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ARGENTINA

FINANCIAL SYSTEM STABILITY ASSESSMENT

February 2016

The documents related to the Financial Sector Assessment Program for the Republic of Argentina were completed in 2013. The reports were prepared by an IMF team in spring of 2013 and were discussed and finalized by the IMF's Executive Board on July 12, 2013. The assessment and recommendations included herein reflect the views of IMF staff at that time and do not apply to developments occurred since then.

The following documents have been released and are included in this package:

- The **Financial System Stability Assessment** (FSSA) for Argentina, prepared by a staff team of the IMF for the Executive Board's consideration on July 12, 2013. This report is based on the work of a Joint IMF/WB Financial Sector Assessment Program (FSAP) mission to Argentina during May 2011 and March 2013. The FSSA report was completed on June 26, 2013.
- A **Press Release** summarizing the views of the Executive Board as expressed during its July 12, 2013 consideration of the FSSA.

The documents listed below have been or will be separately released.

Report on Observance of Standards and Codes
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FINANCIAL SYSTEM STABILITY ASSESSMENT

June 26, 2013

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Prepared By
The Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) missions that visited Argentina in May 2011 and March 2013. The report will be discussed at the Board as a stand alone Financial System Stability Assessment (FSSA).

- This is the initial FSAP for Argentina, which took place in two phases. First a mission visited Buenos Aires in May 2011 to conduct the assessment of compliance of financial supervision with international standards, focusing on banking, insurance and securities markets, and these assessments were published in September 2012. Subsequently, missions visited Buenos Aires in December 2012 and March 2013 to assess issues related to financial stability and development.

- The 2013 FSAP mission team comprised: Robert Rennhack (IMF mission chief) and Sophie Sirtaine (WB mission chief); Sònia Muñoz (IMF deputy mission chief), Mario Catalan, and Roberto Guimaraes-Filho (all MCM), Rodolfo Wehrhahn (MCM offsite contributor), Naomi Griffin (WHD), William Allen, Michel Rodolfo Canta, and José Tuya (IMF consultants); Caroline Cerruti (WB deputy mission chief), Alfonso Garcia Mora, Cledan Mandri-Perrot, Bujana Perolli, Massimo Cirasino, Craig Thorburn, Clemente Luis del Valle (all WB), Sergio Schmukler, Fredes Montes, and Maria Teresa Chimienti (WB offsite contributors), and Alessandro Bozzo (WB consultant). The 2011 FSAP supervisory standards mission team comprised Sophie Sirtaine (WB mission chief), Caroline Cerruti, Serap Oguz Gonulal, Maria Laura Patino, Valeria Salomao Garcia (all WB), and Andrea Corcoran and Socorro Heysen (IMF Consultants). The FSAP team greatly appreciates the excellent cooperation it received from the authorities.

- FSAPs assess the stability of the financial system as a whole and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

- This report was prepared by Robert Rennhack and Sònia Muñoz.

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Glossary

ANSES	Social Security Administration
BADLAR	Wholesale Rate
BCRA	Banco Central de la República Argentina
CAR	Capital Adequacy Ratio
CNV	National Securities Commission
CPI	Consumer Price Index
EBIT	Earnings before Interest and Taxes
ELA	Emergency Liquidity Assistance
FGD	Deposit Insurance Fund
FGS	Sustainability Guarantee Fund
FSAP	Financial Sector Assessment Program
FSSA	Financial System Stability Assessment
ICP	Insurance Core Principles
INAES	National Institute of Cooperatives and Social Economy
INDEC	Official Statistical Office
LCR	Liquidity coverage ratio
MECON	Ministry of Economy and Public Finances
MoU	Memorandum of Understanding
NBFI	Nonbank Financial Institution
NSFR	Net Stable Funding Ratio
NIIP	Net International Investment Position
NPL	Nonperforming Loan
P&L	Profit and Loss Statement
PlaNeS	Plan Nacional Estratégico del Seguro
PROCREAR	Argentine Credit Program
ROE	Return on Equity
SEDESA	Seguro de Depósitos Sociedad Anónima
SEFyC	Superintendence of Financial and Foreign Exchange Institutions
SME	Small- and Medium-sized Enterprise
SSN	National Insurance Supervisor
TD	Top-down
VAR	Vector Auto Regression

EXECUTIVE SUMMARY

Argentina's financial system is very small compared to countries at a similar stage of development and mostly transactional. Banks and the Sustainability Guarantee Fund (FGS) dominate the financial landscape, while insurance companies, mutual funds, and other nonbank financial institutions (NBFIs) play a relatively small role.

Building greater confidence in the macroeconomic outlook is essential to deepen financial markets. The persistence of high inflation expectations and the sharp widening of the spread between the parallel and official exchange rates in the past few months signal that many in the private sector are uncertain about the direction of the economy, and this makes it extremely difficult for markets to price financial risks. Moreover, the government's recently expanded role in the allocation of credit will likely lead to further distortions and is unlikely to promote confidence.

The banking system appears resilient to a wide range of shocks, reflecting banks' large capital and liquidity buffers as well as the strong quality of their assets. This situation reflects the recovery in bank profitability over the past few years resulting from sizable financial margins and strong service income. The stress tests results show that the banking system would be capable to withstand a wide range of shocks, but is most vulnerable to credit and common name concentration risk.

Nonetheless, banks do face several challenges. The transition to the new regulatory framework, especially the ability to develop comprehensive forward-looking risk assessments, will be complicated by the uncertainty about the measurement of key economic variables. The Banco Central de la República Argentina (BCRA) could take advantage of the Basel framework to agree on capitalization plans for banks, which would allow it to adopt a risk-focused approach to dividend payments. Moreover, the recent lending programs required by the BCRA, if sustained and especially if extended, will put pressure on the banking system. For this reason, it is recommended that the *Líneas de Crédito para el Sector Productivo* program be capped at 10 percent of deposits and phased out as these loans are repaid. The FGS is interconnected with the financial system, which has the potential to create unexpected liquidity pressures. In addition, the large equity stakes of the FGS in some private banks raises governance issues.

The insurance sector shows signs of financial vulnerabilities. A large percentage of the available capital for solvency is illiquid and not fully suitable to protect the companies in case of adverse events. The non-life sector is on a weaker financial footing than the life or retirement sectors, and faces credit and liquidity risks. It would be advisable to lift the recently introduced mandatory investment requirements, which could accentuate these vulnerabilities.

Financial safety nets could be further strengthened. Although the emergency liquidity assistance (ELA) facilities for banks are comprehensive, the BCRA should work with other supervisors to

monitor potential liquidity risks outside its regulatory perimeter. The BCRA could strengthen the crisis management preparedness in several ways, including through the development of a contingency plan for systemic crises and an enhanced prompt corrective action regime. A high-level systemic risk monitoring committee that includes all relevant institutions would help ensure coordinated and effective policy responses.

The May 2011 assessment of the regulatory and supervisory framework for banking, insurance and securities markets highlighted several areas for improvement. Banking supervision is anchored by a thorough supervision and examination process. In the past few years, the Banco Central de la República Argentina (BCRA) has made important strides in upgrading regulation and supervision to Basel II standards, and has already developed a road map for full implementation of Basel III. However, there remains the need for steps to strengthen independence, legal protection to supervisors, loan provisioning rules, and consolidated supervision. The insurance sector needs to adopt a risk-based supervisory approach and strengthen the resources and independence of the National Insurance Supervisor (SSN). The new capital markets law addresses many of the deficiencies identified in the assessment of securities market supervision, but it also contains features that could hinder the development of capital markets. In particular, it would be important to remove the provision of the new law that gives the National Securities Commission (CNV) the power to veto decisions approved by a majority of the board of listed companies on the grounds of protection of minority shareholders or investors.

During 2012–13 the government has launched several programs designed to enhance financing for housing, infrastructure and small- and medium-sized enterprises (SMEs). It will be critical to design these programs in a way that avoids moral hazard, creates a level playing field, provides an adequate risk sharing framework, involves adequate oversight and evaluation, and only when necessary relies on well-targeted and explicit subsidies.

The objective of the FGS should be refocused on its pension responsibilities and rely on a market-based investment strategy. The increasing role of the FGS in supporting productive investments would benefit from additional safeguards. It would be better to assign activities to support infrastructure to a different entity.

Continuing to improve the financial infrastructure would also help enhance access to finance. Progress in this area would help by reducing information asymmetries and lowering the costs and risks to financial institutions. In the context of rapidly increasing financial market penetration, ongoing efforts to strengthen consumer protection are welcome given the existing fragmentation in the institutional framework.

Table 1. Argentina: FSAP Key Recommendations		
Recommendations and Authority Responsible for Implementation	**¶**	**Time[1]**
Banking Oversight		
Develop capital plans with banks to ensure compliance with the new Basel standards, and in conjunction, remove the limit restriction on dividend payments and transform it to the capital distribution constraints under Basel III (BCRA).	15	NT
Cap *Lineas de Credito* program at 10 percent of bank deposits and phase out this program as the loans are repaid (BCRA).	14	I
Use the bank-level panel supervisory dataset with detailed information on the balance-sheet and profit and loss (P&L) statements for the modeling part of stress testing (BCRA).	35	I
For regulatory capital, restore risk weights on lending to levels for other credit (BCRA).	12	I
Develop a comprehensive database of the assets as well as the liabilities, and the debt service, of corporate and households (BCRA).	21	NT
Continue improving the satellite models of the top-down (TD) stress testing for profits (BCRA).	35	NT
Strengthen rules to nominate and remove members of the BCRA board and the Superintendent, and financial autonomy; eliminate the ability of Ministry of Economy and Public Finances (MECON) to overrule BCRA's decisions (BCRA).	55	I
Move to a forward looking provisioning rule (BCRA).	57	NT
Raise the threshold for lawsuits to gross negligence for BCRA staff's legal protection (BCRA).	56	MT
Public Pension Fund and Insurance Oversight		
Auction fixed-term deposits in banks on a market price return base. Increase the maturity of these deposits to provide stable funds to the banking system (FGS).	34	NT
Discourage unsupervised direct credit activities. Register all credit and debtor information from FGS loan programs in the credit bureau (FGS).	36	NT
Establish a limit of 5 percent for the FGS exposure to banks in equity (FGS).	34	NT
Adopt a single mandate as a pension reserve fund, and need to make investment decisions driven by a strong and independent governance structure (MECON).	70	I
Strengthen independence of the FGS preferably by creating a separate legal structure with recognition of actuarial liabilities, and with independent Board (MECON).	70	NT
Apply technical premiums and efficiency, disallow more than two months of unpaid premia (SSN).	38	I
Lift the recent investment guidelines for insurances and allow risk-transfer reinsurance (SSN).	39	I
The adoption of a risk-based supervisory approach (SSN).	61	I
Enhance operational independence and increase legal protection to SSN's staff (SSN).	62	MT
Financial Safety Net		
Maintain surveillance over activities of non-bank financial companies to detect emergence of systemic liquidity risks. (BCRA, in conjunction with CNV).	42	NT
Establish a contingent funding mechanism for the Deposit Insurance Fund, FGD (MECON, FGD).	46	MT
Clarify in the norms the resolution framework in case of a systemic crisis (BCRA).	50	MT
Enhance the prompt correction action scheme. (BCRA).	44	MT
Establish a high-level systemic committee comprising all players of the safety net to monitor and plan for crisis coordination (BCRA, MECON, CNV, SSN, FGD).	52	MT
Extend legal protection to Seguro de Depósitos Sociedad Anónima, SEDESA (BCRA).	56	MT
Securities Market Oversight		
Strengthen legal protection for CNV staff (CNV).	65	MT
Strengthen independence and resources of CNV (CNV, MECON).	65	I
Rescind article 20 of the capital markets law so that the CNV cannot veto decisions approved by the boards of listed companies (CNV).	66	I
Financial Infrastructure		
Improve the legal and regulatory framework and oversight on payments and settlement systems and credit reporting ; modernize the secured transactions framework (BCRA).	71	NT

"I-Immediate" is within one year; "NT-near-term" is 1–3 years; "MT-medium-term" is 3–5 years..

MACRO-FINANCIAL PERFORMANCE AND FINANCIAL SYSTEM OVERVIEW

A. Macroeconomic Context

1. An assessment of macro-financial performance in Argentina is more complex than in most other countries. There is a high degree of uncertainty surrounding the official measurement of key macroeconomic variables—GDP and consumer price index (CPI) inflation.[1] In addition, the international community has not had the opportunity to fully assess Argentina's macroeconomic performance since the last Article IV consultation with the IMF was concluded in 2006, and this makes it more difficult to fully analyze macro-financial linkages.

2. Subject to these caveats, the official data point to a recovery in output and employment over the past decade (Table 2). Real GDP grew, on average, by 7.2 percent between 2003 and 2012, while the unemployment rate fell from 17.3 percent to 6.9 percent. This includes a sharp slowdown in growth in 2012, when a severe drought caused a 15 percent drop in the grain harvest and weak demand from Brazil lowered automobile production. The external current account deficit moved from a surplus of 6.4 percent of GDP to balance during this period. At the same time, various indicators pointed to a faster pace of increase in consumer prices. The growth of the GDP deflator increased from less than 10 percent in 2004 to 16.3 percent at end-2012. Similarly, the average estimate of provincial CPI inflation rose from less than 5 percent in 2004 to 20 percent in 2012. Annual wage growth increased from 11 percent in 2004 to 27 percent in 2012.[2]

3. Debt levels have declined sharply and Argentina is now a net creditor vis-à-vis the rest of the world. Argentina's federal government gross debt as a share of GDP declined from about 165 percent in 2002 to 45 percent in 2012, while its debt in the hands of the private sector fell even further to below 15 percent of GDP. The reduction is explained by several factors, including the debt restructurings of 2005 and 2010, a period of sizable primary surpluses, and the growth in nominal economic activity. Nonetheless, the five-year credit default swaps spread on federal government debt rose from 360 bps at the end of 2005 to 1,400 bps at end-2012.[3] Similarly, corporate debt as a

[1] The IMF has issued a declaration of censure and called on Argentina to adopt remedial measures to address the quality of the official GDP and CPI-GBA data. Alternative data sources have shown significantly lower real growth than the official data since 2008 and considerably higher inflation rates than the official data since 2007. In this context, the Fund is also using alternative estimates of GDP growth and CPI inflation for the surveillance of macroeconomic developments in Argentina.

