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Rwanda: Financial System Stability Assessment

This Financial System Stability Assessment on Rwanda was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on June 9, 2011. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Rwanda or the Executive Board of the IMF.

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RWANDA

Financial System Stability Assessment

Prepared by the Monetary and Capital Markets Department

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June 9, 2011

This report presents the conclusions of the International Monetary Fund (IMF)/World Bank Financial Sector Assessment Program (FSAP) Update mission, which visited Rwanda February 2–14, 2011. The FSAP findings and recommendations were discussed with the authorities at the conclusion of this mission, during the Policy Support Instrument review mission March 23–28, 2011 and in Washington, D.C. on April 16, 2011. The broad conclusions of the team are:

- Significant progress has been made in reforming the financial system since the initial 2005 FSAP, improving the stability, structure and efficiency of the financial system, modernizing financial sector legislation and infrastructure, and strengthening the framework for monitoring and mitigating systemic risks.

- The banking sector has recovered from a period of restructuring and cleaning up legacy problems. The industry as a whole can absorb major shocks, but a few banks are still vulnerable.

- The financial sector faces new challenges affecting financial stability and development, posed in particular by the agenda to improve access to finance and provide more long-term financing to the economy. The ambitious objectives pose significant risks if steps are taken too fast and/or not sequenced appropriately, especially in light of considerable capacity constraints for qualified personnel in both the public and private sectors.

- Further challenges stem from the ambitious plans for regional integration and harmonization in the East African Community (EAC).

The FSAP team comprised Messrs. Axel Bertuch-Samuels and Michael Fuchs (Co-Team Leaders, IMF and World Bank, respectively); Messrs. Philip Bartholomew, Thordur Olafsson, Hamid Davoodi, and Moses Kitonga (IMF); Ms. Gunhild Berg; Messrs. Edward Al-Hussainy, Henry Bagazonzya, Thordur Jonasson, Moses Kibirige, Thilasoni Benjamin Musuku, Javier Suarez, and Simon Walley (World Bank); and Messrs. Richard Hands and Jan Rein Pruntel (consultants). The mission also benefitted from the contributions of Mr. Dmitry Gershenson, IMF Resident Representative, and Ms. Lucy Fye, Senior Private Sector Development Specialist in the World Bank's Kigali Office.

The main authors of this report are Axel Bertuch-Samuels and Philip Bartholomew with contributions from the rest of the FSAP update team.

FSAP assessments are designed to assess the stability of the financial system as a whole and not that of individual institutions. They have been developed to help countries identify and remedy weaknesses in their financial sector structure, thereby enhancing their resilience to macroeconomic shocks and cross-border contagion. FSAP assessments do not cover risks that are specific to individual institutions such as asset quality, operational or legal risks, or fraud.

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GLOSSARY

ACH	Automated Clearing House
AMIR	Association of Microfinance Institutions in Rwanda
ATM	Automated teller machine
ATS	Automated transfer system
AML/CFT	Anti-money laundering and combating the financing of terrorism
BDF	BRD Development Fund
BNR	National Bank of Rwanda
BRD	Banque Rwandaise de Developpement
BSD	Banking Supervision Department, BNR
CAMEL	Capital adequacy; assets quality; management soundness; earnings; and liquidity
CCH	Check Clearing House
CDSC	Central Depository and Settlement Corporation
CSD	Central securities depository
CSR	Caisse Sociale du Rwanda
DGF	Deposit guarantee fund
EAC	East African Community
EFT	Electronic funds transfer
FIU	Financial Investigation Unit
FSAP	Financial Sector Assessment Program
FSDP	Financial Sector Development Plan
FSSA	Financial System Stability Assessment
FX	Foreign exchange
GDP	Gross domestic product
IMF	International Monetary Fund
LOB	Law concerning Organization of Banking
MFI	Micro-finance institutions
MoU	Memorandum of understanding
NIMA	Net interest margin to average assets
NPL	Nonperforming loans
PPP	Public private partnership
RAMA	Rwandaise d'Assurance Maladie
RBS	Risk-based supervision
RCA	Rwanda Cooperative Agency
RSE	Rwanda Stock Exchange
RWA	Risk-weighted assets
SACCO	Savings and credit cooperatives
SIMTEL	Société Interbancaire de Monétique et de Télécompensation
SME	Small-and medium-sized enterprise

EXECUTIVE SUMMARY

1. **Rwanda was little affected by the global financial crisis but, like its neighbors in East Africa, is in the process of transition towards a more modern, competitive, open and inclusive financial system.** Following the 2005 FSAP, significant progress has been made in restructuring and modernizing the financial sector and its legislative and regulatory framework, in the context of an extensive Financial Sector Development Plan (FSDP).

2. **The National Bank of Rwanda (BNR) is now the sole regulator and supervisor for the entire financial sector, except securities markets**. By law it is granted independence in its operations and conduct of policy, though some aspects of its independence could be reinforced. Beyond the legal amendments, the BNR has improved its supervisory practice, conformed more to international best practices, strengthened enforcement, and taken intervention actions deliberately. The BNR still has capacity constraints and can further strengthen some of its regulations and supervisory processes.

3. **Both the government and the BNR have shown determined leadership over several years in pursuing the necessary reforms.** These reforms have helped to improve the structure and operation of the banking as well as the insurance and pensions sectors; to modernize the system infrastructure (monetary operations, payments systems, land and mortgage registration, insolvency and creditor rights); and to strengthen the framework for monitoring and mitigating systemic risk. However, continued efforts are required in following up and transiting to the next generation of reforms.

4. **At the same time, the financial sector faces new challenges and changes affecting financial development and stability going forward.** These reflect the authorities' stated priorities to achieve visible progress in improving access to financial services and in the provision of long-term financing to the economy. Rwanda also faces an ambitious agenda with its commitment as a member of the EAC to further regional economic, financial and monetary integration, with the ultimate objective of establishing a monetary union.

5. **Both the domestic and regional financial sector policy agendas are very demanding.** The authorities' desire to make rapid progress is commendable, but there are significant risks in moving too fast or not sequencing the steps appropriately. For example, creating new depository institutions before establishing an adequate supervisory system can create a situation where non-viable entities are not closed but still accept deposits from the public. In this context, the problem posed by the considerable capacity constraints for qualified personnel in financial institutions and in financial sector supervision cannot be overstated.

6. **The banking system in Rwanda has recovered from a period of restructuring in 2007 and 2008, leaving banks now better capitalized, provisioned, and liquid, but**

still exposed to some risks. On the whole, banks—by far the largest providers of finance in the system—are sufficiently capitalized to absorb a shock to their credit portfolio, but some banks exhibit more vulnerabilities than others. This includes large exposure risks due to the concentration of corporate lending. Also—while all banks operate well within the liquidity requirements set by the BNR—a few banks are vulnerable to an extreme drop in deposits. However, the BNR's track record of dealing with emerging problems suggests that these vulnerabilities are manageable. Market risks do not appear to be a major concern, neither with regard to foreign exchange (FX) risk nor interest rate risk.

7. **While the core banking system has been stabilized and strengthened, new risks are emerging at the periphery.** To accelerate the intermediation in the rural areas, the authorities have recently established savings and credit cooperatives in each of the 416 geographically defined sectors of Rwanda—Umurenge Savings and Credit Cooperatives (SACCOs). This created a significant void and to address it, the BNR is in the process of recruiting supervisors for these SACCOs at the district level. However, not only will these supervisors need to be trained in the near term, the BNR will also need to quickly address the challenge of supervising institutions which themselves lack capacity and essential skills in small-scale banking and managing risk. Furthermore, experience in other countries has shown that—to be successful—such bank cooperatives require ownership and trust among the people for whom they were created. Over the medium-term, the most promising way to foster both ownership and a sustainable structure for the SACCO sector, and ease the supervisory burden of the BNR, would be the formation of an apex institution (without banking functions) owned by the SACCOs. This apex institution should provide training and capacity enhancement to its member institutions and also ensure that the members fulfill their regulatory requirements.

8. **The mobilization of more long-term stable financing for the real economy continues to be another major challenge, given the small and underdeveloped local capital market.** The banks are already exposed to the risks posed by the large maturity gap between their assets and liabilities, so encouraging them to increase long-term lending without a more stable funding source would only aggravate these risks. At the same time, there is increasing demand for opportunities to invest in longer-term financial assets by the insurance and pensions sector, in particular the Caisse Sociale du Rwanda (CSR). But the development of a primary and secondary corporate bond market is likely to be achieved only over the medium-term and facilitated by the EAC financial integration process. Against this background, appropriately matching the financing, funding and investment needs of the different sectors in the near term would best be achieved by the creation of a market-based mechanism that allows the channeling of long-term funds accumulated by the CSR, other pension funds and life insurance companies into the banking system, for example via auctioning term deposits.

9. **The authorities are encouraged to vigorously continue their program of financial sector modernization.** A structured plan for accomplishing existing tasks and

preparing for the next phase could form the basis of the second generation of Rwanda's FSDP. The key recommendations of the mission are in the table below. More detailed recommendations can be found in the following sections of this report including the Report on the Observance of Standards and Codes (ROSC) for the Basel Core Principles (BCP) for Effective Banking Supervision in the appendix. In addition Technical Notes are being prepared for the authorities on access to finance, banking structure and competition, housing finance, insolvency and creditor rights, intermediating term finance, payments systems, and stress testing[1].

[1] Independently from this FSAP Update, the authorities agreed to undergo a detailed re-assessment of the Anti-Money Laundering and Combating Financial Terrorism (AML/CFT) framework, with a mission planned for the first half of 2012.

Table 1. Rwanda: Key Recommendations

	Time frame
Banking Structure and Stability • Address shortage of qualified labor in financial sector including through dedicated professional training.	M/L
• Encourage greater contestability in the retail market segment.	S/M
• Develop appropriate regulatory environment for mobile banking and payments.	S/M
Regulatory Framework for Banking • Finalize and implement pending banking regulations. Add a "leverage ratio" to capital requirements. Strengthen provisioning requirements and penalize banks that report under-provisioning.	S
• Implement central information storage and archiving to ensure that all supervisory actions toward banks are well documented and easily accessible.	S
• Increase frequency of on-site examinations. Largest banks should be on a 12-month cycle.	M
• Ensure adequate resourcing of the BSD and continuing development of the skills of supervisory staff.	M
Systemic Liquidity Management • Promote deepening of the interbank markets to foster a more informative interbank rate.	M
• Build additional capacity to improve liquidity forecasting.	M
Payment Systems • Clearly define the objectives and policies in the National Payment System Vision and Strategy.	S
• Establish a "policy and strategy" unit in the National Payments System Department for continual pulling of data and analysis of payment system developments.	S
• Develop a coherent strategy with regard to the role of SIMTEL.	S
Crisis Management, Safety Nets, Bank Resolutions, and Cross-Border Issues • Define a contingency planning framework which spells out objective and transparent policies and procedures for government financial support.	S/M
Insolvency and Credit Rights • Review insolvency legislation with a view to introducing a stay for secured creditors' actions.	S
Access to Finance • Leverage the experience and capacity of existing institutions, in particular Rwanda Cooperative Agency and AMIR to build capacity with the SACCOs.	M
• Develop a sustainable and effective model for the monitoring and supervision of SACCOs.	S/M
• Review the BRD Development Fund Company's guarantee scheme drawing on experience in other countries.	S
Housing Finance • Develop a house price/land price tracking system using transaction data from the National Land Centre.	S
• Create a one-stop shop for the registration of land and mortgages at the National Land Centre.	S/M
Capital Markets, Insurance, and Pensions • Prepare a medium-term government debt strategy and—consistent with fiscal sustainability-increase the issuance of government bonds, concentrating on key maturities up to five years.	S
• Increase availability of long-term funds via CSR-term deposits in the banking system (reverse auction).	S/M
• Enforce insurance companies' compliance with reporting requirements, corporate governance, and audit.	S
• Strengthen supervisory capacity in insurance especially in off- and on-sight inspection. Amend investment guidelines for insurance companies to address differences in investment horizons for life and non-life business.	M
• Revisit the decision to merge RAMA and CSR.	S
• Draft corporate governance regulation to be followed by the CSR, draft investment guidelines for the CSR, and take measures that CSR maintains adequate liquidity.	S

I. MACROECONOMIC BACKGROUND

10. **Rwanda has achieved high growth and macroeconomic stability over the last decade, but poverty remains high** (See Figure 1 and Table 3)**.**[2] Growth has averaged about 8 percent a year.[3] Inflation, though volatile, is now in low single digits, and international reserves are at comfortable levels. Resilience to external shocks has also improved further, thanks to prudent policies, substantial debt relief, and heavy reliance on concessional borrowing. However, poverty remains high.

