	5.4
Gold	53.6	60.0	101.2	2.6
Iron ore	121.7	149.0	95.0	-5.6
Manufactured goods	15.6	8.2	15.4	0.9

¹ US dollar prices.

Source: IMF, Datastream.

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Government debt issuance and central banks – Kenya's experience

Government debt issuance in Kenya

The issuance of government debt is managed by the Central Bank of Kenya (CBK) acting as an agent for the National Treasury. The Treasury retains ultimate responsibility for the final decisions regarding the overall size of borrowing, with the CBK taking decisions on issues relating to size and the details of the individual auctions.

Linking debt strategy to borrowing process

The Treasury publishes a Medium Term Debt Strategy (MTDS) that addresses the projected three-year requirements and guides the financing of the budget deficit. The MTDS is a public management tool that is linked to the medium-term fiscal framework based on revenue projections and planned expenditures consistent with economic growth estimates. The strategy takes into account the cost and risk trade-offs in setting sustainable borrowing limits, ensuring full debt service irrespective of a wide range of shocks.

The MTDS is a critical tool for informing policy decisions, avoiding any onerous debt burden or fiscal vulnerability and improving investor relations, including those with development partners. In addition, the strategy incorporates initiatives to develop a vibrant domestic debt market.

Once the fiscal framework has been adopted, the CBK designs a borrowing programme based on the MTDS that specifies the required amount and at the same time redeems the maturing securities at the optimal cost. In the preparation of the borrowing programmes the following considerations are taken into account: the direction of interest rates, market conditions and domestic debt maturity profile. The current issuance calendar is to offer all Treasury paper; 91-, 182- and 364-day bills weekly and Treasury bonds once a month.

The securities are issued using a multi-price auction based on the interest rates offered by the bidders. This boosts price discovery, which is critical for secondary market trading. In bidding for Treasury bonds with maturities of 10 years and below, the market is allowed to set the coupon for bonds, hence revealing key pricing information that is taken into account in the formulation and implementation of monetary policy, thus creating an implicit yield curve.

1. Lengthening the maturity of government debt issued in local markets

Government debt issuance in local markets has largely been driven by the fiscal objective to finance government deficits at the lowest cost possible, with a prudent degree of risk. One of the most important factors influencing the borrowing strategy is *refinancing risk*. Therefore, lengthening the maturity profile of debt is an

outcome of deliberate borrowing initiatives meant to limit the impact of refinancing risk.

In the last decade, the CBK embarked on a reform path aimed at developing the country's debt markets. Following the re-launch of the Treasury Bonds Programme and in partnership with the National Treasury and market participants, the CBK initiated the creation of a Market Leaders Forum. At the time, the aim of the Treasury bonds programme was to restructure the domestic debt portfolio, which had a composition ratio of 24:76 Treasury bonds to bills.

The Market Leaders Forum hence set out as its objectives: first, to market government securities through direct linkage with potential investors; second, to advise the CBK and Treasury on various developments in the debt and money markets that have direct bearing on the performance of the new issues; and third, to propose the floating of suitable debt instruments to diversify the product range and as result ensure stability in the financial markets. This has been the bedrock for future reform measures.

As a result of the CBK's reform programme and the efforts of the Market Leaders Forum, the Kenyan bond market has been rated as one of the fastest growing bond markets in sub-Saharan Africa. Some of the initiatives undertaken to lengthen the maturity profile of government-issued local debt include the following.

a. Implementation of benchmark bonds programme

In the initial periods of the bond programme, the issuance of fixed coupon bonds (including zero coupon) of different maturities was being done without much attention to the deliberate objective of lengthening maturities. However, with the recent drive towards developing secondary markets for government securities, specific maturities of two, five, 10, 15 and 20 years were earmarked benchmark bonds. This was a critical step towards addressing the problem of bond market fragmentation and creating the liquidity necessary for developing a firm and reliable yield curve. It was also important to reduce refinancing risks by increasing the average maturity profile of domestic debt.

b. Elongation of the yield curve

Cognisant of the need to provide an appropriate pricing benchmark for the private sector, particularly those inclining to offer long-term financing, the CBK in 2010 and 2011 extended the yield curve to 25 years and then to 30 years, respectively. This initiative has not only provided confidence to the private sector, but has also contributed to lengthening the maturity of the government's domestic debt.

c. Reopening medium- to long-term bonds

In September 2007, the Market Leaders Forum noted that Kenya's bond market was highly fragmented, with many small bonds scattered along the yield curve. Fragmentation made the bond market illiquid, causing volatility and hence hampering the process of market deepening.

