INTERNATIONAL MONETARY FUND

IMF Country Report No. 15/346

MALAWI

SELECTED ISSUES

December 2015

This Selected Issues paper on Malawi was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with Malawi. It is based on the information available at the time it was completed on November 30, 2015.

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International Monetary Fund
Washington, D.C.

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SELECTED ISSUES

November 30, 2015

Approved By
The African Department

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CONTENTS

FIGURES

TABLES

FIGURES

TABLE

REFORMING THE FARM INPUT SUBSIDY PROGRAM[1]

A. Introduction

1. The Farm Input Subsidy Program (FISP) is one of the largest social expenditure items in Malawi, aimed at improving food security and reducing poverty. The FISP program targets poor rural households and provides them with a coupon for a predetermined amount of fertilizer (100kg) at a heavily subsidized rate. The inception of FISP in 2005 coincided with a substantial increase in the production of maize that mitigated persistent food insecurity. From this perspective, the program was considered successful. More recently, the program has become increasingly costly, without the accompanying improvements in maize production or poverty reduction. As a result, the authorities are currently considering reforming the FISP program.

B. Macroeconomic and Distributional Implications of Reforming FISP—A Model–Based Approach

2. The objective of this note is to develop a framework to study the macroeconomic and distributional implications of alternative FISP reforms. Given its sheer size (3 percent of GDP), covering (1.5 million households), and because it impacts agriculture—the most important economic sector in Malawi—FISP is clearly macro critical. In addition, FISP is a component of social expenditures, which are monitored under the current ECF program. Hence, the policy analysis of reforming FISP must go beyond the impact on macroeconomic or fiscal variables, and aim at understanding the various effects that reforms may have across different segments of the population. While various empirical studies on Malawi, including the World Bank's Poverty Assessments, have documented the impact of past and current policies on inequality using household data, none to date have used a formal general equilibrium framework to quantify the effects of alternative policy scenarios.

3. The results of this study show how policies that seek to improve the efficiency of expenditure—which is critical to creating fiscal space to finance Malawi's development—can be consistent with higher and more equitable growth. The study focuses on the macroeconomic and distributional impacts of reducing the subsidy rate for the FISP. If then considers complimentary policies that could compensate the poor and foster equitable growth.

[1] The team is grateful to Andrew Berg, Rupa Duttagupta, Chris Papageorgiou, Catherine Pattillo, David Owen, and Oral Williams for helpful comments and suggestions.

A model of the Malawian economy

4. The model is calibrated to reflect key features of the Malawian economy. Details on the specific structure of the model can be found in Box 1. The principal features include:

- A very significant role for agriculture.
- A relatively small manufacturing sector.
- Heavily concentrated exports, primarily on commodities.
- A relatively basic financial market, with limited opportunities for risk sharing.

5. Given the prominent role agriculture plays in the economy, its key features are explicitly considered in the analysis. First, agricultural supply is built from the bottom up and comprises the output of a large number of agricultural households ranging from subsistence farms (that barely generate any surplus above subsistence needs) to higher productivity farms active in domestic and international markets. Since FISP targets fertilizer that is mostly used in maize production, the model includes an agricultural portfolio decision problem for farmers (so that they decide what to grow based on prices and policies, including FISP). These farmers can either produce maize (Malawi's main staple) or other agricultural goods that are either used for final consumption or as an input in the production of commodity exports. Prices of domestically sold agricultural goods are determined by the interaction of domestic supply and demand. Commodity exports e.g. tobacco, are relatively low value-added activities and are traded at prices determined in international markets. Fluctuations in agricultural prices play an important redistributive role in the model as higher prices distribute income towards surplus farmers.

6. The model also captures key aspects of the current FISP program today including the subsidy rate. Further, although the program is assumed to target the rural poor, it is known that targeting is difficult to implement in practice. Hence, we consider a setting with correct targeting, but also one where the full bottom half of the income distribution receives the subsidy which is uniformly distributed. Finally, since farmers choose their optimal demand for fertilizer, and since demand could well be below what is provided by the coupon, we incorporate a secondary market for "surplus" fertilizer coupons. This represents a source of income for farmers that sell them, and reforming the size of the subsidy will impact such incomes.

Box 1. General Structure of the Model

- Small open economy with three consumption goods: maize, other agricultural goods, and non-food goods (manufacturing and services).
- There are four types of households: rural, urban, government employees, and entrepreneurs (capital holders). Within each of the first three types, there is a continuum of households, equal ex ante, but facing idiosyncratic risk. Households solve dynamic optimization problems taking prices and government policies as given.
- Four goods are produced: (i) maize (produced by rural households), (ii) other agricultural goods (also produced by rural households), (ii) non-food items (manufacturing and services), produced either by urban households (in family businesses) or by entrepreneurs (the industrial sector). Entrepreneurs also produce (iii) traditional exports, which are not consumed domestically and are exported at a price given by international markets.
- The only financial assets available are one-period bonds, and they are traded among households to allow for risk sharing (in the baseline only urban households have access to the bond market). The interest rate of these bonds and the price of domestic food are determined by supply and demand forces in equilibrium.
- The government collects tax revenue (on income, consumption, etc.). This revenue is used to fund the FISP program and other government expenditures (including public sector wages, capital investment and pro-poor spending).
- The model is thus a dynamic general equilibrium including a continuum of households facing idiosyncratic risk (as in the income inequality literature) and also multiple sectors (as in the structural transformation literature).

Empirical underpinnings: Matching key features of Malawi's macro and household level data

7. The model qualitatively and quantitatively reproduces key macroeconomic trends in Malawi. Parameters are chosen so that the model correctly captures the relative size of the agricultural, manufacturing, and services sectors. For the baseline year (2014) in the model as in the data, the agricultural sector accounts for 33 percent of GDP, and the share of cereals (maize) in the agricultural production is 15 percent, public expenditure is 21 percent of GDP and expenditure in FISP correspond to a 3 percent of GDP. Private consumption and private investment as share of GDP are also reflected in the data. These data are matched by calibrating the differences in total factor productivity (TFP) across sectors in the economy, as well as the sector specific parameters of the production functions, and implicit tax rates.

8. The model replicates key distributional features of Malawi's household level data. Each household is subject to income shocks that are calibrated to reproduce Gini coefficients of consumption and poverty rates observed in Malawi. In addition, the model is calibrated to match households' consumption patterns with the objective of capturing the distributional implications of the policy changes.

Policy measures and reforms for equitable growth

9. The first set of policy changes we consider consist of lowering the subsidy rate from 97 percent to 79 percent, and simultaneously reducing the procurement costs of the FISP program by 25 percent. The reduction in the fertilizer subsidy rate and the procurement costs of the program is expected to improve the quality of public expenditure and to generate a more efficient allocation of agricultural factors (land and labor). The reform is in line with the recent changes to the FISP program announced by the government. It allows the government to free up resources corresponding to 1 percent of the GDP for other uses. The results of these policy changes are summarized by the blue triangles in Figure 1. From now on we will refer to this policy set as FISP reform.

10. In addition, we introduce a policy package including two compensatory measures that make the overall reform pro poor. This comprises: (i) expanding the existing cash transfers program (by an amount equivalent to 0.25 percent of GDP); and (ii) an increase in agricultural research and development (R&D, by an amount equivalent to 0.5 percent of GDP).[2] The combined effect of the FISP reform and the compensatory measures are summarized by the red bars in Figure 1. From now on, we will refer to this combined package as pro poor reform.

Illustrative scenarios: quantitative results

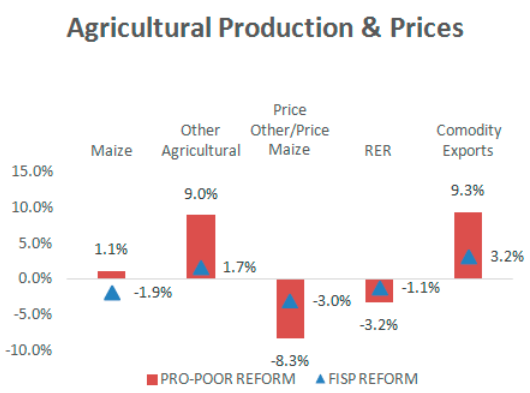
11. The model suggests that FISP reform in isolation results in a more diversified agricultural portfolio, increasing productivity, and, ultimately, macroeconomic activity. Relative to what would prevail absent the subsidy, too much maize is produced by small-low productivity farmers. Lowering the subsidy results in a more diversified agricultural portfolio. The supply of agricultural goods other than maize increases (by 1.7 percent). Some of this is ultimately exported. In consequence agricultural exports increase (by 3.2 percent). This benefits mostly larger, more productive farms, and agents in the right tail of the income distribution. As the incomes of these agents go up, savings also go up. This eventually translates into higher capital stock for the economy, higher output, and higher private consumption (Figure 1).

12. The FISP reform in isolation would benefit wealthier and urban households more than rural households. The increased supply of non-maize agricultural goods causes the prices of these goods to go down, and with them farmers' incomes and welfare. In addition, the lower subsidy rate implies that the net gains from reselling FISP coupons declines. Given that fertilizer use is positively related to productivity, it is the low productivity farmers that had the strongest incentives to get cash instead of keeping the coupon, and these are also the individuals that loose the most from the lower subsidy. In the short run, inequality therefore increases.

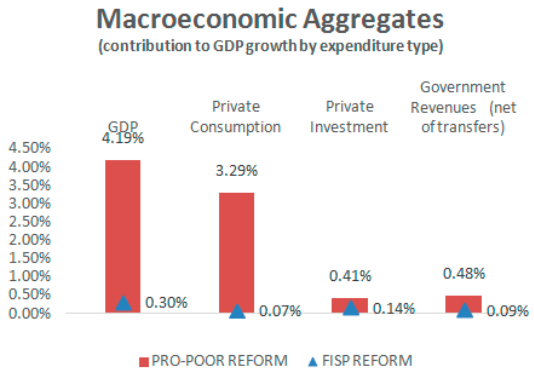
[2] Spending 0.5 of GDP in R&D expenditure may translate into a 10 percent improvement in TFP in the agricultural sector (based on the results from plot level data for 376 households in Mzuzu, Lilongwe, and Blantyre from May to December 2003 analyzed simulation an increase in R&D expenditure from 0.17 percent of GDP to 0.5 percent of GDP translates into increase of 10 percent in the TFP in the agricultural sector.