11. **In 2008 and 2009 the economy experienced a period of dramatic tightening and subsequent easing of domestic liquidity conditions.** This reflected developments in the real economy, which risked overheating with 11 percent real GDP growth rate and 22 percent inflation rate in 2008. As the resulting cooling-off coincided with the global recession and a significant economic slowdown, fiscal policy complemented monetary easing with a large fiscal stimulus (2 percent of GDP in FY 2009/10).

12. **The economy in 2010 appears to show clear signs of recovery while inflation has remained low.** The services and manufacturing sectors that are more sensitive to up-and-down turns in domestic and external demand, as well as the financial sector, have rebounded, while a good harvest maintained the robust contribution of agriculture to growth. Inflation has remained at record lows with 2.3 percent period average and almost zero end-of-period inflation rates. Higher export performance, reflecting a rebound in international prices and stronger-than-expected volumes of coffee, tea, and nontraditional exports, has contributed to a narrowing of the external current account deficit (excluding grants) to 17 percent of GDP in 2010 from 18.6 percent in 2009, while international reserves remain at comfortable levels.

13. **Major risks in the macroeconomy that were identified include shocks to agriculture and housing (See Appendix I). Commercial and residential housing construction shows strong growth with inadequate use and occupancy.**

14. **Rwanda is a signatory to the EAC Treaty and the EAC Common Market Protocol, which includes financial services.** The EAC partner countries (Burundi, Kenya, Rwanda, Tanzania, and Uganda) envisage the creation of a monetary union. EAC members have already, for example, intensified collaboration in the Monetary Affairs Committee (MAC) of the five central banks and through memoranda-of-understanding on banking supervision. Efforts are underway to harmonize the frameworks for monetary policy and operations, the legal and regulatory frameworks for banking, and arrangements

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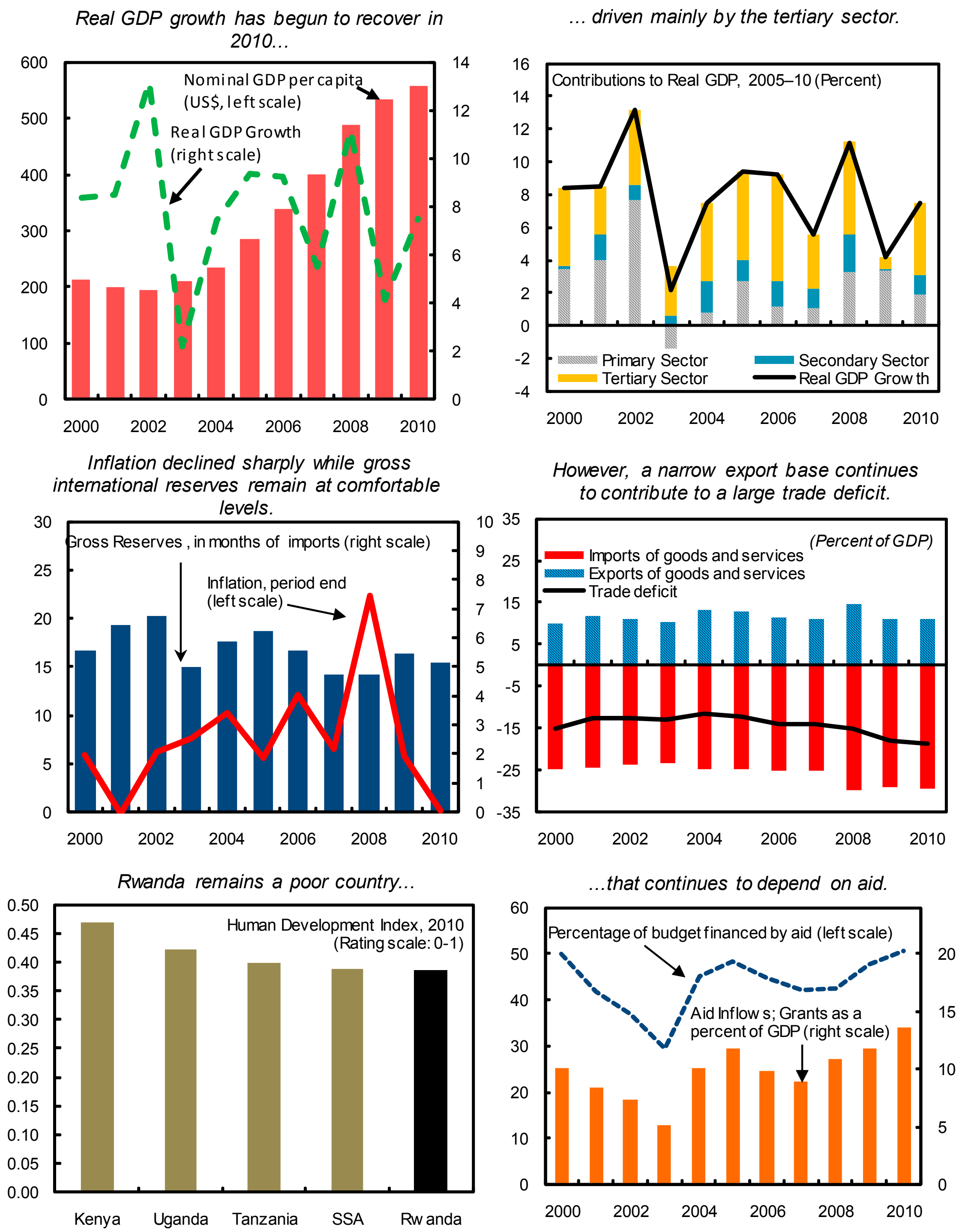
[2] According to the most recent data available (2006), 57 percent of the population lives below the poverty line.

[3] In August 2010, Fitch upgraded Rwanda's sovereign rating by a notch to 'B', citing gains made from a sustained period of strong growth and improvement in the business environment.

for crisis management and resolution, and to link the financial markets infrastructure. Given its small size, Rwanda stands to gain considerably from the potential economies of scale and scope associated with EAC financial market integration. The Rwandan authorities will need to ensure consistency of their legislative, regulatory and operational changes with their commitments under the EAC to avoid opening up regulatory gaps.

Figure 1. Rwanda: Recent Performance, Achievements, and Challenges



Sources: Rwandan authorities, IMF staff estimates, World Economic Outlook, AFR's Regional Economic Outlook, and UNDP Human Development and Poverty Indicators.

II. BANKING STRUCTURE AND STABILITY

A. Banking Structure, Performance, and Competition

15. **The banking system is in a period of transition following significant bank restructuring and merger/acquisition activity in 2007 and 2008.** The system is highly concentrated but is competitive in key markets. It is also relatively efficient, although performance indicators have been affected at banks addressing problem loans coupled with continuing expansion efforts. There is scope for increased competition in the retail segment of the market. Innovation in the form of agency and mobile banking has the potential to transform existing business models for providing services to the currently under-served populace and reduce the costs of mobilizing retail deposits.

16. **Since the 2005 FSAP, there has been significant foreign bank entry.** The banking sector consists of eight commercial banks and four specialized financial institutions (See Table 4). In 2010, the foreign share of assets stood at 49 percent and government maintained a 30 percent stake—the highest in the EAC—marking a significant shift from 2004 (40 percent foreign and 22 percent government).[4]

17. **In 2008 and 2009, at the expense of earnings, banks restructured their portfolios by writing-off bad loans.** Banking assets doubled to RF 1.1 billion between 2006 and 2010, accompanied by a decline in nonperforming loans (NPLs) from 26 to about 12.4 percent. Banks remain well-capitalized but have relatively low earnings in the EAC. (See Table 5). Rwanda makes up only 3.3 percent of EAC bank assets. Financial depth is low—credit to GDP ratio stands at about 12 percent, below the average of the EAC. Credit growth collapsed in 2008/09 following a period of tight liquidity when the government pension fund, withdrew deposits to invest directly in real estate. Bank lending has since recovered, driven by strong commercial lending to the corporate sector.

18. **The banking market is highly concentrated, but competition is increasing, particularly in the corporate market segment.** Concentration runs along several dimensions: (i) the three largest banks account for over 60 percent of assets, loans, and deposits;(ii) both loans and deposits are concentrated in a few corporate and institutional clients; (iii) corporate lending is concentrated in construction and mortgage sectors,[5] while a large share of retail lending also goes to mortgage as well as salary-backed loans; and (iv) most banking activity is concentrated in Kigali. Market entry and organic growth have reduced concentration since 2006, but Rwanda remains the most concentrated banking market in the EAC region. There is a high degree of competition in the corporate market.

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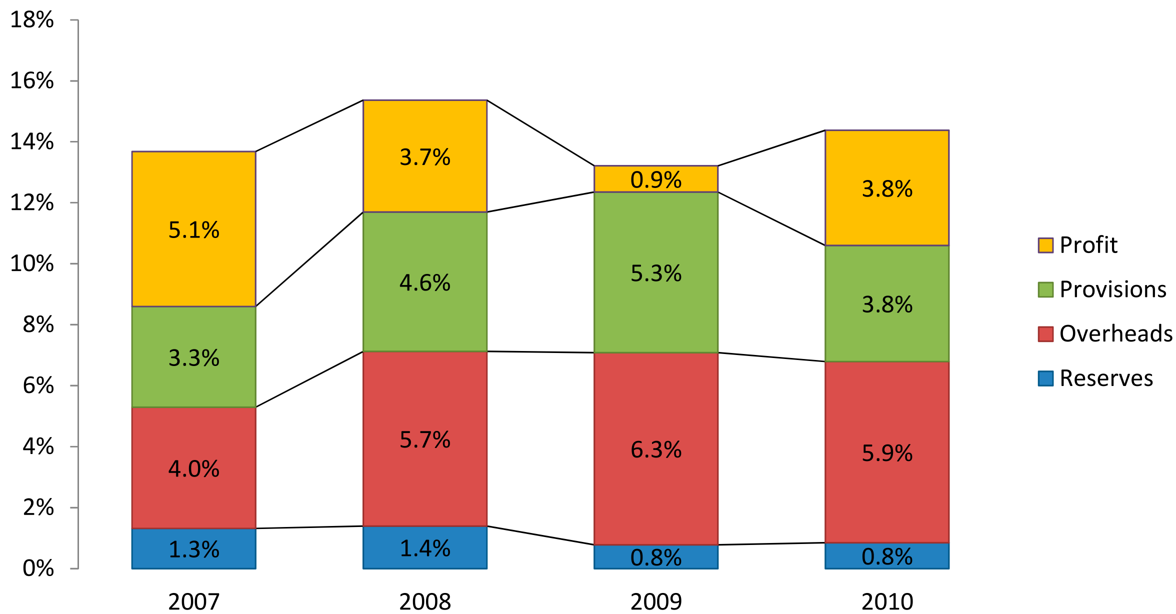
[4] Five of the eight banks have majority foreign ownership. Two others have minority foreign ownership.

[5] Retail mortgage lending is mainly for residential properties and commercial mortgages include hotels, apartment buildings, offices, and warehouses.

The retail market is still mainly served by Banque Populaire de Rwanda (BPR), but is beginning to be contested as competition has led banks to expand their branch networks.

19. **Competition and write-offs have led to a decline in profits and lower effective spreads, but the market stabilized in 2010.** Delineating interest income, as shown in Figure 2 and referred to as a the spread decomposition for the 2007-2010 period, it is revealed that: (i) higher overheads reflecting the network expansion and limited skilled labor; (ii) higher write-offs and stricter enforcement of provisioning regulations; (iii) a decline in profit margins through 2009; and, (iv) the impact of lower reserves. Some banks consolidated their portfolios while others suffered increased costs from their expansion.

