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Challenges of low commodity prices for Africa¹

Benedicte Vibe Christensen²

Introduction

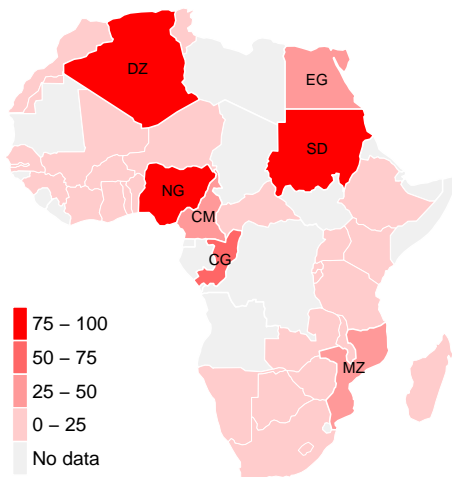
During the past decade, Africa has recorded impressive growth. This has been attributed to improved macroeconomic policies and a better business environment. With much of the continent being highly dependent on commodities (Graph 1), however, the long commodity price boom, and the strong capital inflows that accompanied it, including from China, have also been major forces.

Commodity dependent exporters

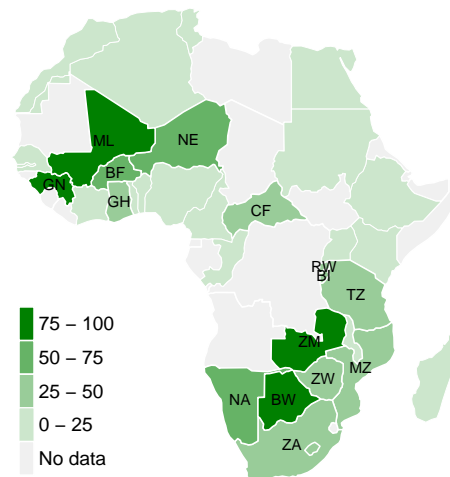
In per cent of merchandise exports; 2010–14 average

Graph 1

Fuel exports



Ores, metals and precious stones exports



BF = Burkina Faso; BI = Burundi; BW = Botswana; CF = Central African Republic; CG = Rep. of the Congo; CM = Cameroon; DZ = Algeria; EG = Egypt; GH = Ghana; GN = Guinea; ML = Mali; MZ = Mozambique; NA = Namibia; NE = Niger; NG = Nigeria; RW = Rwanda; SD = Sudan; TZ = Tanzania; ZA = South Africa; ZM = Zambia; ZW = Zimbabwe.

Sources: World Bank, *World integrated trade solutions database*, 2016; BIS calculations.

With commodity prices falling and market expectations pointing to little reversal in the foreseeable future, macroeconomic policies have been put to a serious test. Growth has already weakened substantially in commodity exporters. The fiscal space for pursuing countercyclical policies has largely been eroded since the onset of the Great Financial Crisis (GFC) – except in some commodity exporters that had managed to build up financial buffers. Even such precautionary policies provide only temporary insulation. Should the commodity price decline be of a long-term duration, as

¹ This article is also available in French.

² This note was written with the assistance of Andreas Freitag. The author would like to thank Serge Jeanneau, Philip Turner and Christian Upper for helpful comments.

projected by most analysts, further measures would be needed. Moreover, access to external financing has become more difficult and costly, and African countries have drawn down their external deposits with international banks (Table A1). Meanwhile aid flows from advanced countries have been constrained by the currently weak economic situation. This suggests that African countries will have to rely primarily on domestic policies and financing in dealing with the slowdown in growth.

This paper discusses the policy choices for African central banks in responding to commodity price declines. The first section illustrates the importance of commodities for African countries. A discussion of the various transmission channels through which commodities impact the economy then follows, with a review of the policy instruments available to counter the impact of commodity price swings on economic growth and employment in both the short and the medium term.

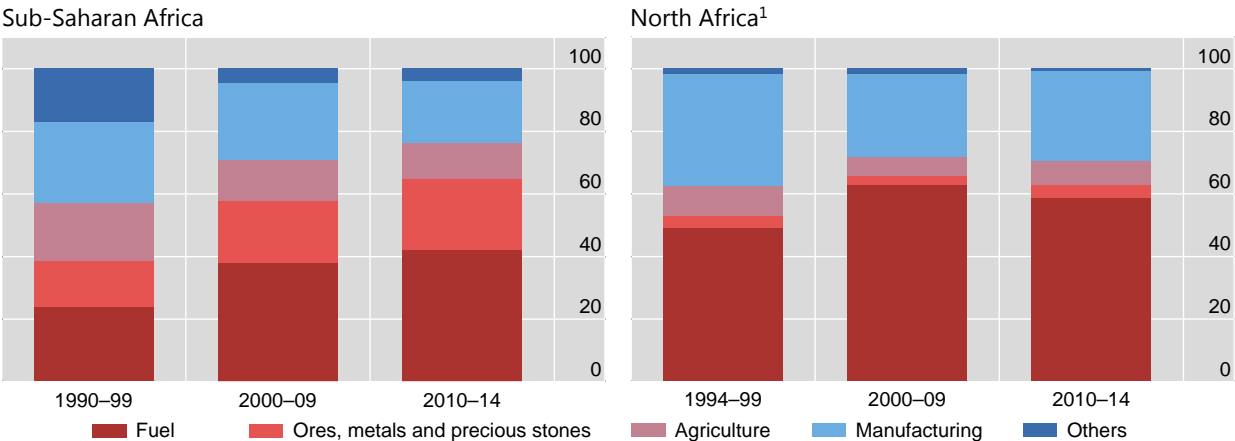
1. The importance of commodities

During the course of the recent commodity price boom, African countries became more dependent on commodity production and exports than in the past. Supported also by very low global interest rates, large investments took place in the exploration and production of commodities as well as in supporting industries such as energy generation, construction and transportation (World Bank (2015)). This mirrors developments in emerging market economies (EMEs) in other parts of the world, where the commodity price boom has given rise to major new investments even in economies dominated by the manufacturing sector. Overall, the share of commodities in the exports of sub-Saharan Africa rose from 57% in 1990–99 to 76% in 2010–14 (Graph 2). A similar picture, although with a smaller expansion, has been evident in North Africa.

Commodity share in exports

In per cent of merchandise exports; period average

Graph 2



¹ Algeria, Egypt, Morocco and Tunisia.

Sources: World bank, *World integrated trade solutions database*, 2016; BIS calculations.

This dependence has been particularly marked for oil exporters: in the three largest oil producers – Algeria, Angola and Nigeria – oil accounted for more than 90%

of exports in 2015. For other commodity exporters, the reliance on commodity exports has been less dominant. Oil has also accounted for a large share of fiscal revenues (about half to two-thirds of all government revenues during 2015 in the three largest oil exporters). Thus the major decline in oil prices observed since 2014 has had a direct and significant effect on fiscal revenues. The impact on GDP was generally less striking given that commodity production usually accounts for a smaller share of production than exports. In Algeria, Angola and Nigeria, oil accounted for one tenth to one third of GDP. Therefore other sectors, such as agriculture and services, have cushioned the impact of falling commodity prices on GDP growth, although they have also been indirectly hit by spillover effects from the sectors that were affected by the fall in commodity prices.

