

ZAMBIA ECONOMIC BRIEF

REAPING RICHER RETURNS FROM PUBLIC EXPENDITURES IN AGRICULTURE

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9th ZAMBIA ECONOMIC BRIEF

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IACRONYMS

AfDB	African Development Bank
BoZ	Bank of Zambia
CSO	Central Statistical Office
DfID	Department for International Development
ERB	Energy Regulation Board
FDI	Foreign Direct Investment
FISP	Farmers Input Support Program
FRA	Food Reserve Agency
GDP	Gross Domestic Product
IAPRI	Indaba Agricultural Policy Research Institute
IMF	International Monetary Fund
LCMS	Living Conditions Monitoring Survey
MoF	Ministry of Finance
OPEC	Organization of the Petroleum Exporting Countries
PMI	Purchasing Managers' Index
PPP	Public-Private Partnerships
PPP	Purchasing Power Parity
R&D	Research & Development
SSA	Sub-Saharan Africa
US\$	United States Dollar
VAT	Value Added Tax
ZMW	Zambian Kwacha
ZRA	Zambia Revenue Authority

FOREWORD

I am pleased to share the ninth Zambia Economic Brief with a focus section on reaping returns from public expenditures in agriculture. This Brief is part of a series of short economic updates produced twice a year by the World Bank.

Each Brief includes two sections: the World Bank's assessment of recent economic developments and the outlook in the short to medium term, and its analysis of a specific development topic or theme. Previous Briefs covered opportunities for improving revenue collection, public expenditure, the power sector, mining, jobs, trade, and financial inclusion and can be found on the World Bank's Zambia website.

Zambia's economy has picked up in 2017 from the tough conditions of 2015 and 2016. Copper prices have firmed, but they remain low when compared to their peak. However, the big challenge remains with ensuring a shift to fiscal sustainability. Bold actions are needed to clear arrears and ensure they do not build up again in the future.

We also see that the past decade of growth was not sufficiently pro-poor and the benefits have accrued mainly to the richer segments of the population in urban areas. Poverty remains far higher for the ru-

ral population than their urban counterparts, and income growth between 2006 and 2015 was greatest among those with higher incomes and relatively weak for those with lower incomes.

There remains a need to look closely at ways to improve public spending in agriculture to ensure the promotion of a non-copper economy and improved rural livelihoods. Low agriculture productivity is a key impediment to poverty reduction and has knock on effects in terms of gender disparities, land degradation and rapid deforestation.

We hope that the findings of this Economic Brief will stimulate a healthy debate around these questions so that Zambia can shift to a path of more inclusive growth.



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EXECUTIVE SUMMARY

Regional economic developments

Economic activity in Sub-Saharan Africa (SSA) picked up in 2017, driven by improved global conditions and easing domestic constraints. We project growth of 2.6% for the region despite weak prospects for the three major economies: Nigeria, South Africa and Angola.

The region's growth is projected to increase further to 3.2% in 2018 and 3.5% in 2019. The outlook is subject to downside risks. Globally, the risks include tighter than expected global financial conditions, weaker than expected increases in commodity prices, as well as the threat of protectionism. Internally, the risks include possible slippages on reforms, increased security threats, and political uncertainty ahead of elections in some countries.

The state of the Zambian economy

The Zambian economy has continued its recovery in 2017, following subdued economic activity when economic growth fell to 2.9% in 2015, its lowest rate since 1998. The economy was hit by lower copper prices and domestic pressures including an El Niño-induced lower harvest in 2015, a power crisis and political uncertainty in the lead-up to the August 2016 elections. Growth of the economy increased to 3.4% in 2016 and is expected to increase further to 4.1% in 2017.

Inflation declined to 6.5% in May 2017 (from a peak above 20% in February 2016) and, together with a stable kwacha, led the central bank to ease monetary policy, thereby reversing the pressure on credit growth. However, the stronger growth and better macroeconomic indicators have not resulted in an improvement in the fiscal indicators.

In 2016, Government revenue fell short of the ambitious revenue target under the budget by 7.6%, while spending was above target by 10.1%. Expenditure pressures in 2016 included unbudgeted spending on electricity and fuel subsidies and higher than expected interest payments. Further, there were overruns on agriculture subsidies and election

expenditures. The 2016 fiscal deficit reached 5.7% of GDP on a cash basis, above the approved target of 3.8%, while the underlying deficit including new arrears reached 8.5% of GDP.

Until Q4 2016, the government had limited access to external and domestic borrowing at reasonable interest rates. This led the government to cut several spending lines and withhold payments to contractors and suppliers, increasing its stock of expenditure arrears to about ZMW 17 billion (7.8% of GDP) at the end of 2016. The stock of arrears includes unpaid bills to road contractors, the major agriculture programs, fuel suppliers and pension obligations.

Data from Q1 2017 shows revenues below target and that expenditure was not moderated from what was budgeted, suggesting that the 7% GDP fiscal deficit target will be a challenge to achieve. The government has started to reduce the large stock of expenditure areas, but further efforts are needed to improve budgetary controls and better withstand fiscal pressures, if the national debt is to remain at sustainable levels.

Debt levels remained elevated, due to large persistent fiscal deficits between 2012 and 2016 and a currency shock in 2015. The public debt increased from 35.2% of GDP in 2014 to 55% at the end of 2016. The recent appreciation of the kwacha has helped ease the cost of servicing the external and dollar-denominated debt, but the foreign currency and repayment risks of the government debt portfolio remain high.

Zambia's economic outlook

We project GDP growth in Zambia to strengthen to 4.1% in 2017 and further to 4.5% in 2018 and 4.7% in 2019. For 2017, the forecast assumes the government will continue to implement its economic recovery plan, the harvest and electricity production will be stronger because of the favorable weather, and copper production will increase because of the new and recently refurbished mines. We also assume that gradual fiscal consolidation and sustained ef-

forts on structural reforms, along with a sustained decline in inflation, will allow for easier monetary policy.

Economic policy challenges

The Minister of Finance launched the government's economic recovery plan 'Zambia Plus' in Q4 2016 and has made progress with implementation. The progress includes: (i) the clearance of ZMW 4.3 billion of arrears; (ii) the removal of fuel subsidies; (iii) reduced electricity subsidies; and (iv) requests for program and budget support have been made to the IMF, World Bank and African Development Bank.

Wide-ranging structural reforms are needed to boost the economy further and ensure more inclusive growth. The Seventh National Development Plan will help the government guide its policy and outlines the external support it requests.

We focus here on providing four ideas to guide the shift to fiscal fitness:

i. Clear the arrears and prevent their future build-up: Efforts are needed to further reduce the stock of public expenditure arrears and improve commitment controls, including continuous monitoring to ensure the same problem does not reoccur.

ii. Strengthen debt management: A modern Debt Management Office structure (with a front, middle and back office), the issuance of a debt strategy (forward looking and annually updated), a regular in-house debt sustainability analysis and better communication via quarterly debt reports would be positive steps forward.

iii. Ensure revenue mobilization reforms are implemented: The 2017 budget includes many revenue reforms aimed at increasing revenue collection to fund planned expenditure. Progress with these reforms in the second half of 2017 is crucial to keeping the fiscal deficit at reasonable levels and avoiding expenditure cuts.

iv. Reduce unproductive expenditures: A full review of the budget should follow the Seventh National Development Plan to ensure all resources are focused on achieving the stated objectives. Areas of social and economic benefit should be scaled up and reductions made to unnecessary administration expenditure or where programs have not been performing.

The special focus section of this report discusses how to improve the efficiency and effectiveness of agriculture spending. More efficient spending will allow savings from unproductive outlays to be re-invested in the sector to support its faster growth, better livelihoods for farming households, and the further expansion of the non-copper economy.

Reaping richer returns from public expenditures in agriculture

Zambia has successfully increased the production of crops (mostly maize), largely thanks to the increased size of areas under cultivation as opposed to improved yields. This leaves enormous scope to increase agriculture productivity and to reduce the vulnerability associated with high dependence on rain-fed agriculture. While public expenditures on agriculture have been increased over the past 15 years, there is vast scope to improve both their efficiency and effectiveness. The current agriculture budget is unbalanced as it is dominated by the Farmers Input Support Program (FISP) and the Food Reserve Agency (FRA). Shortcomings in the budgeting process also reduce spending effectiveness.

The analysis and the ideas in this report are focused on public spending and investment in agriculture. We hope they will contribute to the much broader discussions on agriculture reform. The three main ideas from the report are as follows:

i. Streamline and better target agriculture subsidies. There are four key steps to reform the FISP. First, the roll-out of the electronic voucher to all districts has long been discussed as a means of improving the quality of FISP, and remains crucial. The 2017 budget promised a full roll-out for the 2017-18 season, but this—based on current delivery challenges—appears to be too ambitious. Instead, a realistic timeline for 2017-19 should be drawn up. Second, the targeting of the program should be enhanced to make it more efficient and to reduce the overall cost (freeing up resources for complementary agriculture expenditures). Third, there is need for a clear exit strategy: farmers should not receive subsidies indefinitely. The program should sustainably raise productivity and incomes so that farmers can graduate from the subsidy program. Finally, there is a need to ensure that farmers can, in practice, select the inputs and the crops they grow. This is a crucial step for reversing the maize-centric status of Zambian agriculture. To improve the FRA, efforts are needed to ensure that the prescribed purchase limit is not exceeded. A monitoring system needs to be built to ensure that purchases relative to the limit can be tracked accurately.

ii. Ensure high-return areas get funded and complementary investments are made. The government routinely spends 79% of the agriculture budget on FISP and FRA. As these programs are improved, savings will be realized. These should be invested back into the sector in high-return areas such as R&D, extension services, irrigation, livestock development, infrastructure and technology. A careful strategy will also be needed to guide such expenditure, while more predictable flows of resources to the sector will help ensure there is an incentive to plan.

iii. Address the impacts of climate change.

Climate smart agriculture can help address the issues of agricultural productivity, land degradation and climate resilience among the farmers. Such actions will contribute to enhanced food security and increased incomes per households, and will help them adapt to climate change. Zambia is well placed to access climate finance and these avenues should be explored.

SECTION 1 RECENT ECONOMIC DEVELOPMENTS

A. REGIONAL ECONOMIC DEVELOPMENTS

Economic activity in Sub-Saharan Africa (SSA) picked up in 2017, driven by improved global conditions and easing domestic constraints. Growth of 2.6% is forecast for the region despite weak prospects in the three major economies; Nigeria, South Africa and Angola. The region's growth is projected to increase further in 2018 (3.2%) and 2019 (3.5%). The outlook is subject to downside risks. Globally, the risks include tighter than expected global financial conditions, weaker than expected increases in commodity prices, as well as the threat of protectionism emerging from populist sentiments. Internally, the risks include possible slippages on reforms, increased security threats, and political uncertainty ahead of elections in some countries.

Improved global conditions and easing domestic constraints will lift SSA growth in 2017.

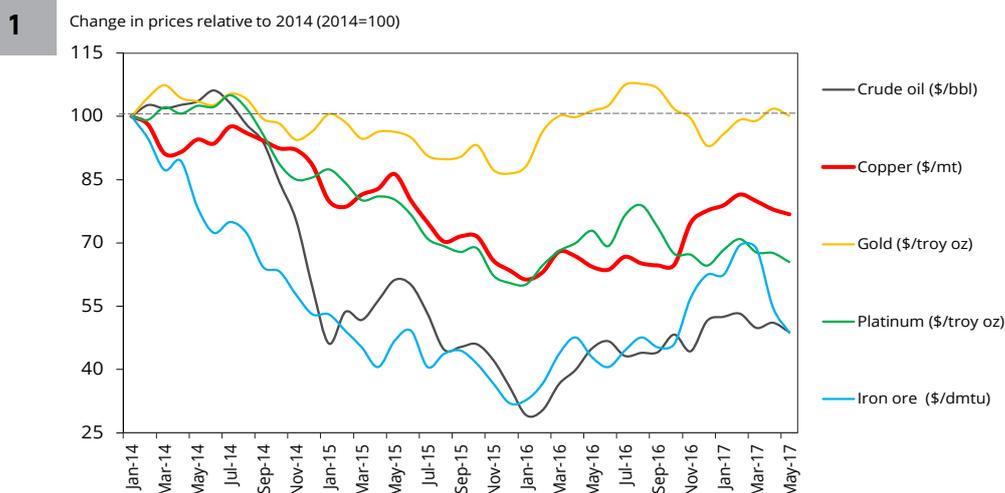
World Bank's *Africa's Pulse* (released in April 2017) highlights improved global and domestic conditions for the growth of economies in SSA¹. In January 2017, annualized growth in global industrial production reached a five-year high, driven by accelerations in China, the euro area, Japan and India. Furthermore, the Purchasing Managers' Index (PMI) for manufacturing strengthened in February 2017, while the PMI for services remained strong. Overall, global GDP growth is projected to increase from 1.8% in 2016 to 2.7% in 2017. Meanwhile, domestic constraints confronting SSA have been easing, as the end of the drought has seen agriculture and electricity generation rebounding.