Figure 1. Malawi: Impact of Reforms to the Farm Input Subsidy Program

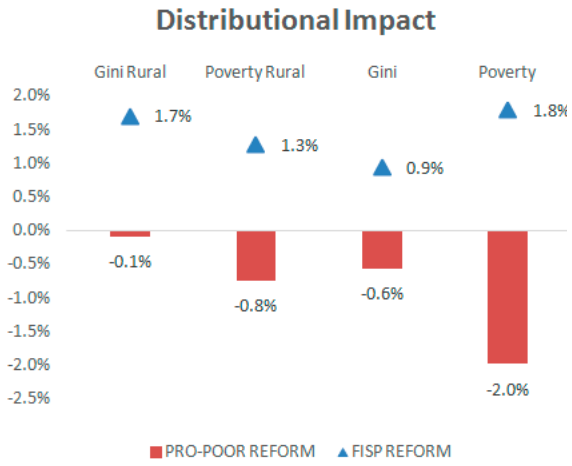
The reforms would have a positive impact on agricultural diversification and promote exports…



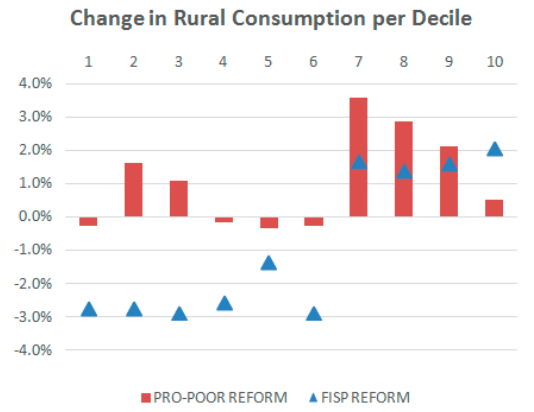
…and also have a positive impact on the macro economy



The reforms would be regressive in isolation but compensatory measures improve equity



… although the poorest in rural areas would enjoy higher consumption than before.



Source: IMF staff estimates.

Policies for equitable growth

13. Expansion of agricultural R&D coupled with cash-transfers generates long-term widespread benefits in the rural sector that reduce inequality and poverty even further. Targeted cash transfers to the rural poor reduce inequality. These transfers can be financed from the lower spending that result from reforming FISP. Targeting the rural poor is particularly pertinent when the price of agricultural goods is negatively affected by the proposed reform. In the model, households receive these transfers and optimally allocate them between consumption and savings. Cash transfers are typically seen as a short term social support measure. In contrast, increasing

agricultural productivity has long lasting impact on the economy (including the poor). The pro poor reform results in a reduction of the Gini by 0.6 percentage points and a reduction of the poverty rate of 2 percentage points. At the same time, private investment increases by even more than the FISP reform in isolation (3.2 percent) and so does GDP (4.2 percent). Finally, the direct net savings from the overall FISP reform is equivalent to 0.25 percent of GDP. Due to the general equilibrium effects that also expand economic activity, the total fiscal space improves by 0.73 percent of GDP.

14. Targeted cash transfers to the rural poor reduce inequality. These transfers can be financed from the lower spending that result from reforming FISP. Targeting the rural poor is particularly pertinent when the price of agricultural goods is negatively affected by the proposed reform. In the model, households receive these transfers and optimally allocate them between consumption and savings. In the simulation, the cash-transfer program is increased just enough so that if the only change was lower subsidies inequality, as measured by the Gini coefficient, and the proportion of households below the poverty line, would not be negatively affected by the reform. Because of general equilibrium effects, when the reform to FISP is combined with cash transfers and improved agricultural productivity, the impact on the macro-economy is positive and both poverty and inequality go down.

15. Expansion of agricultural R&D coupled with cash-transfers generates long-term widespread benefits in the rural sector that reduce inequality and poverty even further. In the simulation an increase in R&D expenditure from 0.17 percent of GDP to 0.5 percent of GDP translates into increase of 10 percent in the TFP in the agricultural sector.[3] The increase in agricultural productivity is coupled with a cash transfer program that accounts for 0.25 percent of the GDP. The policy mix reduces the Gini by 0.6 percentage points and the population below the poverty rate by 2 percentage points with respect to the pre-reform scenario. At the same time, private investment increases by 3.2 percent and GDP rises by 4.2 percent. This policy mix still leaves 0.25 percent of GDP freed up by the FISP reform to be used for alternative purposes (Figure 1).

16. Our findings show that designing policies that promote growth and address inequality requires an in-depth understanding of the economy's structure, relevant inter-linkages, and the possible synergies and trade-offs between objectives. It requires taking into account: (i) the distribution of income and consumption at a micro level, and the overall inter-linkages with the macroeconomic and policy framework; and (ii) the effects that policies may have on different sectors and households, and possible tradeoffs with other objectives. The illustrative scenarios considered in this model show that a well-designed set of policies can indeed increase efficiency and protect equitable growth objectives, in particular for the rural poor.

[3] The increase in agricultural productivity is calibrated using plot level data for 376 households in Mzuzu, Lilongwe, and Blantyre from May to December 2003 (source Tachale and Sauer 2008).

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Appendix I. Model Details

1. The model presented here is a dynamic stochastic general equilibrium model of a small open economy with multiple sectors. There are a large number of households that are heterogeneous, both within and across sectors. Urban and rural households differ with respect to their occupations as well as to their access to financial intermediaries. Within-sector heterogeneity is due to household specific shocks to productivity.

Economic sectors

2. There are four types of occupations in the economy, three urban and one rural:

- Agricultural workers (rural).
- Entrepreneurs (urban.)
- Public sector workers (urban).
- Private sector workers (urban).

Households are confined to their sectors and cannot easily switch occupations.

Production

3. Agricultural workers use their own labor to produce either maize, or other agricultural goods. Agricultural workers differ in their land holdings (some are small farmers and others own large plots), and employ land and labor, together with fertilizer in the case of maize, to produce.

4. Public sector workers work for the government which does not produce marketable goods. Private sector workers provide their labor to the entrepreneurs. Additionally, both private and public sector workers devote some of their time to producing a nonfood product.[1]

5. The entrepreneurs produce the non-food item using capital and labor.[2] This nonfood good can then either be sold to consumers or converted into capital using an intermediary. Each entrepreneurial household owns its own capital stock which cannot be converted back into a nonfood consumption good. Capital depreciates over time, so that new investments are necessary to maintain the capital stock.

[1] This assumption is made to capture Malawi's large informal sector.

[2] Hence the non-food product is produced both within the entrepreneurs' firms and informally by workers at home.

6. Besides the domestically produced food item and the non-food product, there is also an agricultural export product. The production of this good (e.g. tobacco in Malawi, cocoa in Ghana) takes place in firms owned by entrepreneurs. It uses the food item as input which is then refined and packaged using labor.

Production Structure			
Good	**Producer**	**Input**	**Use**
Maize	Agricultural workers	Land, labor, and fertilizer	Consumption
Other agricultural goods (i.e., Tobacco , pigeon peas, tea, sugar, etc.)	Agricultural workers	Land and labor	Consumption, production of agricultural exports
Non-food product	Entrepreneurs	Private sector labor, capital	Consumption, investment
	Private / public sector workers	Informal technology	
Agricultural export	Entrepreneurs	Domestic food product, private sector labor	Export

7. Preferences and household decisions are as follows:

- Households live forever and are forward looking. In every period, they decide how much of their disposable income to consume and how much to save. Households face uncertainty regarding their future income and are risk averse: they want to avoid large fluctuations of their consumption over time. Having access to a financial intermediary allows them to accumulate a buffer of financial wealth as insurance against future drops in income. Households facing more severe shocks can borrow to smooth consumption if they have access to finance.[3]
- Only private and public sector workers and a given fraction of agricultural workers have access to finance. The remaining farmers can neither save nor borrow.
- Households also decide how to allocate their consumption expenditure over two food items (maize and other agricultural goods) and the non-food item.
- Workers also make a decision on how much of their time to devote to the formal labor market and how much to work in the informal sector.

[3] The model thereby highlights the role of financial inclusion not just as a measure of mobilizing resources for investment but also as an insurance mechanism that reduces consumption inequality.

Financial Intermediation and Financial Sector Policies

8. Financial intermediaries have two distinct roles in the economy:

- They convert non-food goods into capital.
- They allow workers to save and borrow.

Fiscal policy parameters

9. The government in the model has access to a rich set of taxes and transfers to pay the public sector workers, to finance FISP, and to provide insurance to vulnerable households. These policies are captured by a set of exogenous policy parameters:

- A tax on entrepreneurs' capital income.
- A tax on private and public sector workers' wage earnings.
- Sector specific and means-tested transfers and subsidies.

Idiosyncratic shocks

10. Each non-entrepreneurial household's productivity is subject to random changes over time, but these changes in productivity are different across households. At each point in time, some households are lucky while others are unlucky. There is no aggregate uncertainty and, given the large number of households, a law of large numbers applies, so that the distribution of shocks across households within each sector remains constant. That is, the number of unlucky households is always the same.

Equilibrium and steady state

11. At each point in time, prices, wages, and interest rates are set to ensure that the markets for all three domestically produced goods, for credit, and for labor clear. Moreover, given these prices (both in the present and future) and government policies, all household decisions are made to maximize the present value of lifetime utility. The prices of maize and of agricultural exports are exogenously given.

12. The economy is in a steady state. Aggregate variables and prices are constant over time, as is the distribution of wealth, income, and consumption across households. The income, wealth, and consumption of individual households however changes over time with the realization of their idiosyncratic shocks.

FINANCIAL SECTOR STABILITY ANALYSIS

A. The Landscape of the Malawi Financial System

1. Malawi's financial sector is dominated by banks, whose loans are concentrated in few economic activities and contracted by a small number of large borrowers. Banks accounted for 61 percent of financial sector assets at end-2014 and 95 percent of credit to the economy (Tables 1 and 2). Nearly 60 percent of total bank loans were concentrated in wholesale and retail sector, agriculture, and manufacturing sector. Banks provide mostly short and medium-term loans which are concentrated among a few borrowers. At end-2014, six out of the eleven banks had a credit exposure of more than 25 percent to their first largest single borrower and four banks had also their second largest borrower with an exposure above the 25 percent regulatory norm. Two banks account for more than half of assets, deposits, and capitalization of the banking sector.

Table 1. Malawi: Structure of the Financial Sector, (2011–14)

	2011	2012	2013	2014
Banks				
Number of banks	12	12	11	11
Local[1]	6	6	6	6
Foreign[2]	6	6	5	5
Bank assets/GDP (percent)	29.7	33.0	33.1	30.2
Private sector credit/GDP (percent)	13.9	14.6	12.5	11.7
NPLs/Gross loans (percent)	4.1	9.4	15.4	14.9
Microfinance Institutions (MFIs)				
Non-deposit taking MFIs				
Number of institutions	17	17	18	25
Assets/GDP (percent)	1.1	0.7	0.6	0.7
Credit/GDP (percent)	0.8	0.4	0.3	0.5
Financial Cooperatives				
Number of institutions	48	45	48	46
Assets/GDP (percent)	0.3	0.2	0.2	0.2
Credit/GDP (percent)	0.2	0.2	0.1	0.1
NPLs/gross loans (percent)	23.5	15.6	14.5	11
Insurance Companies				
No. of companies	11	11	11	11
Assets/GDP (percent)	6.5	5.4	4.0	3.1
Pension sector				
Number of pension funds	n.a.	1457	1777	n.a.
Number of members on pension	n.a.	156,936	191,256	201,405
Assets/GDP (percent)	5.6	6.8	8.5	9.6
Stock Market				
No. of listed companies	14	14	14	14
Trading volume (billions of Kwacha)	6.9	4.0	13.3	10.9
Market capitalization (billions of dollars)	17.1	14.2	19.4	17.6
Malawi all share index (percentage change)	8.4	12.0	108.3	18.8
Collective investment schemes				
Number	2	2	2	2

Source: Reserve Bank of Malawi.