Africa has not followed the typical development model of other regions of the developing world. In Asia, for example, manufacturing took up a gradually growing share of output well before the commodity price boom came into full swing. In Africa, by contrast, manufacturing still accounts for much the same share of GDP as it did in the early 1970s.³ Exports of commodities are often limited to primary products with limited transformation further up the value stream. This is a problem because natural resources tend to be non-renewable and so not a good foundation for sustainable development. In addition, the lack of economic diversification makes it harder for countries to achieve a broad-based growth and employment trajectory that would improve the lives of broad segments of the population. According to the 2014 *African Transformation Report*, economic transformation needs to be based on a diversification of the economy, improved export competitiveness, increased productivity and upgraded technology along with improvements in human well-being (eg education, employment, health and justice).

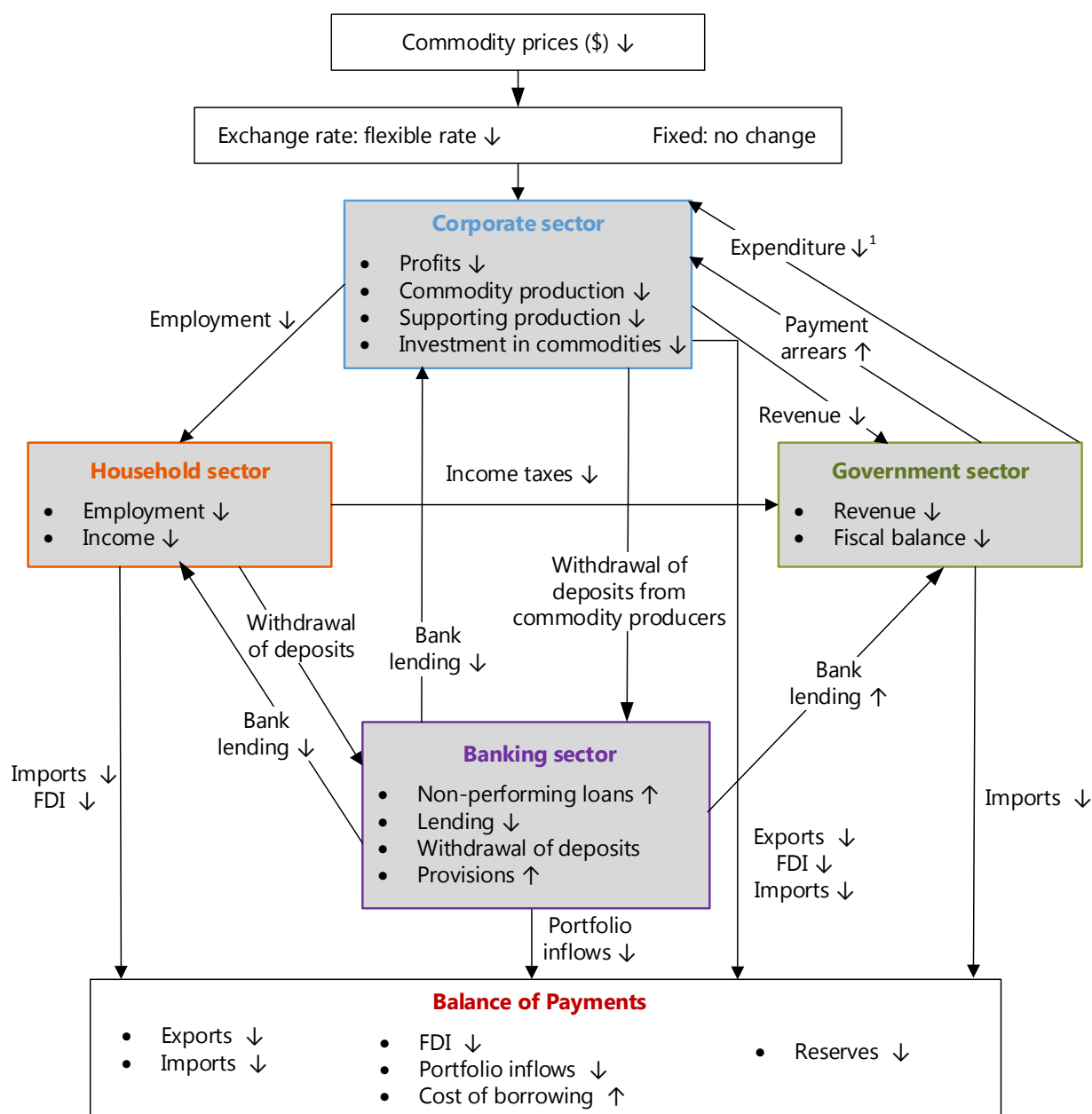
Commodity prices are volatile and extremely difficult to predict. It is also difficult to transfer their price risk to global financial markets: where this has been done, any such transfer (eg as in the case of Mexico) is limited since the market liquidity of financial hedging instruments beyond one year is low. Moreover, experience from all continents shows that governments have had difficulties in putting in place a macroeconomic framework that safeguards the stability of economic growth during commodity price swings (IMF (2015c)). The need to rethink how to achieve economic diversification is the policy lesson for the medium and long term. In the short term, policymakers need to adjust policies to the reality of lower commodity prices. This is discussed below.

2. Investment and potential growth

Commodity price declines affect all sectors of the economy (corporate, household, government and banking) through very many channels, summarised in Graph 3. This section focuses on how the macroeconomic effects influence not only actual GDP but also potential GDP. The fiscal, monetary, exchange rate and bank lending transmission channels, which encapsulate the other major forces at work, are discussed in subsequent sections.

³ African Center for Economic Transformation (2014).

Graph 3: Transmission channels of falling commodity prices



¹ This assumes that the government reduces spending in response to a decline in revenue.

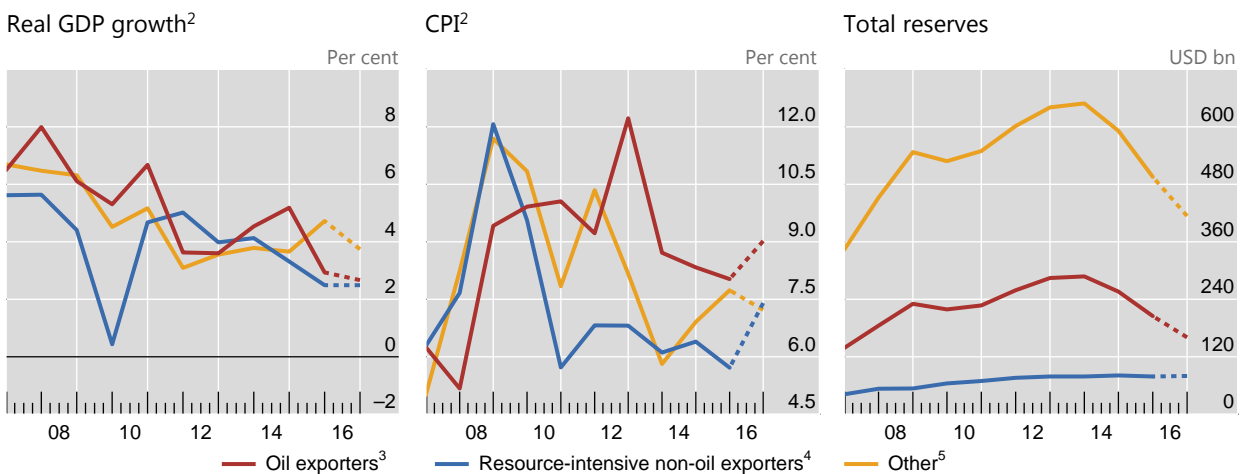
The first *transmission channel* of falling commodity prices is macroeconomic. A *decline in exports, investment and output* immediately affects the corporate and household sectors. Terms of trade shocks have a long-lasting effect on actual and potential output. The downturn tends to be stronger in countries with fixed exchange rate arrangements, where an exchange rate change cannot ease the adjustment, and in countries with less financial depth, where financing constraints rapidly become binding on economic activity. Foreign investment in commodity extraction and