Rebounding global growth has been crucial for the recovery of prices of key export commodities in SSA (figure 1). Oil prices increased by 7.9% in Q1 2017 relative to the previous quarter, on the back of steadily increasing demand and agreements by some OPEC and non-OPEC oil producers to limit output. However, the longer-term recovery of oil prices is unlikely, given high global oil inventories and an improved supply outlook in the USA shale oil sector. Metal prices have also strengthened over the same period, including copper prices (by 10.6%), iron ore prices (22%), and platinum prices (3.9%), partly reflecting increased demand from China. Despite recent gains, the prices of oil and metals remain below the levels observed prior to June 2015.

Despite improved growth, SSA GDP per capita is expected to contract by 0.1% in 2017.

In light of these developments, SSA's GDP growth is projected to double to 2.6% in 2017, from an estimated 1.3% in 2016. However, a population growth of 2.7% means that GDP per capita is expected to contract by 0.1% in 2017, further complicating the challenge of accelerating poverty reduction in the region. Excluding South Africa, Angola and Nigeria, the rest of SSA is projected to grow by 4.8% in 2017.

Growth remains weak in Nigeria, South Africa and Angola, SSA's three largest economies. After contracting by 1.5% in 2016 due to low liquidity, delays in implementing the budget and militant attacks on oil pipelines, the Nigerian economy will remain weak as the non-oil sectors are constrained by a shortage of foreign currency. And despite nota-

Figure 1 Commodity prices have firmed since Q1 2016

Source: World Bank Commodity Markets Data

Excluding South Africa, Angola and Nigeria, the rest of SSA is projected to grow by 4.8% in 2017.

ble improvements in mining and agriculture, South Africa will face subdued recovery as policy uncertainty and low business confidence continue to constrain growth in investment. Furthermore, the recent (April 2017) downgrading of South Africa by Standard and Poor's and Fitch will tighten financing conditions and further weigh on growth.

Tightening global financial conditions are expected to dent growth prospects of several SSA countries.

Elsewhere, growth continued to be weak in oil-exporting countries (e.g. Chad, Equatorial Guinea and the Republic of Congo) as a slowing oil sector spilt over to other sectors. Oil-importers will continue to benefit from low oil prices and non-energy sectors. Mineral-exporting economies (e.g. Botswana, Guinea, Liberia, Sierra Leone, and Zambia) are expected to reap the gains of recovering prices. Most Southern African countries are expected to gain from rebounding agriculture and electricity sectors following the end of the El Niño-linked drought, while parts of East Africa (e.g. Kenya) are still experiencing drought conditions. Fiscal consolidation and tightening global financial conditions are also expected to dent growth prospects of several countries across the region.

Despite a moderate pace of overall regional economic recovery, growth remains robust in Cote d'Ivoire, Ethiopia, Kenya, Mali, Rwanda, Senegal and Tanzania. Most of the countries that have remained resilient have stronger monetary policies, lower debt-GDP ratios, better strategies for prioritizing public spending and mobilizing domestic resources, a better regulatory environment, a more diverse structure of exports, and more effective public institutions than their peers.

The rebound in commodity prices, along with tight monetary policies, have helped to stabilize currencies and tame inflation across most commodity exporters. However, exchange rate volatility and/or inflation has remained problematic in a few counties for different domestic reasons, including unsustainable foreign exchange controls (Nigeria and Angola), heightened political uncertainty (the Democratic Republic of Congo), drought-fueled food price hikes (Kenya) and a debt crisis (Mozambique). Declining inflation has allowed central banks to cut rates in Ghana, Tanzania, Uganda and Zambia.

Countries that have remained resilient to global shocks have stronger macro-fiscal policies.

Tight monetary policy has helped tame inflation and currency volatility across the region, but has elevated banking sector vulnerabilities. Non-performing loans have increased while profitability and capital buffers have declined. The impact has been especially strong in countries characterized with foreign exchange restrictions, policy uncertainty and weak growth.

Recent improvements in commodity prices have not been large enough to offset the negative terms of trade shocks that commodity exporters experienced over the past two years. Consequently, the overall current account deficit for the region is expected to narrow only slightly. In metal exporters, the current account deficit is projected to widen as the growth of imports of capital goods is expected to outpace that of exports earnings from rising metal prices. However, current account deficits are projected to

narrow substantially in oil-exporting countries, driven by higher oil prices and improved oil production in Nigeria.

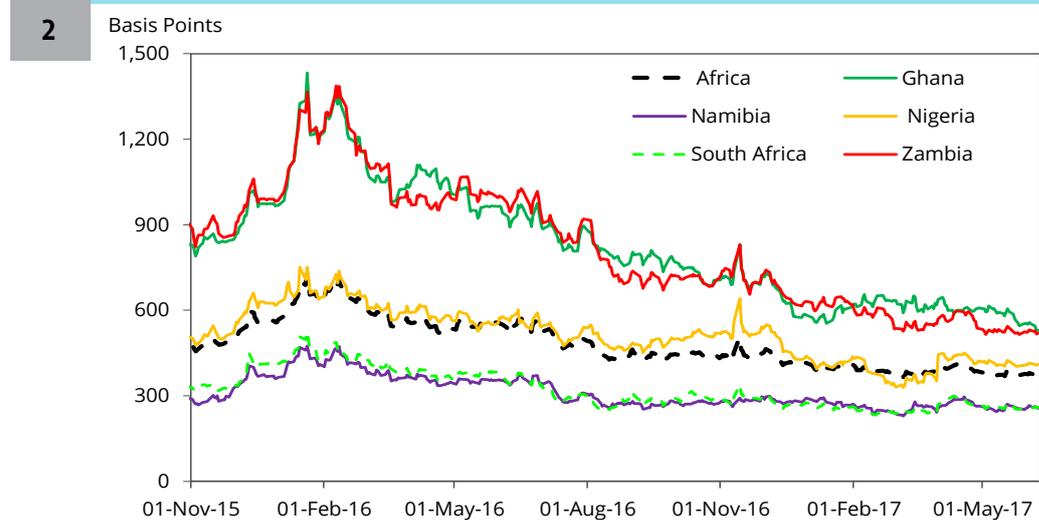
Widened fiscal deficits and increased public debt levels have elevated the costs of debt service.

Most countries are counting on rebounding capital flows (particularly foreign direct investment (FDI)) and foreign debt as sources of financing for current account deficits. Indeed, FDI has picked up in several countries across the region since Q4 2016. Sovereign spreads have narrowed across most Eurobond issuers in the region, reflecting reduced volatility in global financial markets and a heightened risk appetite amongst investors (figure 2).

Meanwhile, the region's fiscal deficit widened to 4.8% in 2016 from 4.3% in 2015, driven by low public revenue in oil-exporters and elevated spending on public investments in non-commodity rich economies. Widened fiscal deficits, and in some cases sizeable currency depreciations, increased public debt levels, which in turn increased the costs of debt service, especially in countries that have contracted non-concessional debt. Going forward, fiscal consolidation remains imperative to reduce fiscal deficits and contain the growth of public debt.

Sovereign spreads have narrowed, reflecting decreased global financial markets' volatility and a heightened risk appetite amongst investors.

Figure 2 Eurobond spreads have narrowed



Source: Bloomberg.

Outlook for Sub-Saharan Africa

SSA growth is projected to improve to 2.6% in 2017, slightly below population growth (2.7%), before increasing further in 2018 (3.2%) and 2019 (3.5%) (figure 4). The outlook is subject to commodity prices remaining firm, policy actions to tackle large macroeconomic vulnerabilities in several countries, and improved rainfall to boost the agricultural sector and electricity supply.

Per capita incomes are expected to contract in Africa's three largest economies in 2017.

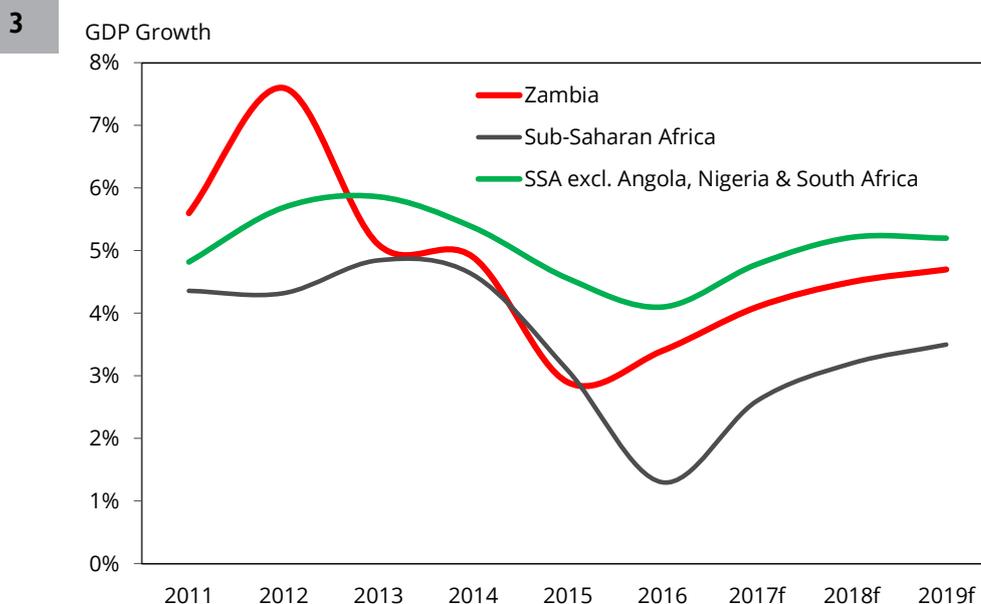
Modest recovery is expected in 2017 despite weak growth prospects in the region's three major economies; Nigeria, South Africa and Angola. In Central Africa's oil-exporting countries, recovery will be weak as maturing oil fields weigh on oil production. Recovery in mineral exporters will be lifted by improved commodity prices, but will be dragged by fiscal tightening. Growth will remain strong in non-resource-intensive economies, buoyed by infrastructure investments, services growth and the recovery of agricultural production.

The outlook is subject to significant downside risks. Globally, the risks include tighter than expected global financial conditions, weaker than expected increases in commodity prices, as well as the threat of protectionism emerging from populist sentiments. Internally, the risks include possible slippages on reforms, increased security threats, and political uncertainty ahead of elections in some countries.

The region grapples with three urgent challenges². First is a substantial slowdown in investment growth to 0.6% in 2015 from 8.0% in 2014 – well below the long-term average of 6.0% (box 1). Second are the high trade logistics costs which are constraining competitiveness and export diversification. Third are rising public debt levels driven by large deficits and weak growth. To effectively address these challenges, efforts are needed to improve institutions for private sector growth, develop local capital markets, improve the quality and quantity of public infrastructure, enhance the efficiency of utilities, and strengthen domestic resource mobilization.

An urgent challenge is rising public debt levels driven by large deficits and weak growth.

Figure 3 SSA growth is improving in 2017



Source: World Bank (2017a). Note: f= forecast.

Box 1 Poor infrastructure continues to be a constraint to development in Sub-Saharan Africa

The SSA region lags behind other developing regions in most dimensions of infrastructure performance, although trends vary across key sectors. This is especially evident in the electricity and transport sectors. Electricity-generating capacity per capita remains low, with only 35% of the population having access to electricity. The region also has the lowest road and railroad densities amongst developing regions.

In contrast, telecommunications infrastructure has improved dramatically: the number of fixed and mobile phone lines per 1,000 people increased from 3 in 1990 to 736 in 2014, and the number of Internet users per 100 people increased from 1.3 in 2005 to 16.7 in 2015. Similarly, access to safe water has risen from 51% of the population in 1990 to 77% in 2015.

Closing SSA's infrastructure quantity and quality gaps can generate large growth gains. Unfortunately, the region's public spending on infrastructure development (2% of GDP) is inadequate for this to be achieved. While the private sector can help to bridge the funding deficit, the countries need to build robust institutional and regulatory frameworks that will attract investment via public-private partnerships (PPPs).

Moreover, SSA countries need to develop sound public investment management systems to ensure that public investments are efficient, and that they can be used to crowd in more private investments via PPPs. This entails improving the institutions and procedures governing project appraisal, selection, and monitoring.

For further analysis, see the *Africa's Pulse* April 2017 edition.