Figure 2. Rwanda: Decomposition of Bank Interest Spreads (2007–2010)



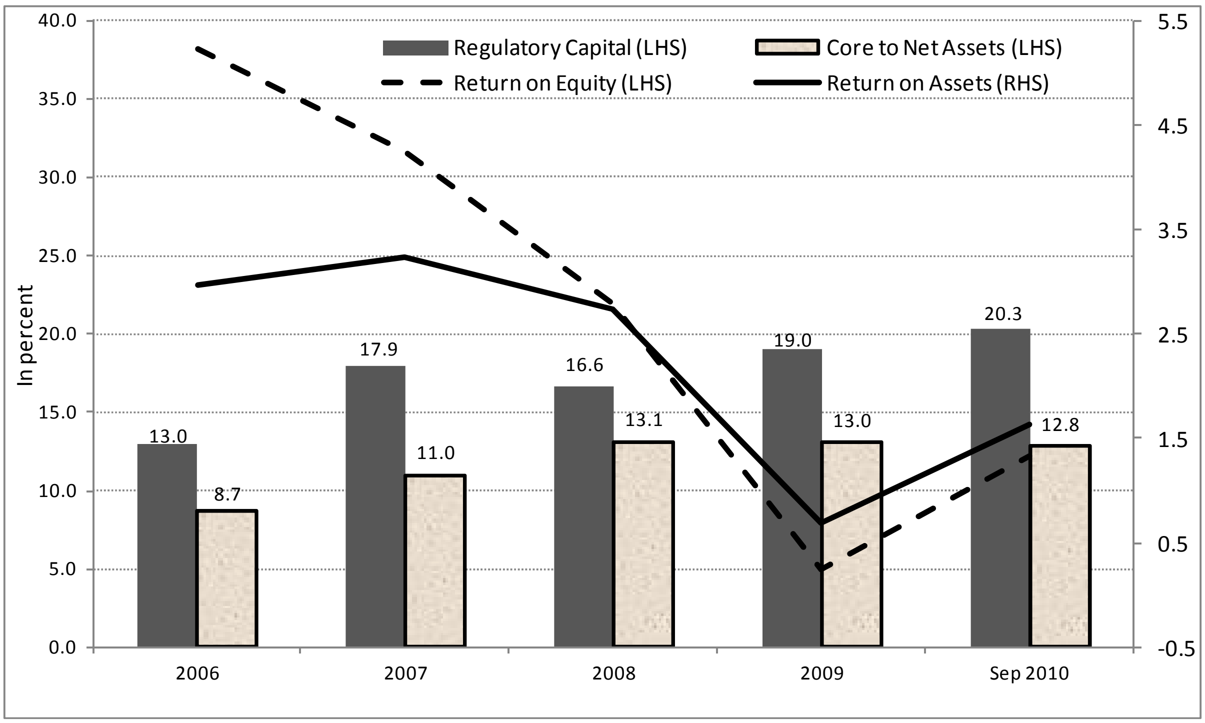
Note: System level decomposition of ex-post spreads.
Source: Estimates using BNR data

20. **Innovation in the form of agency and mobile banking could transform existing business models for serving low-income clients and reduce the costs of expanding retail deposits.** In this regard, mobile banking is emerging as a viable approach to increasing financial inclusion in Rwanda. The BNR has a central role to play in realizing this potential by setting an appropriate regulatory environment for mobile banking, network operators and payments.

B. Stress Testing

21. **Based on data reported as of end-September 2010, Rwandan banks were well capitalized while earnings have been relatively low** (See Figure 3 and Table 6).[6] Due to the shedding of bad assets, NPLs were reduced, but seem to be still relatively high. Return on assets for the industry fell to 0.7 percent for 2009, but improved during the first three quarters of 2010, to 1.6 percent.[7] Compliance with provisioning rules has improved. While four banks were under provisioned as of year-end 2008, the number has been reduced to only one by September 30, 2010.

Figure 3. Rwanda: Capital and Profitability Ratios (2006–2010)



Source:BNR and IMF staff calculations

22. **Stress testing focused on the eight commercial banks and used data for year-end 2008 and 2009, and end September 2010.**[8] Two measures of capital were used for the credit quality stress tests. Core capitalization (i.e., Tier I divided by net assets) was

[6] Data as of end-September 2010 was used since end-December 2010 data was not available at the time the mission visited Kigali. For the purposes of stress testing all data provided to the mission were validated (i.e., checked for reporting consistency and accuracy). When end-December data became available later, the BNR and the mission members agreed not to use them as they could not be properly validated.

[7] Spreads, as measured by the net interest margin to average assets (NIMA), however, seem to be relatively high both over the past three years and within the EAC.

[8] Results of stress testing are summarized in Table 6.

used as a conservative measure of capital. The same stress tests were run using Rwanda's capital definition (Tier I plus Tier II) on a risk-weighted asset basis.[9]

23. **The first step in the stress testing exercise was to adjust the data to better reflect true capital positions of banks.** Capital was adjusted for under-provisioning, and for stronger provisioning requirements generally used in neighboring countries. Figure 4 illustrates the impact on capital of these two adjustments. Correcting for the one bank's under-provisioning, core capitalization of the industry drops from 12.8 percent to 12.4 percent. Regulatory capitalization drops from 20.3 percent to 19.7 percent. Imposing a 1 percent general provision and a 5 percent watch provision reduces core capitalization to 11.6 percent and regulatory capitalization to 18.5 percent.

24. **Bank's balance sheets were stress-tested for a stringent haircut to the eligible collateral held against classified loans.** In Rwanda, not all collateral held against a loan is eligible for the purposes of provisioning, but the stress test imposed an even more conservative assumption. Under the assumption that all collateral held against classified loans becomes worthless, core capitalization would decline to 8.3 percent and regulatory capitalization to 13.3 percent (See Figure 4). As an industry, and measured with metrics for both capitalization measures, the industry on average was well capitalized. However, with these adjustments, two banks fell below 6 percent core capitalization and one of those fell below 3 percent.

25. **Due to banking and macroeconomic data limitations, further tests were principally static in nature.** The sensitivity of capital or liquidity was tested to determine breaking points and likely changes for credit quality which was supplemented with discussions with banks and other market players. The time series available on banking data was too short for analysis of macroeconomic effects on banking performance. Instead, static stress testing was used on three periods (end-2008, end-2009, and end-September 2010) to judge any transition of financial vulnerability.

26. **After the recent period where banks appear to have shed a sizable proportion of their bad (i.e., classified) loans, the banks appear to be reasonably healthy, but some vulnerabilities remain.** The team's analysis found that NPLs would have to increase by 120 percent before any bank would reach core capital insolvency.[10] Alternatively, 23 percent of all currently considered normal and watch loans would have to become classified before any bank would reach core capital insolvency.

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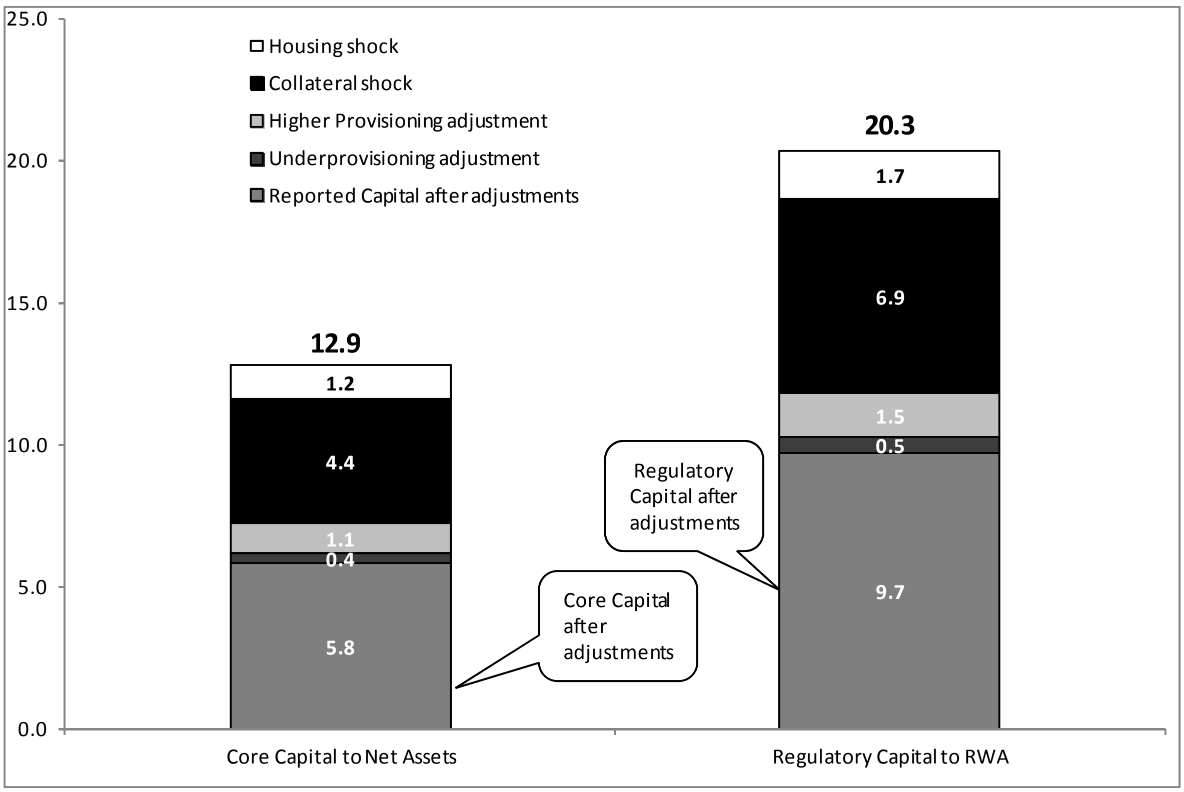
[9] Since Rwandan banks have little in the way of supplemental capital or capital charges for interest-rate risk, the results based on Rwandan capitalization definition must always be higher than those for un-weighted core capitalization.

[10] We used the breaking-point approach to find the level at which the first bank fails. In calculating the breaking point, we used the average provisioning ratio (which assumes a fixed proportion of new bad loans), consistent with the 2007 Working Paper; "Introduction to Applied Stress Testing" by Martin Cihak.

27. **Specific credit shocks were tested for housing and agriculture.** Data were limited on sectoral disaggregation of loans, but ad hoc tests for bank exposure to agriculture found little consequence from a shock to agriculture. A shock to the housing sector, assuming that 30 percent of presently good housing loans would go bad, reduced industry core capitalization to 6.3 percent and regulatory capitalization to 10.5 percent (still above the required 10 percent), but core capitalization for two banks would fall to less than adequately capitalized (See Figure 4).

Figure 4. Rwanda: Bank Capitalization: September 30, 2010



Source: BNR and IMF staff calculations

28. **In addition to sectoral exposure, tests for concentration risk found that a large borrower default would still keep banks slightly above their minimum regulatory capital ratios.** Core capitalization of three banks would be between 6 and 10 percent in this case.

29. **Rwandan commercial banks are more than reasonably liquid, but a few are vulnerable to an extreme drop in deposits.** For liquidity risk, a 30 percent drop in deposits at all banks was assumed.[11] A standard stress test used the liquid asset-to-total

[11] The drop experienced by Rwandan banks in the second quarter of 2008 was 33 percent (see paragraph 11). At this time the CSR removed its deposits from commercial banks and invested in property directly.

asset ratio, but the BNR uses a stricter definition of liquid assets (see above) and relates it to deposits. The test found that only one bank would have its liquidity ratio drop below 20 percent. Using the BNR's more conservative measure of liquid assets it was found that one bank would exhaust its liquidity and two others would fall below 20 percent.