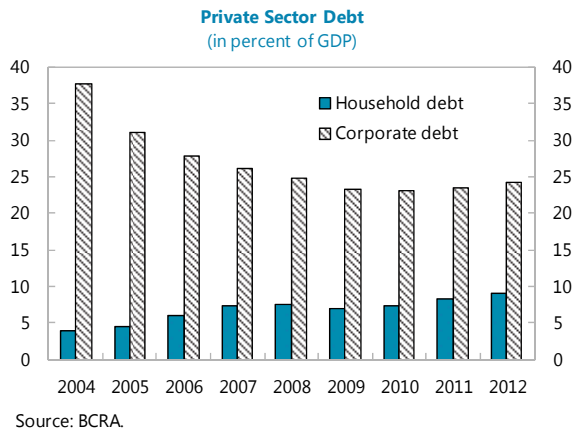
[2] The source of the data on the GDP deflator and wage increases is INDEC—the official statistical office. Provincial CPI data are produced by the corresponding regional statistical offices. Their methodologies may not fully correspond to best international practice, and also have some weaknesses as measures of consumer price inflation.

[3] Although Argentina has successfully restructured 91 percent of the outstanding debt from the 2001 default with the 2005 and 2010 debt exchanges, the remaining untendered bond holders have continued to dispute their claims in courts. There is currently litigation ongoing in New York involving Argentina and certain of its creditors who did not participate in Argentina's debt restructuring in 2005 and 2010. This litigation is beyond the scope of this report,

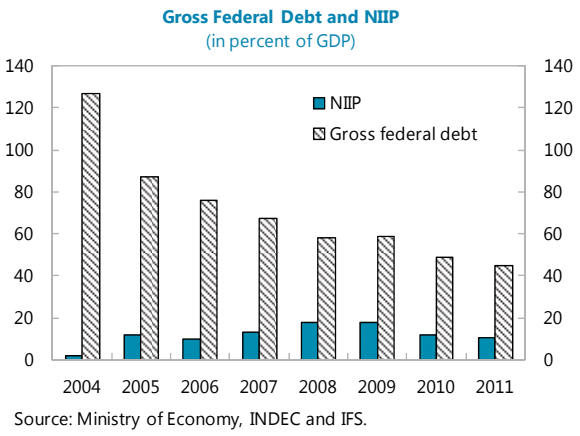
(continued)

share of GDP declined from 64 percent at the end of 2002 to 24 percent in 2012. Household debt to GDP increased somewhat, from 5.5 percent in 2002 to 9.1 percent in 2012. The net international investment position (NIIP) improved from -2.4 percent of GDP in 2002 to 11 percent in 2011. However, gross international reserves have been declining since mid-2012, and amounted to US$38.5 billion at end-May 2013.[4]

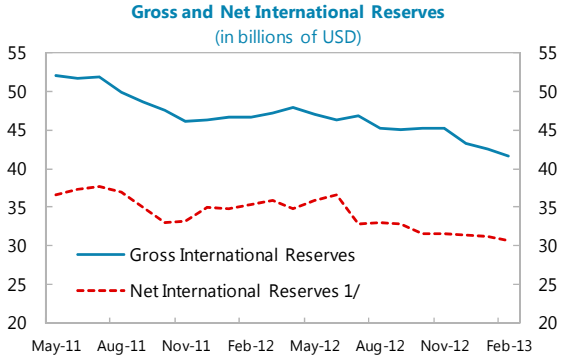
Argentina: Debt, NIIP, Gross and Net International Reserves, and Trade Credits



Source: BCRA.

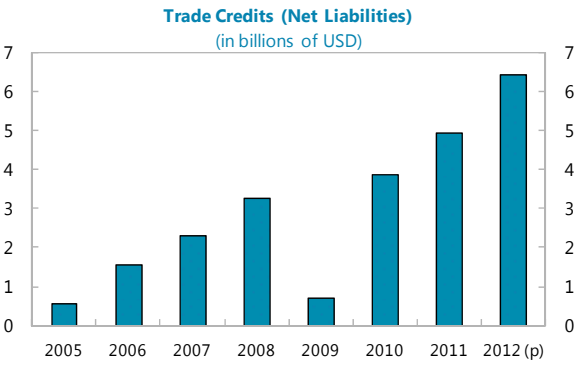


Source: Ministry of Economy, INDEC and IFS.



Source: BCRA and IMF.

1/ Gross reserves net of predetermined net short-term drains on foreign currency assets.



Source: INDEC.

4. Fiscal and monetary policies supported a sustained expansion in demand in recent years. The primary balance of the consolidated public sector (the federal government and the provinces) moved from a surplus of 5.4 percent in 2004 of GDP to a moderate deficit in 2012, as public spending generally grew faster than revenues. In this period, the growth in base money (M2) rose from 11.4 percent (33.5 percent) in 2004 to 39 percent (40.1 percent) in 2012. Exchange rate

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and in view of the uncertainties that surround its resolution, any potential implications that may arise from this litigation are not discussed in this report.

[4] The Fund's International Reserves Template reports that predetermined net short-term drains on foreign currency assets amounted to US$10.5 billion at end-May 2013. This includes US$9.4 billion of foreign currency loans, securities and deposits, which largely reflects the counterpart of foreign currency deposit liabilities of domestic banks.

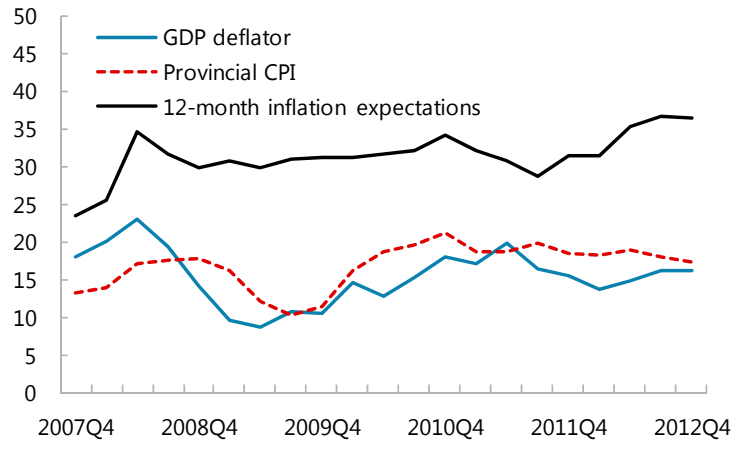
policy sought to contain the short-term volatility in the peso vis-à-vis the U.S. dollar, while allowing it to depreciate gradually over time.

5. The government's policy mix has also included incomes policies and administrative controls. In Argentina, wage growth is determined through negotiations between large employers and labor unions representing various occupational groups, and the government. There have also been administrative measures, including an array of administered prices, restrictions of certain exports, and adjustments of tariffs and fees of public services. In addition, since late 2011, the government introduced various measures related to foreign exchange transactions and imports to contain the domestic demand for dollars. As a result, private sector dollar deposits have declined by half since October 2011, matched by the same reduction in private sector dollar lending.

6. In the near term, economic activity is expected to pick up. At the time of the FSAP mission, Fund staff projected that real GDP would rise by 2.8 percent in 2013 and 3.5 percent in 2014 before stabilizing at 4 percent, while the authorities expected real GDP growth to reach 4.6 percent in 2013 before leveling off—for the purpose of the stress testing exercise—at 4 percent in 2014 and beyond. In the view of the Fund staff, there are no indications that the pace of price increase will slow.

7. However, there are signs of increasing tension in the economic outlook. The available measure shows that inflation expectations have been quite high for some time. More recently, the intensification of capital and exchange controls has contributed to a sharp widening of the spread between the parallel and the official exchange rates. The spread reached a peak of 100 percent and later came down to 50 percent in June 2013, although anecdotal evidence suggests that the size of the parallel market remains relatively small.

Argentina: Inflation Trends

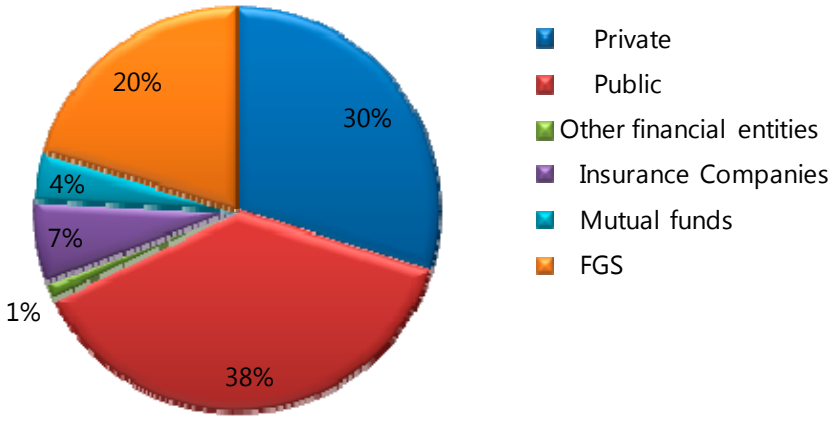


Source: INDEC, Universidad Torcuato Di Tella, and provincial statistical offices.
Note: The estimates of provincial CPI may have methodological shortcomings.

B. Financial System Structure

8. Argentina's financial system is small, transactional, with public institutions playing a prominent role (Table 3). Argentina's financial system assets amount to 50 percent of GDP—relatively small compared with countries elsewhere in the region with comparable levels of economic development.

Argentina: Structure of the Financial System
(Percent of Financial Assets)



Source: Banco Central de la República Argentina.

- *The regulatory architecture involves three financial supervisors.* The BCRA oversees banking institutions, financial companies, credit unions, exchange houses, exchange brokers, and issuers of credit cards. Private sector bank deposits up to ARS$120,000 are insured through the Deposit Insurance Fund (FGD). The CNV oversees securities markets and mutual funds, and the SSN covers the insurance sector. Cooperatives and mutuales are not supervised but are monitored by the National Institute of Cooperatives and Social Economy (INAES).

- *Banks dominate Argentina's financial landscape*. Banks account for about two-thirds of financial sector assets, or 35 percent of GDP. Banking system assets consist mainly of loans to the private sector (50 percent) and liquid assets (about 30 percent), with relatively little exposure to the federal or provincial governments (10 percent) and the central bank (10 percent). There is minimal maturity transformation as the average maturity of the trading and banking books is about one year. Loans are diversified across sectors. Mortgages are only 9.4 percent of total loans and many homes are purchased with cash. Financial intermediation in foreign currency has declined sharply in recent years, with the share of dollar loans and deposits at 7 percent and 9 percent of their respective totals as of March 2013.

- *State-owned banks are key players in Argentina's banking sector*. Together, public banks account for about 45 percent of banking sector assets and deposits. The largest bank is owned by the federal government and accounts for nearly a quarter of loans and nearly 30 percent of deposits. Other public banks are owned by provinces or cities, which are independent of the federal government. Public sector deposits account for about a quarter of total deposits and are more important for public sector banks. Public banks tend to have a different business model than private banks, relying more on loans to SMEs at somewhat lower interest rates and longer maturities. Public banks participate in the FGD on the same footing as private banks. The only exception is for federal government deposits at the Banco de la Nación, which are not insured.

- *In the past few years, the public sector has taken steps to influence the allocation of credit.* The BCRA has adopted several programs aimed at increasing bank lending to SMEs at lower interest rates and longer maturities, and the government recently introduced requirements for insurance companies to invest a significant share of their assets in infrastructure or other growth-oriented projects.

- *In addition, the main institutional investor is the FGS, which is a public entity under the control of the Social Security Administration (ANSES).* It accounts for 20 percent of the financial system assets and about 11 percent of GDP. Created in 2007, it received in late 2008 the proceeds from the nationalization of the private pension funds. The FGS is currently the main provider of long-term financing through its support to productive and infrastructure projects. The pension system is now a public pay as you go scheme and contributions are paid to ANSES, which manages and owns the FGS.

- *The rest of Argentina's financial markets are small.* Insurance sector assets represent less than 7 percent and mutual fund assets less than 4 percent of the financial system. Equity market capitalization amounts less than 7 percent of GDP, with 107 listed firms at end-2012. Other institutions include small cooperatives, credit unions, and lending houses. There are a few microfinance institutions, with two set up by banks and therefore supervised, and the rest unsupervised.

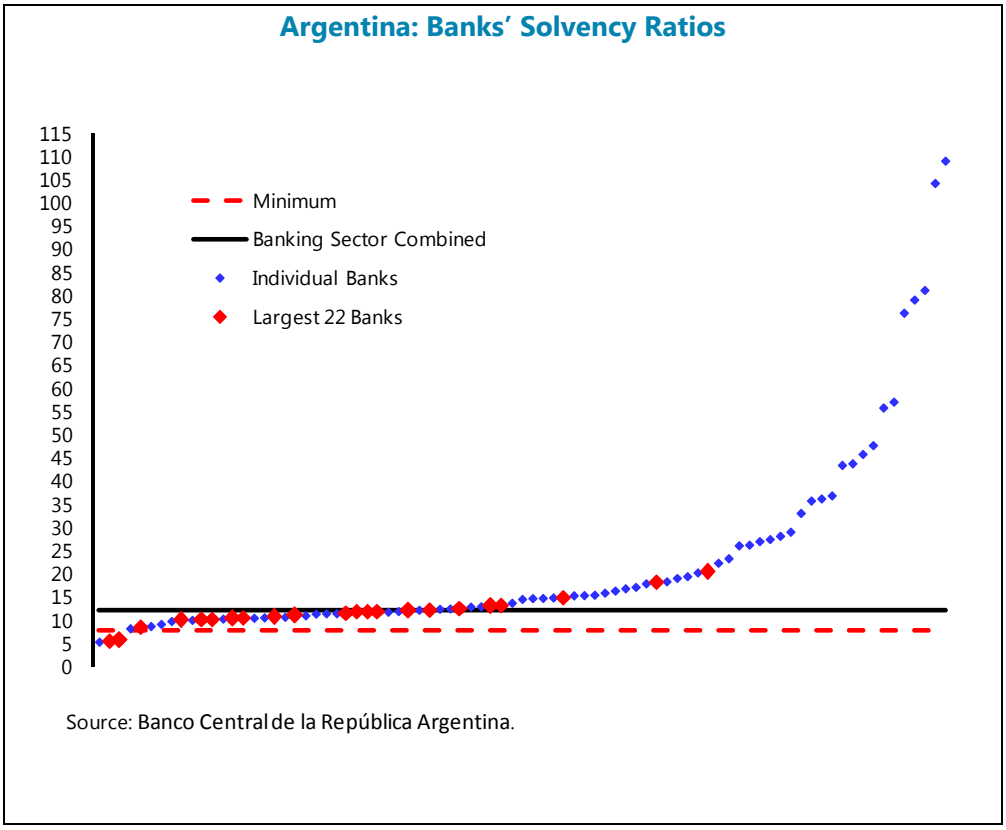
FINANCIAL SECTOR RISKS AND RESILIENCE

A. Banking Sector

Snapshot

9. Banks maintain significant buffers (Figure 5, Table 4):

- *Solid capitalization*. The system-wide total capital adequacy ratio (CAR) amounted to 12.4 percent at end-2012, well above the regulatory minimum of 8 percent, and the system-wide Tier 1 CAR was 11.3 percent. [5]



- *Low leverage*. The leverage ratio (capital as a share of total assets) has been broadly stable at 11.5 percent, with public banks less leveraged than private banks.