[1] Excluding Leasing and Finance Company, which is not a commercial bank, but is governed by the banking regulations

[2] A local bank acquired a foreign bank (International Commercial Bank) in 2013. The number excludes a new foreign bank, which was granted licence in 2013, but was not yet operational in 2014.

Table 2a. Malawi: Total Assets of Financial Institutions

Assets	2013		2014	
	Billion Kwacha	Percent of total	Billion Kwacha	Percent of total
Banks	653.0	64%	796.1	61%
General insurance	18.9	2%	25.1	2%
Life insurance	170.5	17%	223.3	17%
Pension funds	170.8	17%	247.0	19%
MFIs	11.6	1%	17.8	1%
Total	1024.8	100%	1309.3	100%
Percent of GDP	51%		51%	

Source: Reserve Bank of Malawi.

Table 2b. Malawi: Financial Sector Credit to the Economy

	2013		2014	
	Billion Kwacha	Percent of total	Billion Kwacha	Percent of total
Credit from banks	256.6	97%	304.9	95%
Credits from non-deposits taking MFIs	5.5	2%	12.6	4%
Credit from deposit-taking MFIs (SACCOs)	2.7	1%	3.2	1%
Total credit to the economy	264.8		320.7	

Source: Reserve Bank of Malawi.

2. Banks are substantially exposed to fiscal developments. Although banks are privately owned, the government is a significant borrower[1]. At end-2014, the government provided about 3.5 percent of the banking system's deposits and held 20 percent of outstanding credit. Government securities represented 24 percent of banking system assets. Government securities are attractive to banks for three reasons: (i) their relatively high yield (around 27 percent in 2014 on 91-day treasury bill, versus an average inflation close to 24 percent), which is tax exempt; (ii) the ease with which these securities can be refinanced at the RBM's discount window; and (iii) "zero weighting" of government sovereign risk in the computation of bank solvency, thus requiring no capital provision and providing a high leverage effect on profitability.

3. The microfinance sector (MFIs) is sub-divided into two main categories, namely the non-deposit taking institutions and financial cooperatives. The former offers a wide range of financial services apart from mobilizing deposits and focus on payroll-based lending. The supervision of these entities is delegated to the Malawi Microfinance Network (MAMN).

[1] The state-owned bank was privatized in July 2015.

New directives that came into force in 2014 made liquidity, provisioning, and capital adequacy requirements applicable to non-deposit taking institutions whom would commence collecting deposits. The 46 savings and credit cooperatives (SACCOs) are under prudential supervision performed jointly by the RBM and the Malawi Union of Saving and Credit Cooperatives (MUSCCO).

4. The microfinance sector is a growing but narrow sector, accounting for 18 percent of financial sector's assets in 2014, but only 5 percent of credit to the economy. Total assets of the non-deposit taking entities grew by about 30 percent over 2011–14. Loans and advances account for the large share of total assets while capital and reserves form their main source of funds. The subsector has been facing a high level of NPLs and liquidity challenges arising from the high inflation environment and arrears in salary remittances by some government ministries. Financial cooperatives registered an increase of about 45 percent in their aggregate assets since 2011 and positive net profits since 2012. Nevertheless, the growth of the subsector is constrained by liquidity and high non-performing loans (11 percent in 2014)

5. The insurance industry is subdivided into three categories, namely general insurance, life insurance, and reinsurance. There are four life insurance companies accounting for 89 percent of total assets of the sector in 2014. General insurers are required to meet a minimum core capital of 50 million Kwacha and a minimum solvency ratio of 20 percent. Its average solvency ratio rose from 22.3 percent in 2012 to 30.4 percent in 2013 and 32.9 percent in 2014. This subsector registered improvement in capital in 2013 and 2014 following capital injection and increased profit retention. Both the general and life insurance subsectors registered improved profitability in 2013 but their profits after tax dropped in 2014 due a decline in income from investments and other sources.

6. Following the adoption of the new Pension Act in 2011, pension funds' assets increased substantially. There are over 1,500 pension funds and most are operated by four pension administrators. Furthermore, there are 13 stand-alone pension funds. Assets rose from 60 billion Kwacha (5¾ percent of GDP) in 2010 to 259 billion Kwacha (10 percent of GDP) in 2015. They are largely invested in equities, government securities, fixed deposits, and properties. The Act introduced mandatory participation by all employees in a pension scheme. Employers are required to contribute 10 percent while employees' contribution is 5 percent. Ongoing reforms will separate pension administration from life insurance companies' activities. The major risks facing the insurance sector include reinsurance risk and concentration risk. The former arises from non-payment of reinsurance premiums to foreign reinsurers due to insufficient availability of foreign exchange, while the latter arises from investment of insurance assets in shallow equity markets.

7. The capital market remains relatively underdeveloped with a limited number of trading instruments, few listed companies, and low participation by retail investors. Although market capitalization is high, turnover is low (Table 3). In a bid to develop a yield curve the government listed three bonds on the stock exchange for the first time in 2014. The capital market faces two kinds of risks, related to low consumer confidence and limited liquidity

Table 3. Malawi: Statistics for the Malawi Stock Exchange

	2011	2012	2013	2014
Volume of share traded (billion)	1.6	0.67	4.41	1.72
Value of share traded (billion Kwacha)	6.9	3.97	13.33	10.87
Market capitalization (billion Kwacha)	2,681.0	3,562.20	7,179.93	7,489.36
Percent of GDP	*214.0*	*237.2*	*357.0*	*291.4*
Malawi All Share Index	5,369.4	6,015.50	12,531.04	14,886.12
Domestic Share Index	4,238.4	4,725.50	9,850.19	11,720.43
Foreign Share Index	535.4	854.7	1,709.34	1,759.61
		(Percentage change)		
Malawi All Share Index	8.4	12.0	108.3	18.8
Domestic Share Index	8.1	11.5	108.4	19.0
Foreign Share Index	52.1	59.6	100.0	2.9

Source: Reserve Bank of Malawi.

B. The Resilience of the Banking Sector to a Potential Adverse Shock

Background

8. The resilience of the Malawi banking system to adverse macroeconomic shocks has been considerably strengthened in recent years. Malawi migrated to Basel II standards in January 2014 to strengthen financial sector stability. Under the Basel II regime, banks are required to maintain minimum core capital and total capital ratios of 10 percent and 15 percent respectively; conduct the Internal Capital Adequacy Processes (ICAAPs) annually[2] and submit the documentation to RBM; publish market disclosure reports; submit the monthly Basel II Call Report to the RBM; and maintain up to date risk management systems and standards, including enterprise wide risk management. Malawi opted for higher minimum capital adequacy ratios than under Basel II standards (6.0 percent Core Capital Ratio and 8.0 percent Total Capital Ratio) considering the banking business environment and factoring in the possible errors in capital calculation that could result from inadequate or poor quality data and inadequate risk management systems.

9. The RBM has taken additional steps to strengthen the soundness of the financial sector. To enhance the provisioning for NPLs, an asset classification directive was enacted in May 2014 based on the estimated recoverable amount method (ERAM). The directive imposes a provisioning rate that increases by 16.67 percentage points per quarter on loans past due after 90 days, up to 100 percent after 18 months. The new directive likely will increases the provisions to NPLs ratio. A Prompt Corrective Action (PCA) framework was enacted in May 2014 to strengthen the

[2] Under Basel II Pillar II, banks are required to assess their capital adequacy in relation to their strategy, business and financial projections and all material risks.

legal framework for early intervention and bank resolution. The PCA directives clarify and enhance existing triggers for early remedial actions for banks in financial distress.

10. Third party diagnostic assessments, designed as a tool to identify problem banks as well as sector-wide issues, were completed in 2014. Major areas of concern were communicated to the boards of directors of the respective banks for action, in line with existing prudential requirements and legal framework. Gaps raised by the diagnostic assessments were weak credit management, inaccurate loss provisioning, poor information management systems, and weak credit underwriting and administration. Strategies were put in place by the RBM to address these issues. Moreover, efforts were undertaken to strengthen the supervision framework of the banking system, including enhancement of both on-site and off-site supervision, as well as close monitoring and enforcement of compliance with prudential norms.

11. The banking sector in aggregate remains well capitalized, profitable, and liquid (Figure 1). While the aggregate ratio of regulatory tier-1 capital to risk weighed capital has declined somewhat over the last four years, it remains substantially above the statutory 10 percent minimum. Similarly the return on assets and on equity remains high compared to those in peer countries despite some reduction from their peak in 2012.

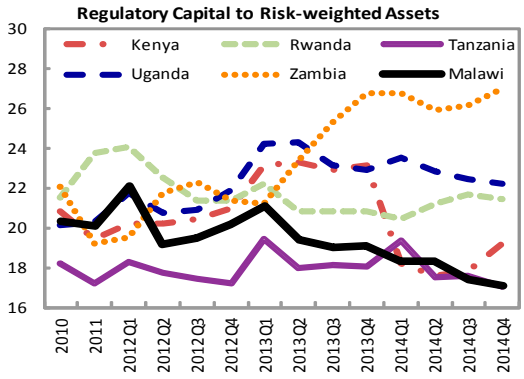
12. Bank-by-bank data indicate that while most, and in particular the two dominant, banks are solid, a number of banks are vulnerable. At end-2014, all but two small to medium sized banks met or exceeded, and some by a large margin, the statutory minimum tier 1 capital requirement. However, most banks faced a high degree of concentration risk, reflecting in part the limited number of large creditworthy customers and two banks had NPLs net of provisioning that exceeds their tier-1 capital. Most banks were also profitable, although three small banks recorded little or no return on assets (ROA) and two had negative ROA.

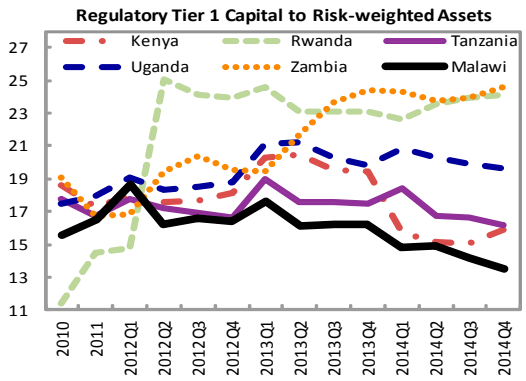
13. The stability of the banking system was enhanced by the sale of government's shares in the two weak banks in June 2015. The two problem banks were non-compliant with the minimum capital requirements. Government sold 75 percent of its shareholding in one bank to the fifth largest bank. Government's shares in the second weak bank (41 percent) were sold to the largest domestic bank. A restructuring and recapitalization of the two weak banks is proceeding.