30. **At this time, market risk in Rwandan banks appears to be quite limited.** However, assets and liabilities are mismatched based upon maturity (82.6 percent of short-term liabilities are funding assets with maturities greater than one year). Fixed rate loans include a clause whereby banks can change the rate at their discretion. As banks pass on higher interest rates to customers, credit risk increases. FX exposure is governed by an FX net open position of not more than 20 percent of capital. Banks are compliant and the FX position to capital was only 5.7 percent of capital as of September 30, 2010. Stress tests found that an increase in the FX rate from the present rate to a rate of RF 700 to US$ 1, representing a 15 percent depreciation, would reduce core capitalization by only 1 percent.

31. **The BNR introduced a financial stability analysis unit in late 2010.** It is still defining its work plan and intends to use the analysis framework from the FSAP as a starting point. The BNR has introduced a spreadsheet-based system for off-site surveillance that includes reporting by banks on an individual loan basis. The unit will benefit from further capacity building in data analysis, validation, and reporting.

C. Banking Sector Regulation and Supervision

32. **The authorities have taken major steps to strengthen regulation and supervision of banks, substantially addressing many of the recommendations of the 2005 FSAP.** The 2007 law governing the BNR (BNR Law) and the 2008 law concerning organization of banking (LOB) have strengthened the legal framework for banking supervision in Rwanda. The law clearly conveys the independence of the BNR, but, as noted in the BCP, some features, such as rules for removal of the Governor and other BNR board members, could be improved. Strengthened regulations on capital adequacy, liquidity, credit concentrations, corporate governance, and insider lending are now in place. While other regulations remain to be finalized, the new regulations, together with the BNR's strengthened enforcement and remedial powers, have substantially implemented the recommendations of the 2005 FSAP. They provide the BNR with sufficient powers for effective regulatory intervention and address cases of non-compliance. The authorities are also working within the various committees of the EAC to harmonize their legislative and regulatory framework in the banking sector and attain greater compliance with the Basel Core Principles.

33. **The BNR suffered turnover of qualified staff in 2008 and 2009, but has improved recruiting, training, and equipping examiners.** To strengthen supervisory capacity, the BNR is recruiting an additional five staff for the banking supervision

department by end June 2011, is introducing a new compensation scheme in order to attract and retain staff and is intensifying its training of bank examiners.

34. **The BNR should consider the introduction of further regulatory requirements in two areas: the measurement of capital adequacy and provisioning.** First, a leverage ratio, comparing core capital to net assets (total assets less provisions and interest in suspense), is recommended as a valuable check and balance in assessing capital adequacy (and, in any case, will form part of the Basel III framework in due course). Second, it is recommended that the BNR consider introducing requirements for general provisions in respect of current (or normal) exposures and specific provisions in respect of watch category exposures.[12]

35. **The frequency of on-site examinations should be increased with a view to having at least the largest banks on a 12-month cycle.** For operational supervision, the BNR employs both a risk-based supervision (RBS) framework and a CAMELS approach.[13] While the combination of the two approaches appears to function reasonably well in practice, it would be better to use one or the other since the two approaches overlap one another. From a sequencing point of view, implementing a sound CAMELS system before proceeding on a risk-based approach is warranted. CAMELS is a risk-based framework, but does not incorporate all of the features of the risk-based approach.

36. **The anti-money laundering and combating the financing of terrorism (AML/CFT) framework is recent and at an early stage of implementation.** An AML/CFT Law was enacted in 2008. It provides for the establishment of the Financial Investigation Unit (FIU), to which the BNR, banks, other financial institutions, and designated parties are to report suspicious transactions. While the introduction of the AML/CFT law is a significant step forward, further action needs to be taken. This includes, at a minimum, the start-up of the FIU.

37. **The BNR has taken steps to strengthen the framework of cross-border supervision, but further efforts are warranted.** Rwanda is party to the multilateral memorandum of understanding (MoU) between the supervisory authorities of the member states of the EAC, which was signed in 2008. The BNR has carried out a joint on-site inspection with the Kenyan authorities, and the BNR intends to enter into MoUs with the home supervisors of all foreign banks operating in Rwanda. The BNR seeks the home supervisor's approval for the establishment of a banking subsidiary or branch in Rwanda.

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[12] As discussed in the section on stress testing, Rwandan banks would see their capitalization reduced by higher provisioning requirements, but, ceteris paribus, none would be impaired.

[13] CAMELS is a supervisory scoring system with the aggregate score constructed from component scores on capital adequacy (C), asset quality (A), management quality (M), earnings (E), liquidity, (L), and sensitivity to market risk (S).

It should make sure that it also verifies whether and how the home supervisor practices consolidated supervision.

D. Crisis Management and Cross-Border Issues

38. **While there is no formal crisis management framework in place, the BNR is vested with ample enforcement and resolution powers.** Collaboration between the respective local authorities regarding crisis management has been enhanced. The authorities have demonstrated their willingness and ability to effectively deal with financial difficulties of individual financial institutions on an ad-hoc basis including providing liquidity and solvency support. They should formalize their collaboration, including on contingency planning, crisis management, and transparent criteria for assisting and/or resolving problem banks in a MoU. The BNR actively cooperates with other central banks in the EAC (Paragraph 37). Adequate financial stability arrangements require that contingency planning and crisis-management mechanisms be in place, not only in each of the member countries, but also on a regional basis. The BNR is urged to conclude MoUs also with all non-EAC supervisory authorities whose banks are represented in Rwanda, clearly spelling out cooperation and coordination on crisis contingency planning and crisis management issues.

39. **As mandated by the LOB, the authorities intend to prepare a separate legislation on deposit guarantee fund (DGF).** If such a law moves forward, it is important that an effective process is in place for resolving banks, and the scheme will need to be carefully designed to ensure its effectiveness. In particular, the coverage should be limited to household deposits. Given current supervisory capacity, it is not advisable to extend the DGF to cover depositors in other financial institutions, such as MFIs and SACCOs.

III. Financial Sector Infrastructure

A. Systemic Liquidity Management

40. **The BNR has an adequate lender-of-last-resort facility.** Liquidity assistance by the BNR includes both the provision of liquidity to the financial system as a whole through market operations as well as lending to individual banks through its discount window. In March 2009, it established an emergency lending facility in response to the liquidity crisis, and in August 2009, the Government created a longer-term facility at the BNR. Neither is necessary anymore and should be closed.

41. **The BNR continues to use reserve money targeting.** A further deepening of the interbank market will be necessary to strengthen the monetary transmission mechanism and improve individual bank capacity in liquidity management. Transactions in the interbank market have increased, but the market remains shallow. The BNR work on automating its payment system should facilitate interbank transactions. Greater issuances

of government securities—consistent with fiscal sustainability—would also support the development of a capital market. Greater depth in the market for government securities, combined with a longer maturity structure, should help build a yield curve and enhance the monetary policy transmission mechanism.

B. Payment Systems

42. **While the National Payment System Vision and Strategy brings together stakeholders to consider national payment system development in Rwanda, this process needs to be further strengthened.** The objectives and policies need to be more clearly defined. Effective policy design and BNR oversight also requires ongoing assessment of payment system developments.

43. **The organizational structure of the BNR's payments system department should be strengthened with the separation of policy and oversight functions.** An "oversight unit" should focus on behavior and compliance of operators. A separate "policy and strategy unit" should focus on defining general policy and strengthening the clearing process, as much remains on the agenda for further reforms. The "operations unit" should focus on daily operational management.

44. **Following the enactment of the new Payments Systems Law, the remaining subsidiary central bank directives and regulatory guidelines need to be issued without delay.** Additional subsidiary central bank directives and other regulatory guidelines need to be adopted in such areas as correspondent agency networks (branchless banking services) and outsourcing of specific functions of the payment system.

45. **The Automated Transfer System will assist in resolving existing weaknesses in the payment system, but concerted efforts will be required to encourage extensive use of electronic funds transfers in the automated clearing house (ACH).** Although implementation is still ongoing, the Rwanda Integrated Payment Processing System Project presents an important opportunity to move away from the Check Clearing House altogether. It deploys an integrated processing infrastructure comprising the real-time-gross-settlement system, the automated clearing house, and the central securities depository into an automated transfer system.

46. **A coherent strategy is needed with regard to the role of SIMTEL and the use of cards, given the rapid advances in mobile technology and the relatively small size of the local market for formal payment services.**[14] Fragmentation of the payment systems landscape in Rwanda will negatively impact quality, cost and efficiency and thereby outreach of payment services. The development of parallel switches by

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[14] There has been limited use of cards (debit, automatic teller machine, and credit cards), partly due to the high cost related to the technology chosen—chip cards rather than magnetic strip.

commercial banks is symptomatic of the banks' mistrust towards SIMTEL. The authorities should work with system participants and SIMTEL to revive a cooperative approach and mandate the creation of a switch working group, comprising representatives of system participants and SIMTEL to cooperate on common issues.

C. Insolvency and Creditor Rights

47. **Rwanda has made considerable progress in putting in place a far-reaching reform program for the legal and regulatory framework for creditor rights and insolvency.** A new law, allowing a range of assets to be used as loan collateral, has the potential to expand access to finance, but as of yet has had limited impact as banks continue to favor real estate as collateral. As virtually all credit extended by financial institutions is secured, there is a lack of incentives for debtors and creditors to use the insolvency framework. Therefore, the new insolvency legislation could usefully be amended by the introduction of a stay for secured creditor actions. Additional efforts are also needed to make the new credit reference bureau in Rwanda fully operational and effective. [15]

IV. Development Issues

A. Access to Finance

48. **A large proportion of the Rwandan population, particularly in rural areas, is financially excluded.** Only 14 percent has access to formal banking products. An additional 7 percent use other formal products such as loans from microfinance institutions (MFIs) or insurance products and 27 percent use informal products only (see Figure 5).[16]

49. **To increase access to financial services in rural areas, the government has recently embarked on a high profile strategy to establish savings and credit cooperatives in each of the 416 geographically defined sectors of Rwanda (Umurenge SACCOs).** Significant challenges and risks, however, remain.[17] Users perceive these

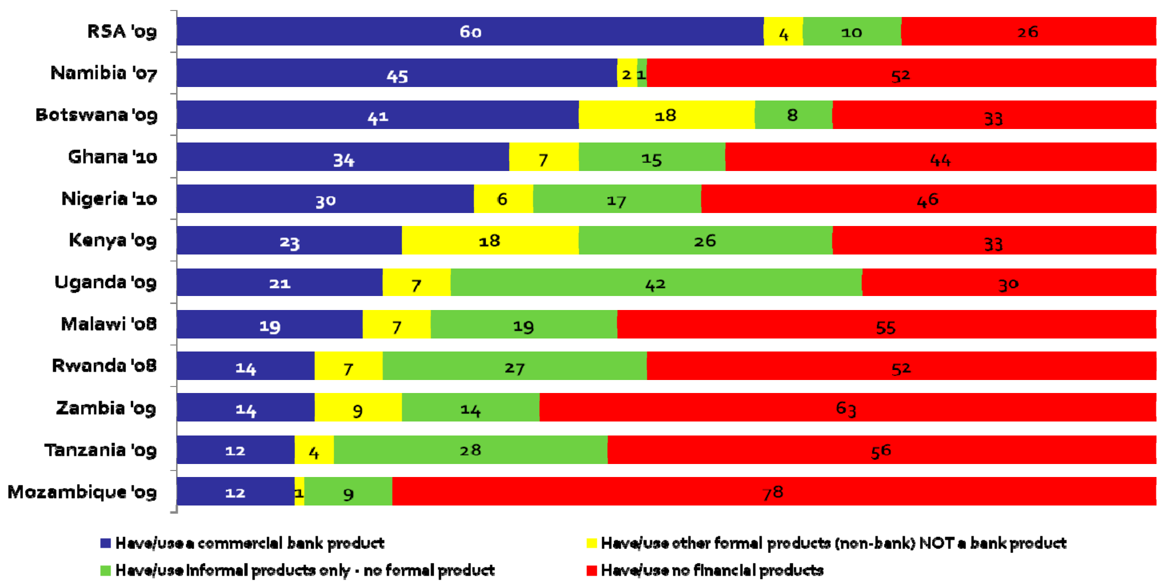
[15] The bureau is still in its initial stage of development, and supervision should ensure consistency, homogeneity, and completeness of the information provided by financial institutions. An effort should be made to incorporate other entities, such as utilities or telecommunications companies, as providers of information for the bureau.