B. THE STATE OF THE ZAMBIAN ECONOMY

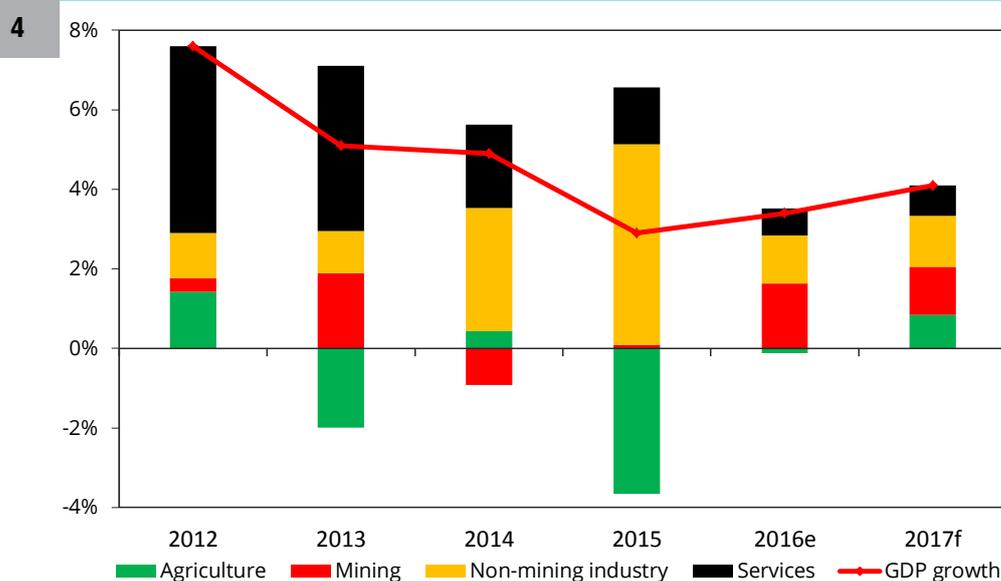
Zambia has continued its economic recovery in 2017, after a slowdown of growth in 2015 and much of 2016. Improved copper prices have supported the recovery by lifting the mining sector, while better rains over the past two seasons have raised agricultural output and eased electricity outages. Further, declining inflation (following a peak above 20% in February 2016) and a stable kwacha have led the central bank to ease monetary policy, thereby reversing the pressure on credit growth. However, the improved economic position has not resulted in an improvement in the fiscal indicators. The fiscal deficit remains wide and data from Q1 2017 shows revenues below target and expenditure was not moderated from plans, suggesting that the 7% GDP fiscal target will be hard to achieve. Government has started to reduce the large stock of expenditure arrears (its unpaid bills that totaled ZMW 17 billion at the end of 2016), but further efforts are needed to improve budgetary controls and better withstand fiscal pressures, if the national debt is to remain at sustainable levels.

The economy has continued its recovery in 2017, following subdued economic activity in 2015 and 2016.

Real economy picking up in 2017, but slow per capita growth

The Zambian economy has continued its recovery in 2017, following subdued economic activity when economic growth fell to 2.9% in 2015, its lowest rate since 1998 (figure 4). The economy was hit by tough global conditions for growth (chiefly lower copper prices) and domestic pressures including an El Niño-induced lower harvest in 2015, a power crisis, and political uncertainty in the lead-up to the August 2016 elections³. The growth of the economy increased in 2016 to 3.4%, and has continued this trend in the first half of 2017, as global conditions for growth have improved and domestic constraints have eased. All sectors of the economy are expected to contribute to a forecasted growth of 4.1% in 2017 (figure 4 and table 1).

Figure 4 All sectors will contribute positively to growth in 2017



Source: CSO Zambia and Ministry of Finance.
e = estimate and f = forecast

The mining sector has benefited from firmer copper prices as global growth improved.

The mining sector has benefited from firmer copper prices as global growth improved, industrial production increased (driven by accelerations in China), and 7% of the global copper supply was offline in Q1 (following strikes in Chile and export restrictions in Indonesia). In Q1 2017, quarterly copper prices rose to their highest level since Q1 2015 (figure 5). Further, copper export volumes rose to 349,413 metric tons (mt) during the first four months of 2017, up from 314,474 mt during the last four months of 2016. The increase in copper exports was accompanied by a drawdown in existing copper stocks, and followed improved electricity supply and a recent capital injection into the sector (for example at Mopani, Kankola, and CNMC Luanshya copper mines).

% Growth	2014				2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agriculture, forestry and fishing	1.7	-0.6	-0.2	2.5	-8.5	-7.8	-6.1	-7.7	3.1	-1.0	0.7	-4.8
Mining and quarrying	3.5	-10.1	-0.7	-2.4	-4.7	17.1	-2.0	-6.1	8.0	7.5	5.0	7.8
Manufacturing	9.7	11.7	0.2	5.1	5.1	1.8	8.7	6.2	1.1	4.4	3.7	1.3
Electricity	4.1	1.4	0.7	1.7	8.8	7.2	-2.9	-18.9	-15.4	-16.9	-3.2	17.5
Construction	-6.5	15.3	10.7	22.2	37.4	20.5	3.8	15.4	9.1	11.7	14.8	3.3
Wholesale and retail trade	-0.4	6.4	8.8	-0.9	1.8	-1.2	3.7	1.5	0.8	-1.0	-1.4	2.0
Financial and insurance activities	7.2	19.4	14.2	19.9	3.7	7.6	21.6	14.9	4.7	4.8	-9.2	-8.2
GDP at market prices	2.5	5.6	5.5	5.2	4.1	2.6	3.8	1.3	3.2	4.7	3.1	2.7

Source: CSO Zambia.

A longer and heavier 2016-17 rainy season improved overall crop production and power generation.

Figure 5 Copper prices firmed in Q4 2016

Source: CSO Zambia and World Bank Pink Sheets.

Enhanced macroeconomic stability has improved conditions for recovery.

On the domestic front, a longer and heavier 2016-17 rainy season improved overall crop production and power generation, but temporarily disrupted some economic activity in early 2017 (for example in the construction and mining sectors). Despite an outbreak of maize-pest armyworms (which was contained in February 2017), the real value of crops produced expanded by 19.1% in the 2016-17 season, following a contraction of 1.1% in the previous season. The production of key crops increased, including maize (by 25%), rice (44.1%), soybeans (31.4%), burley tobacco (30%), groundnuts (28.2%), sorghum (22.9%), wheat (21.4%) and millet (8.7%).⁴ Given that crop production contributes over 87% to the output of the agriculture sector, these crop production gains are expected to lift the growth of the sector in 2017.

Higher rains have led to the faster replenishment of hydro-electricity reservoirs in 2017 than in 2016. As at end-May 2017, Lake Kariba's water level (Zambia's largest hydro-electricity reservoir) had reached 55% of full capacity, compared to 32% at the same point in 2016. Electricity generation grew by 17.5% in Q4 2016 and a further 9.4% in Q1 2017, largely due to increased production from the hydroelectric units. Improved power generation is expected to stimulate economy-wide growth, reversing the impact of two years of persistent power outages⁵.

Meanwhile, improved macroeconomic stability (chiefly a more stable exchange rate and single-digit inflation), the subsequent loosening of monetary policy, and a gradual clearance of Government expenditure and VAT arrears have improved conditions for the economic recovery, especially for firms in services and construction sectors.

Aggregate banking sector liquidity expanded for the first five months of 2017, following a year of contraction.⁶ However, average lending rates have declined only marginally

Banking sector liquidity expanded for the first five months of 2017, but average lending rates have declined only marginally.

to 28.8% in Q1 2017 from 29.2% the previous quarter. High lending rates, commercial banks' preference for investing in government securities, and prohibitive collateral requirements arising from the high level of non-performing loans (10.5%) have deterred firms and individuals from borrowing from banks in 2016 and the first half of 2017.

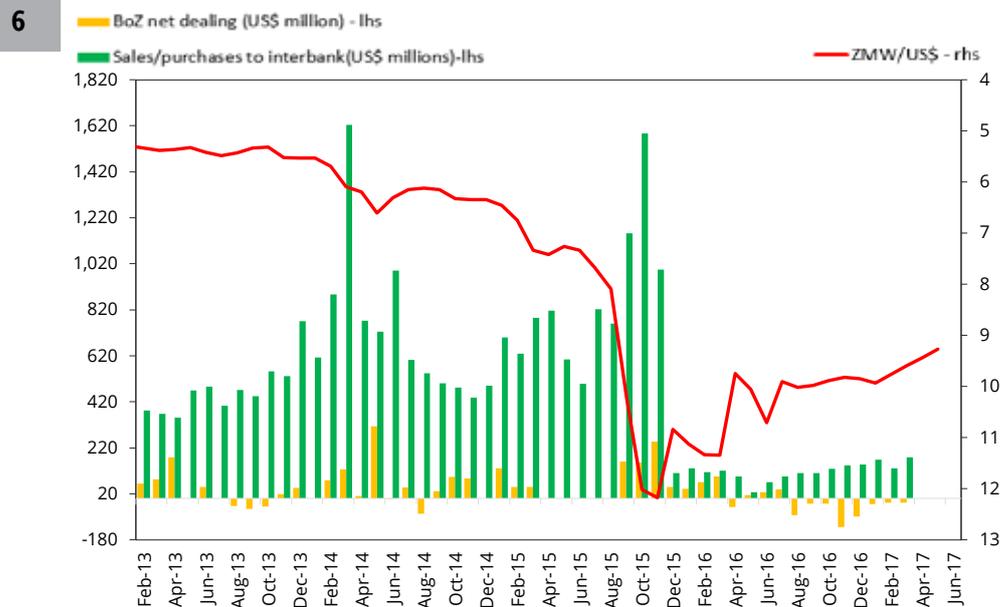
The kwacha remains stable and strengthened

The recent stability of the kwacha follows a large depreciation in 2015 that was halted by tight monetary policy measures taken in mid-November 2015. These measures succeeded in stabilizing and strengthening the kwacha, but at the cost of a substantial reduction in liquidity and interbank foreign exchange trading (figure 6). Average monthly interbank foreign exchange trading plummeted by 86.3% from US\$789 million in 2015 to just US\$108 million in 2016, and has remained low in 2017.⁷

Since the second half of 2016, the kwacha has maintained its stability and appreciated against major global currencies. It appreciated by 11.5% from ZMW 11.1 per US\$ in January 2016 to ZMW 9.9 in December 2016. By the end of May 2017, the kwacha had appreciated by a further 6.7% to ZMW 9.4, on account of increased inflows of US\$ as non-resident participation in the bond auctions increased from Q4 2016, improved macroeconomic stability, the conclusion of the 2016 general elections, and expectations of an IMF program.

The kwacha has maintained its stability and appreciated against major global currencies.

Figure 6 The kwacha has strengthened and stabilized



Source: Bank of Zambia.

Inflation remains in single digits and easing of monetary policy

After reaching a peak of 22.9% in February 2016, annual inflation declined each subsequent month until it reached single digits in November 2016. It declined further in 2017 and reached 6.5% in May 2017 (figure 7). Food inflation fell from a peak of 26.5% in April 2016 to 5.9% in May 2017, the lowest since January 2012. However, there have been concerns about rising prices of mealie meal since December 2016. Non-food inflation has also remained a single digit since October 2016 and its peak of 19.1% in February 2016.⁸

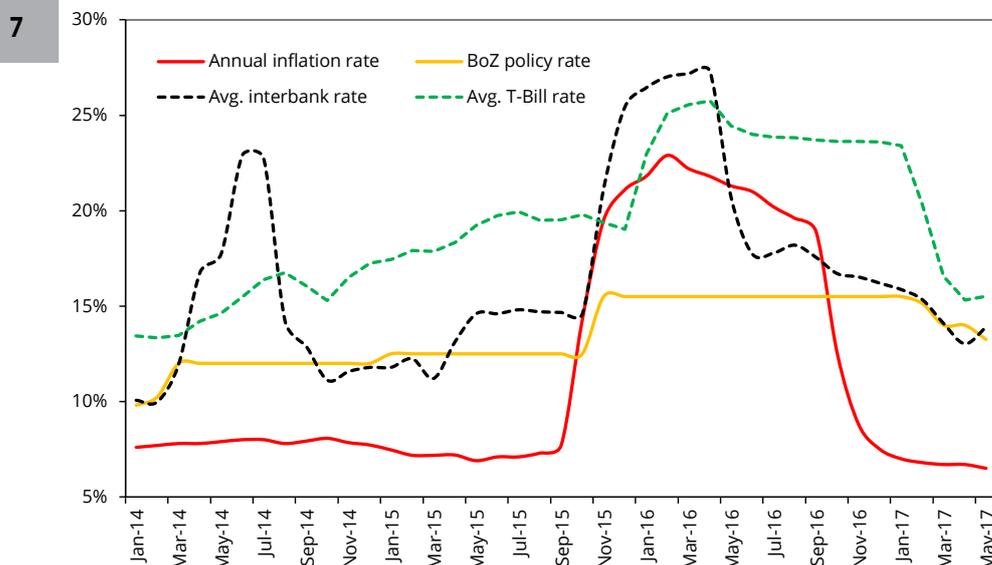
After a peak of 22.9% in February 2016, annual inflation declined to a single digit in November 2016.

Lower inflation and exchange rate stability has allowed a repeated easing of monetary policy in November 2016, February 2017 and May 2017 (figure 7). In November 2016, the measures were aimed at improving liquidity; they included removing a once-a-week limit on commercial banks' access to the Bank of Zambia's (BoZ) overnight lending facility and allowing banks to automatically convert any intra-day credit into overnight loans and to calculate their reserve ratio by using weekly rather than daily averages.⁹ In February 2017, the central bank reduced its policy rate by 150 basis points to 14.0%, reduced its overnight facility rate by 600 basis points, and reduced the statutory reserve ratio by 250 basis points to 15.5% from 18.0%.¹⁰ In May 2017, monetary policy was loos-

Lower inflation and exchange rate stability has allowed a repeated easing of monetary policy.

ened further; the policy rate was dropped to 12.5%, the statutory rate to 12.5%, and the policy rate corridor was narrowed from a range of plus or minus 1% from plus or minus 2%. However, nominal lending rates have not responded quickly to the increase in liquidity and real lending rates have widened with falling inflation.