- *Ample liquidity*. Liquid assets (cash and reserves held in the central bank) amounted to 29 percent of total assets, with little variation among public and private banks. This ratio is even higher once holdings of BCRA monetary instruments and foreign currency are included.

- *Conservative funding*. As of December 2012, deposits from the public and private sector accounted for almost 79 percent of total funding. Loans are less than 75 percent of deposits for the system as a whole, and 57 percent in the case of public banks. There is very little use of external credit lines or other forms of wholesale funding. Some specialized and small banks use

[5] These reported CARs conform to the new standard under Pillar 1 of Basel II adopted in January 2013. Two banks had CARs below the regulatory minimum as of December 2012, but have plans to reach the solvency threshold in the coming years. The BCRA allows the inclusion of retained earnings from the current year in Tier 1 capital only after the bank's financial statements have passed an external audit; hence this ratio may rise once bank audits for 2012 have been completed.

off-balance sheet operations through trust funds (*fideicomisos*) to fund their activity but these remain relatively small as a share of total credit.

- *Strong asset quality*. Nonperforming loans (NPLs) fell from 3.5 percent at end-2009 to 1.7 percent of loans by end-2012. Provisions are relatively high at 141 percent of NPLs, partly reflecting a general provision of 1 percent of total loans in addition to the specific provisions. Public banks have lower NPL ratios and higher provisions, but are subject to exposures to large clients.

10. Banks are generally profitable in nominal terms. Since 2008, the nominal return on equity (ROE) has recovered from over 13 percent to about 25 percent in 2011 and 2012. However, the high rate of inflation suggests that the ROE in real terms is still low by regional standards. Public banks are slightly less profitable than private banks with substantially lower net interest margins and higher personnel expenses. The net interest margin provides an important source of the profits. Since non-interest bearing sight deposits provide a significant share of funding, the average cost of funding is quite low at about 7 percent a year at end-2012, even though marginal funding costs for time deposits have been around 17 percent. At the same time, the average lending interest rate—mostly fixed with short maturities—is above 20 percent, reflecting rates above 30 percent for many types of consumer credit as well as rates of 15–20 percent on corporate and secured credits. Income from a wide range of services—such as fees on credit cards, administration of accounts, and safe deposit boxes—also makes a strong contribution to profitability.

11. The uncertainty surrounding the measurement of key economic variables complicates the task of assessing the true cost of credit. With no agreement on the correct measure for consumer price inflation, creditors and debtors would not generally be able to arrive at a uniform, accurate measure of the real interest rate, and the differences among different measures can be quite large depending on whether one uses the GDP deflator, wage increase or provincial CPI inflation.

Argentina: Real Lending Rates[1/]

	Total Private	Consumer	Corporate	Corporate (SMEs)
Overdrafts	-3.5	15.4	-4.8	0.4
Other Advances	-4.2	-7.3	-3.7	-5.3
Signature loans	-5.6	-5.3	-5.6	-5.0
Mortgages	-8.4	-9.2	-7.8	-7.6
Pledge Loans	-3.7	-3.0	-6.2	-6.7
Personal	9.4	10.5	-3.4	-3.7
Other Loans	-6.7	1.3	-6.9	-6.6

Source: Staff calculations based on data from BCRA.

1/ Nominal interest rates minus the growth in the wage rate.

below -5

above -5 and below 0

above 0 and below 5

above 5

12. The BCRA has begun to play a significant role in influencing the allocation of credit. The new BCRA charter, approved by congress in 2012, broadens its role to include four mandates—monetary stability, financial stability and employment and economic development with social equity—and allows it, inter alia, to set caps on lending interest rates. In this context, it has introduced several lending programs to require banks to increase their lending for productive investment. Earlier, in 2011, the BCRA began to auction funds to banks to lend to the productive sector at a fixed interest rate of 9.9 percent (and a 99 basis points intermediation spread) and an average maturity of 2.5 years (*Plan del Bicentenario*). Starting in 2012, after the adoption of its new charter, the BCRA is requiring banks with a deposit market share greater than one percent of system deposits to lend 5 percent of their deposits at a below-market interest rate of 15 percent and an average of three years with a one year grace period (*Líneas de Crédito para el Sector Productivo*), and half of these loans must be made to SMEs. By June 2013, this lending program is to be increased by another 5 percent of deposits. While complying with these broad parameters, banks take full responsibility for credit risk and the selection of borrowers, who may be in any sector. In addition, lower reserve requirements were granted to banks' lending to SMEs in certain locations, and lending to SMEs has a 75 percent risk weight under the new capital standard.

13. Banks have reallocated their loan portfolio in line with these programs. About ARS$6 billion of loans (0.9 percent of bank credit to the private sector) were extended under the Plan del Bicentenario, but this plan's high collateral requirements have limited its use. Banks have complied with the first phase of the Líneas de Crédito program. Many public banks had already been lending on these terms for some time. A number of private banks have modified the loan terms to existing clients, while other private banks purchased loan portfolios from other banks. Banks are not allowed to transfer the opportunity cost of this program to other types of lending.

14. These programs, if sustained and especially if expanded, present risks for the banking system. The allocation of 10 percent of bank deposits translates into about 15 percent of total credit. With this much credit under this program, the cap on the lending interest rate imposes a sizable opportunity cost on private banks that will diminish their profitability over time. In addition, the limited window to meet the quota may lead to an increase in credit risk. The ROE for banks is already relatively low when adjusted for various measures of the rate of consumer price inflation. Going forward, banks will need to continue to build cushions in line with the planned upgrades in the regulatory framework, and restrictions on dividend payments will restrict bank access to capital market funding. For this reason, it is recommended that the *Líneas de Crédito* program not be continued and be allowed to wind down as the current stock of loans is repaid. Broadening the range of loans subject to interest rate caps would be especially damaging.

15. The BCRA's approach to payouts of bank dividends could be more risk-focused. For the past few years, the BCRA has allowed banks to distribute dividends only when their CAR exceeds the minimum regulatory requirement by a certain threshold, which now stands at 75 percent. This limit has been useful to help banks build up enough of a capital cushion to move to the new Basel II standard without falling below the regulatory minimum. However, it constrains a bank's ability to raise capital in equity markets. The new regulatory framework allows the BCRA to agree on

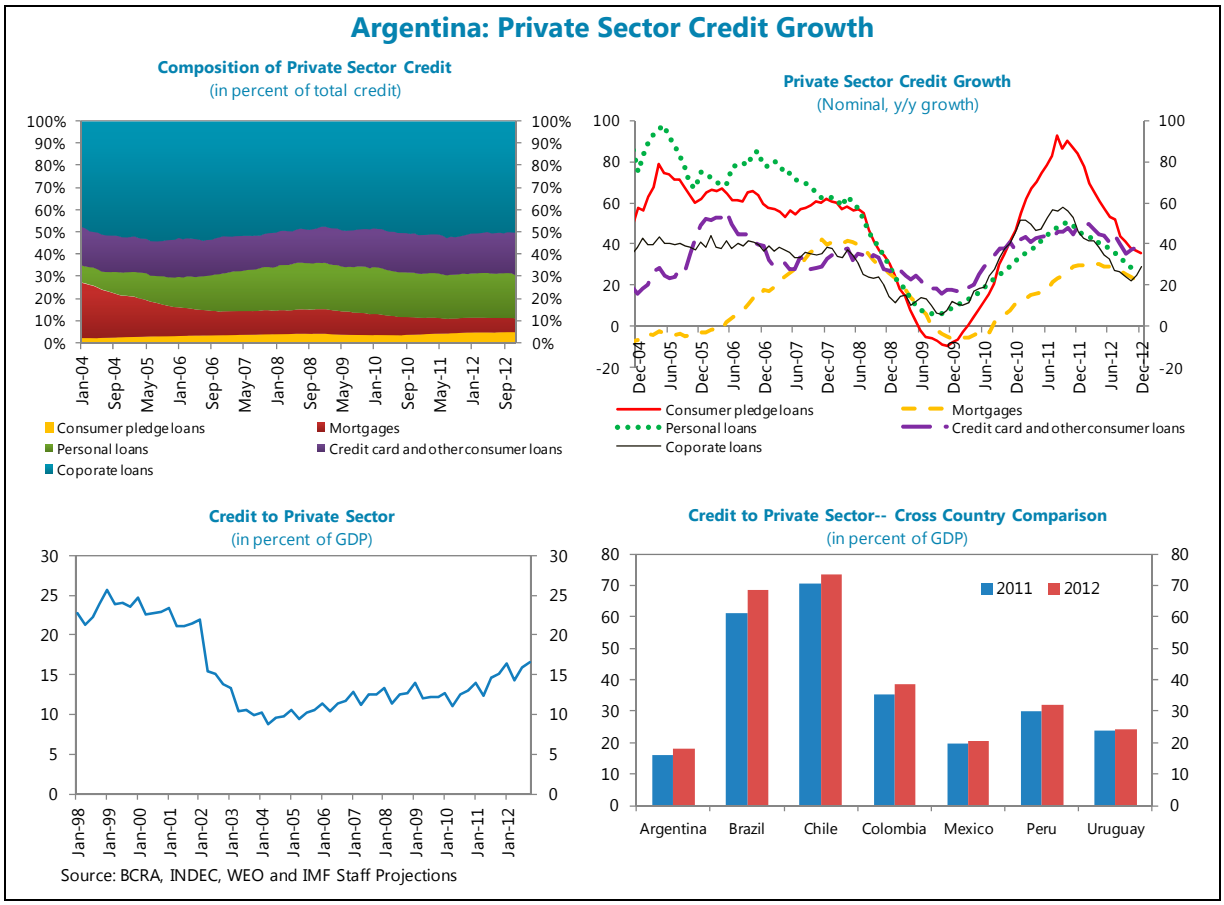
capitalization plans that are tailored to the risk profile of each bank. These plans would allow the BCRA to ensure that each bank could comply with the capital standards that would apply once Basel III is fully implemented, including the capital conservation buffer and the counter-cyclical buffer. In this context, the existing uniform limit for all banks could be dropped and transformed to the capital distribution constraints under Basel III.

Key Risks

16. Argentina's financial links to international capital markets are quite limited, which limits the possibility of spillovers from global financial market shocks. External bond issuance by corporate and financial institutions is very small (Figure 4) and gross cross-border claims for each of the largest 22 Argentine banks represent less than 10 percent of their own assets with the exception of two banks, where the gross claims account for somewhat over 10 percent. The effects of fluctuations in the spread of sovereign bonds on the mark-to-market valuations of these securities seem manageable (see next section). In addition, trade credits are still a relatively small share of GDP.

17. However, Argentina does have significant trade linkages with the rest of the world. As a major exporter of agricultural products, Argentina continues to be susceptible to fluctuations in commodity prices. A sharp decline in the price of soy, in particular, would reduce Argentina's trade balance and aggregate demand. Moreover, Argentina's industrial production and automobile exports are closely tied to the growth of the Brazilian economy. As such, a sharp decline in the growth of Brazil would also have adverse effects on economic activity in Argentina.

18. Risks from domestic factors could be significant as well. In view of the high rate of inflation, a possible scenario might include the need for slower growth in base money to contain or reduce inflationary pressures, which would put upward pressure on real interest rates. In addition, the memory of the 2001 crisis still weighs on expectations and money demand in Argentina tends to be less stable than in other countries. This means that another possible risk is a loss of confidence where money demand would drop, leading to liquidity pressures on banks and possibly placing downward pressure on the currency if it unfolds suddenly. Alternatively, the weight of the capital and exchange controls could steadily drag down growth and weaken the quality of bank assets.



19. The recent rapid growth in credit to the private sector is of concern, although there are indications that this expansion reflects a process of re-leveraging (Box 1). After falling to less than 9 percent of GDP in mid-2004, credit to the private sector has expanded steadily, reaching 16 percent of GDP in the third quarter of 2012. This level is still extremely low by regional standards, and both corporates and households have relatively low levels of debt on average. The number of households borrowing from banks increased by 150 percent between December 2004 and June 2012, while the amount of loans per family increased only by 24 percent during the same period. However, the number of businesses with debt increased by 27 percent between 2004 and 2012, while the amount of loans per business increased by 44 percent during this period.

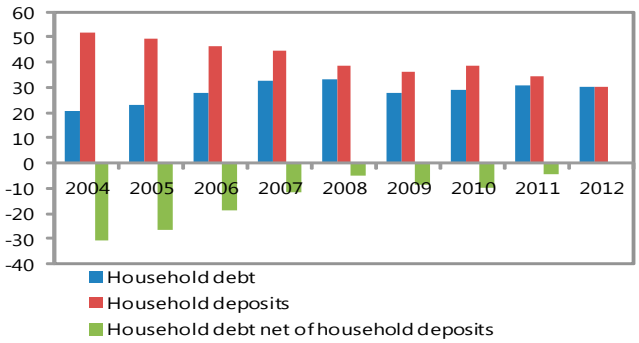
20. The risks of excessive credit growth have also been mitigated by several macroprudential policies that limit currency mismatches. These include: (i) capital requirements differentiated by currency denomination; (ii) limits on banks' short foreign currency net position (±15 percent of the regulatory capital); and (iii) a ban on foreign currency lending to domestic firms without foreign exchange earnings. Reserve requirements are applied to both domestic and foreign currency deposits, and are relatively high at 17 and 20 percent respectively. Based on staff's empirical analysis, an increase in the average reserve requirement lowers credit growth, but has only a small effect on the intermediation spread.

Box 1. Are Corporates and Households Financially Stressed?

The household debt to income ratio is low. Household debt as a share of household income has declined from over 54 percent in 2001 to 30 percent in 2012, reflecting the growth in income as well as a cautious attitude towards releveraging. Compared with other countries, household debt as a share of GDP is quite low—only 9 percent in Argentina versus an average of 19 percent in Latin America and 92 percent in advanced economies.

Households generally do not seem to be financially stressed. Total interest payments were only about 6 percent of total household income in December 2012, implying the implicit effective interest rate of 20 percent. For a household with debt to income ratio of 30 percent, a hypothetical increase in the interest rate by 500 basis points from 20 to 25 percent would raise the interest payments only from 6 percent to 7.5 percent of annual income. However, given that some households do not have access to credit, the average debt to income ratio conditional on having access to credit is most likely higher. Some highly leveraged households could still be vulnerable to a hike in interest rates. In addition, net household debt (adjusted by deposits)—while still less than zero—has increased over time due to declining deposits. Moreover, the value of housing adds to the asset side of the household balance sheet.