[16] There exist 11 MFIs of which one is lending-only and 514 SACCOs. As of September 2010, MFIs and SACCOs constituted about 8.3 percent of total financial sector assets. The new SACCOS have been licensed first as deposit-takers. Not all have yet been granted licenses for offering credit.

[17] A sustainability assessment is currently being undertaken by an expert. Given the fact that these are new institutions with new managements and new supervision, there is considerable risk that a substantial number might fail or otherwise require BNR intervention, and a substantial number of failures or problems could jeopardize public confidence in depository institutions.

institutions to be owned by the government, and it is thus important to establish trust as well as to build an ethos of member ownership. Members need to fulfill their role in sharing responsibility for the viability of these cooperative institutions. An analysis of the capacity of both MFIs and SACCOs indicates that most lack essential skills, especially in the areas of management, IT, product development, pricing, and risk management, all of which contribute to poor governance and high NPLs.[18] The Rwanda Cooperative Agency (RCA) and the Association of Microfinance Institutions in Rwanda (AMIR) have important roles to play by helping to ensure that the basic cooperative principles and governance arrangements are installed and observed, and that relevant training is provided to loan officers and managers. Finally, the supervisory void needs to be urgently addressed.

Figure 5. Rwanda: Access to Financial Services across Sub-Saharan Africa



Source: FinScope

50. **To help mitigate the risk of failure of this high profile government sponsored project, the BNR plans to establish supervision of SACCOs at the district level.** In the near term, however, the BNR is also faced with the challenge of regulating and supervising institutions that themselves have little training and experience.[19] To ease the burden on the supervising authority, the government is also considering the creation of a

[18] The NPL ratio for SACCOs increased from 8.4 percent to 11.2 percent between end-2009 and June 2010 (excluding Zigama CSS).

[19] They do not have a significant financial linkage to the rest of the financial sector yet. Presently, many are still licensed only to take deposits. Their portfolio structure is simple and straightforward—small deposits and small loans.

cooperative bank. However, most experiences in the region and elsewhere have shown that the creation of cooperative banks has caused more problems than they have been able to solve. The most appropriate way forward therefore seems to be the creation of an apex institution without banking functions owned by the SACCOs. This institution could, in conjunction with RCA, provide training and capacity enhancement to SACCOs and also ensure that their members comply with regulatory requirements. Also crucial to the future viability of the SACCOs will be the development of affordable products tailored to the needs of the rural areas and a legal and regulatory framework that allows such development.

51. **The lack of long-term funds for on-lending and bankable projects has constrained SME finance in Rwanda.** The government's decision to consolidate all the guarantee and refinancing facilities in one institution—the Banque Rwandaise de Developpement Development Fund Company (BDF)—is a welcome development. The planned transfer to BDF of the Rural Investment Facility, which has been administered by the BNR and which is intended to provide agricultural investment incentives for both financial institutions and entrepreneurs, should be completed quickly to ensure access to funds by SMEs. At the same time, the authorities need to ensure that the activities and exposures of the BDF are appropriately governed.

B. Capital Markets

52. **The mobilization of long-term stable financing for the real economy continues to be another major challenge, given the small and underdeveloped local capital market.** The opening of the Rwanda Stock Exchange is likely to play only a minor role in helping to meet this challenge in the near future. The most promising avenue to stimulate the securities market is via greater issuance activity by the government, particularly in longer maturities. The outstanding stock of treasury bonds, however, is small at less than 1 percent of GDP, and a larger stock, provided it is consistent with a sound medium-term debt management strategy, could enable the market to deepen and allow a fuller yield curve up to five years to develop, and serve as benchmark for pricing of risk.

53. **The positive cash flows and rising demand for long-term assets from insurance companies and pension funds provides a natural source of demand for long-term placements, and on the other hand establishes demand for long-term investment vehicles.** But the development of a primary and secondary corporate bond market faces an uphill battle due to the extensive use of collateral to secure bank loans to corporates which, *de facto*, subordinates bond investors to secured creditors. Apart from government bonds, possible investment vehicles to be further developed could include longer-term placements in the banking sector, using reverse auctions to ensure that there is competition and adequate remuneration for funds provided by institutional investors; and investments in public private partnerships (PPPs), which may also allow tapping into

demand from the rest of the EAC. Over the medium-term, the EAC provides an opportunity for Rwanda to integrate its capital market with those in the region.

C. Pensions and Insurance

54. **Rwanda's pensions industry and the insurance sector are small but growing, and both groups are facing limited investment opportunities.** Both sectors are dominated by large government-run institutions: the former by the pension fund CSR and the latter by the health care insurer/provider RAMA, which targets population groups in the formal sector of the economy. There are another eight insurance companies encompassing life, non-life and health insurance and, according to BNR estimates, more than 40 occupational pension schemes with a combined size of RF 6 billion or 0.27 percent of GDP. These voluntary group schemes are usually sponsored by employers who use the mandatory scheme and can take the form of either defined benefit plan or defined contribution plan.

55. **A new insurance law came into force in March 2009, and a pension reform law has been adopted recently.** These laws, which designate the BNR as the regulator for the insurance and pensions sectors, represent a significant step in developing regulation for this growing industry. The insurance law establishes rules for licensing, supervision, control and regulation of the insurance profession and insurance intermediaries. The industry had until end-March 2011 to comply with increased capital requirements of RF 1 billion as well as the requirement of operating life and non-life business lines in separate companies. Several companies have yet to comply with these requirements, which may result in either consolidation or specialization in the industry, but may decrease competition as barriers to entry are increased.

56. **The BNR should enforce compliance with the existing regulation, strengthen its supervision capacity and encourage development of separate investment guidelines for life and non-life insurance entities[20].** The BNR has seven staff dedicated to supervision of insurance companies, but has yet to develop fully its offsite and onsite inspection capabilities.

57. **In light of its dominating role, particular attention needs to be paid to the strengthening of governance arrangements applying to the CSR.** They show some weakness, as is illustrated by past audits that make reference to procedural matters and strategic aspects of CSR's business, such as their investment strategy and poor population coverage. While solvency does not appear to be an issue until 2030, the BNR will need to pay attention to CSR's governance, set investment guidelines for the CSR (as well as for

[20] The CSR, pension funds and life insurers will have to follow actuarial guidelines in distributing their portfolio, and any such investment guidelines should be backed by a sound actuarial study.

RAMA), and take measures to ensure that the CSR maintains adequate liquidity.[21] To properly fulfill these responsibilities, the BNR needs to strengthen its capacity. Currently, only two staff are responsible for pension supervision.

58. **The BNR might usefully encourage mergers of smaller occupational pension funds managed by insurance companies to achieve economies of scale.** These smaller schemes could merge, for example, in the form of a sector-based provident fund. Most of these schemes/funds are managed by insurance companies under the long-term insurance business line. These are a contractual form of low-cost saving similar to long-term deposits, many of which are capital guaranteed with a minimum rate of return.

59. **The government should revisit the decision to merge RAMA and CSR due to potentially negative consequences for the functioning of the capital market and incompatibility of the business lines of the two institutions.** RAMA and CSR have distinctly differing operational profiles and structures. Merging them would combine the investment portfolios of the two largest institutional investors, exacerbating concentration in the investor base and jeopardizing competition.

60. **The limited availability of long-term assets is a challenge for the CSR, other pension funds and the insurance industry.** Several possibilities present themselves, including longer-term placements in the banking sector, increased placement in government securities, increased investment in infrastructure, and possibly in the form of PPPs. The authorities should carefully assess these options with a view to expanding investment opportunities for the CSR and other institutional investors.

D. Housing

61. **Many of the necessary building blocks for the further development of the mortgage market are in place.** The systematic registrations of land, to be completed by 2012, will greatly improve the prospects for access to finance for the rural population and SMEs, given the importance of land as a source of collateral for lending. To complement this stage of reforms, land registration, which is done by the National Land Center, and mortgage registration, which is currently done by the Rwanda Development Board, should be unified. This would create efficiency savings and remove a possible window for fraud to be committed. Developing a reliable measure for land and house prices and improving the capacity for property valuation should be a key priority to foster risk management.

62. **A priority for further development of the mortgage market should be the establishment of an appropriate mechanism to channel long-term savings**

[21] According to the BNR, the solvency assessment is based on an actuarial study prepared in 2008 that points to an actuarial deficit of RF 260 billion by year 2030.

accumulated in other parts of the financial system into banks. This is particularly important in light of the current maturity mismatch between banks' funding and their mortgage lending and given the shallowness of Rwanda's capital market. The easiest approach would be to allow fixed deposits from the CSR and other institutional investors (See Paragraph 53).

63. **The microfinance/SACCO sector should seek to develop a housing finance product targeted at the rural and lower income population.** SACCOs and MFIs have much better access to this part of the population. Designing a product which suits the conditions of this population group, using different underwriting techniques from traditional mortgages could lead to much improved access to credit for low income groups.

APPENDIX I. RWANDA: RISK ASSESSMENT MATRIX

	Overall Level of Concern	
Identified Risk	Likelihood of Occurrence Within Three Years	Expected Impact on Financial Stability if Risk Realized
Banks may be under-stating problem loans and insufficiently provisioning for expected losses	• *High* • Not all commercial banks are fully provisioned, but over the past three years compliance has improved.	• *Moderate* • Current non-compliant banks are improving provisioning and they remain solvent. Current capitalization of banks presently is reasonable even when adjustments are made for under-provisioning and Rwanda's lack of a general or watch provision.
New type of nonbank depository (SACCOS) results in some or many institution failures	• *High* • The Rwandan government has already established SACCOs in all districts. Regulation is in place, but the BNR lacks trained supervisors and SACCOs lack trained managers.	• *High* • Failure of any financial institution can lead to problems with public confidence in all financial institutions creating liquidity problems in the near term and credibility issues in the longer term.
Over heating of certain sectors of the economy	• *Moderate/High* • Real GDP growth is high and commercial and housing construction shows strong growth with inadequate use and occupancy.	• *Moderate/High* • Over building and creating excess capacity can lead to borrowers being unable to service their loans. Banks can withstand a 30 percent shock to housing loans, but the system is vulnerable due to CSR's direct investment in housing.
Problems in agriculture sector	• *Moderate/High* • The Rwandan economy and exports are substantially dependent on agriculture.	• *Low/Moderate* • Stress tests do not show commercial banks to be highly vulnerable to agriculture shocks. However, current data do not permit full evaluation of such shocks.
Development objectives in conflict with safe and sound banking	• *Moderate/High* • Government pressuring banks to shift from short-term commercial to longer-term commercial financing. • Government policy encourages housing construction and mortgage financing. • Government movement to acquire direct financing for infrastructure development.	• *Moderate* • In an environment of low interest rate risk, effects on credit risk are more relevant when moving to longer-term funding. This is true in particular as Rwanda still needs to develop a stronger credit culture.. • Accessing international capital markets for infrastructure funding bears risk, especially if projects not properly prepared.
Bank Liquidity	• *Low/Moderate* • Commercial banks already experienced liquidity problems when some institutional depositors withdrew deposits in 2009. • Competition may increase from non-bank depository institutions. • Some external tensions persist.	• *Moderate* • Unlike in 2009, banks now are more than reasonably liquid and appear able to withstand substantial deposit withdrawals. • Banks are undertaking strategies to improve their core deposit base which could possibly lead to greater competition and have an impact on earnings.