Figure 7 Inflation has moderated and stabilised



Source: Bank of Zambia

In 2016, Government revenue fell short of an ambitious revenue target by 7.6%, while spending was above target by 10.1%.

A lack of fiscal sustainability or credibility remains the most pressing challenge

In 2016, Government revenue fell short of an ambitious revenue target by 7.6%, while spending was above target by 10.1%. 2016 revenues included an unbudgeted dividend from the BoZ of ZMW 4.1 billion (linked to the proceeds from the 2015 Eurobond¹¹). If this dividend is excluded, then total revenue would have been below target by 16.8% (table 2). This revenue shortfall followed weak performances in value added tax (VAT), customs and excise duties, and withholding tax collections. Contrastingly, income tax collection performed slightly above expectation (by 1.9%) due to improved compliance¹², and despite lower commodity prices, mining revenue increased slightly in 2016 following increased production and associated mineral royalties.

2016 expenditure pressures included unbudgeted spending on electricity and fuel subsidies and higher than expected interest payments. Further, there were overruns on agriculture subsidies and election expenditures. The 2016 fiscal deficit (on cash basis) reached 5.7% of GDP, above the approved target of 3.8%, while the underlying deficit (including arrears) reached 8.5% of GDP.

The revenue shortfall and unbudgeted expenditure pressures left limited cash available to meet the planned expenditures. Until Q4 2016, the government also had limited access to external and domestic borrowing at reasonable interest rates. This forced the government to cut several spending lines and withhold payments to contractors and suppliers (i.e. the government stopped paying many of its bills), especially in relation to public investment where spending dropped from 7.0% of GDP in 2015 to 3.9% in 2016. Furthermore, the government chose to honor only half of its commitment in 2016 to its cash transfer program (which targets the poorest citizens), and instead provided regressive fuel price subsidies.

By withholding payments to domestic and external contractors and suppliers, the government increased its stock of expenditure arrears close to an estimated ZMW 17 billion (7.8% of GDP) at the end of 2016. The stock of arrears includes unpaid bills to road contractors; major agriculture programs (discussed in [Section 2](#)); fuel suppliers; and pension obligations.

The government increased its stock of expenditure arrears to ZMW 17 billion (7.8% of GDP) at the end of 2016.

The 2017 budget promised a consolidation and the beginning of a shift to a more sustainable fiscal stance.

The firms owed money by the government are in consequence struggling to pay taxes (impacting on revenues), maintain staffing levels (impacting employment), and service loans (contributing to non-performing loans). Many of the arrears are also attracting penalty payments, while some bear interest payments, thus increasing the overall cost of the goods and services to Government. Clearing the arrears is an essential part of restoring 'fiscal fitness' (the tag line for the 2017 national budget).

The 2017 budget promised a consolidation and the beginning of a shift to a more sustainable fiscal stance. The government has targeted a 7% fiscal deficit in 2017, while it clears a good portion of the arrears built up in previous years. However, when Q1 2017 fiscal numbers are analyzed, it appears the revenue shortfalls have continued in 2017, while expenditure plans have not been moderated¹³. Between January and March 2017, domestic revenue fell below its target by 15%, with many revenue sources below target. Income tax collections reached 85% of the quarterly target, customs and excise 73% and non-tax revenue just 56%. Value-Added Tax (VAT) performed close to expectations (collections were 98% of the target) following relevant structural reforms by the Zambia Revenue Authority (ZRA). Improved copper exports volumes and prices resulted in mineral royalties performing above expectations at 163% of their quarter target.

Despite the revenue shortfall, domestic financed expenditure was disbursed as expected (25% of the annual allocation was utilized in Q1 2017). Wages and salaries performed to expectations, but goods and services received only 89% of their target as debt service costs were higher than expected (requiring 111% of the quarterly budget allocation). The cash transfer program commitments were honored (including the scale-up announced in the 2017 Budget Speech). Large shortfalls in public investment were evident in the first quarter, but the late rains made construction activities difficult and some improvement is expected over the course of the fiscal year.

Between January and March 2017, domestic revenue fell below its target by 15%, with many revenue sources below target.

Table 2 Fiscal Trends		2013	2014	2015	2016
2	% GDP unless stated				
	Revenue and Grants	18.4	19.0	18.8	18.1
	Domestic revenue	16.9	18.2	18.6	17.9
	Tax revenue	14.7	15.5	14.4	12.9
	Non-tax revenue	2.2	2.7	4.2	5.0
	Grants	1.5	0.8	0.2	0.2
	Expenditure	25.2	24.4	28.2	23.8
	Current expenditure	18.9	19.1	21.2	19.9
	Wages and Salaries	8.2	9.5	8.8	8.7
	Goods and Services	3.4	3.1	2.9	2.2
	Interest Payments	1.5	2.2	2.8	3.4
	Social Benefits	0.5	0.4	0.5	0.2
	Subsidies	3.5	2.0	3.9	3.5
	Intergovernmental Transfers	1.8	1.9	2.3	1.9
	Public Investment (Includes foreign project)	6.3	5.3	7.0	3.9
	Primary balance	-5.3	-3.2	-6.6	-2.3
	Fiscal deficit (cash basis)	-6.8	-5.4	-9.4	-5.7
	Fiscal deficit (including new arrears)	-6.8	-7.8	-12.0	-8.5
	Financing	6.7	5.5	9.4	5.7
	Domestic financing	6.3	0.8	1.7	3.7
	External financing	0.4	4.7	7.7	2.0
	Stock of Arrears	-	2.4	5.0	7.8
	Public and Publicly Guaranteed Debt	29.1	35.2	55.4	55.0
	GDP (Current ZMW, millions)	151,331	167,053	183,381	216,826

Source: Ministry of Finance and World Bank projections.

Despite the revenue shortfall, domestic financed expenditure was disbursed as expected.

The government has made progress with its economic recovery plan in Q4 2016 and the first half of 2017.

Progress with Economic Recovery Plan Reforms

The Minister of Finance launched the government's economic recovery plan: 'Zambia Plus', on October 20, 2016, to guide 2017 budget implementation. It has since been rebranded as an 'economic growth and jobs creation plan', as the economy has recovered. The Zambia Plus plan has fed into the Seventh National Development Plan. The government has made progress with the Zambia Plus plan in Q4 2016 and the first half of 2017.

- **Some public expenditure arrears (ZMW 4.3 billion) have been cleared:** This includes agriculture subsidies (ZMW 615 million); fuel imports (ZMW 350 million); emergency electricity imports (ZMW 307 million); road construction (ZMW 300 million); and education, health and local government infrastructure (ZMW 216 million).

- **Fuel subsidies have been removed:** In October 2016, fuel pump prices were increased by an average of 34.4% for the first time in 13 months. They were later reduced by 10.0% in January 2017, following the appreciation of the exchange rate. The government also announced that it is reviewing the systems for fuel procurement with the aim of enhancing competition to improve efficiency and reduce the cost of supply.

- **Reduction in electricity subsidies:** The Energy Regulation Board (ERB) approved increases in the electricity tariffs for non-mining consumers of 50% in May 2017, and an additional 25% in September 2017. Meanwhile, the government has commissioned a study on the cost of electricity supply, with the results expected at the end of 2017, to guide future prices changes. The government has also been renegotiating electricity tariffs with mining consumers. At present, different mines pay different tariffs based on investment agreements confidentially negotiated by the government. Given that mines consume half of Zambia's power, a tariff adjustment for mining consumers is necessary if overall financial sustainability of the power sector is to be achieved.

- **The government is seeking support from development partners:** In February 2016, the Ministry of Finance (MoF) announced the decision to seek an IMF program within that year, but negotiations were postponed several times. In June 2017, the MoF announced that most elements of the program had been agreed. The remaining elements are expected to be finalized and an IMF program is expected in Q3 2017, and with it balance of payments support. The government is also in discussions with the World Bank and the African Development Bank (AfDB) for budget support programs, with disbursements planned for late 2017 or 2018.

Fuel subsidies have been removed: in October 2016, fuel pump prices were increased by an average of 34.4%.

Public debt levels remain elevated

Debt levels have remained elevated, due to large and repeat fiscal deficits between 2012 and 2016 (figure 8), and huge external borrowing followed by a currency shock in 2015. Fiscal deficits have been financed by new non-concessional sources, including China and international debt markets. Eurobond borrowing totaled US\$3 billion in 2012-15. This borrowing has raised the foreign currency risk of the government's portfolio and is associated with larger repayment risks, given the bullet structure of the first two bonds (they each need to be repaid in one single year)¹⁴.

Participation by foreigners in the domestic debt market declined between January and September 2016, following the large depreciation of the kwacha and increased risk aversion towards emerging and developing countries. However, appetite has increased for domestic paper in Q4 2016 and in the first half of 2017. There has also been a return of non-resident interest in the bond market. This financing has helped clear some of the arrears and finance expenditure. Also of note is that a fifth bond auction took place in December 2016, as the BoZ switched from having four to five bond auctions per year. Following increased demand for government securities, the weighted average yield on treasury bills declined to 16.6% in March 2017 from 24.4% in December 2016, while the yield on government bonds declined to 20.4% from 25.0% over the same period.

Debt levels have remained elevated, due to large and repeat fiscal deficits between 2012 and 2016.

The estimated stock of public and publicly guaranteed external debt increased from US\$5.3 billion in 2014 to US\$7.2 billion in 2015; and then by 11% in 2016 to reach US\$7.9, as a result of new borrowing (figure 8).

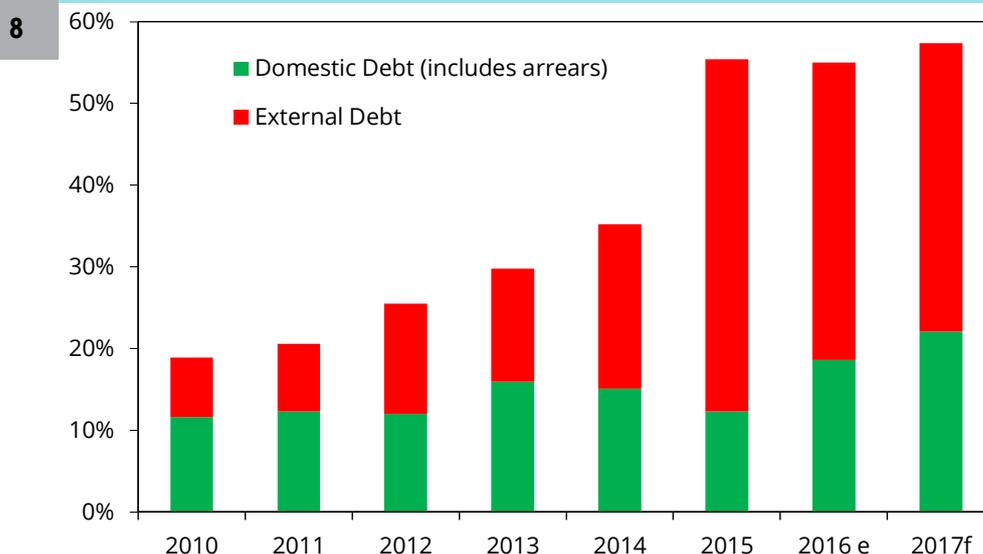
Financing from the increased auction of government securities has helped clear some of the arrears and finance expenditure.

The estimated stock of public and publicly guaranteed external debt increased from US\$ 7.2 billion in 2015 to US\$ 7.9 billion in 2016.

In Q1 2017, exports continued to rise (the volume of copper exports rose 24% while prices firmed) and imports fell.

In addition, the government contracted US\$3.0 billion of new loans in 2016¹⁵, and while the loans will only become debt once they have been disbursed, the rapid build-up of contracts is a concern for future debt levels. The majority of the loans (57% or US\$1.7 billion) were contracted to China for infrastructure projects.

Figure 8 Public debt levels have stabilized at high levels



Source: Ministry of Finance, and World Bank forecasts.
e = estimate. f = forecast

Despite the new borrowing, the estimated stock of external debt as a percent of GDP declined to 36.4% at the end of 2016 from 44.3% at the end of 2015, following an appreciation of the kwacha and GDP growth.

The stock of domestic debt reached 18.6% of GDP at the end of 2016. When public expenditure arrears are included in the total debt, the public and publicly guaranteed debt stock was 55% of GDP at the end of 2016. It is also important to note two characteristics of this portfolio that require careful management. First, 66% of the debt stock is denominated in foreign currency (80% of which is in US\$). Second, the proportion of non-concessional borrowing has increased, resulting in higher interest payments. This, along with increasing debt levels, has had an impact on the national budget. The cost of servicing debt now amounts to 20% of domestic revenue in 2017 from just 8% in 2012. This leaves less resources for development priorities and poverty reduction.

International trade is rebounding, but reserves remain low

Copper provides 77% of Zambia's exports, and as global prices of the metal fell, so did the US\$ value of exports in 2015 (by 28%), and further in 2016 (by 11.6%). This opened up a trade deficit. As the economy slowed down and the price of imported goods rose (following a rapid weakening of the kwacha in the second half of 2015), the US\$ value of imports also decreased steadily in 2016, reducing the size of the trade deficit (figure 9).