The CBK successfully started reopening Treasury bonds in April 2009. The first candidate bond for reopening was a five-year bond. After reopening, liquidity rose from KES 4.4 billion to KES 10 billion. Since the commencement of this programme, the reopened issues have recorded increased trading activity on the Nairobi Stock Exchange (NSE), which has contributed to the main objective of secondary market development. Because the reopening focused on medium- to long-term bonds, as a

subsequent benefit the bulk of government debt is now well spread between 2013 and 2041.

d. Infrastructure bonds

A highly successful new instrument with long maturity was introduced in December 2009. This instrument, which was exempt from withholding tax, was to finance identified priority projects in the infrastructure sector of the government.

e. Investor base diversification

The processes of lengthening the maturity of government debt would not be successful were it not for the liberalisation of both the pensions and insurance sectors. Kenya began to reform the retirement benefits industry by establishing the Retirement Benefits Authority in 1997, to guide the developments within the industry. This was a significant development since previously there were private and public pensions and provident schemes operating in the country without clear regulatory guidelines.

In addition to securing the funds from contributors, it was evident that the industry was a significant growth area that had long been neglected, and that there was need for a change in the governance structure. At the time, the National Social Security Fund (NSSF) was the main public retirement benefits scheme in the country and handled all the statutory contributions. In addition, the coverage by the existing schemes was so low that there was a need to begin to extend the coverage to ensure that a greater population was covered.

This was a significant step in market development as the effort by government to structure and reform the pensions sector resulted in greater participation of pension schemes, both NSSF and private, in debt markets. The new legal regulatory framework provided investment guidelines that established limits on a variety of investments. Of significance was a requirement that pension funds invest up to 70% of their assets in government securities. This requirement helped open the debt markets to a new category of investor, keen on medium- to long-term investment. This same strategy was adopted during the reform of the insurance industry.

In January 2009, in an effort to increase participation from the retail sector, the CBK reduced the minimum amounts required to invest in Treasury bills and bonds from KES 1 million for both to KES 100,000 and KES 50,000, respectively. The purpose of this initiative was to encourage retail investors to increase their levels of savings by providing wider investment options, as well as the larger objective of promoting financial inclusion.

Initially, public corporations were required to hold significant quantities of government paper; with liberalisation, the market brought in many other players, in particular commercial banks, pension funds and insurance companies. The current diversified investor base includes commercial banks, pension funds, insurance companies, parastatals and retail investors.

f. Debt strategy

In June 2009, the financial authorities produced the first formal MTDS ("2009 MTDS"), covering FY 2009/10–FY 2011/12. The key driver of the strategy was a desire to reduce refinancing risk, particularly in the domestic debt portfolio, and to develop the domestic debt market further; the authorities highlighted a desire to reduce the degree of exchange rate exposure in the portfolio. Consequently, the

MTDS envisaged significant reliance on domestic debt to meet the financing requirement.

The debt strategy has provided the key guideposts for supporting the goal of lengthening the maturity of government securities. The strategy has helped align domestic borrowing towards issuance of more medium- to long-term Treasury bonds than Treasury bills. The result of this has been the lengthening of debt maturities from about 4.7 years in 2009 to 6.6 years in 2012.

2. Impact of debt issuance on the structure of market interest rates and the liquidity of the banking system

With an increasingly integrated global financial landscape, and the resulting increase in competitive conditions to achieve the cheapest funding, debt issuance has moved to the use of broadly similar issuance procedures and policies that facilitate or encourage liquid markets and a predictable interest rate structure.

Apart from debt management objectives, the maturity structure of debt affects the transmission mechanism of monetary policy. In this regard, the CBK has continued to pursue various initiatives to boost market liquidity and consequently affect the structure of market interest rates positively. These initiatives are as follows.

a. Improved market infrastructure

In November 2009, the CBK facilitated the setting-up of a functioning Automated Bonds Trading and Settlement System (ATS). ATS linkage between the Securities Exchange and the CBK enables simultaneous exchange of securities and cash settlement using the KEPSS (RTGS) infrastructure on a delivery versus payment (DvP) basis, ensuring efficiency of trading in terms of safety of transactions and price discovery. Since then, daily bond turnovers have significantly increased. Turnover has increased to monthly highs of more than KES 30 billion since the introduction of ATS, up from less than KES 10 billion per month on average before November 2009. Turnover on the NSE has risen from KES 108 billion in 2009 to KES 530 billion in 2012. This has resulted in a more firmed-up yield curve, oversubscriptions in primary auctions and a decline in bond yields due to improved market confidence. This development has enhanced bond market confidence, increased transparency and stirred vibrancy at the bourse, which is a major milestone for the general growth of the bond market.

b. Horizontal repos

The horizontal repo facility was rolled out in September 2008 as a platform to aid in liquidity distribution, and has helped to improve on the range of credit line arrangements among commercial banks. Despite some bottlenecks, this platform has provided an additional avenue for liquidity distribution in the market and banking system.

The introduction of the horizontal repo, along with other initiatives related to lengthening the maturity profile of debt and monetary policy reforms, has boosted market liquidity and created a structure of market interest rates that is more responsive to monetary policy.

How is this coordinated with the central bank?

Coordination between debt managers and monetary authorities is essential, not just for the smooth operation of various monetary transmission mechanisms but also for monetary and financial system stability.

The CBK acts as fiscal agent for the government and the National Treasury. It works hand in hand to meet fiscal objectives set by the Treasury, despite playing the key monetary policy role. These authorities work together in preparing the medium-term debt strategy and managing auctions.