Figure 1. Banking Soundness Indicators: Malawi Relative to its Neighbors

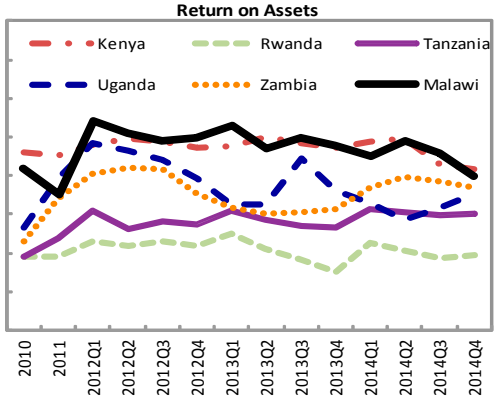
(2010–14, Percent)

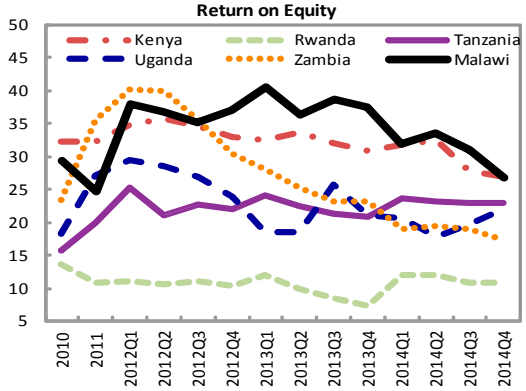
The banking sector remains well capitalized…



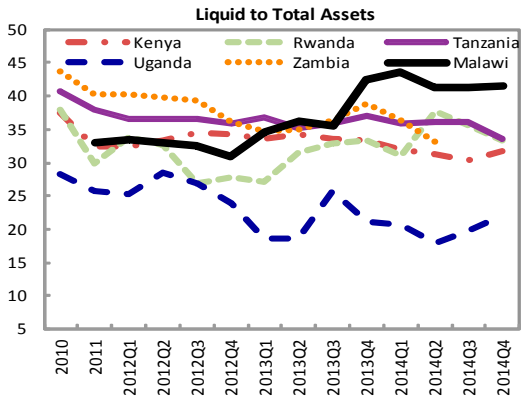


…profitable…

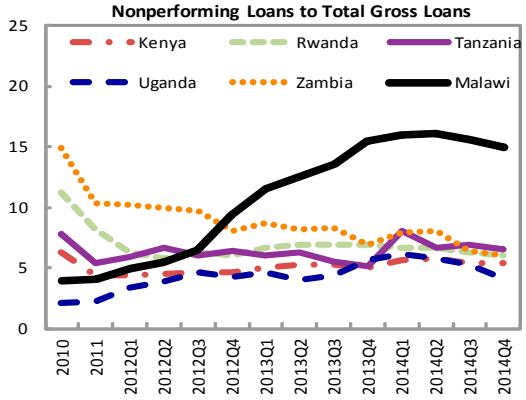




…and liquid…



…but credit risks have risen.



Sources: IMF's database and Malawian authorities.

Macro Risks to Financial Stability

14. The main macro-related risks to bank solvency and financial stability in Malawi arise from the following sources:

- **Fiscal policies:** Inadequate fiscal adjustment in the context of ongoing external financial shortfalls remains an important source of risks to financial stability and a deterrent to growth. In the recent past, the fiscal sector accumulated domestic payment arrears to suppliers (about 5½ percent of GDP) who experienced payment difficulties with banks, leading to an increase in NPLs and a tightening of lending conditions by banks. Greater recourse to domestic financing since the "cashgate" scandal led to a cumulative net domestic borrowing of about 8 percent of GDP. This resulted in crowding out of the private sector (hurting growth), to higher exposure of the financial sector to the central government, and increased exchange rate volatility. Higher interest rates and exchange rate depreciation increased the interest bill (3 percent of GDP) and the cost of goods and services which inflated the fiscal deficit in the absence of fiscal adjustment. The direct impact of domestic arrears, higher lending rates, and exchange rate volatility had a negative feedback effect on the real economy.

- **Monetary policy:** Tighter monetary policy conditions have led to high real lending rates that have curbed demand for private sector credit and increased NPLs. A recent episode of loosening the monetary policy stance by lowering the reserve requirement ratio increased liquidity at a time of exchange rate volatility. Both tightening and loosening monetary policy affect banks' balance sheets and, consequently, their financial soundness.

- **Volatility in tobacco exports.** Tobacco is the main cash crop and Malawi's main export commodity, accounting for 30–40 percent of its export revenues. Malawi is the sixth largest producer of tobacco in the world. This dependence on a single highly seasonal and weather dependent cash crop results in large within-year and year-to-year swings in export earnings and the exchange rate. Swings in tobacco earnings also results in swings in economic activity. The main transmission from the tobacco harvest to bank solvency and financial stability are via (i) the exchange rate and its impact on banks' balance sheet directly and on the repayment capacity of borrowers; (ii) the transportation sector and the wholesale and retail trade sector.

- **The maize harvest:** Maize is the staple food in Malawi and maize farming is a major income source for the bulk of the rural population. It accounts for 15 percent of the value added of the agricultural sector. The main transmission from the maize harvest to bank solvency and financial stability are via: (i) its impact on inflation; (ii) credit to farmers and their repayment capacity; (iii) credit to microfinance institutions; and (iv) the fertilizer subsidy program.

- **Exchange rate risks:** Malawi has a long history of foreign exchange shortages given structural balance of payments weaknesses. Thus, the main exchange rate impact on bank

solvency and financial stability is likely via its impact on (i) inflation and nominal interest rates; (ii) growth and real income; and (iii) borrowers' repayment capacity.

Macro Stress Tests

15. Mindful of the sensitivity of the banking system to domestic and external shocks, the RBM has been undertaking a half-year stress testing exercise since 2011. The exercise draws on the Cihak (2007) framework, adjusted for banking system's specificities. It considers four categories of risks, namely credit risk, liquidity risk, market risk (including interest rate and foreign exchange risks), and income risk. The impact of minor, moderate, and major shocks on Malawian banks is tested for each risk. The system-wide results of the stress tests are published in the semi-annual Financial Stability report and the results for each bank are discussed at meetings at which the banks are required to present the outcome of their own tests.[3]

16. We present the results of a replication of the RBM's stress tests using its basic framework. A more stringent assumption on provisioning new NPLs is used by considering that all new NPLs, resulting from shocks, are 100 percent provisioned. The RBM's framework assumes a provisioning rate of 50 percent on stress-generated NPLs in few scenarios and on all NPLs (existing and new ones) in others. A provisioning rate of 100 percent for all stress-generated new NPLs is in line with the new RBM's provisioning regulations issued in May 2014 (paragraph 9), which completely disregard collateral on NPLs after 18 months. Also, a few formulae used in the RBM's framework were readjusted too fit better the Cihak (2007) template. The tests are based on end-2014 banking sector data provided by the RBM.

17. Stress tests suggest that the banking system is generally resilient to credit, liquidity, and market risks, although concentration is high and the system is vulnerable to an income shocks. Credit risk poses the greatest threat to the banking system. Specifically, concentration risk arising from exposure to large borrowers represents the largest source of credit risk. In addition, the system is not robust to a combined major shock to net interest and foreign exchange income which would lower the tier 1 capital below the norm of 10 percent.

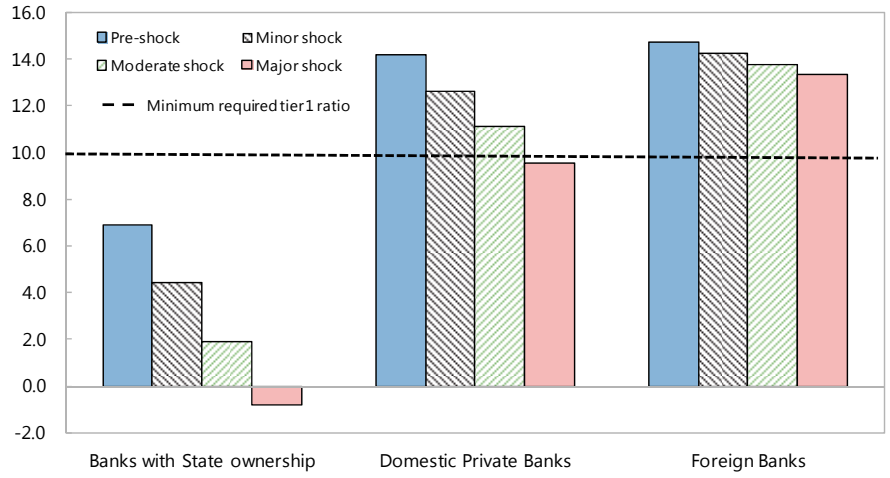
Credit Risk

18. The resilience of the banking sector was assessed by simulating the impact of an overall deterioration in loan quality on tier 1 capital ratio per bank (Figure 2). Uniform increases of 20 percent (minor shock), 40 percent (moderate shock), and 60 percent (major shock) in NPLs are assumed across banks, from their level at end-2014. A provisioning rate of 100 percent for the new NPLs was assumed. The results show that the banking system in aggregate would remain resilient to minor and moderate shock of this kind, as the tier 1 ratio would stay above the

[3] Individual banks are required to run their own stress tests each quarter. The conducted tests must be consistent with individual Internal Capital Adequacy Assessment Process (ICAAP). Stress testing framework guidelines for banks were issued by the RBM in April 2013.

prudential standard of 10 percent. However, the number of banks that would be undercapitalized would increase from two in the pre-shock situation to three in the minor shock scenario and to four in the case of a moderate shock. These two weaker banks have since been sold and are being recapitalized. A major shock would push four banks to below the capital adequacy norm.

Figure 2. Effects of a Uniform Increase in NPLs on Tier 1 Capital Ratio



Sources: Reserve Bank of Malawi and IMF staff estimates.

19. The sectoral shock to NPLs seeks to get a better insight of the vulnerability faced by each bank according to the sectoral loan concentration. The sectoral percentage increases in NPLs used by the RBM in its June 2015 Financial Stability Report are assumed (Table 4). The report states that the assumed increases in NPLs were based on the observed historical growths of NPLs within the sectors.