Household Debt and Deposits
(In percent of household income)



Source: Banco Central de la República Argentina

Corporate sector debt to GDP is relatively low and corporate balance sheets seem generally sound. The level of corporate indebtedness is significantly less compared to other emerging market countries and has trended downward over the last decade; corporate debt to GDP declined from 45 percent at the end of 2003 to 24 percent in September 2012. In addition, the share of financing in domestic currency has steadily increased and the share of dollar denominated loans has declined. The low level of debt and negative real lending rates indicate that corporate interest payments as a share of GDP are also small.

Large publicly listed firms have higher leverage ratios than the average firm, and could be more susceptible to a sudden increase in real interest rates. The Economatica database shows that, on average, large companies have improved their balance sheets after the crisis of 2001: the debt to equity ratio has declined, the liquidity ratio has increased, and the debt service ratio has declined sharply between 2004 and 2012. At the same time, the share of short-term debt has increased from less than half in 2004 to roughly two-thirds in 2012. Gross interest payments as a share of EBIT were low at 35 percent in 2012. However, a hypothetical increase in interest rates by 500 basis points would boost this ratio to 47 percent when using gross debt, or 62 percent when using total liabilities. The increase in interest payments is greater for large corporations due to their higher leverage ratio, suggesting that large corporations are likely to be more affected by higher real interest rates.

Financial Ratios for Large Corporations 1/

	2004	2012
Short-term Debt / Total Debt	0.45	0.65
Gross Debt / Equity	1.98	0.41
Current Assets / Current Liabilities	1.04	1.42
Gross interest payments / EBIT	1.13	0.35

Source: Economatica
1/ Weighted average using total assets

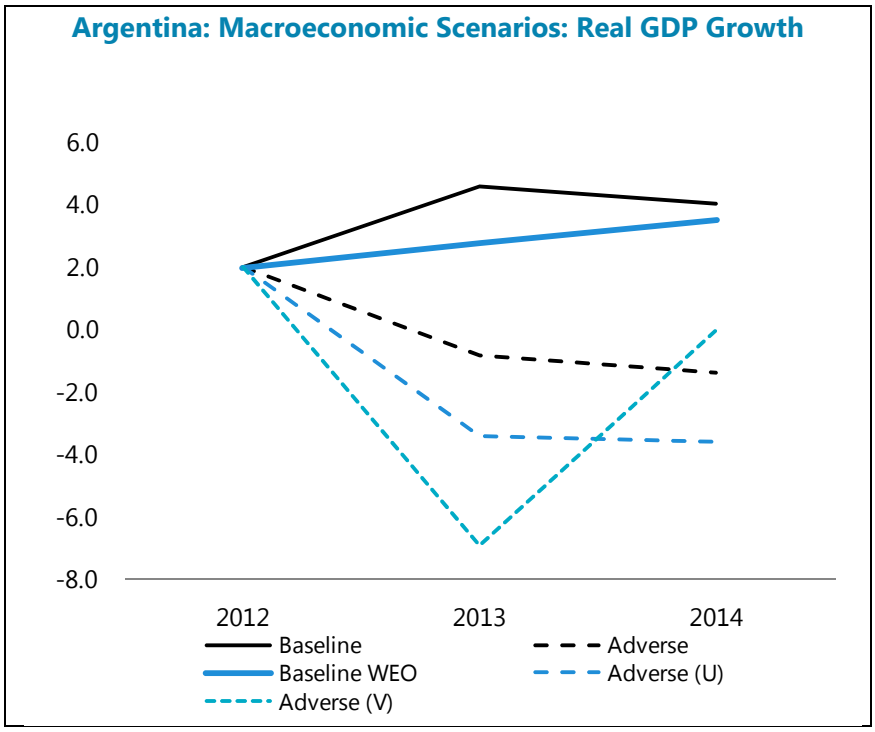
21. However, the BCRA would benefit from a more thorough monitoring of balance sheet data on households and corporates. In particular, it would be important to develop a comprehensive database of the assets as well as the liabilities, and the debt service, of these two sectors, with a breakdown by size of the corporation or income level of the household and by geographic location. This would allow for a better assessment of the distribution of the debt burden across corporates and households, which could help identify if certain groups of households or corporates were under distress from debt.

Stress Tests

22. Carrying out stress tests on banks is conceptually challenging in the Argentinean context and the results must be interpreted with a high degree of caution. The stress tests use macroeconomic and satellite models to calculate the impact of adverse scenarios or shocks on banks. These models are estimated using historical data and are subject to estimation uncertainty. Model uncertainty is possibly severe in the case of Argentina, given the institutional and structural changes experienced by the country in the last two decades. The simple structure of the bank balance sheets mitigates some of the challenges.

23. These tests suggest that most Argentine banks are in a position to withstand substantial levels of stress while still phasing in capital requirements under Basel II (Appendix II). The stress tests covered the 22 largest banks (90 percent of system assets) and were conducted by the authorities and the FSAP team. The stress tests examined the resilience of the banking system to solvency, liquidity, and contagion risks through a macroeconomic scenarios approach and through sensitivity analysis. Macroeconomic scenarios were developed to assess the impact of adverse *external* shocks on the economy and on individual banks. The effects on individual bank's profitability and capitalization were assessed using satellite models developed by the authorities and validated by Fund staff. In addition, sensitivity stress tests assessed vulnerabilities of the banking system to the key *domestic* shocks.

24. The macroeconomic stress tests rested on two baseline scenarios and assessed the effects of three adverse scenarios. The two baseline scenarios include one based on the authorities' projections and another based on Fund staff projections. The three adverse scenarios included (i) an adverse scenario based on the authorities' baseline resulting in a cumulative decline of GDP equivalent to 1.7 standard deviations over two years; (ii) a U-shaped adverse scenario relative to the Fund-staff baseline; and (iii) a V-shaped adverse scenario also relative to Fund-staff baseline. The latter two scenarios result in a cumulative decline of GDP equivalent to 2 standard deviations (13.3 percentage points) over two years, relative to the baseline.



25. The tests based on the Fund-staff baseline, and those based on the authorities' baseline, were implemented using different methodologies and assumptions (Appendix II). The tests corresponding to the authorities' baseline and adverse scenarios were implemented using the existing BCRA methodology. This approach allows for growth in credit and deposits to differ from nominal GDP growth. Thus, in a crisis, money demand could fall sharply in relation to GDP, leading to a similar fall in credit and in risk-weighted assets. In contrast, and following standard international practice, the Fund-staff tests corresponding to the Fund-staff baseline scenario and the adverse scenarios (ii) and (iii) assumed constant balance sheet growth. That is, banks' balance sheets grew in line with nominal GDP (since nominal growth was not negative in any scenario). For the conduct of these tests, the BCRA also developed more refined satellite models that were validated by Fund staff. Due to differences in scenarios, assumptions, and methodology; the tests based on the authorities' baseline yield more positive results than those based on the FSAP approach (Fund-staff baseline).

26. The macroeconomic stress tests reveal that credit risk is the most important vulnerability. Results from the macroeconomic stress tests based on the Fund-staff baseline indicate that declines in capital ratios in 2013 and 2014 would be largely driven by deterioration in credit quality. NPL rates are currently low, but they would rise sharply under an adverse scenario triggered by an external shock. In the U-shaped adverse scenario, capitalization in 4 of the 22 largest banks would fall below the required minimum of 8 percent, while in the V-shaped scenario, 6 banks (half public and half private domestic, representing about 16 percent of the banking assets in the

sample) would be undercapitalized.[6] Bank losses materialize as the decline in output increases the loan loss ratio in the banking system from 1.5 percent to 4.4 and 6.2 percent in the U- and V-shaped scenarios, respectively, by 2014.

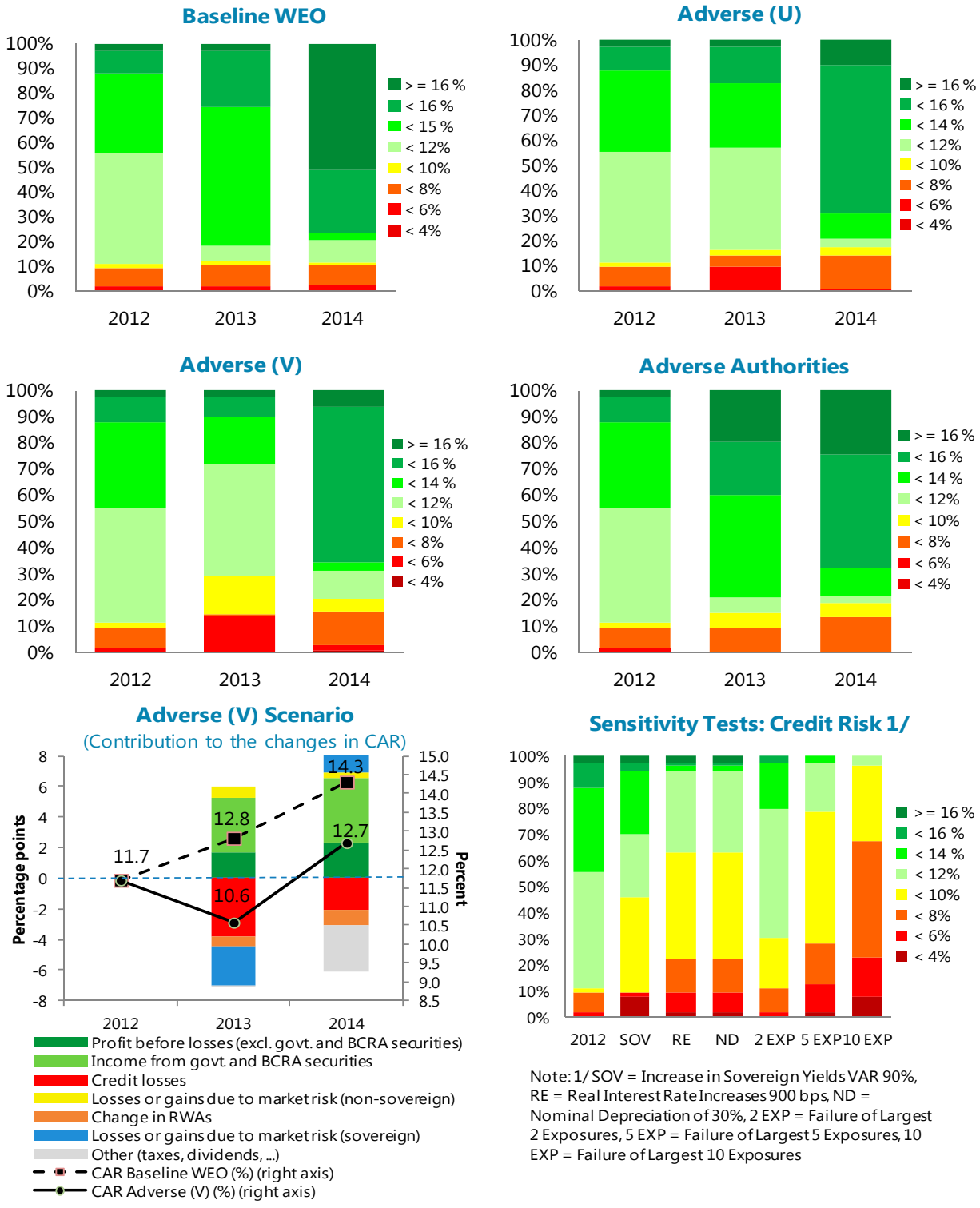
27. Banks appeared resilient to market risk but less so to sovereign risks. Banks hold highly liquid bonds and money market instruments—mostly those issued by the central bank and to a much lesser extent securities issued by the government. The adverse scenarios result in significantly higher interest rates[7] and inverted yield curves that through haircuts cause sizable sovereign losses from holding of sovereign paper. These losses, however, are partially offset by gains from the price appreciation, as well as the short duration of the central bank monetary instruments held on bank portfolios. The exposure of banks to corporate bonds, equity, commodities, foreign securities, and other sources of market risk are negligible. Regarding exchange rate risk, banks hold positive net open foreign currency exposures, and hence, a depreciation of the peso in the adverse scenarios has a positive impact on profits.

28. In all adverse scenarios, however, the capital shortfall in the banking system would be small relative to the size of the economy. Although a number of banks would be under-capitalized in adverse scenarios, the capital shortfall in the banking system would be small relative to the size of the economy—in the V-shaped adverse scenario the system's shortfall is estimated at about 0.2 percent of GDP. This is due in part to the small size of the banking system relative to the size of the economy.

[6] All these results take into account the two banks, accounting for 9 percent of banking assets in the sample, that are undercapitalized at the starting point of the exercise. Those banks are under plans to restore solvency in the near future. Results of the solvency stress tests in terms of Tier 1 are in Appendix V.

[7] The simulated yield changes were very large: in the V-shaped adverse scenario, average yields increased by about 1,500 basis points for U.S. dollar denominated bonds; 2,000 basis points for peso denominated bonds adjusted by inflation; and about 2,800 basis points for bonds linked to the wholesale (BADLAR) interest rate. Yield changes of peso-denominated nominal instruments—including fixed coupon bonds and discount money market instruments—were about 450 basis points.

Argentina: Bank Solvency Stress Test Results, Capital Adequacy Ratios



Note: 1/ SOV = Increase in Sovereign Yields VAR 90%, RE = Real Interest Rate Increases 900 bps, ND = Nominal Depreciation of 30%, 2 EXP = Failure of Largest 2 Exposures, 5 EXP = Failure of Largest 5 Exposures, 10 EXP = Failure of Largest 10 Exposures

Source: Banco Central de la República Argentina.

29. Sensitivity tests also suggest that domestic shocks simulated by an increase in real interest rates or a depreciation-inflation spiral could deteriorate the credit quality of loan portfolios. Sensitivity tests based on credit risk models, developed by the authorities and validated by Fund staff, suggest that 5 of the 22 largest banks would be undercapitalized after a 900 basis point increase in real interest rates sustained for two years. Losses from credit risk would also spike in a scenario with a depreciation-inflation spiral. Assuming that real interest rates remain constant, a 30 percent peso depreciation that is partially transmitted to domestic prices would increase inflation by 6 percentage points—under a 0.2 pass-through assumption. NPL ratios would increase by about ½ percentage point on average, with variation across banks. Under the strong assumption that banks earned no pre-impairment profits, the capitalization ratio of five banks could fall below the required minimum. By definition, they are stringent as a measure of overall impact as banks are likely to continue earning positive pre-impairment profits that are not included in the analysis. Moreover, these profits would rise under a peso depreciation scenario as a result of banks' net open foreign currency exposures.

30. Sensitivity tests of concentration also pointed to the predominance of credit risk from common name concentrations. The failure of the five largest borrowers—admittedly a low probability event—would cause undercapitalization in 8 of the 22 banks subjected to the tests. A more stringent test shows that failure of the 10 largest counterparts would result in undercapitalization of 12 banks. Moreover, a number of firms are large counterparts of many banks simultaneously, compounding systemic risk.