supporting industries tends to weaken, which means that it is not just actual output but also potential output that decreases. Therefore, unless country-specific indicators show evidence that activity is significantly below potential, policymakers should not overestimate the shortfall of GDP from potential when terms of trade move adversely. Keeping inflation under control after a collapse in commodity prices and in the exchange rate are key to sustainable growth. Monetary and fiscal stimulus in such circumstances might just lead to higher inflation rather than stronger growth (IMF (2015d)). Instead the focus should be on implementing structural reforms that alleviate supply-side bottlenecks.

GDP growth in sub-Saharan Africa has decelerated from more than 5% per annum during 2010–14 to 3.5% in 2015 and is projected to weaken further to 3% in 2016 (Graph 4). This average masks a dramatic slowdown among commodity exporters (in particular oil exporters) given that about one third of sub-Saharan African countries that are not dependent on commodity exports have maintained strong growth rates. Growth has been halved in oil exporters in both sub-Saharan and North Africa. The main reason has been the fall in commodity prices, although drought in eastern and southern Africa also played a role in slowing agricultural production and creating electricity shortages. Falling commodity prices have also reduced capital inflows for investment and increased the risk premium on external sovereign borrowing. To the extent that reduced investment inflows were associated with a decline in imports, there was no change in the overall balance of payments.

Macroeconomic indicators¹

Graph 4



¹ The dashed lines are the IMF forecasts for 2016. ² Weighted average across listed countries based on rolling GDP and PPP exchange rates. ³ Algeria, Angola, Cameroon, Chad, Rep. of the Congo, Equatorial Guinea, Gabon, Nigeria and Sudan. ⁴ Botswana, Burkina Faso, Central African Republic, Dem. Rep. of the Congo, Ghana, Guinea, Liberia, Mali, Namibia, Niger, Sierra Leone, South Africa, Tanzania and Zambia. ⁵ Other 27 economies.

Sources: IMF, *World Economic Outlook*, April 2016; BIS calculations.

The slowing of growth in China and the rebalancing of the Chinese economy towards higher domestic demand have reduced not only the prices of commodities but also China's demand for exports from Africa. As a result, the traditional trade surplus of the continent vis-à-vis China, which is now its largest trading partner, has

turned into a deficit since 2015, thereby also making a negative contribution to growth.⁴

Some non-commodity exporting countries may also have experienced *spillover effects* from a decline in economic activity in neighbouring countries (eg from Nigeria or South Africa). While recent studies⁵ based on official trade statistics have not been able to establish any significant spillover effects from the slowdown of growth in Nigeria and South Africa on neighbouring or more distant countries, there is evidence that the deceleration has impacted unrecorded trade and growth (eg in Benin).⁶ According to a central bank response to a BIS survey conducted to gather information for the preparation of this paper, South Africa, which has doubled its exports to other sub-Saharan countries during the past decade, has also experienced an abrupt slowdown in exports in 2015, as demand from those countries decelerated (in particular SACU members, the Democratic Republic of the Congo, Mozambique, Nigeria, Zambia and Zimbabwe).

3. Fiscal policy

Fiscal policy plays a crucial role in a country's ability to navigate the commodity price rollercoaster. Empirical evidence shows that oil price shocks affect GDP growth mainly through the *fiscal transmission channel* by inducing a cut in public expenditure as a result of reduced revenue from commodity production and exports (Husain et al (2008)). Unfortunately, fiscal policy often has accentuated the impact of the commodity price cycle on economic growth by increasing expenditures during upswings and decreasing expenditures during downturns (IMF (2015c)).

During the recent commodity price boom, several commodity exporters have introduced fiscal frameworks – fiscal rules or resource funds – that aim at countering the volatile evolution of commodity prices on the budget (although the experience so far has been mixed). Botswana's resource fund is widely considered to have been successful. During the recent upswing, commodity exporters have generally set aside a larger part of the revenue windfall than during previous booms. Algeria, for example, increased significantly its deposits with the central bank, although those were later drawn down. Angola used the upswing in oil prices to rebuild reserves and scale up investment spending, and created a sovereign wealth fund in 2012. The Republic of the Congo accumulated financial assets and increased capital spending. Gabon first used higher oil revenues to repay and restructure its external debt (2003–08) and then boosted investment spending drastically from 2011 (although this proved unsustainable and had to be partly reversed). Nigeria's oil price-based fiscal rule was undermined by weak enforcement. In Chad, resource funds were abandoned partly because they were seen as incompatible with budgetary needs.

The recent experiences of Chile and Indonesia, two large commodity exporters, are illustrated in the Annex. In the case of Chile, the introduction of a fiscal rule has reduced the procyclical fiscal bias and increased the credibility of fiscal policy. In

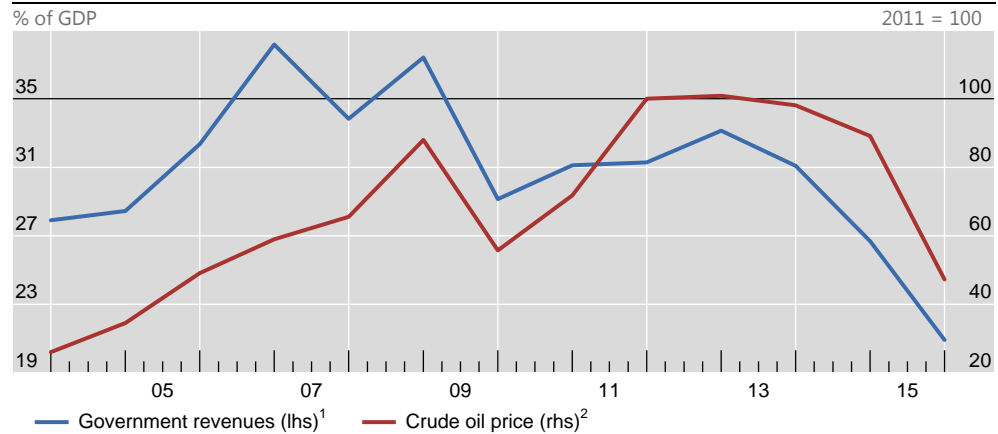
⁴ Casanova and Garcia-Herrero (2016), and IMF (2016c).