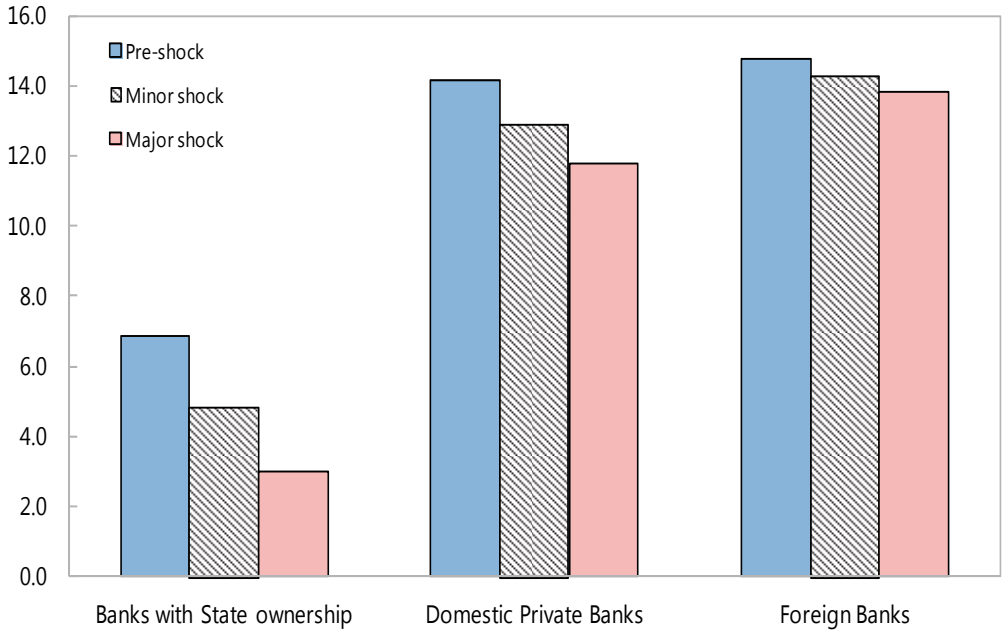
Table 4. Percentage Increase in NPLs by Economic Sector

Sectors	Pre-shock NPLs ratio	Percentage increase in NPLs	
		Minor shock	Major shock
Agriculture,	14.8	30.0	50.0
Manufacturing	4.7	20.0	40.0
Electricity, gas, water and energy	1.3	30.0	50.0
Construction	28.8	15.0	30.0
Wholesale and retail trade	20.3	5.0	10.0
Restaurants and hotels	31.1	30.0	50.0
Transport, storage and communicati	16.4	20.0	40.0
Financial services	20.4	30.0	50.0
Community, social and personal ser	11.5	30.0	50.0
Real estate	1.5	2.0	5.0
Other sectors	21.5	15.0	30.0

Source: RBM, June 2015 Financial Stability Report.

20. Tests on the vulnerability faced by each bank according to the sectoral loan concentration were conducted (Figure 3). The results of the stress test indicate that the banking system is quite resilient to the assumed sectoral increases in NPLs as the overall tier 1 capital ratio for domestic private and foreign banks would remain above the 10 percent threshold. However, one bank would see its tier 1 capital ratio drop below 10 percent in case of a minor major shock and two banks would not be complying with the capital adequacy norm in case of a major shock.

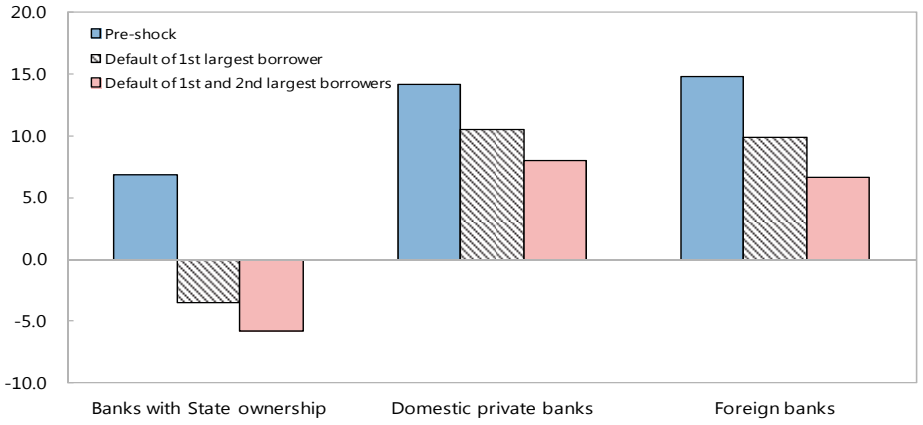
Figure 3. Credit Risk: Effects of Sectoral Increase in NPLS on Tier 1 Capital Ratio



Sources: Reserve Bank of Malawi and IMF staff estimates.

21. Large exposure to few borrowers exposes banks to concentration risk as a default of one or more large borrowers would lead a large drop in the bank's core capital (Figure 4). The results of the stress tests show that the entire banking sector is exposed to concentration risk through large exposures as the aggregate tier 1 capital ratio would fall below 10 percent after the default of the first largest borrower of each bank. The results also show that three banks would see their Tier 1 capital ratio falling below the regulatory minimum after their first largest borrower's default and 10 out of the eleven commercial banks will fall below the prudential requirement in case of default by their first two largest borrowers.

Figure 4. Effects of Default of Large Exposures on Tier 1 Capital Ratio



Sources: Reserve Bank of Malawi and IMF staff estimates.

Liquidity Risk

22. The results of the liquidity tests show that banks, in aggregate, are largely resilient to liquidity risk as all shocks result in the liquidity ratio remaining above the regulatory benchmark of 30 percent (Figures 5 and 6). Only the two weak banks (now sold) based on assumptions in Table 5 would shift to below the required liquidity coefficient, under a minor shock. The results show also that the survival period of almost all banks would be less than two weeks in case of a minor shock, but would fall below one week in case of a major shock.

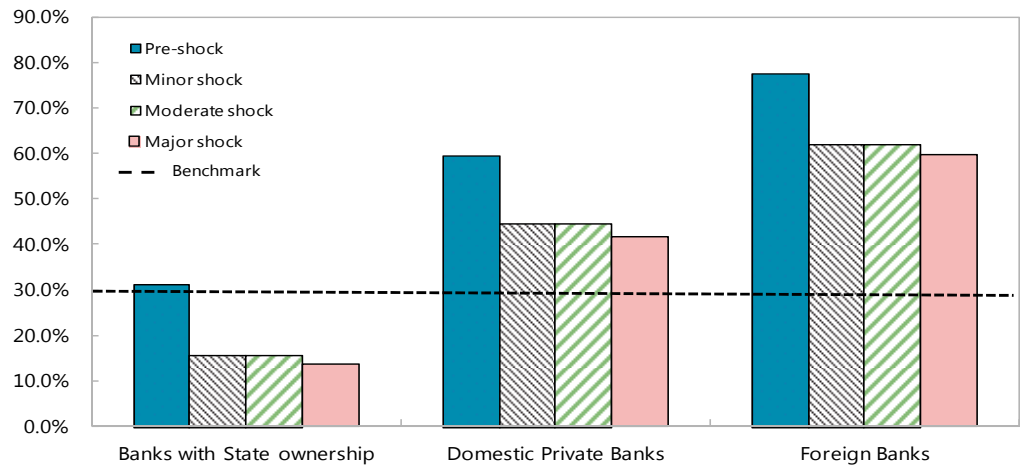
Table 5. Assumed Hair Cut and Deposit Run in Case of a Liquidity Shock

	Minor shock	Moderate shock	Major shock
Hair cut			
Cash	0%	0%	0%
Cheques	5%	15%	20%
Balances with RBM	15.5%	15.5%	15.5%
Local Registered Stock	10%	15%	20%
Nostro (banks' deposits abroad)	15.5%	15.5%	15.5%
Interbank claims	5%	10%	15%
Short Term Investments	5%	10%	15%
Bill of Exchange	5%	10%	15%
Deposit run	10%	20%	30%

Sources: Reserve Bank of Malawi and IMF staff estimates.

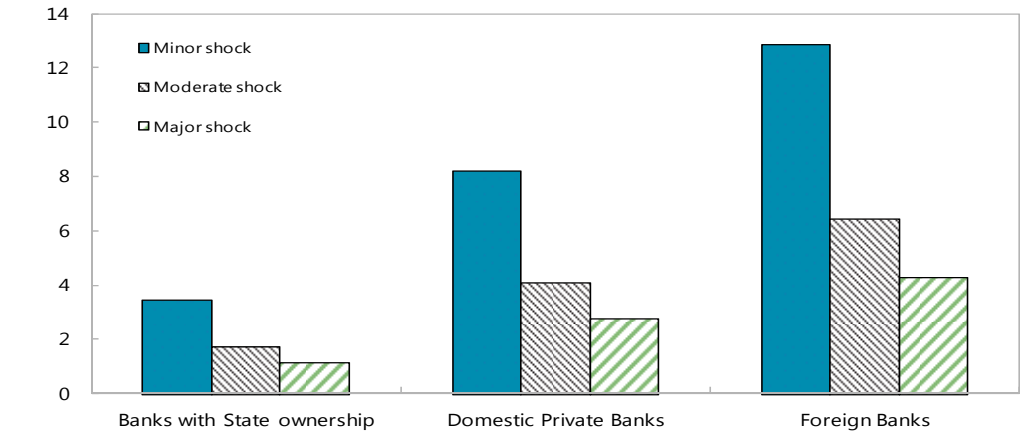
23. The liquidity measure and stress test may underestimate the risk of banks becoming illiquid, however, in the case of a crisis. Deposit concentration and a lack of good risk management may make some banks vulnerable to deposits flight, which might also cause the interbank money market to dry up. The prudential liquidity ratios may, moreover, overstate how liquid banks are if assets classified as liquid are de facto not liquid because of counterparty risk, market constraints, or restrictions on the use of these assets as collateral to access central bank lending facilities. The ratios may, furthermore, be overstated to the extent that banks have funded their acquisition of liquid assets by short term borrowing.

Figure 5. Effects of Liquidity Shocks on Liquidity Ratios



Sources: Reserve Bank of Malawi and IMF staff estimates.

Figure 6. Days Afloat in Case of a Deposit Run[1]



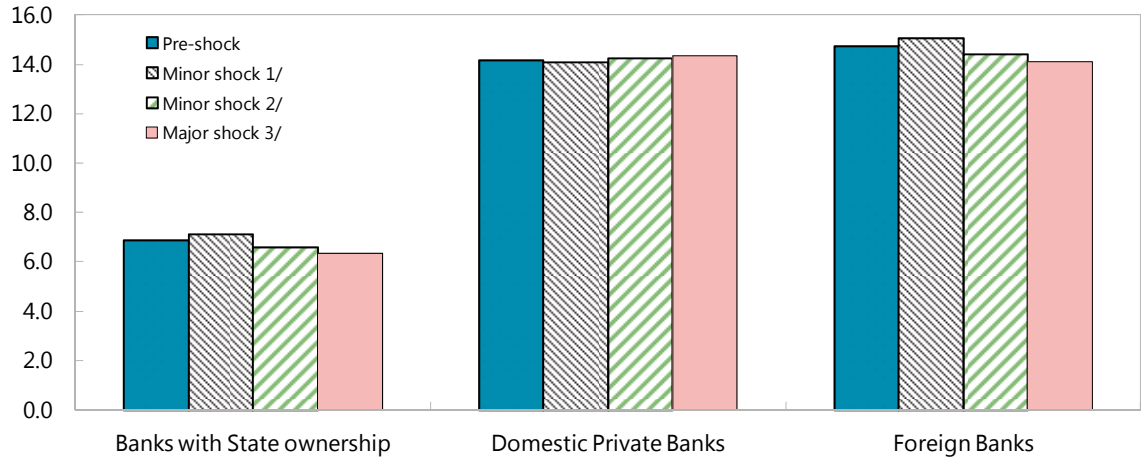
[1]Total liquid assets over the amount of deposits which would be withdrawn per day.

Sources: Reserve Bank of Malawi and IMF staff estimates.