In terms of issuance planning, the Treasury sets the borrowing target and the CBK provides a borrowing programme to meet the target. This calendar is then taken into account when implementing the monetary operation targets.

The Auction Management Committee (AMC), which is responsible for determining individual auction results, draws its membership from the Treasury and the CBK departments responsible for economic research, banking, monetary policy formulation and implementation.

Circumstances when the central bank should issue its own debt, and at what maturity

Central banks around the world are faced with the challenge of implementing monetary policy goals in the presence of excess liquidity in domestic banking systems. Within the range of instruments available, the issuance of central bank securities is one policy option that has been used effectively by a number of central banks.

In several countries, central banks have resorted to issuing their own securities in circumstances where the markets for government securities are undeveloped and where governments are reluctant to issue securities in sufficient amounts to deepen the bond market. Some central banks have resorted to own securities because of the unavailability of appropriate government securities that can be used to manage liquidity in the market.

In Kenya's case, the CBK does not issue central bank bills. One of the major drawbacks noted when this issue was considered was the likelihood that central bank bills would be viewed by the market as competing with the Treasury bills and thus confuse the market. That is why there should be emphasis on instruments for liquidity management by central banks and instruments to contract government debt, that is securities to deepen the bond market with risk-free assets and encourage the private sector to join and build a vibrant bond market for long-term finance.

Rather than issue its own bills, the CBK, in agreement with the National Treasury, converted debt owed to it by the Treasury into one-year Treasury bills that are used exclusively for open market operations. These securities are known as Central Bank Repo securities and they form part of the domestic holdings of debt.

Cross-border expansion of Nigerian banks: has it improved the continent's regulatory and supervisory frameworks?

Sarah O Alade¹

1. Introduction

Nigerian banks expanded into other African countries following the 2004 consolidation that increased minimum capital requirements more than tenfold. Most banks expanded their operations domestically and internationally by increasing branch networks in the domestic market and opening subsidiaries abroad. United Bank for Africa (UBA) and Access Bank combined are operating in more than 20 countries on the continent. Cross-border expansion has taken place through the setup of subsidiaries, thus adding to the number of banks in host countries.

In the case of Nigeria, we have five foreign-owned banks out of 23 banks in the country, namely, Citibank, Ecobank, Stanbic IBTC, Standard Chartered and Nedbank. While four of the banks have been operating for a while in Nigeria, Nedbank was just granted a license and only started operation this year. Therefore, what we have is a financial system where the number of Nigerian banks operating branches in other African countries far exceeds that of the foreign banks operating in Nigeria.

Economic theory would suggest that such cross-border expansion would have many benefits, both for the expanding banks and for the recipient banking system. The main benefits for the parent company would be risk diversification and greater profit opportunities for shareholders. The recipient banking systems, on the other hand, would benefit through increased intermediation and improved efficiency resulting from technological advancement, reduced interest rates and efficiency improvements due to increased competition.

Most countries have welcomed the expansion of Nigerian banks in their jurisdictions, as they are helping to deepen the banking sector on the continent through branch network expansion, the introduction of new financial products and the strengthening of the regulatory and supervision framework through the introduction of consolidated supervision and joint supervision of bank branches, which have helped to affect knowledge- and information-sharing among supervisors.

There is ample evidence in the economic literature that cross-border expansion can also impose a cost on domestic banks in host countries, whose market share is threatened by the new entrants and who could take more risks with adverse consequences for the stability of the banking sector. This could include behaviours such as potential adverse selection of clients for domestic banks due to the

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migration of less risky clients to the foreign banks who offer new and innovative products and services.

While the expansion has helped host countries expand their banking sectors and increase intermediation in their respective home countries, the poor risk framework at the beginning of the expansion and the effect of the financial crisis put a strain on some Nigerian banks, resulting in the failure of some, including Oceanic Bank, which had expanded to seven countries before the crisis. This necessitated broad-based reform in the Nigerian banking sector that has benefited countries with Nigerian bank presence.

The central bank implemented consolidated supervision and developed a framework for cross-border supervision implemented in 2010. The framework sets as a precondition for the presence of Nigerian banks in other countries the execution of Memoranda of Understanding (MMoU) with the host country. In Nigeria, all banks, whether local or foreign, are treated equally and are subjected to the same prudential and supervisory regulation. In case of liquidity crisis, the Central Bank of Nigeria is the lender of last resort to all banks. While the function of supervision of banks rests with the central bank, other agencies supervise non-financial institutions; therefore the need for coordination between the central bank and other regulatory bodies is essential. This paper will examine the effect of the cross-border expansion of Nigerian banks in the West African Monetary Zone (WAMZ), which includes: The Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone. These countries were selected because 10 Nigerian banks operate in these countries and they have the most collaborative relationship in the area of supervision and regulation with the Nigerian authority. This close collaboration is helping to strengthen information-sharing through formal arrangements such as, MMoU, joint supervision and development of common regulatory and supervisory framework for the zone. The paper will cover the period 2005–12 to capture the period before and after the cross-border expansion of Nigerian banks and explore the notion that the presence of foreign banks helps build a domestic banking supervisory and legal framework, and enhance overall transparency in both home and host countries.