31. Liquidity stress tests reveal that banks would be able to confront large deposit withdrawals. Cash flow-based liquidity stress tests assessed resilience to a strong shock characterized by run-off rates and haircuts on assets calibrated by type on Argentina historical data. It was assumed that the BCRA could assist banks that face liquidity shortfalls by waiving reserve requirements for a maximum period of 30 days or by injecting liquidity through its standing facilities. The results revealed that all banks would be able to withstand persistent and sizable withdrawals of funding for 30 days without any assistance from the BCRA. After 30 days, only two of the 22 largest banks would need BCRA assistance in pesos and one in dollars, and in these cases, an extension of the reserve requirement waiver would suffice to render them liquid. Besides access to own minimum required reserves, no bank would need emergency liquidity assistance from the BCRA for two years. The BCRA has initiated a pilot program to develop a framework for calculating the liquidity coverage ratio (LCR) and net stable funding ratio (NSFR) ratios for all banks, and the three banks tested so far show ratios above 100 percent for both indicators.

Argentina: Bank Liquidity Stress Test Results

Survival Period for Pesos Liquidity	Up to one day	Greater than one day and up to one week	Greater than one week and up to one month	Greater than one month and up to two months	Greater than two months and up to three months	Greater than three months and up to six months	Greater than six months and up to one year	Greater than one year and up to two years
Number of banks meeting contractual obligations without BCRA support	22	22	22	20	20	20	20	20
Number of banks meeting contractual obligations with BCRA support	22	22	22	22	22	22	22	22

Note: Results for pesos liquidity stress tests. It is assumed that the BCRA waives compliance with the minimum reserve requirement for up to one month. The results show that two banks need liquidity support to comply with the fully enforced minimum reserve requirement after one month. These two banks, however, would need no other liquidity assistance if the BCRA were to waive the minimum reserve requirement for a period longer than one month.

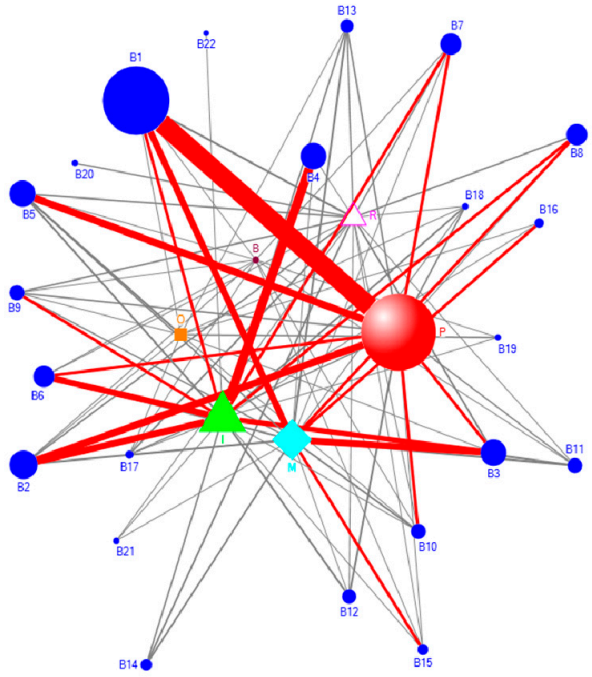
32. A reverse liquidity stress test also assessed the capacity of banks to withstand wholesale deposit withdrawals. The test assumed that banks faced 100 percent run-off rates on maturing wholesale deposits and full rollover rates in other funding lines. The results show that all banks have liquidity to deal with losses of 33 percent or more of total wholesale deposits, without recurring to BCRA facilities. Moreover, 15 of the 22 largest banks would be able to confront withdrawals of 100 percent of maturing wholesale deposits without experiencing a shortfall of liquid assets at anytime in the two-year assessment period.

33. Direct contagion risk through bilateral interbank exposures is limited. Interbank exposures are very small compared to banks' capitalization. As of September 2012, only one of the 22 large banks had a total interbank exposure that was larger than its excess of capital over the required minimum—and in this low probability case, five other institutions would have to fail for that bank's capital to fall below the required minimum.

34. However the banking system is interconnected with the FGS, which has the potential to create unexpected liquidity pressures.[8] It has 6 percent of its portfolio invested in fixed-term deposits, for very short term (on average 35–40 days) and for some banks, FGS deposits represent more than 4 percent of total deposits. The allocation mechanism for such deposits does not seem to be driven by transparent criteria as most of them as of September 2012 were invested below market prices (in the largest public bank, or in a private bank where the FGS is a significant shareholder). The absence of clear criteria and the consequent risk of sudden withdrawal (even if not materialized so far) may generate liquidity pressures for the smaller banks. Additionally, the large equity stakes of the FGS in some private banks raises governance issues.

[8] Deposits from insurance companies and mutual funds in banks are dispersed and exhibit low degree of concentration, and the cross-border exposures of banks abroad are not significant enough to merit a quantitative analysis.

Argentina: Network Map of the Banks and Nonbanks Interlinkages



Note: Linkages (edges) are bilateral assets and liabilities. Top 20 largest connections are represented by red edges, all other connections by gray edges. Nodes: Blue circles represent banks (B1-B22), Red sphere represents ANSES including the FGS (P), Lime solid triangle represents insurance companies (I); Aqua solid diamond represents mutual funds (M); Fuchsia triangle represents retirement funds (R); Orange solid square represents other financial institutions (O); Brown disk represents brokerages (B).

35. Going forward, the BCRA could further refine its stress testing toolkit. The BCRA should further use the existing bank-level supervisory dataset containing detailed information on the balance-sheet and P&L statements for the modeling part of the stress testing exercise, and establish a mechanism to make it available to the members of the stress testing team in a short notice. The BCRA has already started to refine the satellite models for profits of the TD stress testing using higher frequency data to assure that smaller banks also get a good fit.

B. The Sustainability Guarantee Fund and Insurance Companies

36. The portfolio of the FGS is subject to market risk and credit risk. About four-fifths of the investment portfolio of the FGS is concentrated in fixed term instruments with a duration of five years on average. Simple estimates of the market risk effects in the FGS portfolio, assuming all fixed term instruments were marked to market, shows that for every 100 bps increase in the interest rate, the economic value of its investment portfolio would decline by 3.4 percent. In addition, the FGS has begun to try to extend credit, and since it falls outside the regulatory perimeter of the BCRA and loans are not registered in the credit registry, this could be a source of risk.

37. Overall the insurance sector shows signs of financial vulnerabilities. Profitability in the industry has improved, as the nominal ROE has risen from 8 percent in 2006 to 22 percent in 2012. However, the nominal ROE in 2012 is still below many indicators of inflation, such as wage growth, although it is still somewhat above the rate of increase in the GDP deflator. The nominal ROE is propped up by returns on investment, and not underwriting income, where many insurers are experiencing losses. Going forward, it would be important to boost income from underwriting to provide a more sustainable source of overall profitability. Under the current solvency regime, 4 companies have solvency ratios below 100 percent and 57 have ratios below 125 percent. For the industry as a whole the solvency ratio has amounted to 175 percent for the past several years (Table 5). However, a significant share of assets that contribute towards solvency actually bear significant credit risk (unpaid premia and other receivables as reported in 2012), and these assets with credit risk amount to 100 percent of the free capital available to the sector (ARG 18.34 billion). This situation implies that a large percentage of the available capital for solvency is illiquid and not fully suitable to protect the companies in case of adverse events.

38. The non-life sector is on a weaker financial footing than the life or retirement sectors, with vulnerabilities to credit and liquidity risks. Profitability tends to be low, reflecting poor underwriting results, as claims paid plus expenses have exceeded premium income for the past several years. Since profits on investment returns are not sustainable, the industry would need to apply technical premiums and become more efficient. In addition, the balance sheets of non-life insurers report that accounts receivable are quite high, especially with outstanding premia equivalent to about one-fifth of total assets and one-third of the total annual nonlife premia. New regulation that disallows more than two months of unpaid premia to be admissible as assets would reduce credit risk. For the 20 largest nonlife insurers in 2012, liquid assets amounted to 106 percent of claims paid on average, although 6 of these firms had liquid assets that fell below 75 percent of claims paid. In addition, there are a high number of court claims, which could suggest dissatisfaction with claim settlements and could possibly indicate liquidity strains as well as inefficiencies in the legal system.

39. Several recent regulatory changes could add to these vulnerabilities. The new mandatory investment guidelines could weaken investment income, without improving underwriting profits, reduce liquidity, and possibly accentuate maturity mismatches, especially for life insurers. Over the past decade, the duration of liabilities of life insurers has become much shorter, as these firms now rely mainly on annual renewals of group life. As result, these firms would have a greater need for assets of shorter duration. It would be strongly preferable to lift these guidelines. At a minimum they should be tailored to allow a firm to avoid significant maturity mismatches between its assets and liabilities and the choices of investment projects or areas should not be made by a political committee. The new reinsurance regulation introduced in 2012 could complicate risk management by insurance firms. In 2012, a new regulatory framework for insurance took effect that inter alia sharply curtailed the ability to reinsure abroad. This will reduce diversification of risk outside the country and curtail product innovation—often a benefit of working with an internationally active reinsurer. Allowing risk-transfer reinsurance and business financing with foreign reinsurers would support the growth of the industry and diversify risk outside the country.

40. Contagion risk from the insurance sector to the banks is limited. Banks are exposed to the insurance sector through deposits and some bonds held as assets of insurance companies, and these amounts have very limited significance for the funding of the banking sector. Only two banks hold equity in insurance company subsidiaries.

FINANCIAL SAFETY NETS

A. Emergency Liquidity Assistance

41. The BCRA's facilities have not been tested, but are well-designed to manage a major bank liquidity crisis. Under these facilities that parallel the framework during the 2001–02 crisis, the BCRA is empowered to provide peso loans to support distressed financial institutions in a wide range of circumstances. In particular, banks that fall short of liquidity may apply for assistance (rediscounts or loans) using public or private sector assets as collateral—a wider range that accept under normal liquidity facilities. Total assistance is capped at the equivalent of the capital and reserves of the borrower, although the BCRA board can decide to lift this limit in times of systemic stress. The emergency assistance is available for 180 days at an interest rate equal to 135 percent of BADLAR, with close supervisory monitoring. Renewals are possible for unlimited consecutive 180 day periods at rate equal to 170 percent of BADLAR. Assets, such as mortgages, auto loans, consumer loans, post-dated checks and publicly-offered securities may be 'pre-qualified' in anticipation of the possible need to use them as collateral for a loan. While this framework worked well in the previous crisis, it has not been tested in the current environment, where banks hold far less government securities than in 2001–02 and may face steeper haircuts on collateral.

42. Although the facilities for banks are comprehensive, the BCRA should work with other supervisors to monitor potential risks outside its regulatory perimeter. The experience of the United States during the recent financial crisis shows that liquidity crises can emerge outside the regulatory perimeter. In extreme circumstances, central banks and governments may be compelled to support the liquidity shortfalls in such institutions even though they had given no undertaking to do so and had exercised no regulatory oversight of them. If it concludes that there are systemic liquidity risks outside the banking system, the BCRA should consider how to manage them, and in particular whether the entities concerned should be subject to some form of liquidity regulation, and whether facilities for providing them with emergency liquidity assistance should be developed.

B. Corrective Action Regime and Supervision

43. The BCRA approach to supervision is risk-based and focuses on early supervisory action to address deficiencies. Relying on offsite and onsite inspections**,** the Superintendence of Financial and Foreign Exchange Institutions (SEFyC)[9] assesses the soundness of each institution, and

[9] Supervision is conducted by the SEFyC that forms part of the BCRA.

where necessary, develops a follow up plan to address significant weaknesses, with the corrective actions calibrated to the severity of the issues. Failure to address weaknesses could, in severe situations, lead to the implementation of resolution powers. The SEFyC also has the authority to suspend the bank from transacting business for 30 days (which may be extended up to 90 additional days with BCRA board approval) until a serious short-term threat is addressed. These powers have been actively used in time of crisis.

44. While this system has been effective, the BCRA could enhance its prompt corrective action framework. Although the BCRA has implemented quantitative corrective action triggers keyed-off the CAMELBIG rating, other quantitative triggers such as benchmark capital or liquidity thresholds may be considered. These could help reduce the risk of regulatory delays and provide additional incentives to managers and shareholders to rectify problems. Additionally, such a framework improves transparency as banks know what to expect when certain thresholds are reached.

C. Deposit Guarantee Fund

45. The Argentine deposit insurance system operates as a "pay box". The BCRA performs most key functions envisioned by the International Association of Deposit Insurers principles. It sets the risk-adjusted premium within an authorized range, monitors the condition of the banking system, manages the resolution/recovery process, declares insolvency, determines least-cost option to be employed and has information exchange agreements with cross-border supervisors. The FGD manages the system's reserves, which amount to the equivalent of 1.3 percent of total deposits and 4 percent of covered deposits. The current reserve levels compare quite favorably with those of other countries, as disclosed in the "Thematic Review on Deposit Insurance Systems" published by the Financial Stability Board in February 2012.[10] These reserves are currently invested in U.S. Treasuries (65 percent) and BCRA instruments (LEBAC) (35 percent). The SEDESA exercises fiduciary oversight over the FGD.

46. The system would benefit from a contingency plan for a systemic crisis. SEDESA lacks adequate access to back-up funding for the FGD that it may need if a systemic crisis were to drain its reserves. While the BCRA has flexible options to operate in a crisis jointly with SEDESA, it would be important to establish access to a line of credit from MECON for use in systemic crises.

47. A review of liquidation arrangements with home country supervisors of foreign banks would aid the BCRA on contingency planning. The BCRA has memoranda of understanding (MoU) with home and host country supervisors of significance to the Argentine banking market. However, these MoUs typically do not deal with resolution issues. Since the international community is reviewing ways to strengthen the cross-border resolution framework for banks, it would be

[10] https:\\ www.financialstabilityboard.org/publications/r_120208.pdf.

important to review cross-border liquidation procedures with home countries of foreign banks operating in Argentina.

D. Bank Resolution Framework

48. Argentina's resolution framework relies mostly on purchase and assumption operations. Since 1995 the BCRA has been involved in 36 bank resolutions with only one resulting in a depositor payout. In 34 of these cases, the purchase-and-assumption process was successfully employed, with 98.6 percent of deposits being assumed. Other techniques have included one case of open bank assistance to a systemic bank in 1996 and a bridge bank process in 2002.