Market Risks

24. The results of the stress tests reveal that, in aggregate, banks are quite resilient to interest rate risk (Figure 7). A major shock on interest rates pushes down the average Tier 1 ratio only by 0.2 percentage points to 13.4 after such a shock. However, four banks are very sensitive to changes in interest rates with a 1000 basis points upward shift decreasing their tier 1 capital ratio to below the regulatory norm.

Figure 7. Effects of Interest Rate Shocks on Tier 1 Capital Ratio



1/ Interest rates drop by 500 basis points.
2/ Interest rates increase by 500 basis points.
3/ Interest rates increase by 1000 basis points.

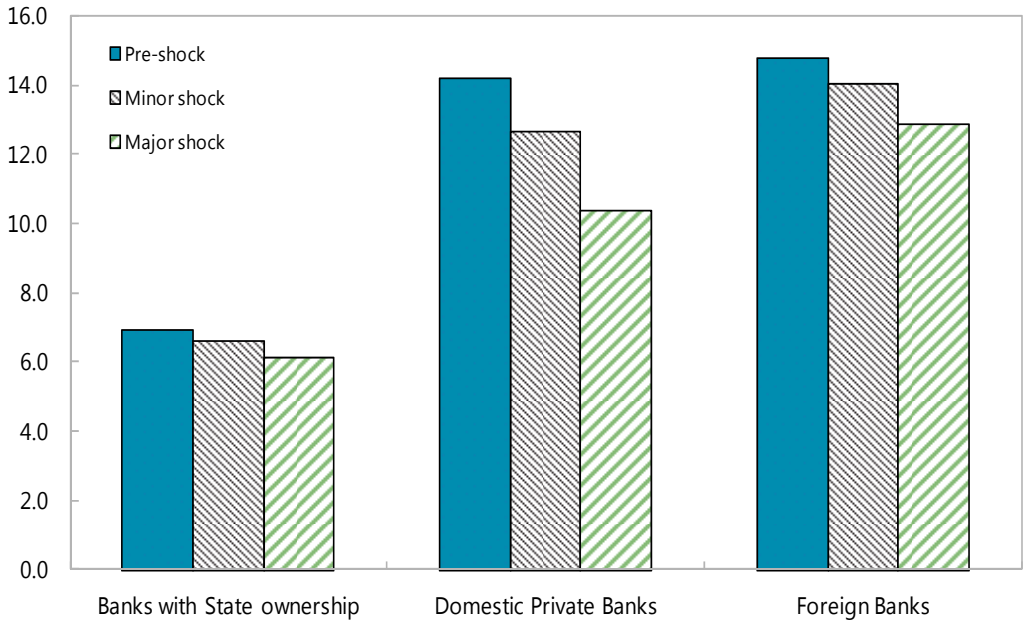
Sources: Reserve Bank of Malawi and IMF staff estimates.

25. The stress test on foreign exchange risk assesses the direct and indirect effects of a shift in the exchange rate on tier 1 capital ratio (Figure 8). The direct impact comes from the effect of the change in the exchange rate on net open foreign exchange position. The indirect effect is derived from the probability of some bank loans in foreign currency becoming nonperforming after a shift in the exchange rate. A bank might be exposed to both direct and indirect foreign exchange risks. In line with RBM's assumptions, the minor (major) shock is based on a depreciation of 20 (50) percent of the kwacha. It is also assumed that 20 percent (50 percent) of the loans in foreign currency become nonperforming in case of a minor (major) shock. The provision rate for the resulting NPLs is set at 100 percent.

26. The test shows that most Malawian banks would be resilient to major foreign exchange risk. Aggregate net open foreign exchange position at end-December 2014 for the banking system was negative. The direct impact of an exchange rate depreciation would then be negative for the entire banking system. The indirect effect would also be globally negative on tier 1 capital ratio as bank loans in foreign currency were about 20 percent of total loans. The total impact is a decline in tier 1 capital ratio of about 1 percentage point in the case of a minor shock

and 1.7 percentage points in the event of a major shock. Three banks with a positive net foreign exchange position and without loans in foreign currency would see an increase in their tier 1 capital ratios even after a major shock, while two banks would shift to a tier 1 capital ratio below the prudential standard.

Figure 8. Effects of Foreign Exchange Risk on Tier 1 Capital Ratio



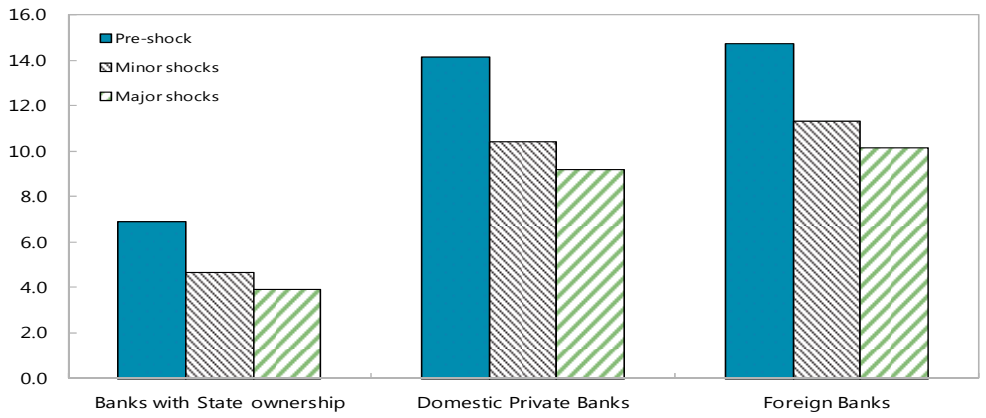
Sources: Reserve Bank of Malawi and IMF staff estimates.

Income Risk

27. Income risk was assessed by a joint shock on the income of banks assuming a combined shift in net interest income and foreign currency income. The minor scenario assumes 5 and 50 percent decline in net interest income and foreign exchange income respectively; the major scenario assumes 10 and 60 percent decline in net interest income and foreign exchange income, respectively.

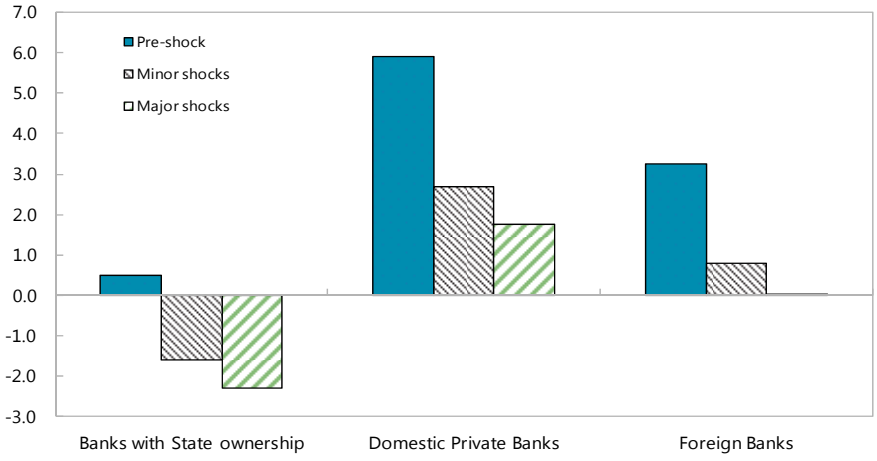
28. The results of the tests indicate that the banking system is not resilient to this combined shock (Figures 9 and 10). The tier 1 capital ratio falls below the 10 percent threshold after the major shock; and three banks are particularly vulnerable as their tier 1 capital ratio would fall below 10 percent even after a minor shock. The two combined shocks would also lower considerably the return on assets (ROA) for all banks and three banks with a positive ROA in the pre-shock situation would shift to a negative ROA even in the case of a minor shock.

Figure 9. Tier 1 Ratio Aftershocks to Interest and Forex Income



Sources: Reserve Bank of Malawi and IMF staff estimates.

Figure 10. Impact of Shocks to Interest and Foreign Exchange Income on ROA



Source: Reserve Bank of Malawi and IMF staff estimates.

C. Policy Implications

29. Continued vigilance over the financial sector is warranted given the adverse impacts of macro-related risks on the financial sector and the negative feedback loop to the real economy. Close monitoring of financial institutions and periodic stress testing exercises by the RBM and banks is essential to ensure an appropriate and timely response of episodes of stress. Stress testing would serve as a key input to contingency planning and mitigate potential economic and fiscal costs.

30. There is merit in comparing stress test outcomes over time. This will provide a view of the evolution of banking sector soundness. A comparison of recent stress tests show that concentration and income risks have become stronger as the macroeconomic outlook has deteriorated.

31. Strengthening macroeconomic policies conducive to disinflation would safeguard financial stability. In particular, tighter fiscal and monetary policies will reduce inflation premia, lower market and credit risks, and engender lower interest rates that foster growth.

32. Enhancing both on-site and off-site supervision and tightening and enforcing prudential norms are critical to containing credit risk. Addressing concentration risk may require raising bank capital to increase buffers and push to consolidation of the banking industry, undertaking surveillance of large borrowers for early detection of default risk, and enforcing the single borrower exposure limit.

FINANCIAL DEEPENING AND INCLUSION

Malawi has made some progress toward financial deepening and inclusion, but lags behind the average for sub-Saharan Africa, peer countries, and the benchmark level expected when considering Malawi's structural characteristics. Furthermore, access to financial services is concentrated in urban areas as half of the population in the rural areas is un-served. Alleviating the various structural barriers to financial deepening, both in terms of depth and access to financial services, will bring substantial benefits for the economy in terms of growth, poverty alleviation, resilience to shocks, and effectiveness of monetary and fiscal policies. Developing mobile banking and promoting the less developed segments of the financial system will offer good opportunities to improve access to financial services.

A. Background

1. Sustained, broad-based growth requires a sound and inclusive financial system. Financial deepening increases a country's resilience and boosts economic growth by mobilizing savings, promoting information sharing, improving resource allocation and facilitating diversification and management of risk (Sahay et al., 2015). Against this background, the Malawi authorities with support from international partners have taken a few steps to deepen its financial system. Key steps taken include: (i) implementation of an interlinked national payment system infrastructure that include a National Switch to facilitate integration of payment systems in the future; (ii) adoption in 2011 of mobile payment systems guidelines to enable non-banks to offer mobile money services; (iii) setting up a coordination Group, which bring together diverse public and private sector stakeholders aiming to expand mobile money access and usage; and (iv) introduction of Agent banking in 2012 and provision of permission to banks to implement agent networks.