The rest of the paper is organised as follows: Section 2 reviews the economic literature on the benefits and costs of cross-border banking expansion. Section 3 discusses the extent of Nigerian bank expansion and the nature of the expansion on the African continent, while Section 4 outlines the impact of Nigerian banks' expansion in strengthening the banking system and, more importantly, in improving the regulatory and supervisory environment, with a focus on the West African sub-region. Section 5 highlights the importance of even greater coordination and collaboration in banking supervision, as the development of a harmonised common regulatory framework for the zone is imperative in securing and sustaining the gains made in intermediation and financial sector stability. Section 6 concludes the paper.

2. Nature and extent of Nigerian banks' expansion in Africa

Nigerian banks' cross-border activities started in 2002, with two banks setting up operations in a few countries in Africa, and increased after the 2004 banking sector consolidation in Nigeria. Following the 2004 increase in minimum capital requirements from NGN 2 billion (\$17 million) to NGN 25 billion (\$210 million), the Nigerian banking system consolidated and the number of banks fell from 89 in 2003

to 24 at the end of 2013. The total assets of the banking sector increased from NGN 2,767 billion (\$23 billion) in 2003 to NGN 14,932 billion (\$127 billion) in 2008. By the end of 2008, more than half of the 20 domestically owned Nigerian banks remaining had subsidiaries in at least one other African country, compared to only two in 2002² (Table 1). United Bank for Africa (UBA) led the way, with subsidiaries in more than 20 African countries. Although cross-border expansion of Nigerian banks was temporarily halted by the global financial crisis in 2008–09, it picked up after conditions stabilised following intervention in the banking sector and the strengthening of risk management and supervisory frameworks by the Central Bank of Nigeria.

Sample of Nigerian banks' cross-border subsidiaries in other African countries and beyond

As at end-2012

Table 1

Bank	Countries in operation	Outside Africa
Access Bank	Burundi, Côte d'Ivoire, Democratic Republic of Congo, The Gambia, Ghana, Rwanda, Sierra Leone, Zambia	London, UK China
United Bank for Africa (UBA)	Angola, ¹ Benin, Burkina Faso, Cameroon, Chad, Democratic Republic of Congo, Republic of Congo, Côte d'Ivoire, Gabon, Ghana, Guinea, Kenya, Liberia, Mali, ¹ Mozambique, Senegal, Sierra Leone, Uganda, Tanzania, Zambia	New York, US London, UK Paris, France
Guaranty Trust Bank (GTB)	The Gambia, Ghana, Liberia, Sierra Leone	London, UK Hong Kong ²
Afribank/Mainstreet Bank	Ghana	London, UK
Zenith Bank	The Gambia, Ghana, Sierra Leone	London, UK South Africa
Diamond Bank	Benin, Côte d'Ivoire, Senegal, Togo	Dublin, Ireland
Bank PHB / Keystone	The Gambia, Liberia, Sierra Leone, Uganda	
Skye Bank	The Gambia, Ghana, Guinea, Sierra Leone	
FCMB Bank	The Gambia	London, UK South Africa
First Bank	Democratic Republic of Congo	London, UK Paris, France
Union Bank	Benin, Ghana ³	London, UK South Africa

¹ Yet to commence operation. ² Request for representative office in progress. ³ Union Bank has minority stake of 32.4% in HFC of Ghana.

Sources: Individual banks' websites.

² UBA and Guaranty Trust Bank engaged in cross-border banking operations vis-à-vis a few countries starting in 2002.

The cross-border expansion of Nigerian banks was motivated by several factors that are both economic and ideological in nature. Motivated by the need to maximise profit and the value of shareholders' funds, the banks engaged in aggressive regional expansion. Additionally, based on the belief that banking systems in many African countries are still less developed and less capitalised than in Nigeria, and the significant opportunities in financing trade between these countries, Nigerian banks saw an opportunity to leverage their success, experience and technology platform to deliver services in these markets, where returns are expected to be at least as high as those in Nigeria. At first, the banks' expansion was concentrated on Anglophone countries, suggesting that language and similarities in the legal environment played a role. It has since moved on to some Francophone countries (like Côte d'Ivoire, Burkina Faso and the Democratic Republic of Congo). A combination of financial reforms in the host countries and a favourable macroeconomic environment in Nigeria played a role in the expansion as high oil prices led to the accumulation of sizeable international reserves of \$62 billion the highest in the history of Nigeria – at end-2007.