Appendix II: Rwanda: Report on Observance of Standards and Codes of the Basel Core Principles for Effective Banking Supervision

A. Summary, Introduction, and Methodology

64. **This Report on Observance of Standards and Codes (ROSC) summarizes the Detailed Assessment Report (DAR) on the implementation of the Basel Core Principles for Effective Banking Supervision (BCP) in Rwanda.** The DAR was completed during February to March 2011 as part of a Financial Sector Assessment Program (FSAP) Update undertaken by the International Monetary Fund (IMF) and the World Bank. The Rwandan authorities have taken major steps to strengthen regulation and supervision of banks, substantially addressing many of the recommendations from the 2005 FSAP. New laws governing the central bank, banking, and countering the abuse of financial services, have been enacted, providing the National Bank of Rwanda (BNR) with sufficient powers for effective regulatory intervention. However, the FSAP Update assessment found several weaknesses that need to be addressed: (i) the process of introducing prudential regulations on the basis of the new laws needs to be completed soon; (ii) the framework for cross-border supervisory cooperation should be further strengthened; (iii) the frequency of on-site examinations should be increased with a view to having at least the largest banks on a 12-month cycle; and (iv) the BNR should ensure that staff members of its supervision department stay intimately familiar with supervisory methods and procedures and with the new laws and regulations.

65. **The assessment team held extensive discussions with staff from the BNR's Supervision Department and industry representatives.** [22] The team enjoyed the full cooperation of its counterparts, received the information it required and benefited from a self-assessment prepared by the BNR. The assessment was performed in accordance with the guidelines set out in the Core Principles (CPs) Methodology.[23] The assessment is based solely on the laws, supervisory requirements, and practices that were in place at the time it was conducted. However, where applicable, the assessors made note of regulatory initiatives which have yet to be completed or implemented.

B. Institutional and Market Structure—Overview

66. **The 2007 BNR Law (BNR Law) and the 2008 Law on the Organization of Banking (LOB) provide the basic legal framework for banking in Rwanda.** Under the BNR Law, one of the missions of the BNR is "to enhance and maintain a stable and competitive financial system without any exclusion," while its duties include supervising

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[22] The BCP assessment was conducted by Richard Hands (consultant to the World Bank) and Jan Rein Pruntel (consultant to the IMF).

[23] Issued by the Basel Committee on Banking Supervision, October 2006.

and regulating the activities of financial institutions, including banks, as well as other institutions. The BNR Law empowers the BNR to issue regulations implementing the provisions of the LOB, and states that these regulations have to be respected by those concerned. Besides the BNR, there are at present, no other authorities directly or indirectly involved in banking supervision. However, new laws on capital markets and money laundering and terrorist financing foresee the establishment of a Capital Markets Authority and a Financial Investigations Unit (FIU), respectively. Both of these have yet to become operational.

67. **There are eight commercial banks and four specialized financial institutions (including one microfinance bank) in Rwanda, accounting for 89 percent and 11 percent of banking system assets, respectively.** The system is small and concentrated, with the three largest banks together holding over sixty percent of the banks' assets. Rwandan banks are generally well capitalized, with the overall regulatory capital adequacy ratio (CAR) standing at 20.3 percent as of September 2010, somewhat mitigating the still relatively high proportion of nonperforming loans (NPL). However, Rwandan banks also record the lowest earnings performance in the Eastern African Community (EAC). Within the EAC, Rwanda has the shallowest banking sector with a ratio of bank assets to GDP of only 19.7 percent.

68. **The commercial banking system remains in a period of transition and recovery.** The genocide of 1994 had *inter alia* resulted in some 50 percent of gross loans being non-performing and severe difficulty in identifying surviving customers. Although it has required continuous attention from the BNR, NPLs as a percentage of gross loans declined to 12 percent in 2010. In addition to the BNR's resolute efforts to purge the banks' loan portfolios of NPLs, there has been significant restructuring and merger/acquisition activity continuing into 2010. Three banks have been wholly acquired by foreign institutions and three others have sought foreign partners. In addition, one Kenyan bank has established a *de novo* presence. Almost half of banking system assets are now held by foreign banks. Rwandan banks have no operations abroad.

C. Preconditions for Effective Banking Supervision

69. **Rwanda has achieved high growth and macroeconomic stability over the last decade but poverty remains high, with 57 percent of the population living below the national poverty line in 2006.** The BNR's monetary operations are relatively basic, payment system development is nascent, and foreign exchange operations were recently liberalized. Fiscal policy in Rwanda has been slightly expansionary but the deficit is projected to be reduced this fiscal year. Rwanda's resilience to external shocks has improved thanks to prudent policies, substantial debt relief, and heavy reliance on concessional borrowing.

70. **The legal and regulatory framework is supportive to sound banking operation and effective supervision.** This is further enhanced with a relatively modern accounting framework and an accounting profession of high integrity standards. The court system has been strengthened by introducing specialized commercial courts which makes the processes for realizing collaterals more effective.

71. **Rwandan banks have adopted International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB).** Their financial statements must be prepared in accordance with IFRS and must provide a true and fair view of the bank's financial position and performance. The annual accounts must be audited, with the quarterly financial statements banks are required to publish subject to review by external auditors. Major international accountancy firms have a presence in Rwanda and are employed by most of the banks.

72. **While there is no formal crisis management framework in place in Rwanda, the BNR is vested with ample enforcement and resolution powers**. These powers are further enhanced in the various regulations issued by the BNR. As evidenced by past action, the BNR is able and willing to act decisively, although sometimes with delay, in case of breaches of respective laws and regulations.

73. **Collaboration between the BNR and the ministry of economics and finance (MINECOFIN) as regards crisis management has been enhanced.** Regular as well as ad-hoc meetings between the ministry of finance (MoF) and BNR staff at different levels are held. As there is no formal arrangement for coordination between the two in the event of a bank's insolvency, problem banks have been dealt with on an ad-hoc basis. The MoF and BNR are advised to further reinforce their collaboration in a memorandum of understanding (MoU) and to engage with home country authorities on crisis-contingency planning and management issues.

74. **There is no pre-designed official financial support to insolvent but viable banks in Rwanda.** Past experience indicates, however, that the government is ready in principle to provide solvency support to banks and other financial institutions on an ad-hoc basis. There is a need to define a contingency planning framework which spells out objective and transparent policies and procedures for government financial support. As mandated by the LOB, the authorities intend to prepare separate legislation on a deposit guarantee fund (DGF).

D. Main Findings

Objectives, Independence, Powers, Resources, and Cooperation (CP 1)

75. **The BNR should as a matter of priority invest in developing the capacity of its bank supervision department, particularly by ensuring sufficient training of staff.** The BNR employs eight bank inspectors (excluding managers), who have an average experience of only about two years. These inspectors are responsible for supervising eight

commercial banks and four other bank-type institutions. While the number of staff may be considered to be commensurate with the number of supervised institutions, the BNR's supervision department should ensure that its staff members stay intimately familiar with supervisory methods and procedures and with the laws and regulations, which particularly in the latter case may be challenging due the rapid pace at which these are being renewed.

Licensing and Structure (CPs 2–5)

76. **There is no explicit legal provision limiting deposit taking from the public to licensed institutions.** This is potentially a major loophole that might be abused for undertaking undesirable activities (e.g., Ponzi schemes). So far this has not caused any problems, but nevertheless this loophole should urgently be closed.

77. **The BNR should strengthen its processes for licensing foreign-owned banks wishing to start operations in Rwanda.** The BNR has in at least one recent case actually sought the consent of the home country supervisor of a foreign bank that wished to start operating in Rwanda by acquiring an existing bank. However, the BNR did not verify whether this particular supervisor practices global consolidated supervision (which, as it turns out, this supervisor does not do). Neither did the BNR perform its own due diligence of the financial strength of the acquiring bank.

Prudential Regulations and Requirements (CPs 6–18)

78. **The BNR has introduced key regulations which have substantially implemented the recommendations of the 2005 BCP assessment and provided the BNR with sufficient powers for effective regulatory intervention.** These include strengthened regulations on capital adequacy, liquidity, credit concentrations, corporate governance and insider lending. In addition, Risk Management Guidelines for banks have been introduced (CP7).

79. **A range of other regulations are in various stages of completion and remain to be finalized and published before the framework of minimum prudential standards is complete.** These include regulations on credit classification and provisioning, placements with banks, and foreign exchange exposure limits.

80. **The capital adequacy requirement generally conforms to Basel I.** The minimum capital adequacy ratio is 15 percent but the BNR does not yet apply a capital charge for market risk. (CP6) The BNR is planning to expand the capital adequacy rules to incorporate the Market Risk Amendment to the Capital Accord, including the use of the internal models approach. Implementation of the Standardized Approach to market risk measurement would appear more appropriate in the short-term and completion of the draft regulation on foreign exchange exposure limits should be a priority. (CP13)

81. **The BNR has indicated that it is in the process of fully implementing Basel II.** The assessors believe that the BNR should first concentrate on implementing all the supervisory methods already at hand, and consolidating these in day-to-day supervision.

82. **The BNR recognizes a gap in its regulatory framework in relation to Country and Transfer Risk.** It plans to develop appropriate risk guidelines on country and transfer risk, reporting forms and supervisory oversight for provisions against country risk by mid- to end-2011. Implementation of the draft regulations on banks' placements of deposits with other banks would also go a long way to plug the regulatory gap in a manner consistent with the present business of Rwandan banks. (CP12)

83. **A Law on Prevention and Penalizing the Crime of Money Laundering and Financing Terrorism (AML/CFT Law) was enacted in 2008.** The law provides for the establishment of a Financial Investigation Unit (FIU), to which the BNR, banks, other financial institutions, and specified other parties are to report suspicious transactions. However, the FIU has yet to become operational. While the introduction of the AML/CFT Law is a significant step forward, further action needs to be taken, including at a minimum the start-up of the FIU, providing guidance to banks, training for bank employees and BNR inspectors, and including anti-money laundering and combating the financing of terrorism (AML/CFT) in the BNR's inspection work.

Methods of Ongoing Banking Supervision (CPs 19–21)

84. **The frequency of on-site examinations should be increased with a view to having at least the largest banks examined on a 12-month cycle.** Currently, the period elapsing between on-site inspections can run up to two years, even for the larger banks. In addition to focusing on credit risk, the BNR should ensure that areas such as operational risks (including IT risks) and AML/CFT are properly addressed during both on-site and off-site work. In performing its off-site work, the BNR should make full use of qualitative sources of information, such as board and board committee minutes and internal and external auditors' reports. The BNR should consider having meetings with each bank's internal auditors at least annually in order to discuss their findings and audit plans. The BNR also needs to ensure that all its supervisory actions towards individual banks are well documented and filed in an easily accessible manner. In this context, the BNR is encouraged to complete the transition to a more advanced information system expeditiously. The new system, expected to be completed in 2011, will feature centralized data storage and should be designed to allow for better monitoring of banks' compliance with BNR recommendations.

Accounting and Disclosure (CP 22)

85. **All banks are required to prepare accounts in accordance with IFRS.** Quarterly accounts of banks are published in two widely circulating newspapers.

However, there is no requirement for full audited annual report and accounts to be made available in bank premises or on bank websites.

Corrective and Remedial Powers of Supervisors (CP 23)

86. **The LOB provides the BNR with a suitable range of enforcement powers to address cases of non-compliance with legal and regulatory requirements.** These include *inter alia* appointing a special commissioner (i.e., a temporary administrator), limiting the permitted activities, withdrawal of the license, and suspension or dismissal of board members and managers. The BNR may also impose monetary penalties on banks. The regulation on capital adequacy requirements provides for prompt corrective action should a bank become undercapitalized. The BNR's remedial powers should be further strengthened by clarifying in the LOB that an appeal against sanctions and penalties imposed by the BNR would not lead to their suspension.

Consolidated and Cross-Border Banking Supervision (CPs 24–25)

87. **The BNR has taken steps to strengthen the framework of cross-border supervision, but needs to expand this framework further.** It is party to the multilateral MOU between the supervisory authorities of the member states of the EAC, which was signed in 2008. The BNR seeks the home supervisor's approval for the establishment of a foreign-owned banking subsidiary or branch in Rwanda but it should also verify whether the home supervisor practices consolidated supervision. The BNR should also make sure that it establishes effective cooperative arrangements for ongoing supervision with the home supervisors of all foreign-owned banks operating in Rwanda.