Both exports and imports have increased in Q4 2016 (as the economy recovered, copper prices firmed and the kwacha appreciated). In Q1 2017, exports rose (the volume of copper exports rose 24% in Q1 2017, while copper prices firmed) and imports fell, thus narrowing the trade deficit. This resulted in a narrowing of the current account balance to US\$257.1 million in Q1 2017 from US\$574.7 million the previous quarter. This, coupled with increased portfolio debt inflows (there was keen foreign interest in government bonds), has pushed the balance of payments into a surplus of US\$26.3 million in Q1 2017, from a deficit of US\$161.4 million in Q4 2016.

Figure 9 The Trade deficit narrowed in Q1 2017

Source: World Bank (2015) and Ministry of Finance

The benefits of recent GDP growth have accrued mainly to the richer segments of the population in urban areas.

Prosperity has not been shared equally

The benefits of recent GDP growth have accrued mainly to the richer segments of the population in urban areas, and poverty remains largely concentrated in rural areas. In April 2016, the Central Statistical Office (CSO) launched preliminary results from the 2015 Living Conditions Monitoring Survey¹⁶ (LCMS). Their survey provides estimates of living conditions for Zambia's three million households. Consumption is chosen as the preferred welfare indicator and is assessed via four main components: food, non-food, durable goods and housing.

Despite a GDP growth averaging 7.4% between 2004 and 2014, there was only a marginal reduction in poverty.

The LCMS finds that despite a GDP growth averaging 7.4% between 2004 and 2014, there was only a marginal reduction in poverty. The CSO reports that in 2015, 54.4% of the population were defined as poor and 40.8% of the population were experiencing extreme poverty as per the government's poverty line. Using the US\$1.9 per day (2011 PPP terms) measure for international comparison, poverty is estimated at 61.3% in 2015¹⁷. The poverty measured is largely a rural phenomenon, with 77% of the poorest households located in rural areas.

C. ECONOMIC OUTLOOK, RISKS AND POLICY CHALLENGES

We project GDP growth to strengthen to 4.1% in 2017, and further to 4.5% in 2018 and 4.7% in 2019. For 2017, the forecast assumes the government will continue to implement its economic recovery plan, the harvest and electricity production will be stronger because of the favorable weather, and copper production will increase because of the new and recently refurbished mines. We also assume that gradual fiscal consolidation and sustained efforts on structural reforms, along with a sustained decline in inflation, will allow for easier monetary policy. Efforts are needed to ensure that growth is not just faster, but more inclusive. As the government implements its Economic Recovery Plan, fiscal consolidation will be critical to containing the accumulation of arrears, reducing pressure on monetary policy and cementing resurging investor confidence.

We forecast GDP growth of the economy will improve to 4.1% in 2017.

Business confidence will be bolstered further as a result of the macroeconomic stability.

Tighter global financing conditions would also increase the cost of raising domestic and external financing over the medium-term.

Medium-term outlook

Reflecting on improved global and domestic conditions for growth, we forecast that GDP growth of the economy will improve to 4.1% in 2017 from 3.4% in 2016, and will continue to expand at a rate of 4.5% in 2018 and 4.7% in 2019 (table 3). This outlook is underpinned by the following assumptions:

- i. Copper exports maintain their improved levels, supported by higher production from new mines, and copper prices do not deviate too far from their May 2017 prices during the rest of the year. This is consistent with World Bank forecasts that suggest copper prices are likely to remain firm in 2017 and 2018, with a forecast of US\$ 5,750 per mt for 2017¹⁸.
- ii. Further progress is made with implementing the government's Economic Recovery Plan, including support from an IMF program and concessional financing from the World Bank and the African Development Bank over the medium-term.
- iii. The improvements to the electricity supply are maintained and there is no return to regular power outages. This will help increase both mining production and output from other industry and services.
- iv. Business confidence will be bolstered further as a result of the macroeconomic stability.

Table 3	Key Macroeconomic Data				
	2015	2016	2017f	2018f	2019f
Real GDP growth, at constant market price	2.9	3.3	4.1	4.5	4.7
Private Consumption	4.9	1.9	4.6	4.8	5.0
Government Consumption	-3.4	0.3	0.4	-1.0	-0.2
Gross Fixed Capital Investment	7.6	2.5	2.5	4.9	4.6
Exports, Goods and Services	-11.0	-8.4	5.6	5.9	6.1
Imports, Goods and Services	-7.0	-10.9	3.9	5.1	5.0
Real GDP growth, at constant factor prices	2.9	3.3	4.1	4.5	4.7
Agriculture	-7.7	3.3	3.5	3.8	3.7
Industry	6.8	6.1	5.8	5.7	5.5
Services	2.4	1.8	3.2	3.8	4.4
Inflation (Consumer Price Index)	8.3	18.2	7.9	7.8	7.6
Current Account Balance (% of GDP)	-3.4	-4.5	-2.7	-2.2	-1.0
Net Foreign Direct Investment (% of GDP)	8.8	9.3	8.3	7.6	6.9
Fiscal Balance (% of GDP)	-9.4	-5.7	-7.6	-6.4	-4.8
Debt (% of GDP)	55.4	55.0	57.4	59.2	60.1
Poverty rate (\$1.9/day PPP terms)	57.5	57.3	56.9	56.2	55.8

Source: Ministry of Finance and World Bank forecasts.
f = forecast

Risks to Zambia's economic outlook

The outlook is subject to both domestic and external downside and upside risks. The external risk is that the recent copper price gains would be reversed as global supply increases to match demand, and would severely affect Zambia's prospects. Furthermore, tighter global financing conditions would also increase the cost of raising domestic and external financing over the medium-term. On the upside, copper prices could firm fur-

ther in 2017. Oil prices are forecast to be firm in the medium-term and this could constrain the cost of production, given a return to cost reflective prices.¹⁹

The main domestic downside risks would relate to slippages with the planned structural and fiscal reforms; as would a U-turn on the request for an IMF program. For example, a repeat of the 2015 events when electricity tariff increases were hastily reversed. Furthermore, continued political tensions could dent market confidence and investment levels if they continue. On the upside, if the government sticks to the bold reforms, while also sticking to the fiscal consolidation path the economic recovery plan sets out, then confidence in the economy will continue improving.

Policy challenges

Low inflation, exchange rate stability, and its recent appreciation, have created space for a potential further easing of monetary policy in 2017 to support the recovery. However, a key area of concern remains fiscal policy. Tackling this challenge and making progress with the government's economic recovery plan is essential if debt levels are to remain at sustainable levels over the medium-term, and leading up to the 2022-26 period when the Eurobonds have to be refinanced or repaid. What remains critical is that the planned reduction in the fiscal deficit is planned and managed carefully. A disorderly and incomplete adjustment will not restore market confidence. A too severe or too quick adjustment will undermine growth.

Meanwhile, wide-ranging structural reforms are needed to boost the non-copper economy further and to ensure more inclusive growth. The Seventh National Development Plan will help the government guide its policy and the support it requests from the outside. We focus here on providing a few ideas to guide the shift to fiscal fitness as a pressing issue.

i. Clear the arrears and prevent their future build-up: Efforts need to continue to reduce the stock of public expenditure arrears. Government should issue a clear Arrears Clearance Plan, providing a timeline for when the stock will be reduced and eliminated. The plan should also highlight reforms to improve commitment controls and in-year monitoring so that the same problem does not reoccur.

ii. Strengthen Debt Management: Zambia has joined the markets and has had access to many new sources of finance over the past five to seven years. New skills are needed to track markets and to better communicate with market participants and potential investors. Debt specialists and lawyers must also be on hand to review contracts, and to then better understand and compare competing borrowing options. This should include reorganizing debt management staff into a modern Debt Management Office structure (with a front, middle and back office, complete with the required expertise). Issuance of a debt strategy (forward looking and annually updated), regular in-house debt sustainability analyses and better communication via quarterly debt reports would also be a positive step forward.

iii. Ensure revenue mobilization reforms are impeded: The 2017 budget included a host of revenue reforms aimed at increasing revenue collection to fund planned expenditure. However, the results from Q1 2017 have been slow and collections have fallen below target, despite large increases to the ZRA's resources. Better progress in the second half of 2017 is crucial to keeping the fiscal deficit at reasonable levels and avoiding expenditure cuts. Our eighth Zambia Economic Brief from December 2016 offers ideas for Raising Revenue that could provide guidance²⁰.

iv. Reduce unproductive expenditures: A full review of the budget should follow the Seventh National Development Plan to ensure all resources are focused on achieving the stated objectives. Areas of social and economic benefit should be scaled up and reductions made to unnecessary administration expenditure or where the programs have not been performing²¹. **Section 2** of this report is focused on understanding how the efficiency and effectiveness of agriculture spending in particular can be improved. However, this is not with the view of reducing total government expenditure, as savings in core sectors like agriculture would be best reinvested in the sector to support its faster growth, better livelihoods for farming households, and further expansion of the non-copper economy.

A disorderly and incomplete adjustment will not restore market confidence.

Issuance of a debt strategy, regular debt sustainability analyses and better communication would be positive steps.

A full review of the budget should follow the Seventh National Development Plan.

SECTION 2 REAPING RICHER RETURNS FROM PUBLIC EXPENDITURES IN AGRICULTURE

D. PUBLIC EXPENDITURE CHOICES MATTER

Zambia has successfully increased its production of crops (largely maize), although this had been driven by increasing the cultivation of land as opposed to large steps forward in terms of yields. This leaves enormous scope to increase agriculture productivity and to reduce the vulnerability associated with a high level of dependence on rain-fed agriculture. While the total amount of agriculture expenditure has been increased over the past 15 years, there is vast scope to improve both its efficiency and effectiveness. The agriculture budget is unbalanced as it is dominated by the Farmers Input Support Program (FISP) and the Food Reserve Agency (FRA). Shortcomings in the budgeting process also reduce spending effectiveness.

Resources available from the improved design of interventions are expected to be ploughed back into the sector.

Agriculture is more than just a sector in Zambia. It is a livelihood for the majority of households, employs 48% of the working population and remains a key priority for enhancing the non-copper economy. Shortcomings in agricultural policy have impacted on the overall economy, on poverty reduction and wide ranging issues including gender inequality, deforestation and land degradation — to name just a few. Smarter agriculture policies would have a widespread positive impact.

This section does not cover all the issues relating to agriculture and is instead focuses on Government's expenditure and investment choices. We hope this discussion will contribute to a broader dialogue on agricultural policy in Zambia.

The savings from more efficient and effective agriculture expenditure are not expected to contribute to the pressing need for fiscal consolidation discussed above. Instead, any resources made available from the improved design of interventions are expected to be reinvested into the sector to improve productivity, farming households' livelihoods and job creation efforts.

This section is based on the April 2017 World Bank publication: *'Reaping Richer Returns: Public Spending Priorities for African Productivity Growth'*²², combined with an analysis of Zambia's agriculture budget.

The country is expecting a record harvest in 2017, including a bumper maize crop of 3.6 million tons.

The country is expecting a record harvest in 2017, including a bumper maize crop of 3.6 million tons, a 25% increase on the previous years, and sufficient stocks so that a 1.18 million ton surplus is recorded (table 4). This expected harvest follows above average rainfall during the 2016-17 season and is forecast despite higher than expected levels of pest occurrences (including infestations of armyworms).

The improved crop production has helped ensure food security at the national level, although drier areas of the country are still prone to food insecurity. For example,

The improved crop production has helped ensure food security at the national level, although drier areas of the country are still prone to food insecurity.

975,738 people in the drier south of the country were estimated in 2016 to be food insecure (from a population close to 16 million), and were targeted to receive assistance during the lean season²³. A much more widespread problem than food security in Zambia is hunger, and the Global Hunger Index declared the issue as 'alarming' in Zambia, ranking the country among the bottom seven countries globally²⁴.

Table 4 Production of Selected Crops							
Production ('000 tons)	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
Maize	2,883	2,568	3,380	2,682	2,919	3,607	
Wheat	254	274	202	225	160	194	
Seed Cotton	270	140	120	112	112	89	
Soyabeans	203	261	214	233	267	351	
Millet	28	24	31	32	30	33	
Virginia Tobacco	24	21	26	23	13	12	
Sorghum	15	15	12	10	14	17	
Virginia Tobacco	24	21	26	23	13	12	

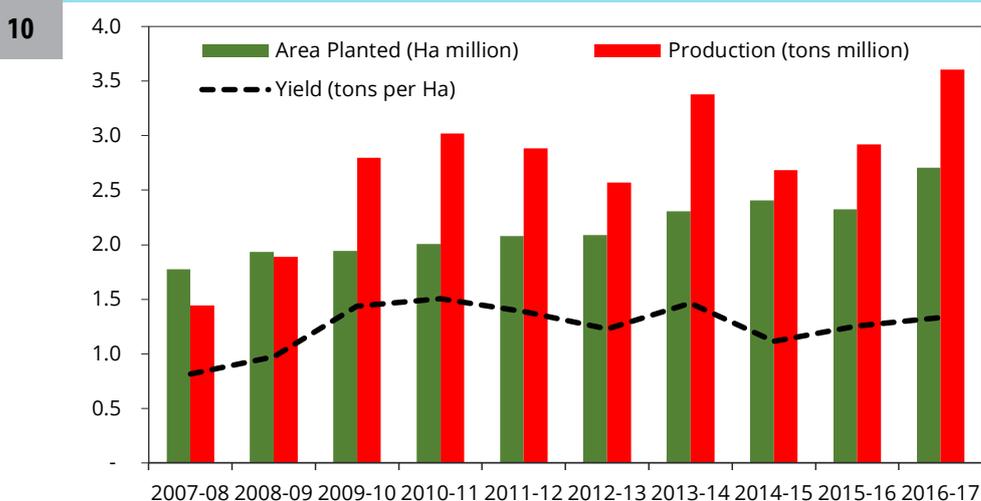
Source: Central Statistical Office.