Some banks sought a role as pan-African or regional banks. With a large asset base, a deep stock market and resulting efficiency improvements on the home front, the banks wanted to play a regional role on the African continent. The desire to establish themselves as regional banks following consolidation contributed to the expansion drive. In 2008, Nigerian banks ranked 1–15 in the African Business Survey (see *African Business* magazine, December 2008) in the category of the most capitalised businesses in Africa. Therefore, they were well positioned to play an increasing role in the sub-region's financial sector. Rather than depend on host countries to raise capital, many of the banks raised capital in Nigeria, contributing to foreign direct investment (FDI) in the host countries to which they expanded. The non-existence of capital markets in most sub-Saharan countries to which the Nigerian banks expanded suggests that the parent companies contributed to the host countries' banking systems by raising capital outside, thereby adding to the financial base in the host countries. There are a few cases where partial ownership from the host country is involved.³ Nevertheless, the expansion has so far been funded by raising capital from the Nigerian market, and the model of expansion suggests that Nigerian shareholders have funded the expansion of the banks. Even after meeting the increased capital requirement after consolidation, some banks raised additional capital both domestically and internationally by issuing global depositary receipts (GDRs) (Table 2).

³ For example, GTBs in The Gambia, Ghana and Sierra Leone are 78%, 70% and 87% owned by the parent company in Nigeria, respectively, while the remainder are owned by other local and international partners. Also, Oceanic Bank in Ghana is majority owned by the parent company. In most cases, however, the Nigerian parent company controls 100% of its subsidiaries in the sub-Saharan countries to which they expanded.

Capital-raising activities by Nigerian banks, 2006–08

Table 2

Banks	IPOs	GDRs
	Domestic (USD millions) ¹	International (USD millions)
Access	1,162	–
Afribank	854	–
Fidelity	410	–
First Bank	1,948	–
GTB	–	824
Intercontinental	853	–
Oceanic	1,492	–
UBA	556	295
Diamond	145	500
Zenith	458	–
Total	7,878	1,619

¹ This is converted using the exchange rate at the time the funds were raised in the market. Most of the domestic capital-raising occurred in 2007/08 when the exchange rate was NGN 117 to USD 1.

Sources: Central Bank of Nigeria; individual banks' annual reports, various years.

There are a number of countries in which Nigerian banks account for a significant share of the banking sector (Table 3). These countries will need to develop a deeper and closer cooperation with the regulatory authorities of the home country to ensure financial stability and sustain the financial sector development that is starting to pick up in most African countries. While some cooperation currently exists, such as the signing of an MMoU between the regulatory authorities in some countries, more collaboration on information-sharing and ways of dealing with insolvency can be explored.

Countries with significant presence of Nigerian banks, 2012¹

Table 3

Country	Number of banks	Number of Nigerian banks	Asset share of Nigerian banks (% of total)
The Gambia	12	7	38.6
Ghana	26	7	16.2
Liberia ²	8	4	26.3
Sierra Leone	14	6	40.2

¹ The Gambia: Access, Bank PHB, Guaranty Trust Bank (GTB), Skye and Zenith Banks. Ghana: Access, GTB, Intercontinental, Oceanic, UBA, Union (HFC), Zenith. Liberia: Access, Bank PHB, GTB, UBA. Sierra Leone: Access, Bank PHB, GTB, Skye, UBA, Zenith. ² This number does not include Ecobank. Although headquartered in Togo, its largest operation is in Nigeria and its majority shareholders are also Nigerian. If Ecobank is included as a Nigerian bank, the share rises to 71% in Liberia.

Source: Various central banks, 2009.

Many market analysts also observed that some element of follow-the-leader dynamics helped fuel the expansion. When a leading bank undertakes investment in a foreign market, it may encourage others to follow. In competition for market share, Choi et al (1986) found evidence that large banks emulate their competitors'

cross-border strategy regarding investment decisions in the main financial centres. The expansion drive of Nigerian banks was led by one, and others followed its lead.

3. Review of economic literature on the cost and benefits of cross-border expansion

Economic research has long established the benefits of foreign bank entry and its potential impact on intermediation, innovation, competition and development of the host country's financial sector. Cross-border banking in the form of foreign bank entry has increased sharply and has affected countries' financial systems in many ways. Foreign bank entry has been found to improve the functioning of domestic banking systems through increased market competition and improved efficiency. The presence of foreign banks may stimulate domestic banks to reduce costs, increase efficiency and diversify the financial services offered as competition puts domestic banks under pressure to improve the quality of their services in order to retain market shares. This may improve the quality of financial services available and may lower interest rate margins and profits.

Levine (1996) analyses the potential costs and benefits of foreign bank entry. He states that foreign banks could play a useful role in promoting capital inflows and competition, thus modernising and improving the efficiency of the financial system and the regulatory framework in the host country. Levine, however, suggests that the role foreign banks play in promoting capital inflows is relatively less important for a country's growth performance, suggesting that a more important role is their role in improving the functioning of the payment system, introducing technological innovations and improved risk management and regulatory frameworks.