Table 1. Rwanda: Recommended Action Plan to Improve Compliance with the BCP

Reference Principle	Recommended Action
Objectives, Independence, Powers, Transparency, and Cooperation (CP1)	The BNR should expedite the publication of aggregate data on the performance of the banking industry and of information on the exercise of its supervisory duties. The BNR should invest in developing the capacity of the Banking Supervision Department (BSD). The possible grounds for dismissal of the governor and other board members should be specified in the BNR Law. In addition, there should be a statutory obligation to publicly disclose the reasons for dismissal. The liability of BNR board members and staff should be limited to actions that were conducted in bad faith, The BNR should take the initiative in establishing information sharing arrangements with home supervisors. The BNR should ensure it will have effective cooperative arrangements with the FIU that is to be set up. Consideration should be given to enhancing the secrecy provisions in the BNR Law and the LOB to allow the BNR to refuse to supply information without a court order or mandate from parliament.
Permissible Activities (CP 2)	The LOB should be amended to include an explicit provision limiting deposit taking from the public to licensed institutions.
Licensing Criteria (CP3)	The BNR should ensure that it verifies that home supervisors of applicants exercise consolidated supervision. The BNR should consider the overall range of experience of a bank's board members collectively. The BNR may wish to establish a formalized internal procedure for processing licensing requests to ensure all requirements of the policy are considered.
Transfer of Significant Ownership (CP4)	It would be useful to include a definition of "substantial" shareholders in the LOB or a regulation.
Major Acquisitions (CP 5)	The BNR should ensure that its new regulation on major investments of banks includes explicit provisions that the investment does not expose the bank to undue risks and that the bank has adequate managerial and organizational resources to handle the investment.

Reference Principle	Recommended Action
Capital Adequacy (CP6)	It is recommended that the BNR consider an introducing a “leverage” ratio for analyzing capital adequacy. Such a ratio would compare core capital to net assets (total assets less provisions and interest in suspense). The BNR should also consider introducing a “leverage” ratio into the formal regulatory requirements in due course.
Risk-Management Process (CP 7)	It is recommended that the BNR re-consider the mandatory committee structure to permit each bank some flexibility in the number and responsibilities of committees it requires to fulfill all regulatory corporate governance and risk management requirements. It is recommended that the BNR should introduce a specific requirement that each bank should prepare an internal capital adequacy plan.
Credit Risk (CP8)	
Problem assets, Provisions, and Reserves (CP 9)	The BNR should finalize the implementation of the draft regulation on credit classification and provisioning as soon as possible. The BNR should consider introducing requirements for loan loss provisions on watch category advances and for general provisions on current/normal exposures at appropriate levels.
Large Exposure Limits (CP10)	It is recommended that the BNR give consideration to introducing off-site reporting requirements in respect of sectoral, collateral, and geographic concentrations of exposure.
Exposures to Related Parties (CP 11)	No comment
Country and Transfer Risks (CP 12)	The BNR should expedite the implementation of the draft regulation on bank placements. The BNR should develop appropriate risk guidelines on country and transfer risk.
Market Risk (CP 13)	The BNR should expedite implementation of the draft regulation on foreign-exchange exposure. It is recommended that the BNR introduce provisions for the Market Risk Amendment to the Capital Accord initially only on the basis of the standardized approaches.

Reference Principle	Recommended Action
Liquidity Risk (CP 14)	The BNR should introduce the formal reporting of foreign currency liquidity. The BNR should expand the use of the maturity ladder approach to liquidity measurement and reporting, including the inclusion of more detailed breakdown of short-term assets and liabilities.
Operational Risk (CP 15)	The BNR should expedite the implementation of the draft regulation on business continuity management. The BNR should establish a formal general responsibility for directors, managers etc of a bank to report "material adverse events" to the BNR in a timely fashion.
Interest Rate Risk in the Banking Book (CP 16)	The BNR should design and implement reporting on each bank's interest rate risk position.
Internal Control and Audit (CP17)	No comment since provisions in this regard are adequate.
Abuse of Financial Services (CP18)	Action should be taken to effectively implement the AML/CFT Law, including at a minimum the start-up of the FIU, providing guidance to banks and training for bank employees and BNR inspectors, and including AML/CFT in BNR inspections.
Supervisory Approach (CP 19)	The BNR should ensure that all its supervisory actions towards individual banks are well documented (including internal working papers, emails, etc.) and filed in an easily accessible manner. The BNR may obtain efficiency gains by focusing on either the risk based supervision approach or the CAMELS methodology.
Supervisory Techniques (CP 20)	The frequency of on-site examinations should be increased with a view to having at least the largest banks on a 12-month cycle. The BNR should consider having meetings with each bank's internal auditors at least annually in order to discuss their findings and audit plans. The BNR should ensure that its examination report quality assurance process does not lead to undue delays in sharing examination findings with the banks.

Reference Principle	Recommended Action
Supervisory Reporting (CP 21)	Banks should be required to submit prudential returns on their interest rate risk position in the banking book. Consideration should be given to the introduction of a requirement for external auditors to certify prudential returns once a year. The BNR should ensure that the external auditors comply with their duty to inform the BNR of adverse developments and cases of non-compliance.
Accounting and Disclosure (CP 22)	The BNR should prepare and promulgate a new regulation on the publication of information by the banks in conformity with the new laws. The BNR should ensure that this regulation encompasses internet based disclosure and published IFRS annual report and accounts. The requirement to file the annual accounts reporting package with the BNR by June 30 should be amended to April 30 each year.
Supervisors' Corrective and Remedial Powers (CP 23)	It should be explicit in the LOB that an appeal against sanctions and penalties imposed by the BNR under Articles 65-69 should not lead to their suspension. In addition, instead of having recourse to an ad hoc committee, it would be preferable if banks could appeal BNR decisions to a permanent court specializing in financial matters.
Consolidated Supervision (CP 24)	Not applicable at this time but could become relevant later especially in the context of EAC integration.
Home-Host Relationships (CP 25)	There is an urgent need for the BNR to enter into a cooperative arrangement with the Banking Commission of the West African Monetary Union. It should be clarified in the LOB that the home supervisor's consent is not only required for the establishment of a branch of a foreign bank in Rwanda, but also for the establishment of a subsidiary. The BNR should assess whether or not the home supervisor practices consolidated supervision. The BNR should remain vigilant that it reports significant events relating to wholly or partially foreign-owned banks in Rwanda to the home supervisor.

E. Authorities' Response to the Assessment

88. **The authorities have indicated that they are in agreement with the conclusions and recommendations of the BCP assessment.** They intend to consider numerous recommendations and develop an action plan for their implementation.

Table 2. Rwanda: Selected Economic and Financial Indicators, 2007–2016

	2007	2008	2009	Est. 2010	2011	2012	2013	2014	2015	2016
	(In percent changes; unless otherwise indicated)									
Output and prices										
Real GDP growth	5.5	11.2	4.1	7.5	7.0	6.8	7.0	6.8	6.5	6.5
Real GDP (per capita)	3.3	8.9	2.0	5.3	4.8	4.6	4.8	4.6	4.3	4.3
GDP deflator	13.2	12.6	11.0	2.1	4.7	6.1	5.3	5.2	4.9	4.9
Consumer prices (period average)	9.1	15.4	10.3	2.3	3.9	6.5	5.3	5.0	5.0	5.0
Consumer prices (end of period)	6.6	22.3	5.7	0.2	7.5	5.5	5.0	5.0	5.0	5.0
External sector										
Export of goods, f.o.b (in U.S. dollars)	19.9	51.4	-12.2	26.5	26.3	9.5	5.9	7.9	5.7	9.1
Imports of goods, f.o.b (in U.S. dollars)	30.2	51.5	13.5	8.5	29.2	-4.5	0.2	6.2	6.5	6.9
Export volume	-0.2	21.8	-20.0	11.6	5.6	12.9	9.4	13.1	10.0	10.0
Import volume	31.0	6.4	7.4	3.8	14.6	0.4	1.7	6.8	6.5	5.7
Terms of trade (deterioration = -)	20.9	-12.8	3.8	8.5	6.1	2.0	-1.7	-4.1	-3.9	-1.9
Money and credit[1]										
Net domestic assets[2]	7.6	10.3	4.9	2.2	7.0	19.1	10.0	15.7	15.5	14.8
Domestic credit[2]	12.0	20.5	3.8	9.4	4.7	23.1	5.4	16.2	16.0	14.8
Government[2]	0.2	-18.1	0.2	2.4	-7.9	16.2	0.0	0.0	0.0	0.0
Economy[2]	11.9	38.6	3.6	7.0	12.6	6.9	5.4	16.2	16.0	14.8
Broad money (M2)	30.8	24.2	13.1	16.9	16.0	15.3	13.7	13.3	12.8	12.8
Reserve money[3]	30.7	23.5	0.3	12.5	16.0	15.3	13.7	13.3	12.8	12.8
Velocity (GDP/M2; end of period)	5.5	5.5	5.6	5.3	5.1	5.0	5.0	4.9	4.9	4.8
	(Percent of GDP)									
National income accounts										
National savings	8.3	9.1	5.1	4.2	7.0	7.7	7.9	8.2	9.2	10.0
Gross investment	20.2	23.5	22.4	21.9	25.1	23.3	21.8	20.9	20.9	20.7
Of which: private (including public enterprises)	12.4	13.1	12.4	10.9	11.1	11.4	11.9	12.2	12.5	12.8
Government finance[4]										
Total revenue (excl. grants)	12.4	12.6	14.9	12.6	13.7	13.9	14.3	14.6	14.8	15.2
Total expenditure and net lending	22.0	22.6	26.4	25.9	28.7	27.4	25.9	24.2	23.6	22.8
Capital expenditure	7.0	8.2	11.1	10.2	13.1	13.0	11.0	8.8	8.5	8.2
Current expenditure	14.2	15.1	14.5	14.8	14.9	14.4	14.4	14.8	14.6	14.5
Primary fiscal balance[5]	-1.6	-3.3	-2.2	-5.2	-5.2	-4.6	-3.6	-4.1	-3.8	-3.1
Domestic fiscal balance[6]	-4.6	-5.6	-5.3	-8.1	-8.1	-6.7	-5.8	-6.2	-5.8	-4.8
Overall fiscal balance (payment order)										
After grants	-1.4	-0.2	-2.2	-0.1	-4.2	-1.8	-0.9	-0.3	-0.3	-0.3
Before grants	-9.6	-10.0	-11.5	-13.3	-15.0	-13.5	-11.6	-9.6	-8.8	-7.6
External sector										
External current account balance										
Including official transfers	-2.2	-4.9	-7.3	-6.0	-5.2	-9.1	-5.5	-4.4	-4.5	-4.2
Excluding official transfers	-11.9	-14.4	-17.3	-17.7	-18.1	-15.7	-13.8	-12.6	-11.7	-10.7
External debt (end of period)	15.2	14.8	14.8	14.9	17.7	19.2	19.0	17.7	16.5	15.2
Net present value of external debt										
(percent of exports of goods and services)	…	…	…	99.7	98.1	108.7	110.7	100.3	91.1	80.9
Scheduled debt service ratio										
(percent of exports of goods and services)	3.5	2.1	2.6	3.4	5.7	5.0	6.1	7.5	7.8	7.1
Gross reserves (in months of imports of goods and services)[7]	4.7	4.7	5.4	5.2	5.7	5.3	5.4	4.8	4.2	3.5
	(Millions of U.S. Dollars)									
Gross reserves	552.4	596.4	742.2	814.2	899.2	847.6	897.2	856.8	804.7	761.5
Memorandum item:										
Nominal GDP (billions of Rwanda francs)	2,049	2,565	2,964	3,253	3,643	4,128	4,652	5,224	5,839	6,526

Sources: Rwandan authorities; and IMF staff estimates and projections.