49. The recovery and resolution processes are administered by the BCRA. Once the SEFyC requires a bank to develop a recovery plan to correct deficiencies or the BCRA Board imposes a resolution plan, the FGD is informed of any contribution that may be required. The SEFyC also prepares the least-cost computations to support liquidation payout or other resolution/recovery options. Liquidations take place only after the BCRA has revoked the financial institution's license and are under the purview of the bankruptcy court. There have not been any resolutions since 2005. Three institutions are currently under special supervision for recovery plans. These institutions are in compliance with the benchmarks imposed by the SEFyC and have returned to profitability.

50. Reviewing and updating the framework, processes and norms about the resolution tool options in case of systemic crisis would help the BCRA in contingency planning. Although the BCRA successfully employed open bank assistance and a bridge bank model in the past, it is recommended that the process be more fully prescribed in regulations. A forward looking review of existing tools and considering possible market growth and diversification of services and financial instruments offered would aid the BCRA in maintaining adequate resolution tools during times of crisis. Manuals and regulations listing all the steps and possible instruments to undertake in case of systemic crisis will allow for a speedy process in the future. Establishing clear principles for systemic situations would safeguard the use of public funds.

E. Coordinating Arrangements

51. The mandates for financial stability and macroprudential policy are spread among the BCRA and other institutions. The BCRA and MECON share responsibilities over the set of macroprudential instruments available to control systemic risks, the detection of any increase in systemic risk and decisions regarding adoption, implementation and enforcement of macroprudential policies. In addition, the CNV and the SSN set macroprudential policies for the capital and insurance markets, respectively. The BCRA and the MECON belong to the Coordinating Council of Monetary, Financial, and Exchange Policy**.** The BCRA has entered into agreements of cooperation and information exchange with other domestic agencies.

52. A high-level systemic risk monitoring committee that includes all relevant institutions would provide stronger safeguards. The functions of the committee, formed by the BCRA,

MECON, CNV, SSN, and FGD, could include the development of contingency planning for crisis management, meeting on a recurring frequency to highlight systemic risks, ensure that all possible legal hurdles for taking action during a crisis are cleared and that procedures for implementing resolution and recovery tools are well defined.

FINANCIAL SECTOR OVERSIGHT FRAMEWORK

53. This section gives an overview of the detailed assessments of compliance[11] undertaken in May 2011 and reports on key updates to supervision adopted since then. Overall these assessments commended the authorities on their thorough supervision and examination process, but pointed to significant shortcomings from international standards and codes, especially the insufficient independence and weak legal protections afforded to supervisors of banks, insurance companies and securities markets. Since the time of these assessments, the authorities have adopted a number of changes to the regulatory and supervisory frameworks. This report summarizes these changes, but it was not possible to formally review the effect of the changes on the assessments of compliance with international supervisory standards.

A. Banking Supervision

54. Since May 2011, the authorities have been strengthening regulation in several areas, and have developed a roadmap for the implementation of Basel III (Box 2). The BCRA has introduced norms to strengthen banks' comprehensive risk management, guidance for stress testing by banks, and to fully align the regulatory framework with all pillars of Basel II. In particular, this change led to a sharp reduction in reported regulatory CARs, as the charge for operational risk is significant.[12] This effort is already bearing fruit. The large banks have been putting in place comprehensive risk management frameworks and have begun to develop detailed models for stress testing. Moreover, this analysis includes assessments and forecasts of probabilities of default and losses given default, which could serve as the basis for a forward looking assessment of credit risk.[13] The uncertainty surrounding the measurement of key economic variables will make the transition to the new regulatory framework more difficult. Without reliable data, any attempt to arrive at forward-looking assessments of risk will be extremely challenging.

[11] Three complete assessments on the Basel Core Principles, the International Association of Insurance Supervisors' Insurance Core Principles, and the International Organization for Securities Commission (IOSCO) Principles of Securities Regulation were published in September 2012. The assessments reflected the practices as of end-April 2011. The Financial Action Task Force/GAFISUD assessment of Argentina's compliance with Anti-Money Laundering/Combating the Financing of Terrorism standards was completed in October 2010, and the report can be downloaded from the FATF website at http://www.fatf-gafi.org/documents/documents/mutualevaluationofargentina.htm.

[12] The BCRA has opted to apply the basic approach to estimation of the charge for operational risk.

[13] The existing provision framework applies backward-looking fixed percentages for specific provisions that apply to impaired loans depending on their classification. There is a general provisioning requirement of 1 percent of all loans.

Box 2. Advances in Regulation and Supervision

For the past several years, the BCRA has been issuing regulations that represent significant advances towards the implementation of a more risk sensitive and proactive capital approach. The Basel Committee report[1] to G20 Finance Ministers and Central Bank Governors on Basel III implementation show that Argentina is in the implementation stage of Basel II, 2.5 and III. These regulations include:

- **Risk Management of Financial Institutions (effective January 2012).** This defines the procedures banks are expected to follow to manage a wide range of risks—credit, liquidity, market, interest rate and operational. It outlines the main procedures to conduct stress tests and to link them to contingency planning. It also requires that risk management be conducted by independent committees.
- **Basel II, Pillar 1 (effective January 2013).** This puts in place the standardized approach of the Basel II capital standard. Key changes include the introduction of a capital charge for operational risk and a capital charge for off-balance sheet transactions. This regulation also slightly raises the capital premium based on the risk rating assigned to the institution by the SEFyC. In addition, the risk weight of sovereign claims in pesos was lowered from 100 percent to zero.
- **Basel II, Pillar 2 (effective February 2013).** This regulation establishes the requirement for banks to undergo an internal capital adequacy assessment process and builds on the January 2012 regulation by completing the risk management procedures to be followed by the banks. The standards establish the responsibility of the Board and management to implement internal control, policies and procedures to monitor and control risk.
- **Basel II, Pillar 3 (effective December 2013).** This regulation establishes the disclosure of the requirements of Pillar III, which are to be implemented by December 2013.
- **Road Map towards adoption of Basel III.** The capital standard adopted in January 2013 already incorporates the key features of Basel III with respect to common equity, Tier 1 and total capital. The BCRA is developing a leverage ratio and has initiated a pilot to develop the LCR and NSFR liquidity, with a view to implementing these in 2015 and 2018, respectively. Starting in 2016, the BCRA plans to phase in the capital conservation buffer, the counter-cyclical capital buffer and capital charges for domestic systemically important banks.

[1] http://www.bis.org/publ/bcbs249.htm

55. The May 2011 assessment emphasized that the political and financial independence of the BCRA is not sufficient. The political, operational, and financial independence of the BCRA and the SEFyC is weak, in particular (i) the rules to nominate and remove member of the BCRA board and the Superintendent, (ii) the approval of the budget by the MECON, and (iii) the ability of the MECON to potentially overrule BCRA's and SEFyC's decisions.

56. The framework for the legal protection of the BCRA's employees as well as persons appointed by the BCRA under the resolution regime should be enhanced. Employees of supervisory agencies and resolution authorities should not be inhibited by the threat of lawsuits against their actions, while exercising their professional judgment and taking the necessary measures, especially in a crisis. It is important that liability accrues only in the event of gross negligence or willful misconduct on the part of the supervisory agency, resolution agency, or its employees. It would help clarify in advance to potential plaintiffs that a case would have no chance

of success, unless it is based on criminal activity, gross negligence, or bad faith. Consideration should be given to extending legal protection to SEDESA staff as well.

57. Banks' provisioning rules are still backward looking and might not be adequate in a downturn. Although the current level of provisions for banks appears to be adequate, it is likely to fall behind when credit risk and NPLs increase. The assessment recommended to move to a forward looking provisioning rule: (i) increasing the granularity of the classification of normal loans, (ii) moving forward the buildup of provisions for consumer loans as they deteriorate; (iii) establishing more stringent standards for the provisioning of refinanced loans; and (iv) removing the exception for the provisioning of exposures with the public sector.

58. The BCRA accounting rules are generally prudent, with the exception of the valuation of some government securities. The valuation of some government securities and the amortization of legal contingencies arising from the 2001–02 banking crisis differ from international standards. Other relevant differences with International Financial Reporting Standards include loan loss provisions, linear amortization of intangible assets, linear accrual of derivatives, and a more prudent treatment for deferred taxes.

59. The SEFyC supervises banking groups on a consolidated basis, but from the bank down. While financial information is also collected on the immediate parent companies, the unregulated parent companies do not fall within the supervision of the BCRA. Moreover, the participation of local banking groups in insurance and capital markets also requires an adequate oversight framework for the risks these activities represent for the overall banking group. To this end, the role of the lead supervisor of a financial conglomerate should be the supervisor of the local entity with the highest risks, and the responsibilities with respect to consolidated supervision and the other domestic supervisors should be clearly defined.

60. Monitoring of NBFIs may need to be strengthened as these institutions grow in significance. Credit mutuales and cooperatives are monitored by INAES. As these entities grow in size and client base, consideration may need to be given to enhancing their regulation and supervision.

B. Insurance Supervision

61. A key finding of the May 2011 assessment was that the adoption of a risk-based supervisory approach is essential for SSN to properly monitor a rapidly evolving market. The recent growth and sophistication of the sector makes moving towards a framework of more risk-based approach to supervision incorporating risk-based capital requirements and strong licensing criteria necessary. The SSN plans to move in the direction of a modern model of risk-based regulation and supervision based on solvency, licensing, and consumer protection. Such a move should be accompanied by a strengthening of the SSN early warning system and preventive remedial and corrective action framework so as to enable the SSN to react earlier to risks and problems in insurance companies. Currently, the SSN lacks a ladder of intervention and the legal

powers to enforce preventive and corrective measures. As a follow up to this assessment, the World Bank has been providing technical assistance to strengthen many aspects of insurance supervision.

62. The May 2011 assessment also stressed that the SSN staff will need additional resources, legal protection, and operational independence and the ability to offer more competitive salaries. While the SSN, which is set up as part of MECON, benefits from a solid endowment in devoted qualified staff with strong experience in insurance regulation and supervision, its capacity to retain its most talented staff and to recruit staff with market experience is constrained by uncompetitive salaries and insufficient resources. The institutional set of insurance supervision and regulations does not ensure the SSN's political, operational, and financial independence, including in its control on changes in Human Resources and training policies, investment in information technology infrastructure, and regulatory tools needed. SSN's staff has also limited legal protection against lawsuits.

63. Since May 2011, a major initiative for the insurance sector has been the recent development of the National Strategic Plan for Insurance 2012–2020 (PlaNeS). The PlaNeS was developed through extensive stakeholder consultation and has solid political endorsement of the proposed actions. In broad terms, the PlaNeS envisages policy interventions that woulds upport a strong expansion in this sector.

64. However, the goals set under PlaNeS are likely to require significant additional capitalization of the insurance sector. PlaNeS assumes important growth of the sector with an increment in the order of a factor of six for the premium per capita by 2020. Achievement of this growth rate would require significant additional capital, given that the sector is facing severe solvency strain as reflected by the high level of outstanding premium and other receivables, as well as its dependence on high yields to generate profits.

C. Securities Regulation

65. The May 2011 assessment of the supervision of securities markets found that the CNV had several strengths as well as a number of critical weaknesses. The CNV operated a highly transparent program for public offers of securities, including collective investments, and was in the vanguard for developing oversight regimes for credit rating agencies and in preparing to apply international accounting standards. However, the CNV's powers to supervise both conduct of business and prudential matters for securities intermediaries were insufficient or severely constrained. The key issue was the inability to sanction market intermediaries directly. The assessment also highlighted the lack of independence of the CNV. Other deficiencies included severe limitations on the ability to apply sanctions or otherwise enforce compliance, legal barriers to information sharing with other supervisory agencies, and the absence of specific criminal penalties for insider trading and market manipulation.

66. The December 2012 capital markets law includes many positive reforms but also includes other steps that could impede the development of capital markets. The new law has the potential, if implemented, to correct many of the deficiencies identified in the May 2011

assessment. The new law gives the CNV the full authority to enforce securities laws across all markets and to require registration of all entities that provide financial services. Other key improvements include the ability to share information with other supervisory agencies, improved governance standards, including for audit committees and reporting of transactions by material shareholders and other insiders. To ensure effective implementation of the new law, it will be essential for the CNV to have sufficient resources for enforcement and oversight and much stronger independence from undue political or industry influence. It will also be important to establish processes that ensure that the new powers are exercised in a way that preserves fundamental fairness to market participants. However, the law also includes reforms that hinder the development of capital markets. In particular, the new broad power of the CNV to veto decisions taken by the boards of listed companies to protect minority shareholders may provide disincentives for listing, and this aspect of the law should be rescinded. This is particularly important because the largest institutional investor—the FGS—is part of the public sector. Moreover, the new appellate processes may leave the CNV with weaker legal protection.

FINANCIAL SECTOR DEVELOPMENT

A. Long-term Finance

67. As can be expected in a small, transactional financial sector, long-term finance is almost non-existent, which constrains economic growth. There are substantial gaps in financial sector development, especially for housing, infrastructure, and lending to SMEs. Mortgages account for a much smaller share of bank credit than in comparable countries. Total spending on infrastructure is estimated at only 2.5 percent of GDP. SMEs employ roughly half the workforce, yet receive only 13 percent of bank credit to the private sector. In the absence of long-term funding, many transactions are settled in cash (for example, only 12 percent of all real estate transactions are financed through a mortgage); firms rely on retained earnings; and there are no financial instruments to help smooth consumption or investment.

68. There are measures that could foster the development of deeper financial markets with long-term instruments. Taking steps to establish more certainty about the macroeconomic environment would be essential. Macroeconomic uncertainty impedes banks' ability to assess credit risk beyond a short horizon and thus to price long term credit, especially at fixed interest rates (which borrowers demand in pesos in view of Argentina's historical episodes of hyperinflation). In addition, the uncertainty surrounding the measurement of inflation makes it impossible to set reference interest rates or to price risk in inflation-adjusted terms.

69. In 2012–13 the government has launched several programs designed to enhance financing for housing, infrastructure and SMEs. It will be critical to design these programs in a way that avoids moral hazard, creates a level playing field, provides an adequate risk sharing framework, involves adequate oversight and evaluation, and relies only when necessary on well-targeted and explicit subsidies. These criteria are particularly relevant for the recently launched housing policy program, PROCREAR, which aims to finance 400,000 housing units in four years,

including 100,000 in 2012–13 (compared to a current stock of 221,000 total outstanding mortgage loans), and is open to over 90 percent of total households. Ensuring adequate oversight by the BCRA and strong governance of the program will be crucial to ensure a non-distorted stable development of the market.