⁵ World Bank (2016), Guara and Ncube (2013), and Canales-Kriljenko et al (2013).

⁶ The IMF staff estimate that a 1 percentage point reduction in Nigeria's GDP growth rate is associated with an 0.3 percentage point reduction in Benin's growth rate through channels of informal trade, fuel prices and subsidies, and fiscal revenue. (IMF (2016a)).

Indonesia, the authorities reduced the level of government spending to comply with the deficit ceiling of the fiscal rule. Both countries are refocusing their policy reforms to support diversification of the economy towards new drivers of growth.

Commodity prices and government revenues of oil exporters Graph 5



¹ Simple average of government revenues of Algeria, Angola, Cameroon, Chad, Rep. of the Congo, Equatorial Guinea, Gabon, Libya, Nigeria and Sudan. ² Dated Brent.

Sources: IMF, *Primary Commodity Prices and World Economic Outlook*, April 2016; BIS calculations.

Virtually all oil producers in Africa have experienced a substantial decline in fiscal revenues (Graph 5). Just like commodity producers in EMEs elsewhere, African commodity producers have had to reduce domestic absorption in response to lower commodity prices to ensure medium-term fiscal sustainability.

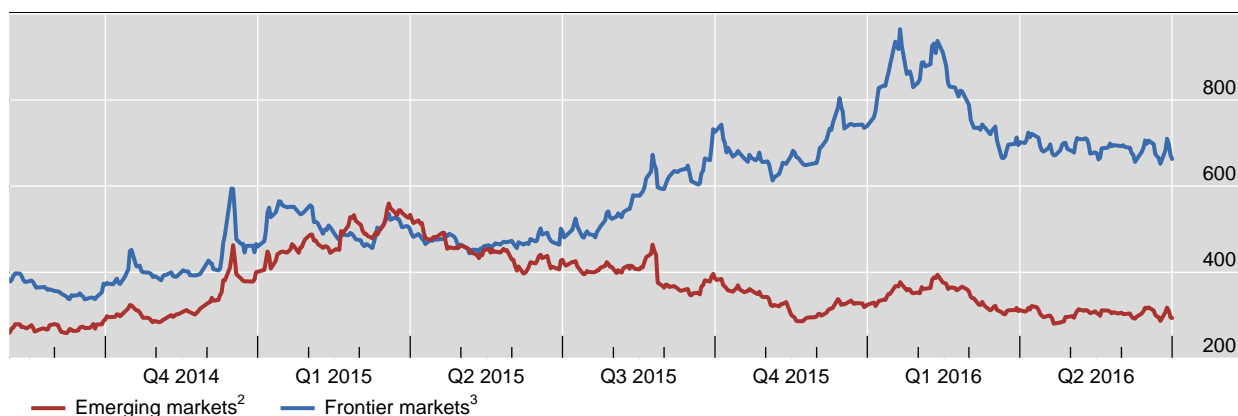
In some cases, spending has been cut (eg Algeria, Angola, Chad, Republic of the Congo, Gabon and Nigeria) but rarely by as much as the revenue decline. Some non-energy commodity exporters have also experienced a sharp drop in revenue (Burundi, Central African Republic, Liberia, Sierra Leone and Zambia) that has not been matched by a decline in public expenditure.

In most commodity producing countries, governments have reduced expenditures in response to falling revenues. By reducing spending (especially investment), income and employment have declined in the affected sectors. In countries that have introduced financial stabilisation buffers, such as Botswana, it has been possible to finance countercyclical fiscal policies for a period of time. But a fall in commodity prices that is long-lasting would require further policy adjustment. Therefore, Botswana is aiming at eliminating the deficit over a three-year period and has announced a ceiling on future fiscal deficits of 4% of GDP. In Algeria, the government has adjusted taxes on energy products and cut spending significantly (particularly on capital investment). In general, governments have had difficulties in quickly adjusting their large public investment programmes to lower revenues. This has created a dilemma in many countries that have embarked on a scaling up of investment programmes they consider necessary to remove obstacles to higher growth but are then without the financial means to sustain them.

Emerging and frontier market spreads¹

In basis points

Graph 6



¹ Simple average of JPMorgan EMBI Global spreads of the economies comprising the index. ² Argentina, Brazil, Chile, Colombia, Hungary, Malaysia, Mexico, Peru, the Philippines, Poland, Russia, South Africa, Turkey and Ukraine. ³ Côte d'Ivoire, Gabon, Ghana, Kenya, Nigeria, Senegal, Tanzania and Zambia.

Sources: JPMorgan Chase; BIS calculations.

Increased fiscal deficits have been financed mainly by debt creating flows. Following record issuance of international bonds by many countries during 2013–14, the budgets of the frontier market economies have been hit by higher sovereign bond spreads since October 2015 (and by much more than the spreads faced by major EMEs (Graph 6)). This was to be expected, as sharp movements in commodity prices tend to be associated with equally sharp movements in spreads (Hilscher and Nosbusch (2010)). In addition, the fiscal room has narrowed after the GFC, as countries tried to counter its impact by means of higher deficits.

Currency mismatch risks have also increased. The issuance of bonds denominated in US dollars has given rise to a pronounced increase in the local currency value of such debt in those countries that have experienced a large depreciation of their currency (eg Ghana and Zambia). A sharp commodity price-induced decline in the exchange rate will hurt non-commodity firms with foreign currency debts but no foreign currency earnings. In periods of steep declines in commodity prices, exchange rate movements can easily outweigh any nominal interest rate advantage of foreign currency borrowing. Unfortunately, for frontier market economies that have not yet established a sustained presence and creditworthiness in international markets, foreign lenders are often not willing to take on local currency bonds or loans. Under such circumstances, macroprudential policies may need to be implemented or reinforced to limit currency mismatches.

4. Monetary and exchange rate policies

If managed in a flexible way, the exchange rate can be one of the most important transmission channels for adjusting to changes in commodity prices. The adjustment to lower oil prices has been more difficult for most African oil-exporting countries because they are either members of a currency union (eg CEMAC), have a de facto pegged exchange rate or allow only a limited depreciation (eg Algeria, Angola

and – up to mid-June – Nigeria).⁷ They have all suffered substantial declines in their international reserves and their governments have increasingly borrowed from the central bank. Angola and Nigeria have introduced formal or informal administrative restrictions on their foreign exchange markets which resulted in a substantial widening of the spread between official and parallel exchange rates. In Nigeria, the shortage of foreign exchange has hampered private sector activity by preventing the import of essential inputs, aggravating the deceleration of growth (World Bank (2016)).