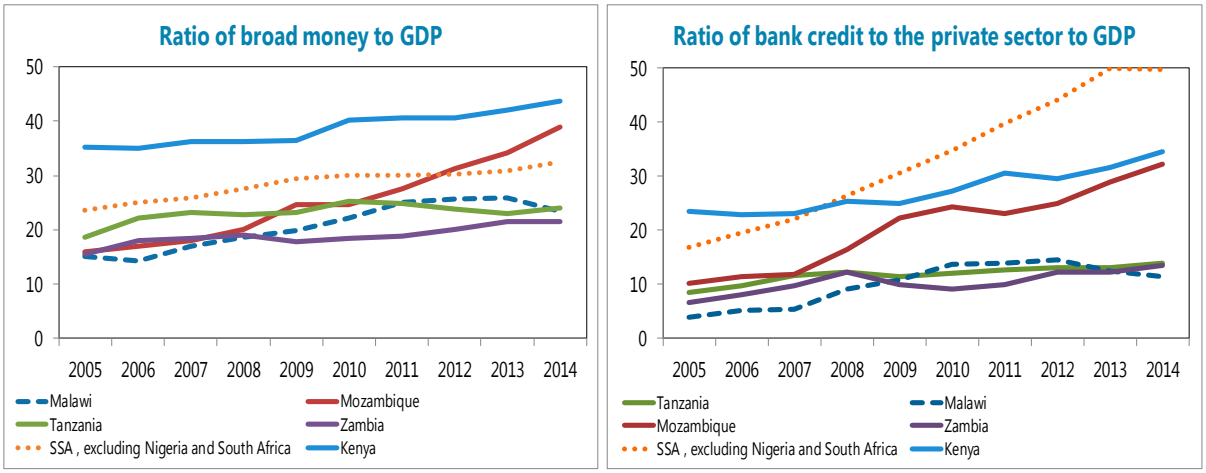
2. Financial deepening and inclusion in Malawi are limited by multiple constraints on the demand and provisions of financial services. Key challenges to financial deepening and inclusion still include the low income level in general, the limited number of bankable activities in the rural area, the high costs of opening and maintaining a bank account, weak telecommunications infrastructure, fairly low literacy rates, the high cost of expanding services across sporadically populated rural areas, widespread lack of marked physical addresses as well as formal identification system and weak contractual, informational and transactional infrastructure. Financial intermediation is also constrained by multiple institutional and structural obstacles inherent to the business environment, notably absence of reliable mechanisms to protect creditor rights and the limited scope of mechanisms for guaranteeing the realization of collateral.

B. Financial Deepening: Progress but Still a Shallow System

3. Available indicators show that financial depth in Malawi has increased steadily since the mid-90s, but has declined recently. Figure 1 indicates that the two standard metrics of the depth of the sector have substantially improved over the period 2005–13. The ratio of bank credit to the private sector to GDP increased from 4 to 14.6 percent over that period, and the ratio of broad

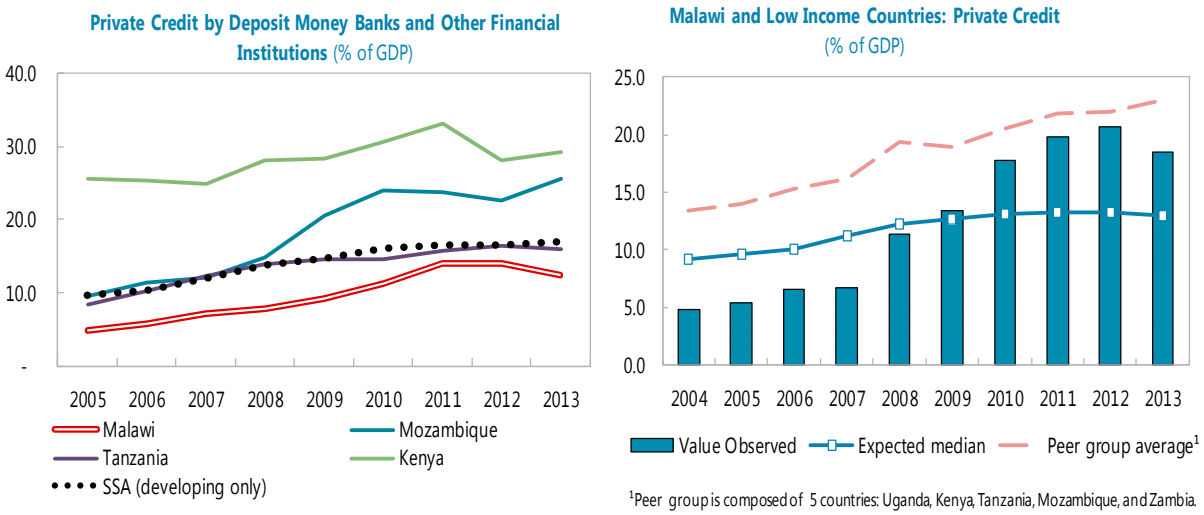
money to GDP expanded from 15 to 26 percent. Figure 1 shows also that Malawi's financial depth has been far below SSA countries' average and lag behind a few neighboring countries. The gap between Malawi and other SSA countries becomes even stronger when credit to the private sector from non-bank financial institutions is included in the measurement of financial depth (first part of Figure 2), an indication of the relatively lower contribution of these institutions to financial depth.

Figure 1. Malawi and SSA Countries: Traditional Metrics of Financial Depth



Sources: Malawian authorities' data and IMF staff estimates.

Figure 2. Malawi: Indicators of Financial Sector Depth

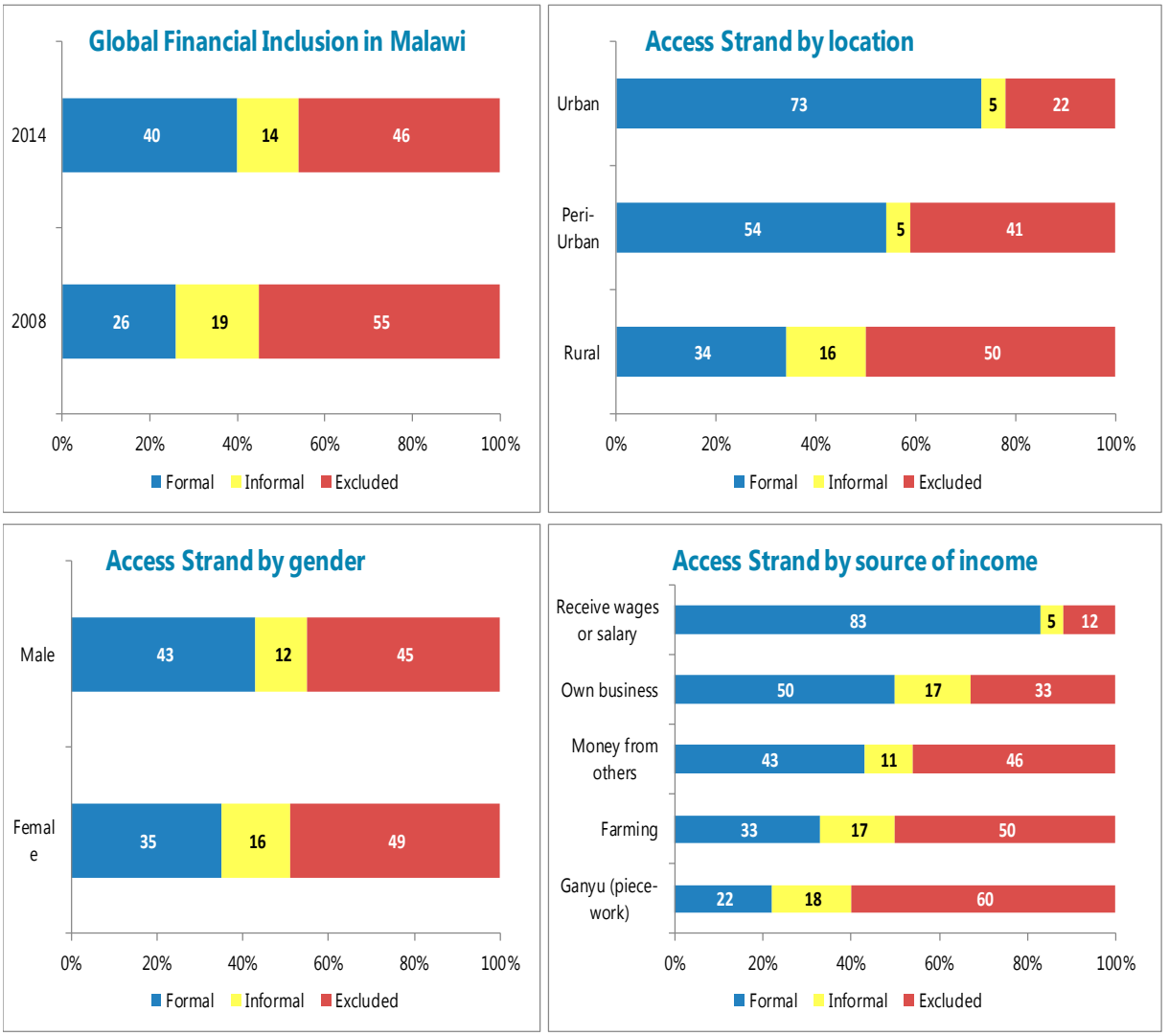


Sources: FinStats and World Bank's Global Financial Development Database.

C. Financial Inclusion: Progress Made but Still Relatively Low Access to Financial Services

4. Malawi has improved financial access over the last few years (Figure 3). Access to formal and informal financial services increased from 45 percent of adults in 2008 to 54 percent in 2014, but remain concentrated in urban areas. In addition, 55 percent of men were financially included, compared with 51 percent of women and that individuals at the bottom of the income distribution or in rural areas are the most financially excluded. In particular, 50 percent of adults in rural areas do not have access to formal or informal financial services.

Figure 3. Malawi: Indicators of Financial Inclusion



Source: FinScope Consumer Survey Malawi 2014.

5. A few indicators of financial access demonstrate progress made over the last few years (Table 1). Banks' branch density, loan accounts and depositors with commercial banks, the number of depositors and borrowers per 1,000 adults, ATM' coverage, and mobile banking services have improved over time. In contrast, the contribution of microfinance institutions to financial access seems to have declined, although the number of depositors have has gradually increased.