Maize is the dominant crop in Zambia and its increased production over the past ten years has been driven by an expansion in the area planted. Maize yields have improved only modestly (figure 10), leaving enormous scope to increase agriculture productivity and to reduce the vulnerability associated with a high level of dependence on rain-fed agriculture.

Maize is the dominant crop in Zambia and its increased production over the past ten years has been driven by an expansion in the area planted.

Boosting agricultural growth in Zambia would not only raise the incomes of farm households, but would also lower food costs for the non-farm population (without the need for costly subsidies) and would promote the development of agro-industry. This in turn would promote broader economic growth by stimulating demand for non-farm goods and services. Higher productivity would also free up resources, such as labor, for the growth of other economic sectors. For these reasons, improving agricultural productivity remains an important strategy for reducing poverty, enhancing inclusive growth, and promoting structural transformation.

Figure 10 Maize production and yield



Source: Central Statistical Office.

The expectation that high-quality public spending should bolster growth has strong empirical validation.

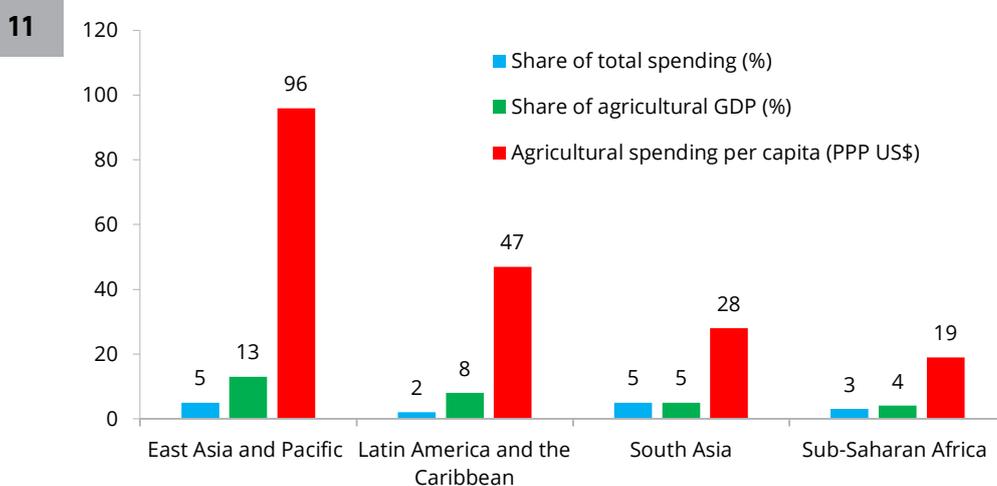
A crucial element in enhancing agricultural productivity growth is improving the provision of productive investments through better public spending in agriculture. This opportunity has been recognized by African policy makers, and over the past few years, ministries of agriculture and finance have intensified efforts to improve both the quan-

Agricultural spending in SSA is substantially lower than that in other regions.

tity (volume) and quality (effectiveness) of public spending. Many countries in the region are targeting 10% of their total budget for agriculture following international commitments²⁵, but while increasing the volume of public spending in agriculture will be important, it will not be sufficient to kindle agriculture growth and poverty reduction. Actions will also be needed to improve the efficiency and effectiveness of public spending. The expectation that high-quality public spending should bolster growth has strong empirical validation²⁶.

Agricultural spending as a share of overall public spending in SSA—the metric used in the Maputo Declaration—is substantially lower than that in other regions, particularly East Asia and the Pacific and South Asia (figure 11). In 2014, few African countries had met or surpassed the 10% target (Malawi and Mozambique consistently surpassed it). Zambia, Niger and Rwanda were close behind in the 8% to 9% range in 2014. On another metric—public spending on agriculture as a share of agricultural GDP—spending is also substantially lower in Africa than in other regions. This is also the case on the metric of spending per capita; in Africa, spending per capita was on average US\$19, almost a third lower than that in the next lowest region, South Asia.

Figure 11 African spending on agriculture lags behind other regions



Source: IFPRI database.

Zambia increased its agriculture spending from below 2% of the budget in the early 2000s, to 10% in 2010-11, and it has fluctuated between 5.4% and 10% since.

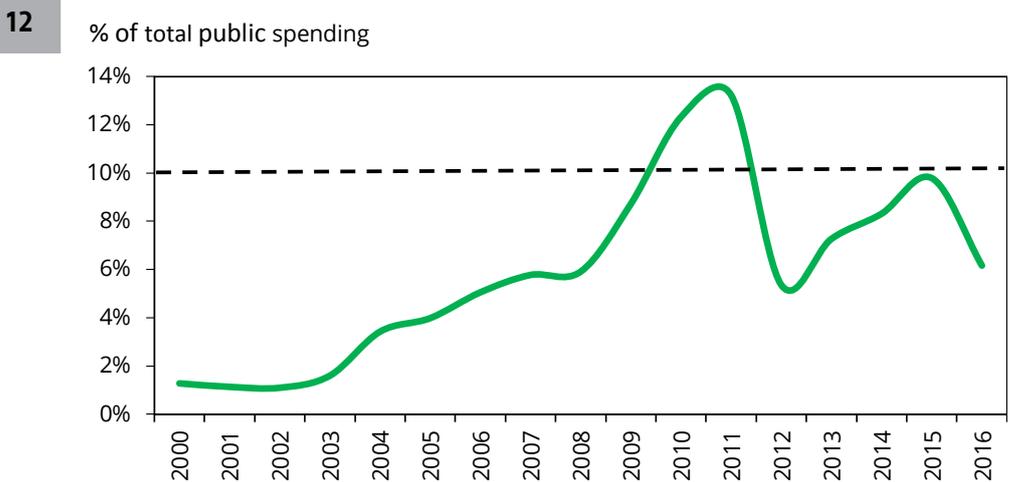
Zambia increased its agriculture spending from below 2% of the budget in the early 2000s to 10% in 2010-11, and it has fluctuated between 5.4% and 10% since (figure 12). Public expenditure on agriculture in Zambia is considered as spending on agriculture, livestock and fisheries. At present, there is a Ministry of Agriculture and a Ministry of Fisheries and Livestock, each with a separate administration budget.²⁷

Perhaps even more important than the level of spending is the efficiency of resource use within the existing budget envelope. Zambia is now spending close to 10% of the budget on agriculture, but is it spent well? Is there a sufficient return on that investment?

Within any given overall budget envelope for agricultural public spending, the allocation across different activities needs to be matched against the government's goals (for example agriculture growth, productivity increases, poverty reduction, etc.). There is no one-size-fits-all formula for deciding what that optimal allocation across programs, investments, and activities should be. This allocation will differ greatly across countries, depending on country circumstances and political preferences. Even so, it is useful to consider what kinds of expenditures have generally been most productive, and to examine how the current composition of spending appears to reflect these lessons—or not. The evidence on returns to different spending categories is somewhat lopsided, in the sense that much more research integrating benefits and costs has been undertaken on certain categories of spending, such as research and development, than on other types of spending. Efforts at data collection in this area have been more systematic, and the specific kind of spending under this rubric is perhaps more homogeneous than other categories as well.

Perhaps even more important than the level of spending is the efficiency of resource use.

Figure 12 Zambia has increased its agriculture budget



Source: Ministry of Finance.

Evidence suggests that in Zambia, the value-added segment of the agriculture sector is lower than in many other countries.

Rebalancing the composition of public agricultural spending toward high return investments could reap massive payoffs.

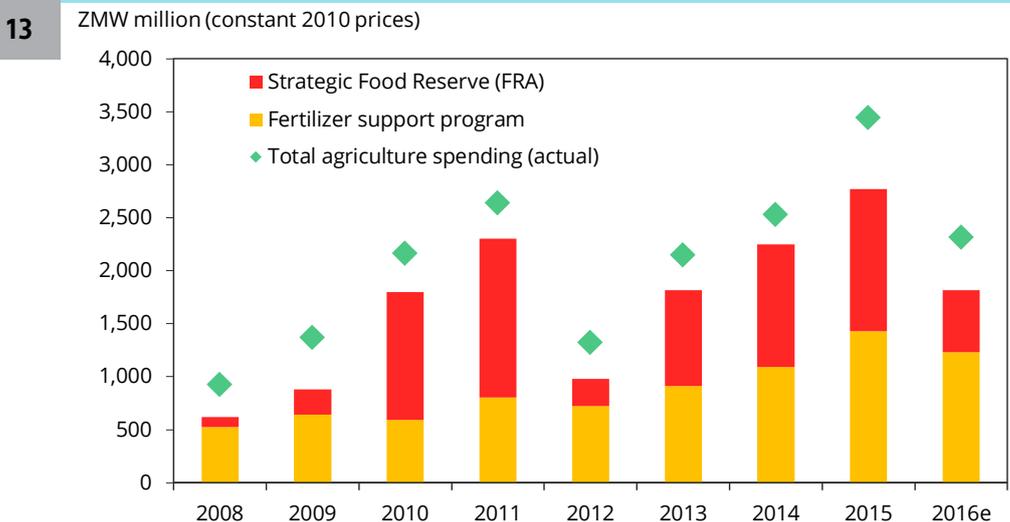
Evidence suggests that in Zambia, the value-added segment of the agriculture sector is lower than in many other countries²⁸, suggesting that there is now a pressing need to address the quality of public spending and the efficiency of resource use. Zambia is not alone in this regard, as agriculture public spending in SSA countries is often lower than in other developing regions, while also dominated by subsidy programs and transfers that favor the better-off, with insignificant gains for agriculture productivity growth or for the poor. Rebalancing the composition of public agricultural spending toward high return investments could reap massive payoffs.

Two factors in particular contribute to the poor rate of return on the government's investment. First, the composition of spending in agriculture is highly unbalanced. And second, shortcomings in the budgeting process also reduce spending effectiveness.

Unbalanced composition

In Zambia, two large spending programs dominate the budgetary allocation for agriculture: the FISP and the FRA. The FISP provides fertilizer and seed subsidies, and the FRA offers maize price support and helps ensure food security. Between 2008 and 2016, they utilized, on average, 79% of spending in the sector (figure 13). This has crowded out investments for strengthening markets, irrigation development, extension services, and the introduction and diffusion of new technologies that are important drivers of robust agricultural productivity growth. Both of these programs also suffer from being loaded with multiple objectives beyond their core mandate, and actions in pursuit of one objective can reduce progress with other objectives.

Figure 13 Farming Inputs and the FRA have dominated the budget



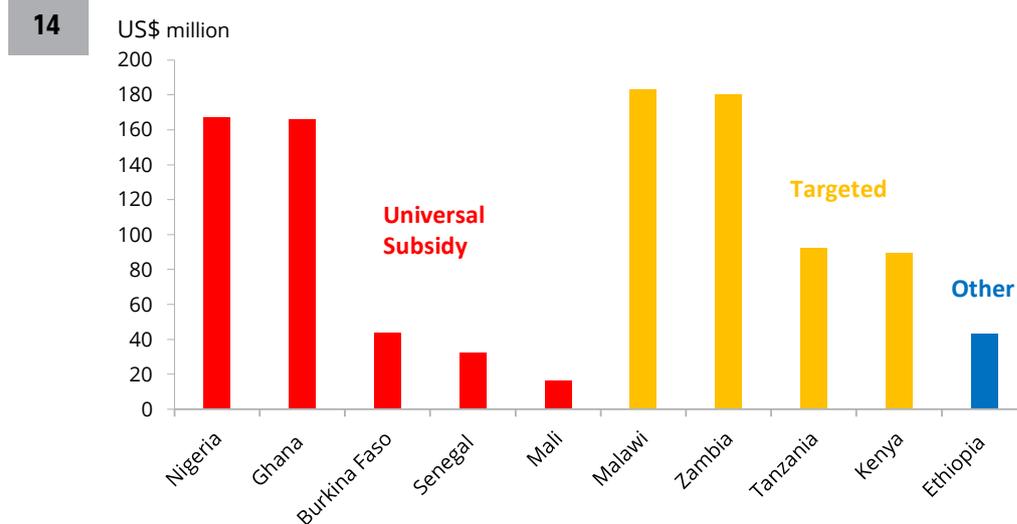
Source: Ministry of Finance.

The resurgence of input subsidy programs has taken place across the continent and not just in Zambia.