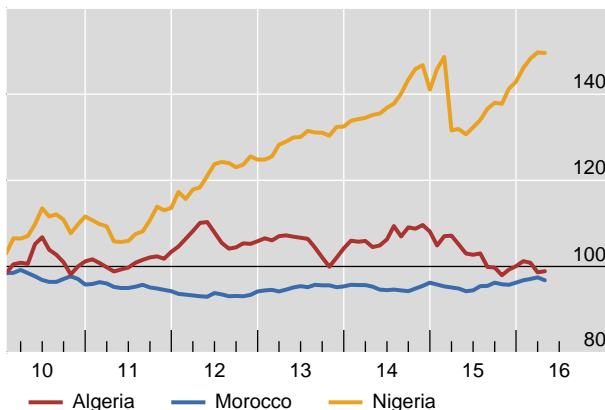
On 15 June, the Governor of the Central Bank of Nigeria announced the introduction of a single, market-driven exchange rate with effect from 20 June. The Governor motivated the move in part by the decline in foreign exchange reserves from US\$43 billion in early 2014 to \$27 billion by mid-June 2016 and a reduction in foreign exchange inflows to the central bank from about \$3 billion on a monthly basis to less than US1 billion (Graph A2). It also followed a tightening of fiscal policy by removal of the fuel subsidies in May 2016. The Central Bank of Nigeria plans to implement a “flexible” foreign exchange regime with periodic interventions in the market. The 41 items classified as “not valid for foreign exchange”, e.g., certain food, steel, and wood products, would continue to not qualify for foreign exchange. The exchange rate, which had been fixed at N 197 per US dollar since March 2015, depreciated to N 261 per US dollar by mid-July 2016 – a 33 percent depreciation (Graph A3). Following an increase in headline inflation to 16% in June 2016, the Central Bank drained liquidity from the interbank market through sales of T-bills in July and raised the policy rate by two percentage points to 14 percent on 26 July 2016.

Real effective exchange rates¹

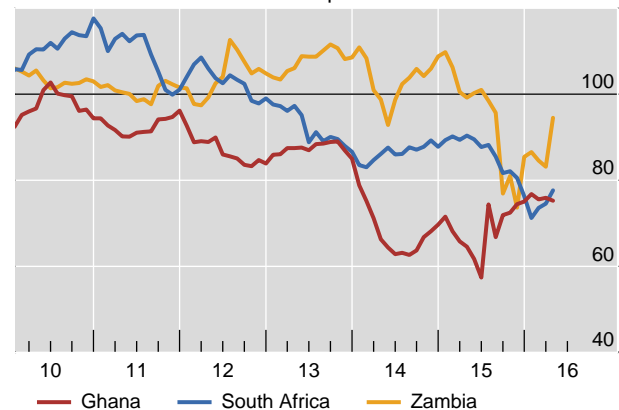
Average 2005 – 2009 = 100

Graph 7

Selected countries



Resource-intensive non-oil exporters



¹ An increase in the index indicates an appreciation.

Sources: Datastream; BIS calculations.

⁷ The Central African Economic and Monetary Community (CEMAC) comprises six countries (Cameroon, the Central African Republic, Chad, Equatorial Guinea, the Republic of the Congo, and Gabon), of which five are oil exporters.

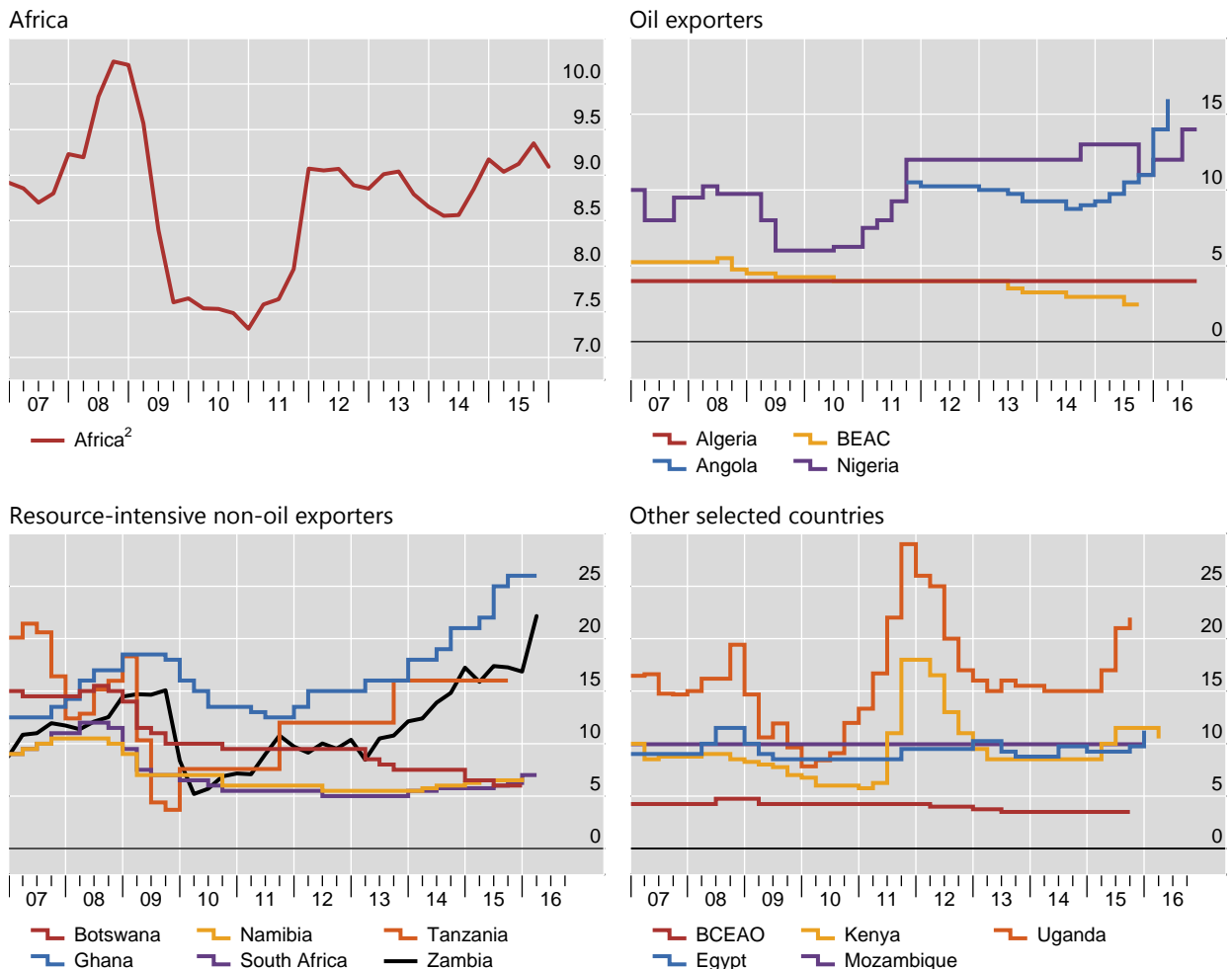
In commodity exporters where the exchange rate has been flexible (eg Ghana, South Africa and Zambia), lower commodity prices and weaker capital inflows have led to substantial currency depreciation. In the short term, adjustment of the external balance tends to focus on imports rather than exports, as it takes longer to stimulate non-traditional exports (De Gregorio (2016)).