Table 1. Malawi: Key Indicators of Financial Access

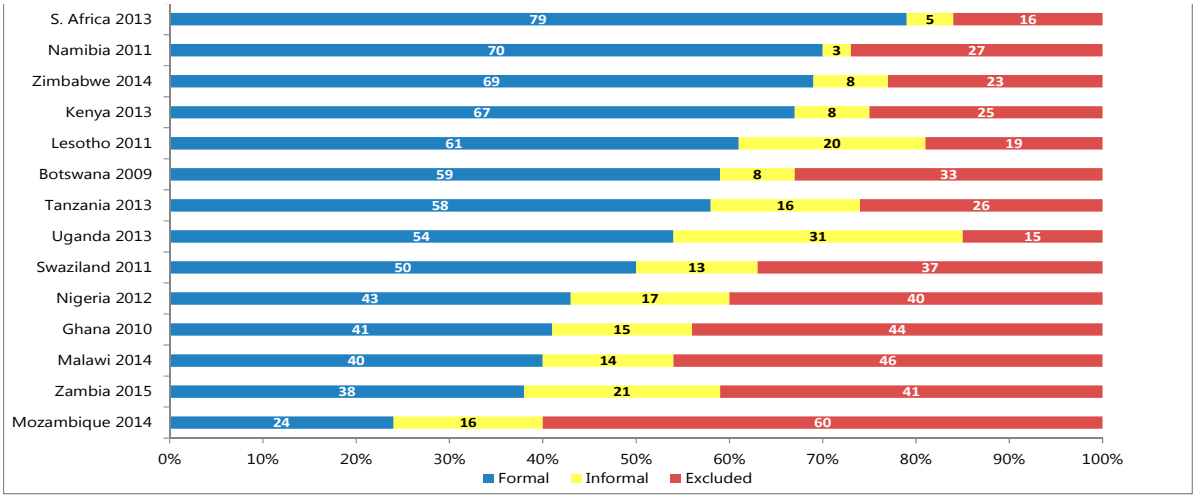
	2004	2008	2012	2013
Commercial bank branches per 1,000 km2	0.70	1.74	2.96	3.04
Commercial bank branches per 100,000 adults	0.97	2.15	3.22	3.31
Loan accounts with commercial banks per 1,000 adults, Number	...	...	18.21	20.39
Depositors with commercial banks per 1,000 adults	...	...	203.72	244.69
Credit union and financial cooperative branches per 1,000 km2	0.83	0.75	0.81	0.84
Credit union and financial cooperative branches per 100,000 adults	1.15	0.93	0.88	0.91
Depositors with credit unions and financial cooperatives per 1,000 adults	8.29	9.68	13.38	11.39
ATMs per 1,000 km2	0.53	1.39	3.91	4.36
ATMs per 100,000 adults	0.74	1.72	4.25	4.74
Mobile Banking, Agent Outlets per 100,000 adults,	...	...	44.33	150.86
Mobile Banking, Agent Outlets per 1000 km2,	...	...	40.80	138.85
Active number of mobile money accounts per 1000 adults, Active	...	...	6.35	35.79

Source: IMF's Financial Access Survey Database

Source: IMF's Financial Access Survey Database.

6. Despite the recent progress, financial inclusion in Malawi remains relatively low compared to many other SSA countries. Malawi is close to the lowest level of formal financial access and that the percentage of financially excluded adult population is close to the highest among these countries (Figure 4). Account penetration, in terms of the percentage of adults with an account in a financial institution, has remained at a low rate of 16 percent between 2011 and 2014 and below the 2011 and 2014 average penetration rates of a selected group of 23 SSA countries (Figure 5).

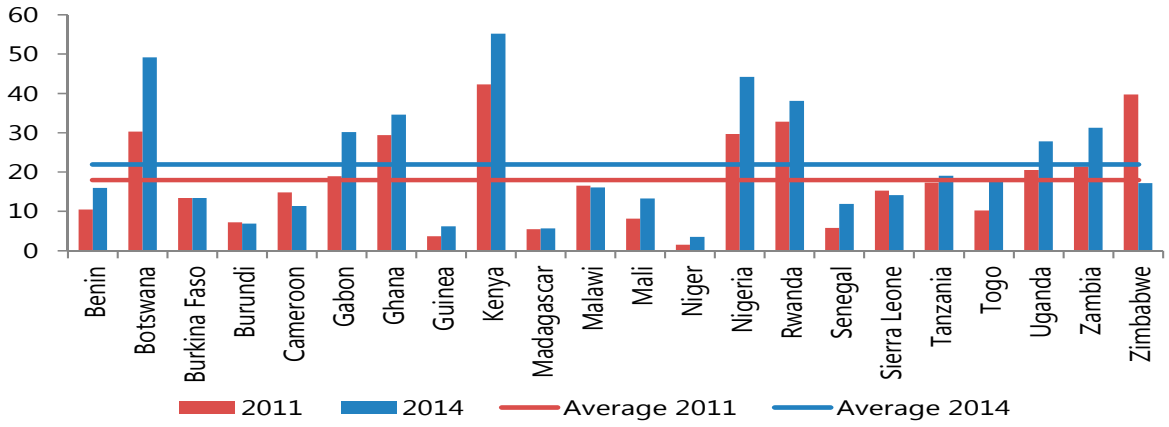
Figure 4. Malawi: Financial Inclusion: Malawi Compared to Other SSA Countries



Source: FinScope Surveys.

Figure 5. Account Penetration in Malawi and Other SSA Countries – Comparison 2011–14

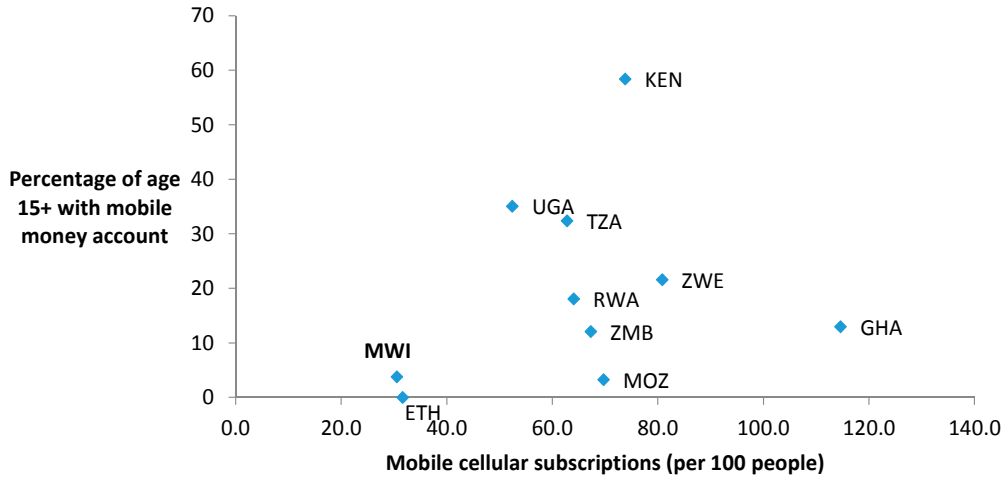
(% of adults with an account in a financial institution)



Source: World Bank's Global Findex.

7. Mobile banking is growing, even though it remains far less developed than in other SSA countries (Table 1 and Figure 6). About 4 percent of the adult population in Malawi uses a mobile money account, compared to 12 percent in Zambia, 32 percent in Tanzania, and 58 percent in Kenya. Eighty percent of customers who do not use mobile money services indicated that they were not aware of such services and 9 percent that they did not have enough information about mobile money. The use of mobile money services is also constrained by the low mobile cellular subscription rate. A more rapid expansion of the cellular network could be particularly beneficial for financial inclusion.

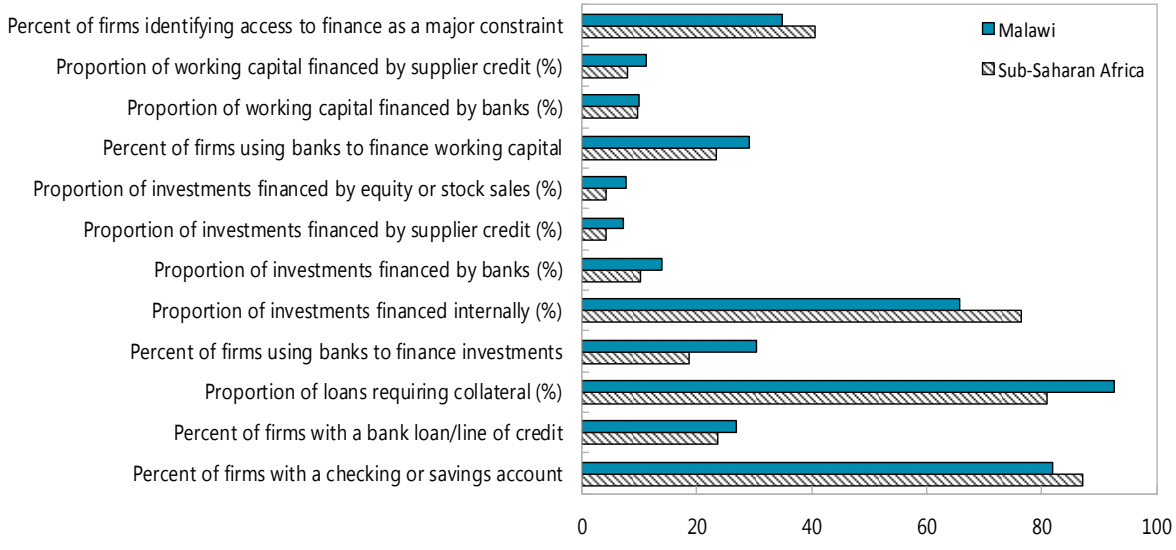
Figure 6. Malawi: Mobile Money Accounts in MWI and SSA



Source: World Bank, 2015 World Development Indicators, Findex database.

8. Firms' access to finance reflects broadly SSA countries' average (Figure 7). According to the World Bank Enterprise Survey**,** about 35 percent of enterprises in Malawi identified access to finance as a major constraint, compared to an average of 40 percent for SSA. Dimensions on which Malawian firms are much more constrained than SSA firms on average include (i) proportion of loans requiring collateral; and (ii) the percent of firms with a checking or saving account.

Figure 7. Malawi: Enterprise Survey Indicators, 2015[1]



Source: Enterprise Survey, The World Bank.

[1]Business owners and top managers in 523 firms were interviewed from April 2014 through February 2015.

D. Improving Financial Deepening and Inclusion

9. Disinflation is key to restoring macroeconomic stability and fostering greater inclusion. The current high-inflation and economic uncertainty have led to the tightening of lending conditions. Macroeconomic stabilization will contribute to enhancing financial deepening and inclusion by lowering uncertainty and the cost of funds, reducing the costs of opening and maintaining an account in financial institutions, and expanding the demand of financial services.

10. Financial inclusion will be fostered by improved access of the population to information and technology and by the interoperability of all payment systems. It is therefore important to pursue the development of mobile phone coverage, power supply, reliable internet services, national payments system infrastructure, and other infrastructure that could facilitate the fluidity and reliability of financial services.

11. There is still a need to strengthen the regulatory framework and the supervision of all the segments of the financial system. The 2010 Banking Act and Financial Services Act still serve as the regulatory framework for banks in Malawi. Enactment of amendments to these acts, aimed at enhancing the regulatory framework for banks, is still pending. Updated e-money regulations are expected to be finalized in the near future to replace the 2011 Mobile Payment System guidelines. New evidence shows that the trade-offs and synergies between financial inclusion and financial stability depend upon the quality of financial sector supervision (Sahay et al., (2015). Actions to expand financial inclusion should therefore go in parallel with the strengthening of the supervision of all the segments of the financial system (banks, MFIs, insurance companies and pension systems).

12. Fostering financial literacy. The lack of awareness and knowledge of financial services and products remain key factors explaining the high level of financial exclusion of large segments of the population, calls for targeted financial literacy programs. Ongoing collaborative efforts between banks, the RBM, and the government to offer financial literacy education and training should be strengthened and expanded to the population at the bottom of the income pyramid.

References

Sahay, R., Čihák M., N'Diaye P., Barajas A., Ayala, D., Gao Y., Kyobe A., Nguyen L., Saborowski C., Svirydzenka K., and Yousefi S., 2015. "Financial Inclusion: Can it Meet Multiple Macroeconomic Goals?", IMF Staff Discussion Note SDN/15/17, September 2015, International Monetary Fund, Washington, D.C.