Despite their widespread use, the returns to the subsidy programs have been shown to be low and variable.

The resurgence of input subsidy programs has taken place across Africa and not just in Zambia, and has arguably been the region's most important policy development for public agricultural spending in recent years. Ten African governments spend roughly US\$1.2 billion annually on input subsidies alone (figure 14), primarily on fertilizers. These programs were almost phased out in the 1990s, during a period of structural adjustment on the continent. However, they have made a strong comeback due partly to residual support for subsidies among African leaders, even while pressured to phase them out, and partly to the uncertainties about food supply during the 2007-08 global food and fertilizer price instability. Input subsidies continue to be viewed as a means of raising productivity and are vastly popular among African politicians as a highly demonstrable way to support their constituents.

Figure 14 The largest African spenders on inputs utilize US\$1.2 billion per year



Source: Jayne et. al. (2016)²⁹

Ten African governments spend roughly US\$1.2 billion annually on input subsidies alone.

Despite their widespread use, the returns to the subsidy programs have been shown to be low and variable. Evidence has recently been accumulating on some of the largest input subsidy programs in SSA—Ethiopia, Ghana, Kenya, Malawi, Nigeria, Tanzania, and Zambia—based on farm-level surveys. In Zambia, there have been many studies that point to shortcomings in the delivery of the FISP³⁰. The studies point to several conclusions with important policy implications:

- Crop response rates of smallholder farmers are highly variable, and usually low, because of the inability to use fertilizer efficiently and profitably due to low water availability and poor soil; chronically late deliveries of fertilizer; poor management practices; and insufficient complementary inputs (discussed below) to enable farmers to obtain higher rates of fertilizer efficiency. The increment in total fertilizer use is smaller than is distributed through the program, because even with “smart” subsidies, the crowding out of commercial fertilizer sales—as well as outright diversion and theft—remain major problems.
- Subsidies are unlikely to address their multiple objectives effectively. It is often argued that subsidizing fertilizer is desirable both to boost agricultural production and to help poor farmers. Yet, there is strong evidence that most of the benefits do not go to poor farmers (targeting is regressive with respect to asset wealth and landholding size), and the gains in overall food production have been transitory and much smaller than the costs (table 5). For example, households in Zambia with more land get slightly larger subsidies and larger farms are over-represented in the groups of FISP beneficiaries.

Subsidies are unlikely to address their multiple objectives effectively.

The traditional FISP is beset with challenges and is viewed as failing in its main objectives of increasing productivity and poverty reduction.

Table 5 Few poor households are beneficiaries of FISP and FRA				
	% Household type receiving FISP	50kg bags of maize produced by household type	50kg bags sold to FRA by household type	% Household type are maize net-buyers
Extremely Poor	25.4	23	7	21.1
Poor	39.2	49	24	2.6
Non-poor	44.5	92	53	3.6
All households	30.2	38	16	27.3

Source: CSO/ ML/ IAPRI (2012)

Improving the delivery of FISP

The traditional FISP is beset with challenges and is viewed as failing in its main objectives of increasing productivity and poverty reduction³¹. It has been in operation since 2002 and has been associated with a long-running discussion on how it might be improved. A much discussed reform idea has been the use of an electronic voucher (e-FISP).

Zambia piloted the e-FISP in 13 districts during the 2015-16 season and 39 districts during the 2016-17 season (box 2). The e-FISP provides farmers with a debit card, with the farmer and government contributions uploaded, that can be used to pay for available inputs of the farmer's choice. The 2017 Budget Address announced the full migration to the e-FISP in 2017, with the aim of reducing "excessive overheads and wastage associated with the current FISP arrangement"³². This move is welcome not only because it will be more efficient (following a reduction in costly procurement and transportation), but because it will also allow farmers greater choice in the inputs they use, and hopefully what they intend to produce, thereby allowing government support to the sector to be less maize-centric.

There remains a need to diversify from maize to higher value crops, livestock and aquaculture. For example, livestock contributes close to 30% of the agricultural GDP and between 6-30% of household income, while cattle numbers increased by 70% between 2009 and 2013. However, the subsector hardly receives public sector investment which would support commercialization³³. Further, aquaculture can play a significant role in the future as Zambia is a net fish importer and has 12 million hectares of water from rivers, lakes and swamps. Using a reformed FISP to incentivize agriculture diversification is an important step.

The full roll-out of the program in 2017 may prove too ambitious if the challenges experienced during the pilot scheme are considered (box 2), but this is certainly a step in the right direction and every effort should be made to ensure that in the coming seasons, the e-FISP becomes the standard delivery platform.

To complement the use of the electronic voucher, the e-FISP also needs to be better targeted. FISP was never intended as a program to support the poorest households—that will be better achieved by scaling up the cash transfer program and the improvement of other transfers, such as the Food Security Pack.

In addition, a clear exit strategy is needed from the support offered by the program. Farmers should not receive subsidies indefinitely, as the program should sustainably raise productivity and income, so that the farmer can graduate from the program and afford to buy inputs from commercial markets without subsidy.

Improving the delivery of the FRA

The FRA was established in 1996 to manage a national food reserve. It was intended to operate alongside, and not in place of, a private grain trade. The FRA was to use the reserve as a buffer stock to ensure food security, reduce the volatility of grain prices and to provide liquidity in the market when absent.³⁴

The FRA was established in 1996 to manage a national food reserve. It was intended to operate alongside, and not in place of, a private grain trade.

The FRA's involvement in the market has been associated with numerous inefficiencies, made worse by the unpredictability of export controls.

Box **The Electronic Voucher FISP****2**

The e-FISP has the following objectives:

- Reduce public expenditure on the delivery of inputs;
- Crowd in more private sector participation in agro-input distribution, thereby promoting competitiveness and transparency in the supply and distribution of inputs;
- Ensure timely delivery and access to inputs by smallholder farmers;
- Provide farmers with the freedom to choose inputs of their choice, thereby promoting agricultural diversification and;
- Reduce the misappropriation of funds and increase the number of intended beneficiaries by linking the e-cards to a particular farmer and their National Registration Card.

The pilot is associated with the following achievements when compared to the standard FISP:

- A comparison of implementation costs between the e-voucher and the conventional FISP showed that the government could make a significant amount of savings by implementing FISP through the e-voucher, as there are no procurement, transportation, storage, and handling costs involved.
- Participation by the private sector in input distribution to rural farmers increased by 83%, from 230 agro-dealers during the 2015/16 farming season to 422 during the 2016/17 season.
- Although farmers were still biased towards redeeming fertilizer and maize seed, the system encouraged agricultural diversification. For instance, in the livestock rich areas such as Southern Province, about 10% of the households reported purchasing veterinary drugs and dip chemicals, and another 5.5% redeemed their vouchers for insecticides and herbicides.

However, the pilot also faced challenges. Delays in launching the program for the 2016/17 season due to late government funding had some significant consequences, such as the e-cards being distributed late (towards the end of December 2016). This meant that farmers were unable to redeem inputs ahead of the growing season.

Source: Kuteya, A. and A. Chapoto (2017) 'E-voucher Performance and Recommendations for Nationwide Rollout during the 2017-18 Farming Season, IAPTRI Policy Brief, Lusaka, Zambia.

The FRA finds it difficult to gauge how much maize it is buying nationwide.

Since its establishment, the FRA has frequently: (i) bought more maize than its prescribed target; and (ii) bought maize at above the market price and sold it to millers at a subsidized rate. The FRA has done this to try meet multiple objectives, including that producers get a higher price and food is more affordable for non-farming consumers. The consequence of this has been an increasingly high cost of the FRA, that includes the subsidies and the costly storage and transportation of food reserves. The FRA's expenditure also often exceeds its annual budget allocation, crowding out other forms of agriculture investment and expenditure.

There are clear deficiencies in the storage and transportation of grain.

Furthermore, the FRA's involvement in the market has been associated with numerous inefficiencies, made worse by the unpredictability of export controls. For example, when the FRA raises the maize floor prices to support producers,³⁵ it impacts negatively on the 37% of extremely poor households that are net-buyers of maize. Between 2004-2011, 50% of the marketed maize was sold to FRA by just 3% to 5% of farmers, who have more land and non-land assets than smallholders do. Hence, the price-stabilizing effects of the FRA policies are regressive, as they disproportionately benefit the relatively better-off who sell maize to the FRA, while having negative net effects on relatively poor households. Like the FISP, much of the support provided by the FRA does not go to the poorest households (table 5).

There are also clear deficiencies in the storage and transportation of grain. In all but the remotest areas of the country, there is a strong argument that the involvement of the private sector could help bring down the costs, and reduce the level of spoilage and delays farmers face in being paid by the FRA. By committing to only purchase up to the target reserve size (currently 500,000 tons) the FRA would allow space for the increased involvement of the private sector, and would free up resources to be spent elsewhere in the agriculture sector. One challenge with this is that the FRA finds it difficult to gauge how much maize it is buying nationwide. A functioning monitoring system would need to be developed to help ensure the target is not breached.

The FISP and FRA often over-spend relative to their budget allocation, further depleting the actual expenditure in other important areas within the sector.

Subsidy and FRA reforms have been discussed for many years, but implementation has been slow.

Shortcomings in the budgeting process also reduce spending effectiveness.

There is also often a large delay between the government receiving maize for the FRA and the farmers being paid. Without this payment, farmers are unable to prepare and invest for the next farming season. There are also issues with the quality of storage the FRA can provide, when purchasing beyond the prescribed limit, and there is much wastage and associated cost as a result. The increased involvement of the private sector is expected to reduce some of these inefficiencies.

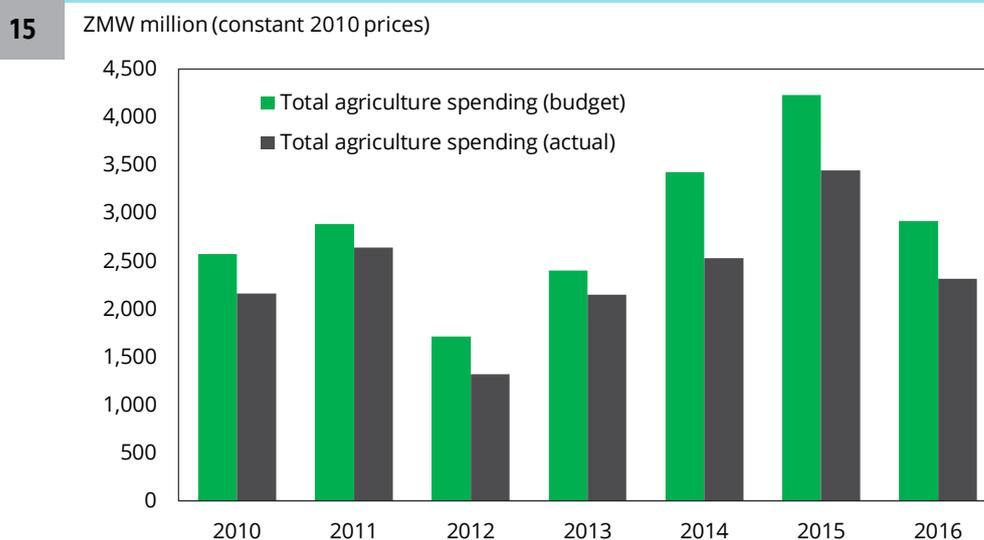
Breaking the reform gridlock

Subsidy and FRA reforms have been discussed for many years, but implementation has been slow. Given this significant inertia in policy making, how might change occur? Options used in other countries include compensating those losing out from the reforms (for example poorer citizens not targeted in a more focused program might receive direct cash transfers). Another idea might be to increase transparency about the distributional effects of policies, so that people understand the reforms better. Many African countries have long pursued policies with a pro-urban and anti-agricultural bias, as rural populations exhibit greater difficulty in organizing collective action. One way to at least partially offset this natural disadvantage of rural populations, is to improve the information base of key actors so that they better understand the effects of alternative policy choices.

Shortcomings in the budget process

Shortcomings in the budgeting process also reduce spending effectiveness. The national budget lacks credibility and the government frequently over-commits itself and reallocates funds during the course of the year and between spending agencies. For example, in 2016, the government projected it would collect ZMW 42.1 billion in domestic revenues, but only 92.3% of this was collected. This led to cuts in some areas and the build-up of substantial spending arrears. Since 2010, actual expenditure in agriculture has averaged just 80% of what was planned in the Budget Speech (figure 15). Further, the FISP and FRA often over-spend relative to their budget allocation, further depleting the actual expenditure in other important areas within the sector and often resulting in substantial expenditure arrears.

Figure 15 Agriculture spending is not well implemented



Source: Ministry of Finance.

E. RE-FOCUS SPENDING TO MORE PRODUCTIVE INTERVENTIONS

There remains a need to reform the FISP and the FRA program that dominate expenditure in the sector, and to free-up resources for high-return categories of spending (such as extension, R&D, irrigation, sanitary and phytosanitary systems, market information systems and marketing infrastructure). These are currently underfunded, as are complementary investments and interventions to address the impacts of climate change better so that production gains are not eroded.

Investments in rural public goods, combined with better policies and institutions, have driven agricultural productivity growth around the world.