Policy rates in commodity exporters have generally increased since end-2014 (Graph 8). The tighter monetary stance, combined with higher government borrowing, has increased borrowing costs for the private sector. Nigeria lowered its policy rate in November 2015 and further in July 2016, after a partial reversal in March 2016. Angola increased its policy rate a few times, last in June 2016. The Bank of Central African States (BEAC), which sets the policy rate for the CEMAC currency union, left that rate almost unchanged.

Policy rates¹

In per cent

Graph 8



¹ Policy rates taken from line 60 in the IMF's IFS; For Angola, after October 2011 BNA basic reference rate is used. ² Weighted average of rates shown, based on rolling GDP and PPP exchange rates.

Sources: Datastream; IMF, *International Financial Statistics*; BIS calculations.

Many countries are experiencing either a deceleration of growth in credit to the private sector or an outright decline (Angola, Central African Republic, Chad, Gambia and Gabon), which is further constraining private sector activity.

Inflation has increased in some commodity exporters (eg Angola and Nigeria) as fiscal deficits have widened. Consumer prices have also doubled in South Africa over the last few years, fuelled by currency depreciation. For 2016, the IMF forecasts a further and broader increase of inflation in African countries.

In several commodity-exporting countries, the monetary policy response to the decline in the terms of trade has rightly focused on the need to limit inflation and prevent an excessive weakening in the exchange rate. Yet without a concomitantly strong fiscal policy response, it is difficult for monetary policy to be effective. Some countries in Africa face the risk of fiscal dominance, which had become less of a problem in many countries before the GFC.⁸ Fiscal dominance can compromise central bank independence if the government resists increases in interest rates because of fiscal concerns. It can also crowd out private sector credit. Therefore, the balance between the response of fiscal and monetary policy to a terms of trade shock is crucial for the effectiveness of monetary policy.

5. Domestic banking system and macroprudential issues

The dependence of African economies on commodities shapes the *bank lending transmission channel* in several ways which can create systemic risks for the banking system and the financial sector more broadly. During commodity booms, there is a tendency for bank credit to grow strongly and for banks to extend credit to borrowers that are less creditworthy. Exchange rate appreciation on the back of a commodity boom is often associated with a lower country risk premium and easier funding for local banks. This can lead banks to see households and firms (especially those with foreign currency debt) as better risks. Such dynamics can further boost credit growth and amplify the procyclicality of bank lending – the so-called *risk-taking channel of currency appreciation* (Hofmann et al (2016)). Dollar-denominated lending can rise sharply.

The financial system can be seriously destabilised by excessive credit growth (including the share of that growth that is denominated in dollars). Problems at one lending institution can easily have domino effects on the domestic and regional banking systems in the case of a commodity price shock and associated capital outflows (eg through a pan-African bank). If the windfalls from the commodity boom are saved in domestic banks, this could also lead to large drawdowns of deposits in the event of a sharp commodity price drop. These detrimental effects are more common in countries with poor quality governance, higher public debt and lower financial development (Kinda et al (2010)). The introduction or activation of macroprudential policies can help restrain the impact of strong commodity-related price/exchange rate/credit growth dynamics.⁹

In the recent collapse of commodity prices, the tighter monetary stance adopted by several countries and the more active recourse by the public sector to domestic

⁸ BIS (2011) and “Fiscal dominance – an illustrative exercise” in IMF (2016c).

⁹ See Gonzalez et al (2015) and Masson (2014).

financing has increased the exposure of the banking system to the government (eg Angola, Chad and Gabon). The drop in prices has been accompanied by a decline in the soundness of private enterprises and an increase in nonperforming loans, particularly in oil exporters (eg Angola, Chad, Equatorial Guinea and Nigeria) and small and fragile states (Gambia, Malawi, Sierra Leone and Zimbabwe). Banking profitability has declined in many countries and capital adequacy has worsened. So far only a few countries (Kenya, Nigeria, Tanzania, Uganda and Zimbabwe) and the CEMAC monetary union have introduced deposit insurance schemes (IMF (2016c)). Basel II standards have been fully implemented only in Malawi, Mauritius, Mozambique and South Africa. The recent emergence of pan-African banks has facilitated the integration and development of banking systems on the continent. Yet major shortcomings in the supervision and cross-border coordination of these banks on a consolidated basis still remain to be addressed.¹⁰

The South African response to the BIS survey mentioned earlier suggest that the South African banking system has been largely insulated from the downturn in commodity prices because of the limited share of loans to the mining sector. Mining operations are mostly run by multinational corporations and funded via equity and bond issuance, both domestically and abroad. Another factor for the insulation of the banking system is the lack of mismatches between banks' foreign exchange assets and liabilities which has reduced banks' vulnerability to the major depreciation of the rand since 2011.

In oil-exporting countries, the sudden loss of income often forces the government and oil-dependent companies to draw down their local bank deposits. This was the case in Algeria, where the fall in hydrocarbon exports led to a sharp drawdown of such deposits. The use of resources in the oil stabilisation fund to cover the fiscal deficit, as well as low issuance of treasury bonds, contributed to containing the reduction in bank liquidity. The impact of the depreciation of the dinar on the banking system was limited because the banking sector had no external indebtedness.

6. Conclusions

The recent fall in commodity prices has put the progress made by the African continent in promoting economic growth and reducing poverty to a more serious test than did the Global Financial Crisis. With the currently weak growth outlook for the world economy, African countries cannot count on significant increases in external financing (aid or debt-creating flows) to ease the adjustment to lower commodity prices.

In the short term, exchange rate policy (except in monetary unions) and fiscal policy are likely to be at the centre of the policy response. Important will be how policymakers offset the impact on the government budget of lower revenue (eg by cutting or prioritising public expenditures and identifying non-resource-related revenues). For countries that are not members of currency unions, how the exchange rate is managed will determine whether two-way market risk is preserved or not. Policies aimed at supporting the exchange rate often need to be accompanied by a tightening of monetary policy. Forex intervention to shore up the exchange rate, but

¹⁰ See Nnaji (2016) for an analysis of how lower oil prices affected the banking sector in Nigeria.

considered by the market to be unsustainable, may just encourage additional capital outflows. The right balance between fiscal and monetary policy is crucial in avoiding a fiscal dominance situation that would eventually make monetary policy ineffective in achieving its goals while crowding out the private sector.

Beyond the short-term crisis response, governments might also want to review whether they have in place a fiscal framework that smooths out the budgetary impact of fluctuating commodity prices. A fiscal rule or fiscal stabilisation buffer that is effective in countering the procyclicality of fiscal policy could reduce the impact of the commodity price rollercoaster. The experience from both Africa and other continents shows, however, that the design and implementation of such measures is complex and requires a strong institutional and governance framework.

In a medium- and long-term perspective, the recent collapse in commodity prices is yet another reminder to policymakers of the vulnerability of countries that are highly dependent on volatile commodity exports. Just as in other continents, the current downturn in prices might offer a welcome opportunity for rekindling the domestic and regional policy debate regarding the best means of achieving economic diversification away from traditional commodity exports to ensure stronger and more sustainable growth in Africa.