[1] Projections are based on the program exchange rate of RwF per US dollar of of RWF571.24 for 2010 and RWF594.45 thereafter.
[2] As a percent of the beginning-of-period stock of broad money.
[3] Increase in 2007 reflects rebasing of the monetary program; reserve money growth was limited to 13 percent after correcting for the rebasing at end-2006.
[4] On a fiscal year basis (July-June).For example, the column ending in 2011 refer to FY2010/11.
[5] Revenue excluding grants minus current expenditure except interest due and exceptional expenditure (AU peacekeeping expenditures and spending on demobilizing and integrating militia groups) minus domestically financed capital expenditure.
[6] Revenue excluding grants minus current expenditure (excluding external interest) minus domestically financed capital expenditure and net lending.
[7] Data from 2009 onwards includes SDR Allocation

Table 3. Rwanda: Financial System as of September 30, 2010

Institution	Number of Institutions	Assets (Bn RWF)
Commercial Banks	8	644
Specialized Institutions	4	81
Microfinance Bank	1	5
MFIs and Old SACCOs	109	90
Umurenge SACCOs	416	n.a
Insurance Companies	8	118
Pension Funds	40	142

Table 4. Rwanda: EAC Commercial Bank Performance Ratios Comparison
(June 2009)

(Figures in percent)	Burundi	Kenya	Rwanda	Tanzania	Uganda	EAC
Measures of Capital Adequacy						
Regulatory Capital to risk-weighted assets	17.4	19.7	19.3	18.8	13.4	17.7
Capital to assets	10.9	11.5	14.0	10.6	12.0	11.8
Measures of Asset Quality						
NPL/Total loans	13.6	9.0	13.4	7.7	4.1	9.6
Measures of Earnings						
ROA	2.5	3.9	0.9	3.6	1.0	2.4
ROE	22.0	34.0	6.4	21.2	6.8	18.1
NIMA	NA	6.4	10.2	9.7	8.9	8.8
Measures of Liquidity						
Loans/Deposits	120.5	75.5	82.8	83.0	52.5	82.9
Liquid Assets/Assets[2]	39.6	32.1	35.8	34.6	26.4	33.7
Liquid Assets/Deposits[2]	107.1	43.8	48.9	44.7	41.7	57.2
Measures of Market Sensitivities						
FX Assets/FX Liabilities	155.0	99.9	107.9	NA	108.4	117.8
Net Open Position/Capital	72.5	-0.2	11.2	-5.9	12.6	18.0
Structure of Commercial Banking Industry						
(Millions of US$)						
Assets	488	16,375	877	6,933	4,013	28,687
Deposits	181	11,940	605	4,702	2,541	19,969
Loans	218	9,138	626	3,112	1,333	14,426
Capital	53	2,280	122	668	604	3,728
Number of banks	7	45	8	36	21	117
Number of branches	73	790	186	282	368	1,699
Asset Share of Commercial Banking Industry						
(Figures in percent)						
State-owned banks	22	5	25	5	3	6
Private banks	78	95	75	95	97	94
Domestic	34	55	28	45	13	45
Foreign	45	40	47	51	84	49
Three largest banks in each country	76	36	65	48	50	NA
Depth of the EAC						
Assets/GDP	44.5	55.4	19.7	33.5	27.6	40.8
Cash/M1	34.6	25.7	28.3	48.5	48.1	35.1

1/ Rwanda does not have a general provision, so capital measurement is more generous than the other East

2/ Liquid assets are defined as cash, due from central bank, interbank loans, and Treasury-securities.

NA = not available.

Source: East African Community central banks and IMF calculations.

Table 5. Rwanda: Financial Sector Indicators
(December 2006–September 2010)

Banking Soundness Indicators	Dec-2006	Dec-2007	Dec-2008	Dec-2009	Sep-2010
Growth Rates					
Total Assets	80.6	29.6	41.2	5.9	2.7
Total loans	92.1	15.6	66.7	2.4	0.5
Deposits	80.9	28.2	41.0	5.4	3.9
Due from banks in Rwanda	80.6	32.7	-10.9	25.4	-9.8
Due from banks abroad	5589.4	-17.3	-97.0	-20.9	96.1
Government securities	138.9	47.1	-7.7	89.9	16.4
Measures of Capital Adequacy (percent)					
Core Capital / RWA	13.0	17.9	16.6	19.0	20.3
Total Qualifying Capital / RWA	13.0	17.9	16.6	19.0	20.3
Core Capital / Total Asset	8.7	11.0	13.1	13.0	12.8
Off Balance Sheet Items / Total Qualifying	4.6	1.2	2.8	15.0	9.5
Insider Loans / Core Capital	17.8	40.1	20.2	19.7	8.7
Large Exposures / Core Capital	126.7	89.2	98.8	65.1	80.0
NPLs – Provisions / Core Capital	71.8	53.1	37.4	35.6	32.3
Measures of Asset Quality (percent)					
NPLs / Gross Loans	25.5	18.2	12.6	13.1	12.4
(NPLs-Interests in Suspense)/Gross Loans	18.8	12.3	10.3	11.4	10.7
Provisions / NPLs	82.0	78.6	66.3	55.2	57.0
Earning Assets / Total Asset	84.8	81.0	81.3	81.7	77.6
Fixed Assets / Core Capital	71.5	32.6	34.2	39.3	42.8
Large Exposures / Gross Loans	19.9	16.4	17.4	13.9	17.4
Measures of Earnings (Annualized, percent)					
Return on Average Assets	3.0	3.2	2.7	0.7	1.6
Return on Average Equity	38.2	31.7	22.0	5.0	12.2
Net Interest Margin	10.0	7.6	11.2	9.3	8.8
Yield on Advances	8.9	8.0	9.2	9.9	10.2
Cost of Deposits	0.6	0.7	0.5	0.6	0.6
Cost to Income	25.4	20.7	25.8	26.6	35.0
Overhead to Income	43.1	32.4	38.9	40.5	54.3
Measures of Liquidity (percent)					
Short term Gap	28.8	27.6	26.2	24.4	22.5
Liquid Assets / Total Deposits	62.3	63.7	60.2	65.3	47.9
Interbank Borrowings / Total Deposits	8.7	8.5	8.1	9.8	9.0
BNR Borrowings / Total Deposits	0.1	0.2	0.2	0.8	0.04
Gross Loans / Total Deposits	70.2	75.3	99.5	83.2	79.0
Measures of Market Sensitivity (percent)					
Forex Exposure / Core Capital	134.6	89.5	2.1	1.9	2.4
Forex Loans / Forex Deposits	1.0	1.2	0.5	2.8	2.1
Forex Assets / Forex Liabilities	100.9	113.3	102.6	103.6	103.9

Source: BNR and IMF staff calculations

APPENDIX III. RWANDA: STRESS TEST METHOD

Stress tests were used to assess the resilience of the banking system to extreme, but plausible, risk factors. The stress tests were carried out for all eight banks based on December 2008 to September 2010 data. Several possible risks were considered, including credit, concentration, liquidity, and foreign exchange. The exercise comprised single factor shocks that were static in nature due to limited data which precluded performing regression analysis conditioned on macro scenarios. Interest rate risk was not analyzed as banks in Rwanda have the discretion (which is explicit in the loan agreement) to change interest rates for all types of loans, including fixed interest rates. The mismatch of asset and liability maturities at Rwandan banks is more a potential credit risk problem than an interest rate risk issue. Banks may be able to increase interest rates, but risk of default rises as customers may be unable to service higher cost of their loans.

Several adjustments were made to the banks' initial capital, risk-weighted assets, and net assets to correct for under-provisioning in order to meet regulatory limits. The criteria for the stress tests on asset quality used two capital measures as the relevant metric: (i) regulatory capital, defined as Tier I plus Tier II (supplemental capital) divided by risk-weighted assets; and (ii) core capital to net assets. Since Rwanda lacks a general and specific provision, both capital measures were adjusted to conform to the standards currently applied in other EAC[24] countries.

A number of stress tests focused on credit and concentration risks, given their importance for the Rwandan banking system. The tests applied the following shocks: (i) a 100 percent discount on collateral; (ii) a uniform increase of current NPLs; (ii) the breaking point from a haircut on total standard loans; (iv) increases in NPLs for the agriculture and housing sector; and (v) a large borrower default. The method used in the credit risk sensitivity analysis consisted of estimating the additional provisions that would be required to cover the estimated loss and charging it to capital. The provisions were calculated using the average provisioning ratio. This assumes a fixed proportion of new bad loans according to MCM standard methodology[25]. The provisioning shortfall was deducted from risk-weighted assets and net assets as well as capital.

Liquidity risk test simulated the following shocks: (i) a 30 percent drop in deposits and its effect on a basic liquidity ratio (i.e., liquid assets-to-total assets); and (ii) the same shock and its effect on BNR's definition of their liquidity ratio (i.e., a more conservative definition of liquid assets divided by deposits). The BNR's liquid assets definition is more conservative because it nets out due to and due from banks. When the test was run using the BNR liquidity ratio definition, the results were measured against the 20 percent liquidity requirements for Rwandan banks.

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[24] As part of their commitment to further regional economic, monetary and financial integration, the EAC members have already stated their objective to harmonize financial regulation standards.

[25] See Cihak, Martin, 2007, "Introduction to Applied Stress Testing" IMF Working Paper No. 07/59.

Foreign exchange risk tests measured the impact of shocks on net open position (NOP) and capital. The test measured the revaluation gains (losses) on the NOP in U.S. dollars from a simultaneous depreciation (appreciation). The results were measured against the NOP requirement. Currently, banks are required to maintain a 20 percent NOP to capital position. Because of the NOP requirement, banks exposure to FX risk is minimal.

Table 6. Rwanda Financial System Stress Tests

Rwanda Financial System Stress Tests										
	Distribution of Banks by two Capital Measures									
	Number of Banks								in percent	
	CAR [1/]	Core [2/]	CAR	Core	CAR	Core	CAR	Core	CAR	Core
	<3%		3%-6%		6%-10%		>10%			
Baseline before capital adjustments	-	-	-	-	-	1	8	7	20.3	12.8
Baseline after first adjustments - under provisioning	-	-	-	-	1	2	7	6	19.8	12.4
Baseline after second adjustments - specific provisions [3/]	-	-	-	-	1	2	7	6	18.8	11.7
Sensitivity Analysis										
Credit Risk										
Test 1: Discount on Collateral	1	1	1	3	2	1	4	4	13.5	8.4
Test 2: Uniform increase in NPLs - 106% [4/]	1	1	-	2	2	3	5	2	12.5	7.6
Test 3: Haircut on good loans - 23% [4/]	1	2	2	2	-	3	5	1	8.8	5.3
Sectoral Shocks										
Test 4: Increase in housing NPLs by 30%	-	-	-	-	1	3	7	5	18.6	11.6
Test 5: Haircut on good housing loans by 80% [4/]	3	3	-	1	-	3	5	1	9.6	5.0
Test 6: Increase in agriculture NPLs by 30%	-	-	-	-	1	2	7	6	18.7	11.7
Test 7: Haircut on good agricultural loans by 100%	-	-	-	-	1	3	7	5	17.8	11.0
Concentration shocks										
Test 8: Large borrower defaults	3	3	-	1	1	2	4	2	11.0	6.8
Market risk										
Test 9: Depreciation of RWF by 15% [5/]	-	-	-	-	1	3	7	5	18.7	11.6

	Distribution of banks by liquidity ratio									
	Number of banks								in percent	
Liquidity Risk	Liq/Dep	Liq/Asset	Liq/Dep	Liq/Asset	Liq/Dep	Liq/Asset	Liq/Dep	Liq/Asset	Liq/Dep	Liq/Asset
	<10%		10%-15%		15%-20%		>20%			
Test 10: Drop in Deposits by 30%	1	1	-	-	-	2	7	5	38.8	21.9
Test 10: Drop in Deposits by 30% using BNR definition of liquidity assets [6/]	2	2	-	1	-	1	6	4	25.6	14.4

1/ CAR is Tier 1+Tier 2 / RWA
2/ Core is Tier 1/ Net Assets
3/ This included adjusting for 1% general provision and 5% watch. Rwanda does not require banks to hold a general or watch provision.
4/ This is a breaking point approach to test the level at which the first bank fails (insolvent)
5/ The shock was very severe and thus illustrated that FX risk in Rwanda is minimal
6/ BNR definition of liquid assets nets out due to and due from banks which makes it a very conservative measure.

Source: BNR and IMF staff calculations