High-return categories of spending are underfunded

Investments in rural public goods, combined with better policies and institutions, have driven agricultural productivity growth around the world. The dividends from investments to strengthen markets, expand water access, and develop and adopt improved technologies can be enormous. In addition, improving the policy environment through trade and regulatory policy reforms complements such spending by enhancing the incentives for producers and innovators to take advantage of public goods, thus crowding in private investment. Despite high returns to such investments, many African countries tend to underinvest in them.

Some categories of spending that have been shown to have significant positive effects on productivity and welfare include: extension; R&D (box 3); irrigation; sanitary and phytosanitary systems; market information systems and marketing infrastructure. These areas are frequently underfunded due to technical and political economy reasons.

Improving the efficiency of public spending requires managing the political pressures that determine budget allocations. Groups of producers that control a large proportion of national wealth often have the means to influence public policies to their benefit. Political pressures and donor approaches sometimes influence spending toward short gestation projects and programs rather than those that are of a longer term and higher in impact.

The inability to extract short-term political credit sometimes acts as a disincentive for policy makers to commit to long-term agricultural R&D investments.

First, goods and services with a long lag between the time when resources are allocated and when the benefits become available are less politically attractive. Politicians often have a short time-horizon when in office and the inability to extract short-term political credit sometimes acts as a disincentive for policy makers to commit to long-term agricultural R&D investments, thus jeopardizing future research planning and outputs. Given low investments by governments, agricultural research in many SSA countries is highly dependent on donor funding, which by nature is mostly short term and ad hoc, often causing major fluctuations in a country's yearly agricultural investments. In contrast to the long gestation period required to realize the benefits of investing in research, public spending to subsidize agricultural inputs usually requires a span of only a few months from the time of the investment until the subsidized inputs reach farmers.

Second, areas of public spending involving large infrastructure or other capital investments (such as irrigation) create opportunities for public officials to improve the chances of a private agent winning contracts, or to loosen regulatory burdens on the agent, in return for private payments to the official.

Box 3 Agriculture research has high returns but is severely underfunded

Spending on agricultural R&D is worth an especially close look, given the strong evidence that returns to investments in this area are consistently high around the world. A large sample of studies estimated rates of return averaging 43% in developing countries and 34% in Sub-Saharan Africa. Yet, agricultural R&D capacity in SSA has remained low by international norms. Over the last decade, spending on agricultural research constituted about 0.4% of agricultural GDP in SSA, compared with 1.3% in Latin America and the Caribbean, 0.6% in East Asia and the Pacific, and 0.9% in South Asia (figure 0.7). In addition, Africa was the only region where agricultural research spending fell on average over this period. These are troubling signs that agricultural research is severely underfunded in Africa.

Source: Goyal, A. and J. Nash (2017), 'Reaping Richer Returns: Public Spending Priorities for African Agriculture Productivity Growth', Africa Development Forum series. Washington, DC: World Bank

Well-targeted investments must be complemented by a host of other policies.

Complementary policies and investments are necessary

Investments in broader rural infrastructure, health and education matter too, and well-targeted investments must be complemented by a host of other policies. Indeed, in a poor policy environment, even spending in areas generally considered high return will be unproductive or counterproductive.

The smart use of public funds—not only by agriculture ministries but also by other ministries dealing with hard and soft infrastructure in rural areas—has laid the foundation for transformation in other parts of the world. A key for policy makers and development practitioners is knowing what kinds of spending decisions can yield higher returns in achieving public policy objectives, and what policy mix is required. In a poor policy environment, spending even in areas that would otherwise deliver high returns will be unproductive or counterproductive.

Addressing the impacts of climate change

Public spending policy will need to remain flexible to cope with future challenges, and for agriculture, probably none are more urgent than climate change. It is a threat for agriculture across the world, but the lack of resilience of poor farmers makes it particularly serious in countries across SSA, including Zambia.

Most investments to mitigate climate change (low-carbon growth) and to adapt to it (resilience building) will need to be made by farmers and other private agents.

Projections show yield decreases in the near-term of 5%, potentially growing to 15–20% across all crops and Sub-Saharan regions by the end of the century³⁶. Agriculture is also an important contributor to greenhouse emissions, particularly from deforestation, and Africa is the only region where the majority of production increases have come from expanding cultivated areas, generally at the expense of forests. In Africa, as around the world, more climate-resilient agriculture is needed to achieve the triple win of enhancing agricultural productivity, mitigating emissions of greenhouse gases, and helping farmers adapt to climate change.

Proactive government policies, planning, and investments will be required to provide information, incentives, and an enabling environment to encourage communities, households, and the private sector to change their behaviors and investment choices. Many climate-resilient investments will not be very different from productive investment choices, even without taking climate change into account. Building resilience has overall benefits in any case, but their value is amplified by the changes that will occur with global warming.

Budgetary plans need to do a better job at incorporating considerations of climate change.

For public spending priorities, climate-smart agriculture entails using landscape-scale approaches to invest in managing climate risks through developing drought or flood-resistant technologies; understanding and planning for transitions to new adapted cropping and livestock systems and livelihood options; and reducing greenhouse gas emissions from livestock practices and land use changes that cause deforestation and losses of biomass and soil carbon. Increasing resilience, restoring degraded lands; and managing ecosystem services better will play key roles in all of these. Efforts to craft budgetary and policy choices to create a more climate-smart agriculture will have to cope with special challenges rooted in many uncertainties, distributional issues, and the long-term nature of the problem. To help meet these challenges, budgetary plans need to do a better job at incorporating considerations of climate change.

F. SUMMARY OF IDEAS FOR MORE PRODUCTIVE AGRICULTURE INVESTMENT

What expenditure choices are required to improve the return on investment in agriculture? This is an important question, but there is also a need to think hard about why reforms, discussed for many years (for example the e-voucher), have been so sluggish. How can political support be marshalled for reform and more effective spending? Efforts and innovation are needed to overcome inertia in policy making and move beyond the status quo.

The above analysis and following ideas are focused on agriculture public spending and investment. There are much broader discussions on agriculture reform, to which it is hoped that these ideas will contribute.

As savings are realized, they should be reinvested into the agriculture sector.

i. Streamline and better target agriculture subsidies: There are four key steps within the FISP to achieve this. First, the roll-out of the e-voucher to all districts has long been discussed as a means of improving the quality of FISP, and remains crucial. The 2017 budget promised a full roll-out for the 2017-18 season, but this—based on current delivery challenges—appears to be too ambitious. Instead, a realistic timeline for 2017-19 should be drawn up. Second, the targeting of the program³⁷ should be enhanced to make it more efficient and to reduce the overall cost (freeing up resources for complementary agriculture expenditures). Linking the electronic card to National Registration Cards will be a key step. Third, there is need for a clear exit strategy—farmers should not receive subsidies indefinitely—as the program should sustainably raise productivity and incomes so that the farmer can buy inputs and graduate from the subsidy program. Finally, there is a need to ensure that farmers can, in practice, select the inputs they would like to use and the crops they grow. This is a crucial step for reversing the maize-centric status of Zambian agriculture. To improve the FRA, efforts are needed to ensure the prescribed purchase limit is not exceeded. A monitoring system must also be built to ensure that purchasing relative to the limit can be tracked accurately.

Climate-smart agriculture, particularly conservation agriculture, can increase the agricultural productivity of farmers.

ii. Ensure high-return areas get funded and complementary investments are made: Government routinely spends 79% of the agriculture budget on the FISP and FRA. As these programs are improved, savings will be realized. These should be invested into the agriculture sector high-return areas such as R&D, extension services, irrigation, livestock development, infrastructure and technology. A careful strategy will also be needed to guide such expenditure, and more predictable flows of resources to the sector will help ensure there is an incentive to plan.

iii. Address the impacts of climate change: Climate-smart agriculture, particularly conservation agriculture, can increase the agricultural productivity of farmers, thus contributing to enhanced food security and increased incomes per households, as well as reduced impacts of climate change. Zambia is also well-placed to access climate finance and these avenues should be explored.

ENDNOTES

- 1 This section is based on analysis in World Bank (2017), 'Africa's Pulse', April 2017 edition.
- 2 World Bank (2017), 'Africa's Pulse', April 2017 edition.
- 3 Smith, G., F. Davies and Z. Chinzara (2016), 'Beating the Slowdown: Reducing Fiscal Vulnerabilities for Economic Recovery', Policy Note: <http://www.worldbank.org/en/news/feature/2016/10/11/ beating-the-slowdown-in-zambia-reducing-fiscal-vulnerabilities-for-economic-recovery>.
- 4 Central Statistics Office (2017), 'Crop Survey for 2016-17 Season', May 2017.
- 5 World Bank (2015), 'Powering the Zambian Economy', 6th Economic Brief (December 2015), World Bank, Washington D.C.
- 6 Bank of Zambia (2017), 'Statistical Fortnightly', May 2017, Lusaka.
- 7 Bank of Zambia (2017), 'Statistical Fortnightly', May 2017, Lusaka.
- 8 Central Statistical Office (2017), 'Monthly Bulletin', May 2017.
- 9 Bank of Zambia (2016), 'Monetary Policy Statement', November 2016.
- 10 Bank of Zambia (2017), 'Monetary Policy Statement', February 2017.
- 11 The dividend is treated as one-off non-tax revenue and relates to profits made by the BoZ when holding the 2015 US\$ denominated Eurobond proceeds. This was a period when the Kwacha depreciated against the US\$.
- 12 Republic of Zambia (2016), '2016 Mid-Year Economic Review', October 2016, Ministry of Finance, Lusaka.
- 13 Ministry of Finance (2017), March 2017 Monthly Economic Report'.
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- 15 Ministry of Finance (2017), '2016 Economic Report', Lusaka, Zambia.
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- 19 World Bank (2017), 'Commodity Markets Outlook', April 2017.
- 20 World Bank (2016), 'Raising Revenue for Economic Recovery', 8th Economic Brief: <http://www.worldbank.org/en/country/zambia/publication/zambia-economic-brief-raising-revenue-for-economic-recovery-in-zambia>
- 21 The Seventh Economic Brief was focused on this topic. World Bank (2015), 'Beating the Slowdown: Making Every Kwacha Count', 7th Economic Brief (June 2015): <http://documents.worldbank.org/curated/en/804591467989562427/Zambia-economic-brief-beating-the-slow-down-making-every-kwacha-count>
- 22 Goyal, A. and J. Nash (2017), 'Reaping Richer Returns: Public Spending Priorities for African Agriculture Productivity Growth', Africa Development Forum series. Washington, DC: World Bank. This book can be accessed free of charge at: <https://openknowledge.worldbank.org/handle/10986/25996>
- 23 World Food Program, Food Security Analysis: http://vam.wfp.org/CountryPage_overview.aspx?iso3=zmb&_ga=2.215552855.1599554784.1497428589-933894520.1497428589
- 24 The Global Hunger Index analyses data on: undernourishment; wasting (children under five years); prevalence of stunting in children; and the under 5 mortality rate. See: <http://ghi.ifpri.org/>
- 25 The 10% target was set in 2003 and labeled the Maputo Declaration, it was reiterated in the 2014 Malabo Declaration.

- 26 For example, Benin (2015) finds the aggregate elasticity of agriculture productivity to public agricultural spending in a sample of 34 African countries was 0.04, with a rate of return of 11% (significantly lower than past estimates). However, the elasticity to research spending was estimated to be substantially higher than for overall expenditure, at 0.09, with rates of return ranging from 24% to 126%.
- 27 Here the agriculture budget is considered to include spending by the Ministry of Agriculture and the Ministry of Fisheries and Livestock. Forestry is excluded because it is under the Ministry of Lands, Natural Resources and Environmental Protection.
- 28 Benin, S. (2015), 'Returns to Agricultural Public Spending in Africa South of the Sahara'. IFPRI Discussion Paper 01491 (December). IFPRI, Washington, DC.
- 29 Jayne, T., Mason, N., Burke, W. and J. Ariga (2016), 'Agricultural Input Subsidy Programs in Africa: An Assessment of Recent Evidence', International Development Working Paper 145, Michigan State University, East Lansing.
- 30 See: IAPRI (2016) White Paper http://www.iapri.org.zm/images/WorkingPapers/white_paper_2016.pdf
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- 32 2017 Budget Address by Honourable Felix C. Mutati, MP Minister of Finance. Delivered to the National Assembly on Friday, 11th November, 2016.
- 33 Kuteya and Kabwe (2015), 'Zambia agricultural sector performance: 2000-2015'.
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- 35 Mason and Meyers (2011) found that between 2003 and 2008 the mean market prices was raised by 19% and price volatility reduced by 36%.
- 36 World Bank (2013), 'Growing Africa: Unlocking the Potential of Agribusiness'. Washington, DC.
- 37 For a detailed discussion see: IAPRI (2013), 'How Can the Zambian Government Improve the Targeting of the Farmer Input Support Program?' Policy Brief Number 59: http://www.iapri.org.zm/images/PolicyBriefs/ps_59_rev.pdf

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ZAMBIA ECONOMIC BRIEF

REAPING RICHER RETURNS FROM PUBLIC EXPENDITURES IN AGRICULTURE