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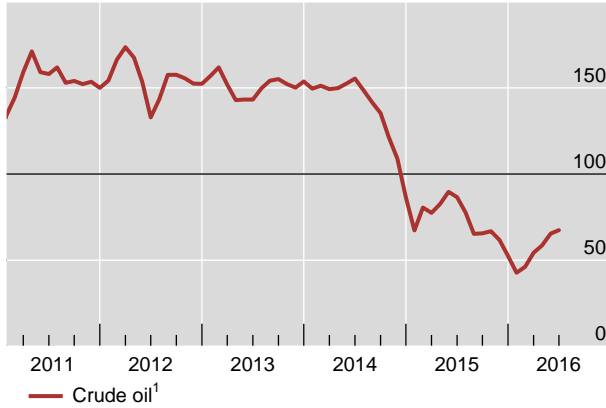
Background statistics

Commodity price indices

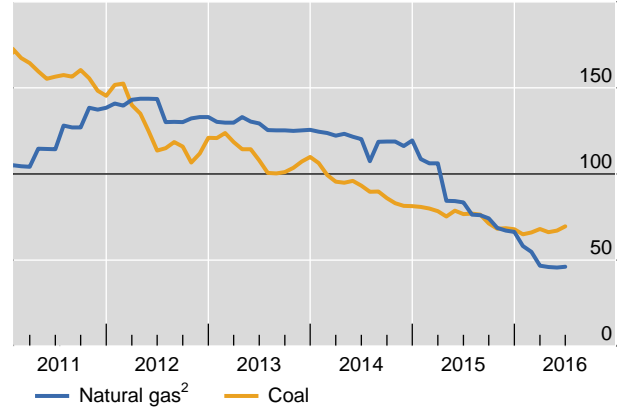
Average 2005 – 2010 = 100

Graph A1

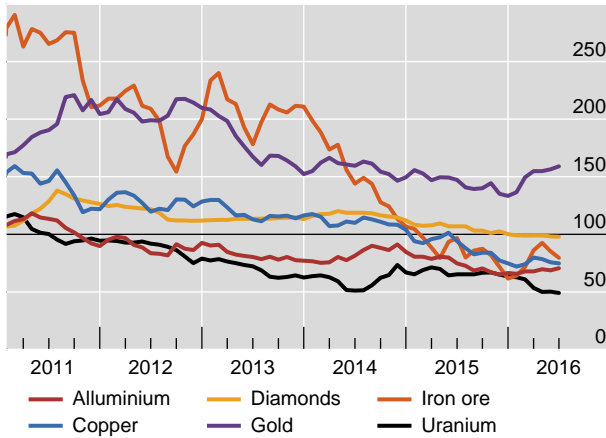
Crude oil



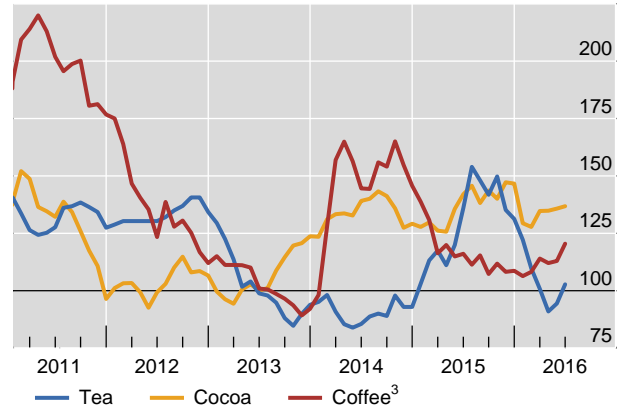
Natural gas and coal



Metals and precious stones



Agricultural goods

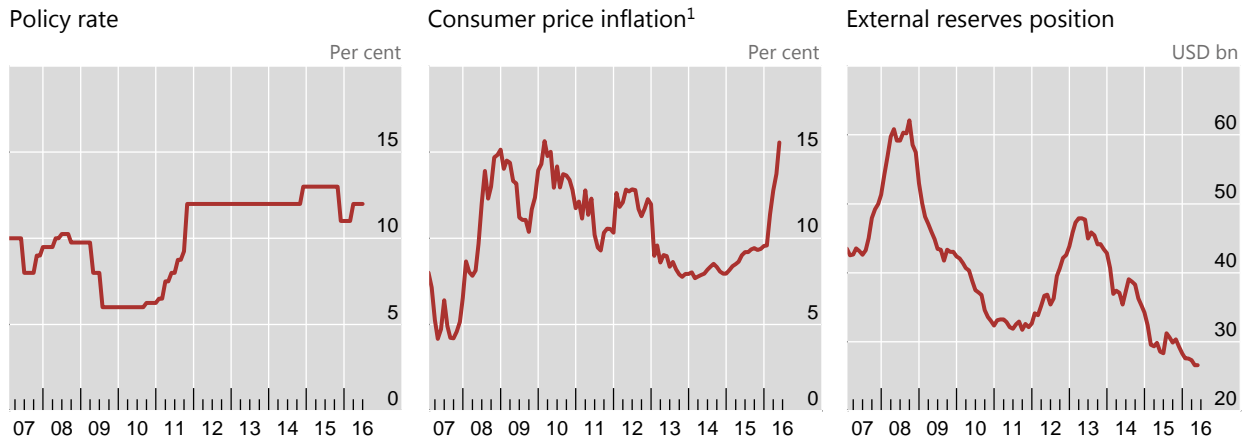


¹ Dated Brent. ² Russian natural gas border price in Germany. ³ Other mild arabicas.

Sources: IMF, *Primary Commodity Prices*; Datastream; BIS calculations.