Economic theory would suggest that cross-border expansion should lead to many benefits such as enhanced competition, technological advancement, increased intermediation, reduced interest rates and increased efficiency. Competition due to entry of foreign banks is expected to affect several dimensions: efficiency, costs and incentives for institutions and markets to innovate (Uiboupin (2005), Claessens and Lee (2002)). Foreign bank entry, especially in developing countries, helps to increase the supply of loanable funds to domestic firms which gain access to a larger pool of capital. Studies have shown that efficient banks can promote economic growth (Berger et al (2005)), and foreign bank entry would result in improved efficiency. Improved financing opportunities for small and medium-sized enterprises (SMEs) and a stronger SME sector may be an engine of economic growth. Another mode of transmission is through greater overall flow of bank credit to the private sector. Healthier banks may not only provide greater credit flows from their own portfolio, but may also compete more effectively with the rest of the banking industry in the provision of credit.

There is general agreement in the literature that the entry of foreign-owned banks increases competition and efficiency in the banking sector of the host country. This is mainly because the entry may reduce risk exposures for the banks through greater geographical and sectoral diversification, and enlarge the aggregate quantity of capital invested in the banking sector. Researchers and analysts encourage entry of banks as a means of strengthening weak and inefficient banking structures, particularly in emerging economies (Hermes and Lensink (2003),

Hasan et al (2000)). This is because banks that are willing and able to expand into other countries are generally assumed to be larger, in healthier financial condition, more professionally managed and more technically advanced than the average bank in the country. Thus, there is an expectation that these banks will help raise the bar for all banks in the host country. However, cross-border banking, while having the potential to lead to a more efficient financial sector, also creates potential challenges for bank supervisors and regulators. Thus, a clear delineation of authority and responsibility by regulatory authorities across jurisdictions is required to safeguard the financial system and to harness the full benefits of cross-border activities (Claessens et al (2001)).

There are counterarguments suggesting that foreign bank entry may not increase credit growth due to higher cost. Detragiache et al (2006) suggest that the higher operating costs for foreign banks in low-income countries may lead to a reduction in credit extension as they struggle for market share in the host country. On the other hand, Micco and Panizza (2004) show that spreads were lowered with the entry of foreign banks in Latin American countries. These positive results have occurred through various channels. Lower costs of financial intermediation (measured in the form of margins, spreads and overheads) and lower profitability (Claessens et al (2001), Berger et al (2005)) have resulted from bank entry. Other researchers (Martinez Peria and Mody (2004)) have observed some evidence of a better quality of financial intermediation, like less loan-loss provisioning, with more foreign entrants.

There is emerging empirical research analysing the determinants, cost and benefits of cross-border banking, especially in the European markets, but a few studies exist for the African continent. A growing number of papers using cross-country and bank-level data have investigated the effects of foreign bank entry in the local banking system and its competitive effect on the local banking system (Hermes and Lensink (2002)). The entry of foreign banks has intensified competition in many African countries' banking systems as new financial products such as the use of ATMs, internet banking and mobile banking are being introduced. In some countries in the study, foreign banks are pushing the regulators to help deepen the market through the development of Treasury bill markets, suggesting that the banking system on the continent is becoming more competitive and innovative and that countries are strengthening the regulatory system.

Most country-level studies point to a positive effect of foreign bank entry on the banking sector. Denizer (2000) investigates foreign bank entry in Turkey's banking sector, showing that the net interest margin, overhead expenses and returns on assets are related to foreign ownership. Denizer also indicates that foreign bank entry has a strong competitive effect on the banking sector: it lowers the return on assets and overhead expenses. Hasan and Marton (2000) investigate the Hungarian banking sector during the transitional process, and conclude that banks with higher foreign bank ownership involvement are associated with higher efficiency. Goldberg et al (2000) study the role of foreign banks in determining the health of domestic financial systems in Argentina and Mexico. They find that the health of banks, and not their ownership, is the critical determinant in the growth, volatility and cyclicity of bank credit. But diversity in ownership tends to contribute to greater stability of credit in times of crisis and domestic financial system weakness.

Banks that expand internationally are typically more efficient, better capitalised and come from countries with a more developed banking system. Based on this, it is

expected that the efficiency of a less developed host country banking system should improve as a result of the entry of foreign banks. Recent empirical evidence counters the traditional view that argues against giving access to foreign banks as they might worsen the allocation of credit and increase the risk to financial crisis and business cycle sensitivity of lending. Studies by Focarelli and Pozzolo (2005) and Goldberg (2002), looking at the European economy, found evidence that foreign bank entry is beneficial for host countries' economies. They argue that because of the drive for market share, foreign banks help to increase the amount of credit available and improve the efficiency of local banks, thus reducing interest margin, as new entrants charge lower interest to gain market share. Additionally, foreign bank entry has been found to improve overall welfare in the host country through the inflow of foreign investment (Bayraktar and Wang (2005)).

A growing number of studies have reviewed the effects of cross-border banking on financial intermediation and efficiency, and have found the existence of a positive relationship. Improvement in the ability of households and firms in a country to access finance and the actual usage of banking services, one way in which the intermediation functions of banks are measured, is enhanced by bank entry (Claessens et al (2001), Berger and Hannan (1998)). Banks are in a better position to lend if they are able to mobilise deposits and increase their asset base. The entry of banks also should increase total banking sector assets and the number of products the system is able to provide to customers. On the efficiency front, improvements in cost ratios and a decrease in profitability are considered good indicators of competition and increased efficiency. Thus the analysis of foreign bank entry focuses on whether the banking sector is more developed and able to perform the function of channelling mobilised deposits to borrowers for economic development.