70. The FGS should adopt a single mandate as a pension reserve fund, and needs to make investment decisions driven by a strong and independent governance structure. Currently, the FGS has the dual mandate of supporting economic growth as well as serving as a pension reserve fund. With a single mandate as a pension reserve fund, the FGS should manage its assets in the best interest of pensioners against fiduciary and prudential criteria. This requires an investment strategy that aligns the maturity, risk, return, and liquidity profile of investments with those of future pension liabilities, and anchored by a strong governance framework, especially because the FGS is the country's largest institutional investor. These criteria may not always be aligned with the second objective of the FGS to invest in 'productive projects' including infrastructure aimed to contribute to economic growth (the FGS can invest up to 20 percent of its portfolio in such projects; increasing them has been a priority since late 2008). Given the tensions between its two objectives, the authorities need to decide what the primary objective of the FGS is and align its investment strategy with that single objective. It is recommended to establish the FGS as a reserve fund for pensions, with strong independence and governance, possibly as a separate legal entity different from ANSES with actuarial liabilities clearly identified, such as in Canada and New Zealand.

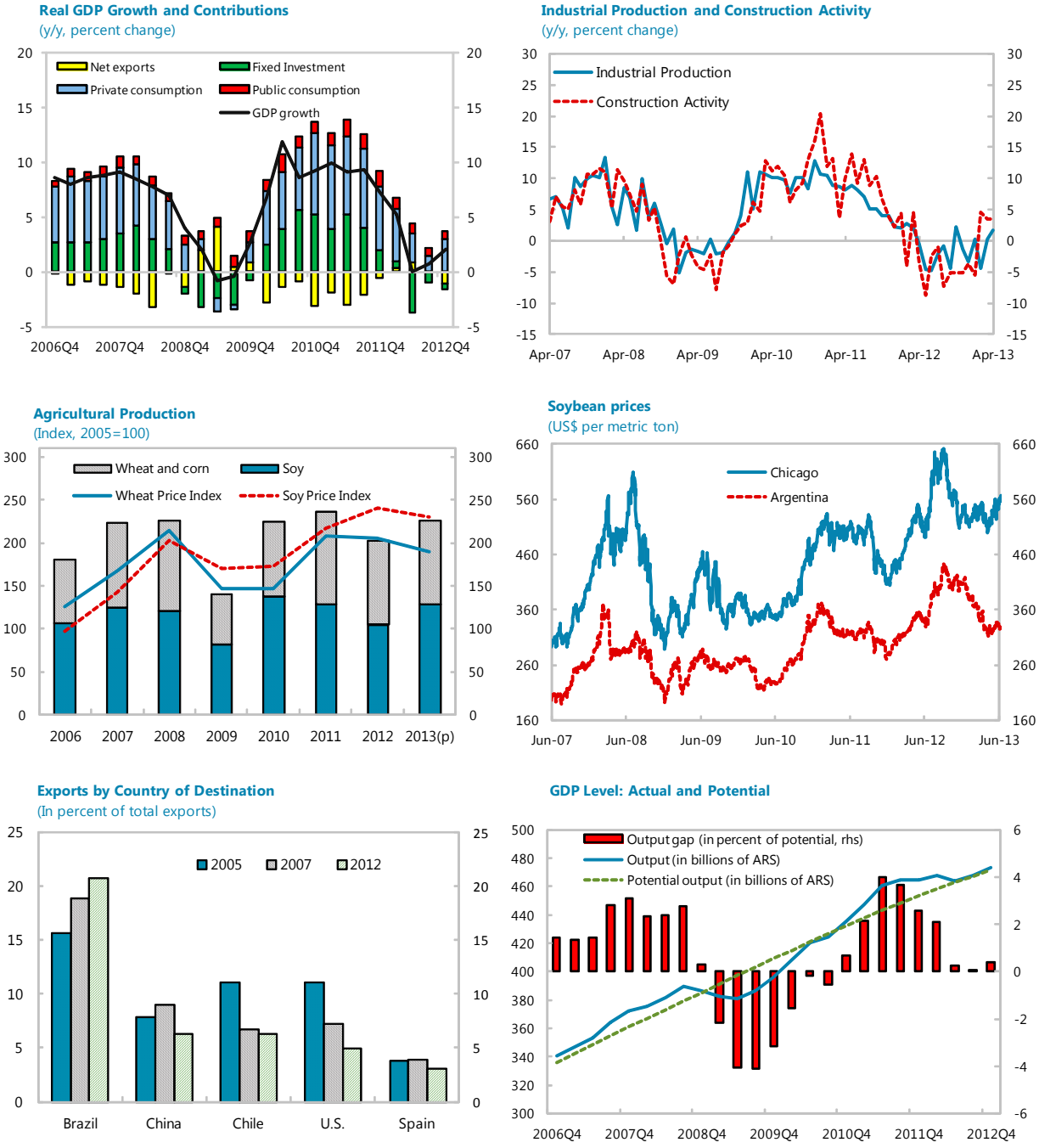
B. Financial Infrastructure

71. The payment and settlement systems work relatively well and present opportunities for further enhancements. Despite the comprehensive regulatory framework developed by the BCRA, there is some fragmentation. A payments system law would comprehensively address existing gaps and consolidate the legal framework. The BCRA should also further strengthen its oversight of the payment systems. Clearing and settlement services could be improved by rationalizing the payments "architecture" into a consolidated platform, addressing the current fragmentation and duplication of collateral requirements, and increasing efficiency. In the context of the new Capital Markets Law, an assessment of the securities and derivatives clearing and settlement systems could be conducted, based on the new Committee on Payment and Settlement Systems– International Organization for Securities Commission Principles for Financial Market Infrastructures. The government's ongoing efforts to strengthen consumer protection in financial services are very welcome.

72. The credit reporting system is also relatively well developed, and would benefit from improvement in the regulatory framework and data quality and completeness.There is no direct regulation of the credit reporting industry, nor does a comprehensive code-of-conduct across the industry exist. The legal framework is composed of overlapping legislation, in particular the credit cards law restricts the ability to share negative credit card debt information among all market players. In addition, the participation of NBFIs in the system would contribute to completeness of data, including information regarding the Argenta card provided to pensioners by ANSES.

73. The secured transactions system should be modernized. Legislation covering secured transactions is largely complete, but fragmented in various laws and a single unified law on security interests in movable property would create less conflicts and uncertainty. There is no single national Real Estate Registry. The process of recording and registering immovable property can take a few months, and can be costly, especially in jurisdictions where provincial authorities levy stamp taxes. Pledges of movable property are registered in a centralized national registry, but the process is paper-based, adding to costs and making access to information more difficult. An online electronic registry system for movable collateral would make information easily available, reliable, and would reduce costs. Market players also report that execution of collateral can be difficult. Although traditionally not a problem, it could become a constraint in case of rising NPLs.

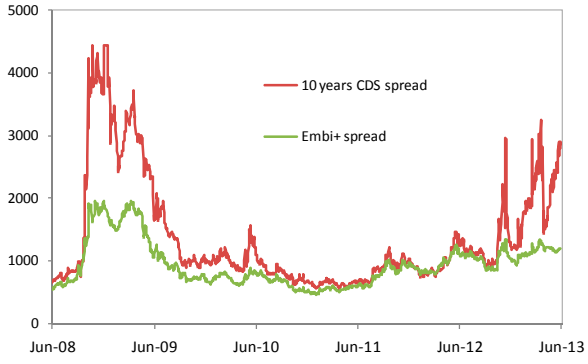
Figure 1. Argentina: Economic Developments



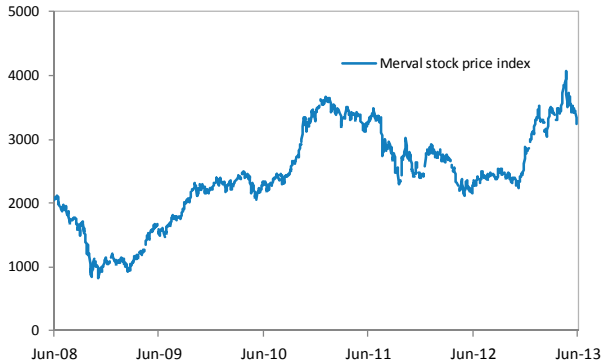
Sources: National Institute of Statistics and Census (INDEC), Ministry of the Economy and Public Finance, Ministry of Agriculture, and Fund staff estimates and projections.

Figure 2. Argentina: Capital Markets and Expected Default Frequencies

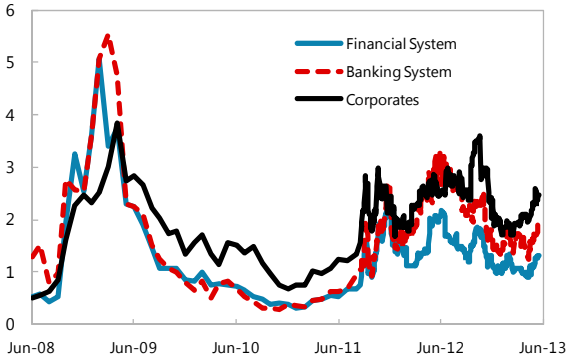
10-year CDS and EMBI+ spread
(In basis points)



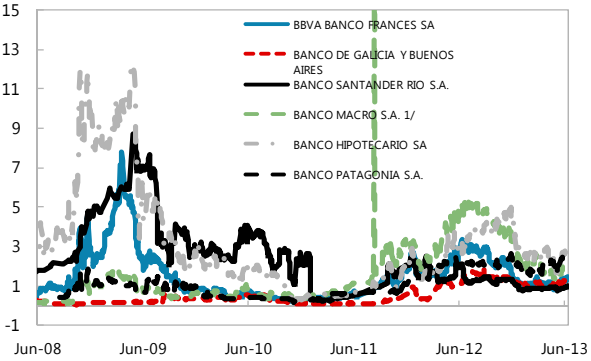
Merval index



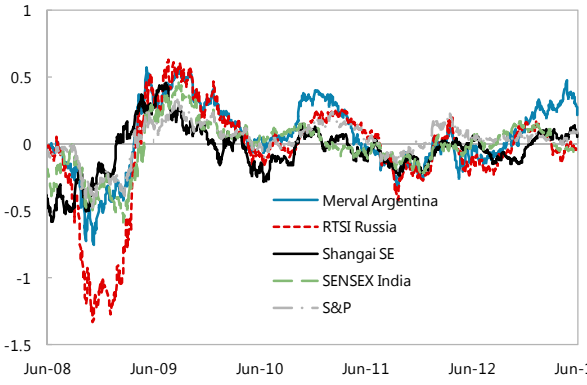
Median 1-Year Moody's Expected Default Frequncy (EDF) for Financials and Corporates
(In Percent)



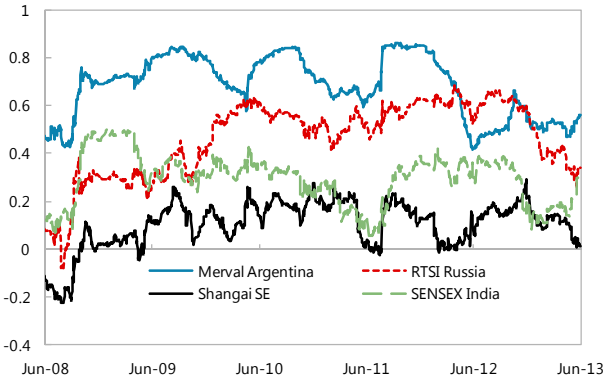
Major Argentine Banks 1-Year KMV Expected Default Frequency (EDF)
(In Percent)



Equity Market Volatility
(6-month rolling average of the daily percentage change)

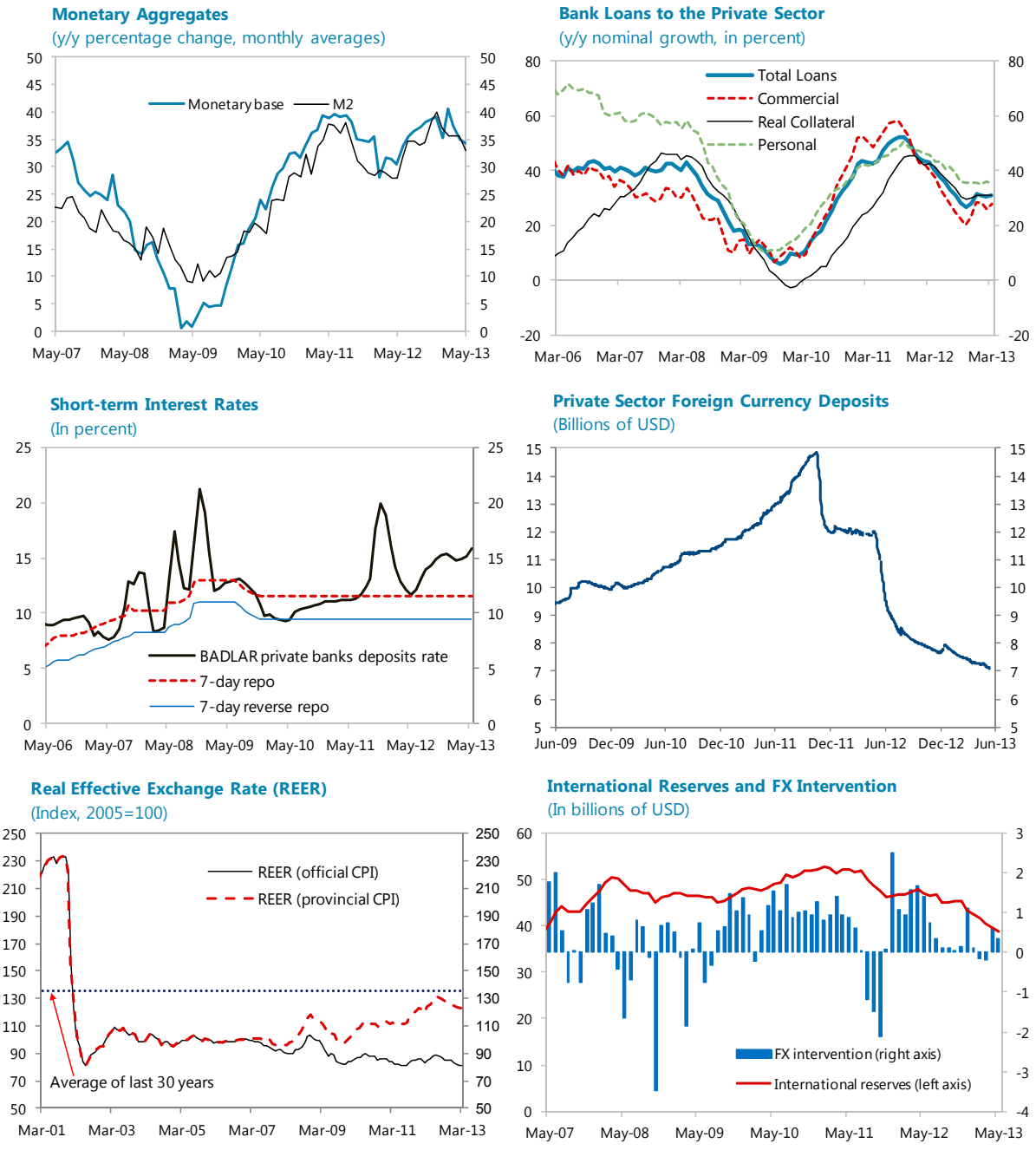


Correlations with S&P 500
(6-month rolling window of the daily percentage change)