Developments in Nigeria since 2007

Graph A2

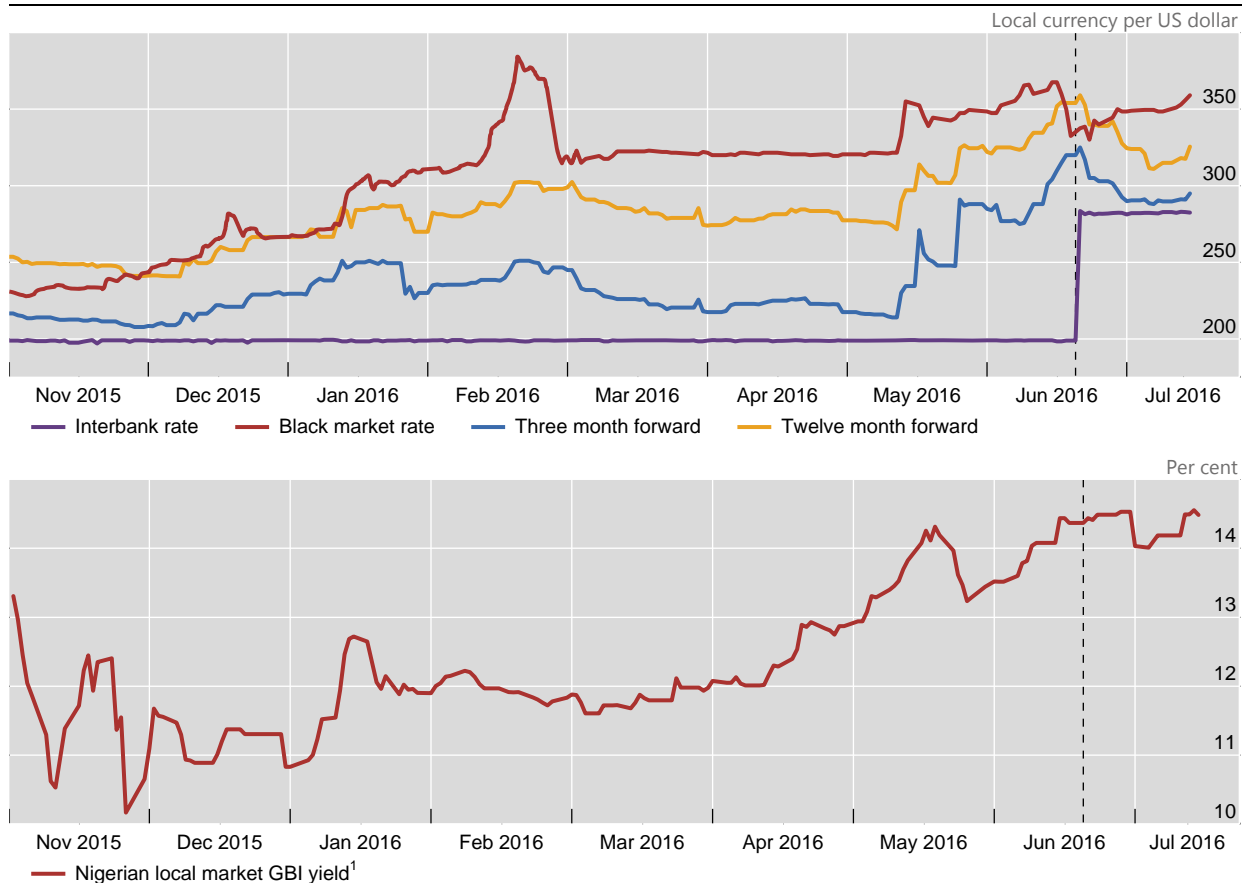


¹ Year-on-year changes.

Sources: Datastream; BIS calculations.

Recent developments in Nigerian interest rates and exchange rates

Graph A3



Dashed line indicates the introduction of a flexible exchange rate on June 20th 2016 (announced on June 15th).

¹ Traded index.

Sources: AbokiFX.com; Bloomberg; JPMorgan Chase.

External positions of reporting banks vis-à-vis all sectors and individual countries¹

Estimated exchange rate adjusted changes and amounts outstanding, in billions of US dollars

Table A1

	2005–07	2008–09	2010	2011	2012	2013	2014	2015	Amounts outstanding, Dec 2015
Assets									
Algeria	-2	-	-	-	-	-	-	-1	2
Egypt	12	-1	5	-7	-2	-2	1	3	15
Liberia	2	5	2	-	-	-2	-	4	29
Morocco	3	1	-	3	-	2	1	-1	13
Nigeria	5	1	-1	1	3	2	5	-1	17
South Africa	16	-2	3	-6	4	-	6	1	40
Africa	41	8	11	-6	11	7	14	9	175
Africa, excl. Libya	41	8	11	-5	11	6	14	9	174
Liabilities									
Algeria	6	-5	-	-	-	-1	-	-	5
Egypt	12	-13	-2	4	-5	-	-2	-	22
Liberia	4	-	3	-3	-4	-	2	-	15
Morocco	4	-2	-1	-2	-2	2	-	-1	6
Nigeria	23	-13	-	-4	9	3	-4	-9	17
South Africa	19	-17	5	-9	2	5	1	-3	40
Africa	150	-66	13	5	-8	-2	-12	-5	238
Africa, excl. Libya	98	-52	18	-2	2	8	-7	-8	196

"-" refers to nil or negligible values.

¹ Does not capture claims and liabilities routed through non-bank vehicles domiciled outside of Africa.

Source: BIS international banking statistics.

Annex

Falling commodity prices: the experiences of Indonesia and Chile¹¹

Chile. The almost 50% drop in copper prices since early 2011 slowed GDP growth from 5% on average during 2004–13 to 2.5% in 2014–15. Investment also collapsed. Copper represents 10% of GDP in Chile and half of exports and FDI inflows.

Since 2001 fiscal policy has been guided by a fiscal rule aimed at maintaining a structural surplus of 1% of GDP. This allows the government to implement countercyclical policies by running deficits during recessions and surpluses during periods of high copper prices and sustained growth. For example, to support economic growth, the budget for 2015 was designed to provide fiscal stimulus.

Monetary policy has also been accommodating, with inflationary pressure limited. The exchange rate has been allowed to depreciate as copper prices fell, which has led to a large compression of imports. However non-copper exports have been slower to respond. To diversify the economy away from copper production, the authorities intend to implement structural reforms (particularly with respect to the labour market and education) to raise the quality of human capital, and strengthen public and private governance. It also aims at improving access to credit for SMEs through the introduction of a Public Credit Bureau and a registry of firms' movable assets to make it easier for banks to use the value of such assets for collateral purposes.

Indonesia. In recent years, Indonesia has weathered commodity price shocks and turbulence in global financial markets. Most recently, supported by appropriate macroeconomic policies, the country has continued to enjoy solid GDP growth (4.7% in 2015) and low inflation (3.4% at end-2015). Portfolio inflows have continued but equity outflows have reflected the pattern observed in other EMEs. Major commodities still account for just under 10% of GDP and half of merchandise exports.

The drop in commodity prices influenced the economy through several channels. Export revenues and company profits weakened at existing production levels. This had a negative impact on domestic demand and imports. Oil and gas revenues declined. The premium on the corporate sector to raise external financing rose which lowered credit demand and capital inflows. The commodity price shock also negatively affected investment in the commodity sector and supporting industries, such as construction and transportation, which further reduced income and employment.

Since 2013, Indonesia has benefitted from a strengthened fiscal policy framework which has provided an important policy anchor. The fiscal rule limits the deficit of the general government to 3% of GDP and the public debt to 60% of GDP. The fiscal deficit of the central government was 2.8% in 2015 and public debt had fallen to 27.5%. To mitigate the fiscal impact of weaker revenues – and prompted by falling energy prices – the government introduced a reform of energy subsidies that eliminated subsidies on gasoline, and rationalised those on diesel and electricity. The authorities have allowed the exchange rate to reflect market forces with judicious

¹¹ IMF (2016b), IMF (2015a) and IMF (2015b).

foreign currency interventions to ensure orderly market conditions. Monetary policy was tightened in 2015 to anchor inflation and maintain the external balance.

To support new drivers of growth and a diversification of the economy away from its longstanding reliance on natural resources and into promising sectors (manufacturing, agriculture, tourism and other service industries), the authorities are preparing reforms to enhance the investment environment and streamline regulations, particularly at the local level. They are also working on improving the functioning of the labour market. Indonesia suffers from a wide developmental gap in infrastructure compared with its Asian peers, particularly in transport and power generation. The government intends to scale up investment in those sectors. Such investment will be financed for two-thirds by the government and one-third by the private sector, mainly through public-private partnerships.

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