Empirical evidence has shown that foreign bank presence causes higher per capita GDP growth in some host countries. A study by Macias et al (2009) finds that cross-border bank lending exerts a significant positive effect on economic growth in the African region as a whole, but a significant and negative impact in oil exporters where weak institutions leave these countries exposed to international banking risks. In a theoretical model, Besanko and Thakor (1992) analyse the allocational consequences of relaxing entry barriers and find that equilibrium loan rates decline and deposit interest rates increase, even when allowing for differentiated competition. In turn, by lowering the cost of financial intermediation, and thus lowering the cost of capital for non-financial firms, more competitive banking systems lead to higher growth rates. Additionally, Giannetti and Ongena (2005) find that the presence of foreign banks led to more entrepreneurial activities; however, access to finance by "connected" firms may be reduced, and therefore could lower the probability of "insider lending" and strengthen the stability of the system. Berger et al (2001) also suggest that foreign banks rely on hard information to initiate lending as they study their new and unfamiliar environment. Thus, insider lending is reduced due to better screening of borrowers.

4. Impact of Nigerian bank expansion on the supervisory and regulatory framework in the West African Monetary Zone

Following the crisis of 2008, the Nigerian authorities introduced robust regulatory framework that have helped to strengthen the banking sector. These measures are being adopted by countries in the WAMZ region in line with the regulatory harmonisation for the region. Against this background, the Central Bank of Nigeria implemented consolidated supervision and developed a framework for cross-border supervision implemented in 2010. The framework sets as a precondition for the presence of Nigerian banks in other countries, the execution of MMoUs with the host country. As of today, a total of 38 MMoUs have been initiated and 15 signed with regulatory/supervisory authorities within Africa and outside the African continent.

This has resulted in the banking sector getting stronger and safer, not only in Nigeria, but in the WAMZ. These measures have included the initiation and introduction of a framework that instituted better information-sharing and joint supervision through the College of Supervisors of the WAMZ with membership of all the countries in the zone. This arrangement has not only improved technical knowledge throughout the region, it has also improved monitoring and crisis management in the region. The capacity-building programme for bank supervisors being provided by the Central Bank of Nigeria to countries in the region since the 1980s received a further boost from 2010 following the widespread expansion of Nigerian banks within the sub-region. Additional training for bank examiners is being offered free of charge through the College of Supervisors of the West African Monetary Zone (CSWAMZ). Also, joint home-host on-site bank examinations of Nigerian banks' subsidiaries has provided an avenue for practical experience-sharing between the supervisors of the Nigerian central bank and the host supervisors in the sub-region.

WAMZ countries that have taken measures to improve the regulatory framework and banking sector stability

Table 4

Country	Membership in Colleges of Supervisors	Have increased capital requirements since 2009?
The Gambia	√	Yes
Ghana	√	Yes
Guinea	√	Yes
Liberia	√	Yes
Nigeria	√	No
Sierra Leone	√	Yes

Source: Individual central banks' websites; WAMI surveillance report.

In Nigeria, all banks, whether local or foreign, are treated equally and are subject to the same prudential and supervisory regulations. In case of liquidity crisis, the Central Bank of Nigeria is the lender of last resort to all banks. Foreign and local banks are treated the same in terms of liquidity support. However, in some

countries in the zone, there are different capital requirements for foreign-owned banks.

The Financial Services Regulation Coordinating Committee (FSRCC), which regulates the financial system, is specified by Section 43(2) of the Central Bank of Nigeria CBN Act 2007, with the membership of this committee consisting of the Central Bank (Chairman), Corporate Affairs Commission, Federal Ministry of Finance, National Insurance Commission, National Pension Commission, Nigeria Deposit Insurance Commission (NDIC), Securities and Exchange Commission (SEC), Abuja Securities & Commodity Exchange, Nigerian Stock Exchange and Federal Inland Revenue Service (FIRS).

These agencies meet on a bimonthly basis to discuss any issues in the bank and non-bank financial institutions in the country and their impact on the economy and financial stability. Currently, the Committee operates through five standing subcommittees and two ad hoc committees through which it achieves its objectives: Financial Sector Soundness, Legal and Enforcement, Information Sharing, Financial Market Development, Harmonisation and Coordinating, Consolidated Supervision and International Financial Reporting Standards (IFRS) Implementation Sub-Committee. In addition, in Nigeria there are a number of bills pending enactment at the national assembly to help strengthen the banking sector and to ensure that risk management frameworks are strengthened. These include the amendment of the Banking and Other Financial Institutions (BOFI) bill, which seeks to repeal and re-enact the original act by proposing tougher measures against irregularities in the banking sector and stiffer penalties for insider abuses. These bills will also strengthen the operations of Nigerian banks both at home and in host countries. Other measures are being instituted to improve data and reporting quality, such as the adoption of the International Financial Reporting Standards (IFRS) and the upgrade of the electronic financial analysis and surveillance system (eFASS), which is the main platform used by banks for the rendition of returns to supervisory bodies.

The number of bank branches increased in all countries. The branch network increased in Ghana from 595 in 2007 to 640 in 2008. The contribution of Nigerian banks to this increase was about 20% as they vied for market share. In Sierra Leone, the branch network increased from 44 in 2007 to 75 in 2011, with Nigerian banks contributing more than 26% of the increase. In The Gambia, the number of branches increased as well, from 41 in 2007 to 64 in 2011, with Nigerian banks' share reaching 35% by 2010. Nigerian banks' strategy was to bring banking to the unbanked by expanding branch networks beyond the capital city. In Liberia, UBA is the only bank with a branch network in Nimba County as at 2009. In Sierra Leone, of the seven branches of Guaranty Trust Bank, four are outside the capital city, and the same trend is observed in other countries.

In many host countries to which Nigerian banks expanded, the authorities recognise that Nigerian banks have contributed to enhancing the competitiveness of the banking system and improving access to financial services. An assessment of banking sector development in Sierra Leone commissioned by the Bank of Sierra Leone, while stressing that more needed to be done, acknowledged the contribution of Nigerian banks in the country's banking system development. According to the study, "new Nigerian banks have enhanced competitiveness significantly, but banking could be more competitive, more cost reducing and credit-risk rating improved. Newer, foreign-owned banks are growing fast, and could come to dominate the system in the near future" (full report on the Bank of Sierra Leone website).

Significant improvements in the risk management practices of banks in the WAMZ have been achieved as Nigerian banks champion the implementation of more robust risk management frameworks in the host countries of the zone, in preparation for transition to the Basel II/III Capital Accords. The frameworks drew largely from the lessons learnt in the aftermath of the Nigerian banking crisis and the global financial crisis. This has provided a strong basis for strengthening the supervisory review process in the affected countries. The Central Bank of Nigeria has spearheaded the provision of financial and technical assistance to some members of CSWAMZ for the automation of banks' statutory returns through the implementation of eFASS and related software, with the aim of enhancing data integrity and timeliness in returns rendition. This would facilitate early detection of risk signals in individual banks and the system as a whole.

Apart from the Bank of Ghana, other supervisors in the WAMZ learnt the practical application of risk-based supervision from the Central Bank of Nigeria. Bank supervisors from Nigeria have assisted other regional supervisors in understanding and implementing of risk-based supervisory approaches in their respective jurisdictions. The presence of Nigerian banks in the sub-region has helped to provide an audit trail for cross-border transactions, thereby assisting in the fight against money laundering/financing of terrorism in the region and promoting transparency in financial transactions. It has also helped create awareness of the need to establish explicit deposit insurance schemes as an effective safety net element in member countries of the sub-region, and has strengthened cooperation among supervisory authorities to minimise regulatory arbitrage.

5. Summary and conclusion

To fully reap the benefit of the pan-African presence in the region, the legal and institutional frameworks must be reformed. While market forces have played a part in enlarging the banking systems in these countries, the legal and institutional environment needs to be reformed to enable them to perform their functions better. The legal and regulatory environment plays a pivotal role in the smooth operation of the financial sector and in the efficient management and integration of capital flows and domestic savings. The value of the claims of financial institutions on borrowers is dependent upon the certainty of legal rights, coupled with the predictability and speed of their fair and impartial enforcement. Legal and regulatory frameworks that empower the regulator and govern the conduct of market participants form the cornerstone of the orderly operation and development of the financial sector. A system that will ensure enforcement of rules and investors' and borrowers' protection will go a long way towards improving access to finance in the countries.

Further strengthening and reforming of the regulatory and supervision framework should be a priority for the countries in the zone to safeguard the financial system. Effective cooperation between host and parent country authorities is a central prerequisite for the supervision of banks' international operations. In relation to the supervision of banks' foreign establishments, two basic principles are fundamental: first, that no foreign banking establishment should escape supervision; and secondly, that the supervision should be adequate (Basel Concordat (1983)). The need for reform is imperative, especially in countries where a major part of the

financial system is controlled by a parent company outside the home authorities' jurisdiction. Strengthening the system in the presence of cross-border banking will require country-level and regional initiatives.

Adoption of consolidated supervision should be a priority. Effective supervision of cross-border operations has to start with effective and efficient home supervision. All supervisory authorities responsible for safeguarding the soundness of their respective financial systems should adopt a set of well established principles of effective supervision, which should include consolidated supervision. Supervisors must ensure adequate monitoring and application of appropriate prudential norms to all aspects of the business conducted by banking organisations. The current MMoUs between the countries should be enhanced to ensure that they conform with the Basel Concordat document on the supervision of foreign banks.

The main priority should be to ensure that both home and host country authorities have adequate access to information regarding the risk exposures and management of cross-border banks. This requires close and timely information-sharing between home and host authorities, during normal times and especially in the times of stress.

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