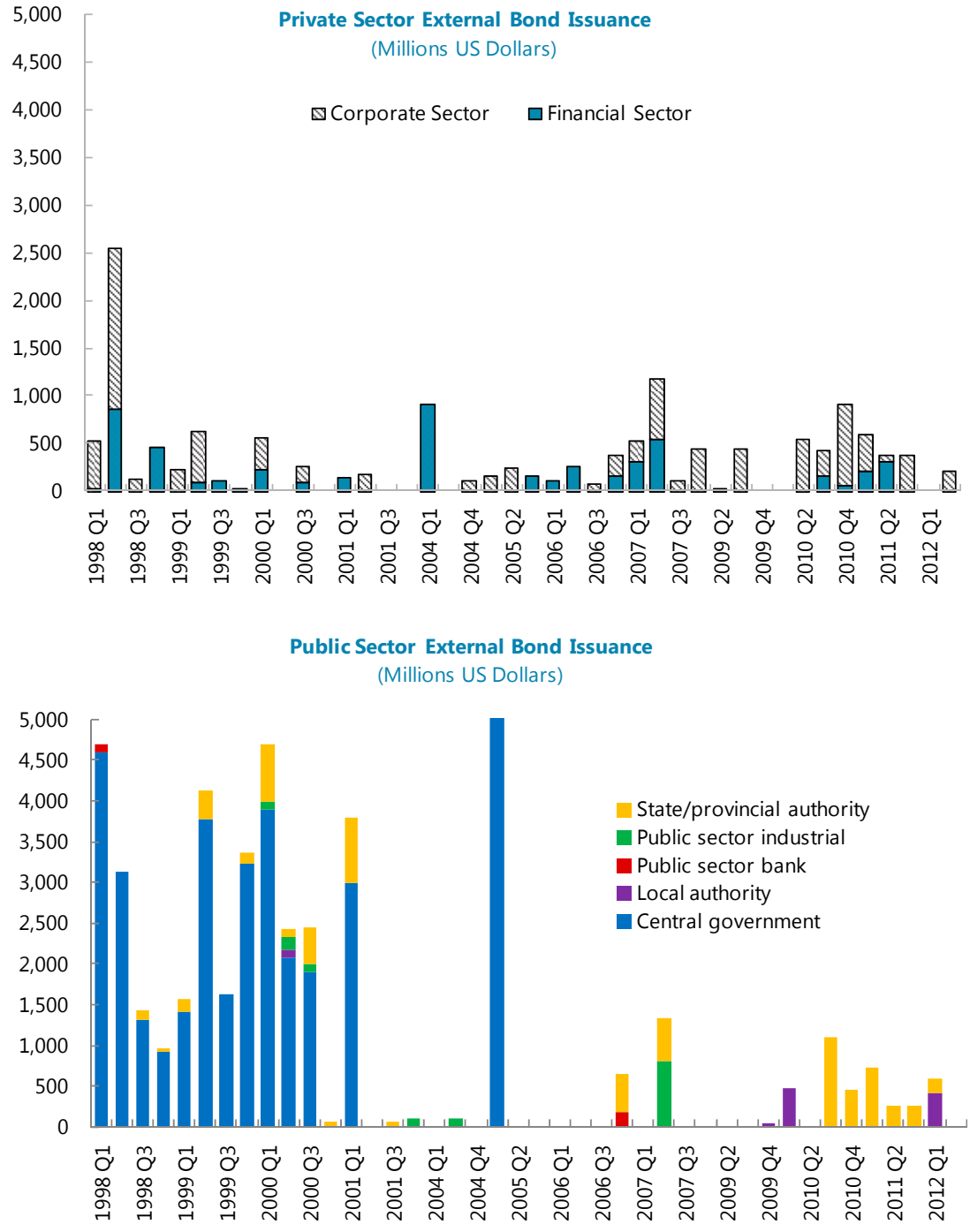
Sources: Bloomberg, and Fund staff calculations.
1/ On 8/15/2011 the 1-Year EDF for Banco Macro S.A. reached 24%.

Figure 3. Argentina: Monetary and External Sector Developments



Sources: INDEC, Central Bank of the Republic of Argentina (BCRA), provincial statistical offices, and Fund staff estimates.

Figure 4. Argentina: External Bond Issuance



Source: Dealogic.
Note: In 2005 Q1, approximately $36 billion of bonds were issued/swapped during the Argentine debt restructuring.

Figure 5. Argentina: Key Financial Soundness Indicators—Cross-Country Comparison

Sources: BCRA, Global Financial Stability Report, October 2012, and World Economic Outlook.
1/ Nominal bank returns on equity for Argentina are deflated using IMF staff estimates of average provincial inflation.
2/ For Peru, it includes restructured and refinanced lloans.

Table 2. Argentina: Selected Economic Indicators

Population (2011): 40.6 million						Per capita GDP (2011): US$10,959	
Quota (current; millions SDR / % total): 2,117 / 0.89						Gini coefficient (2011): 0.45	
Main products and exports: soybeans, automobiles, corn						Unemployment rate (2013,Q1): 7.9	
						Staff Projections	
	2007	2008	2009	2010	2011	2012	2013
	(Annual percentage changes)						
National income and prices 1/							
GDP at constant prices	8.7	6.8	0.9	9.2	8.9	1.9	2.8
Domestic demand	10.0	8.5	-1.0	11.3	10.7	1.9	2.9
CPI inflation (average)	8.8	8.6	6.3	10.5	9.8	10.0	9.9
GDP deflator	14.2	19.1	10.1	15.3	17.2	15.4	16.1
	(In percent of official GDP; unless otherwise indicated)						
External sector							
Trade balance in goods	5.2	4.8	6.1	3.9	3.0	3.3	3.1
Exports f.o.b. (goods, US$bns)	56.0	70.0	55.7	68.1	84.0	81.2	86.5
Imports f.o.b. (goods, US$bns)	-42.5	-54.6	-37.1	-53.9	-70.7	-65.6	-71.1
Terms of trade (percentage change)	6.0	12.2	0.5	3.7	10.6	4.3	-1.0
Total external debt	59.6	51.5	48.2	38.8	35.4	34.4	33.6
Savings-Investment balance							
Gross domestic investment	24.1	23.3	20.9	21.9	22.5	21.7	22.2
of which : public sector	4.1	3.8	4.2	4.2	4.2	3.9	4.4
Gross national savings	26.7	25.2	23.4	22.2	22.1	21.8	22.4
of which : public sector	4.2	4.5	1.9	4.1	1.7	0.6	0.6
Current account balance	2.6	1.8	2.5	0.3	-0.4	0.0	0.2
Public sector							
Primary balance	2.5	2.7	0.2	1.6	-0.5	-0.9	-0.3
of which : federal government	2.2	3.0	0.7	1.7	0.3	-0.2	0.1
Overall balance	-2.1	-0.9	-3.6	-1.4	-3.5	-4.2	-2.4
Revenues	31.5	33.4	34.3	37.2	37.4	40.2	40.5
Primary expenditure	29.1	30.7	34.1	35.6	37.9	41.1	40.7
Total public debt 2/	67.4	58.5	58.7	49.2	44.9	44.9	42.3
of which : share of FX denominated debt	60.6	60.4	61.8	62.0	62.9	63.4	63.9
Money and credit							
Monetary base (percentage change)	24.0	10.2	11.8	31.1	39.0	37.9	31.9
M2 (percentage change)	26.1	14.1	15.6	34.9	30.8	40.1	31.9
Short-term deposit rate (BADLAR)	10.1	13.6	12.4	10.1	13.3	13.8	13.5
Credit to the private sector (percentage change)	37.0	20.1	10.2	36.5	44.3	31.3	32.8
Memorandum items							
Gross international reserves (US$bns)	46.2	46.4	48.0	52.2	46.4	43.3	44.2
Nominal GDP (Arg$bns)	811.4	1,031.6	1,145.4	1,441.8	1,839.9	2,163.0	2,590.2
Nominal GDP (US$bns)	260.1	324.4	305.8	367.6	444.6	475.2	502.4
Exchange rate (average, Arg$/US$)	3.1	3.2	3.7	3.9	4.1	4.6	5.3
REER (2005=100) 3/	101.1	108.4	107.9	114.8	120.8	138.9	143.4

Sources: Ministry of the Economy and Public Finance, Central Bank of the Republic of Argentina (BCRA), and Fund staff estimates and projections.

1/ The data for Argentina are officially reported data. The IMF has, however, issued a declaration of censure and called on Argentina to adopt remedial measures to address the quality of the official GDP and CPI-GBA data. Alternative data sources have shown significantly lower real growth than the official data since 2008 and considerably higher inflation rates than the official data since 2007. In this context, the Fund is also using

2/ Debt figures include holdouts and esitmated penalty interests on Paris Club debt.

3/ Based on the IMF staff estimates of provincial CPI.

Table 3. Argentina: Financial Sector Structure

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number												
Banks	85	78	75	73	71	72	67	67	66	64	64	65
Foreign banks	38	29	27	25	23	24	21	21	21	20	21	20
Domestic banks	47	49	48	48	48	48	46	46	45	44	43	45
Other MFIs	22	21	21	18	18	18	18	17	17	16	16	16
Nonbank financial companies	19	19	19	16	16	16	16	15	15	14	14	14
Savings banks	3	2	2	2	2	2	2	2	2	2	2	2
Insurance companies	217	205	198	192	192	188	184	183	178	181	180	180
Life	86	82	77	73	73	68	69	66	59	59	58	55
Non-life	131	123	121	119	119	120	115	117	119	122	122	125
Pension funds	12	12	12	12	11	11	11	1	1	1	1	1
Mutual funds												
: Open-end	229	194	179	178	193	230	248	256	254	253	281	309
: Closed-end	4	4	4	3	3	3	3	3	3	3	3	3
Financial system assets (in billions of Pesos)												
Banking groups (*)												
of which: Subsidiaries of foreign banks	39,607	48,564	43,154	43,645	40,085	49,765	66,406	79,426	88,219	108,411	161,388	175,288
Branches of foreign banks	19,457	21,241	18,250	16,544	16,124	20,141	15,136	20,541	21,168	19,297	26,459	23,229
Domestic banks	62,858	116,063	122,823	148,303	160,679	185,067	211,056	240,341	270,058	375,472	428,788	519,383
of which: 4 largest banking groups	50,947	91,598	92,458	101,541	105,453	118,802	131,978	151,387	172,038	246,020	291,397	351,027
Other MFIs (*)	1,999	1,778	1,677	1,692	2,061	3,483	5,374	7,019	6,479	7,857	12,359	15,091
Insurance sector	12.41	4.86	6.93	8.00	9.01	10.21	12.24	14.49	13.81	15.53	18.36	20.48
Pension funds	21	39	47	54	68	90	94	100	141	178	199	245
Mutual funds												
of which: Open ended	3,752	987	1,907	2,345	3,605	6,159	6,777	3,781	3,737	5,185	6,810	9,018
Employment (in thousands)												
Banking groups (*)	96	105	82	83	85	89	95	95	94	97	99	101
Other MFIs (*)	4	2	2	2	3	3	4	4	3	3	3	3
Insurance companies (life and nonlife)	29	26	25	22	23	23	25	26	26	26	27	29
Pension funds (ANSES)	12.6	10.5	10.8	10.8	10.3	10.6	11.1	0.16	0.17	0.17	0.18	0.18
Assets as percent of GDP												
Banking groups (*)	49.1	53.4	44.7	42.9	36.8	35.9	31.9	31.6	30.2	30.9	31.1	32.6
Other MFIs (*)	0.8	0.5	0.4	0.3	0.3	0.5	0.6	0.7	0.5	0.5	0.6	0.7
Insurance companies (life and nonlife)	4.41	6.68	5.54	5.74	5.39	5.33	5.24	4.71	4.84	4.77	4.58	4.65
Pension funds	7.7	12.4	12.5	12.1	12.8	13.7	11.6	9.7	12.3	12.3	10.8	11.4

Sources: BCRA.

Note: (*) 2012 figures are as of end-September 2012.

Table 4. Argentina: Financial Soundness Indicators of the Banking System

	2005	2006	2007	2008	2009	2010	2011					2012				
							Total	Public	Private Domestic	Private Foreign	Financial Companies	Total	Public	Private Domestic	Private Foreign	Financial Companies
							(Millions Pesos, unless otherwise stated)									
Banking Sector																
Capital adequacy																
Regulatory capital	23,208	27,281	30,518	35,348	42,853	50,184	61,466	20,347	17,987	20,435	2,697	82,055	28,830	23,026	27,000	3,199
of which Tier 1	21,790	25,948	29,252	34,036	40,215	46,752	55,635	16,864	16,221	19,908	2,642	74,543	23,976	21,087	26,334	3,146
Hybrid instruments 1/	...	...	474	520	572	459	459	0	459	0	0	459	0	459	0	0
Tier 2 2/	1,418	1,333	1,266	1,312	2,638	3,432	5,831	3,484	1,766	527	54	7,512	4,854	1,939	666	53
Risk Weighted assets	188,220	197,735	223,294	248,266	273,414	340,720	467,970	181,627	134,907	137,266	14,170	662,251	252,183	191,211	198,822	20,035
of which for Credit risk	146,068	161,742	180,775	209,570	227,783	283,995	393,688	157,560	110,175	117,986	7,966	479,464	194,848	135,312	138,856	10,448
Market risk	8,032	6,857	10,744	7,010	11,293	11,619	11,336	3,725	2,915	4,695	2	9,037	2,909	2,500	3,508	120
Operational risk	0	0	0	0	0	0	0	0	0	0	0	108,139	36,020	31,062	39,137	1,921
Any other requirement (specify) 3/	34,120	29,136	31,775	31,686	34,338	45,106	62,947	20,342	21,817	14,585	6,202	65,611	18,406	22,337	17,321	7,547
Regulatory capital as percent of risk-weighted assets* - %	12.3	13.8	13.7	14.2	15.7	14.7	13.1	11.2	13.3	14.9	19.0	12.4	11.4	12.0	13.6	16.0
Regulatory Tier I capital to risk-weighted assets * - %	11.6	13.1	13.1	13.7	14.7	13.7	11.9	9.3	12.0	14.5	18.6	11.3	9.5	11.0	13.2	15.7
Capital as percent of assets * - %	12.1	12.8	12.4	11.9	12.5	11.3	11.2	9.7	11.9	11.7	22.5	11.5	9.2	12.7	13.2	20.5
Asset composition and quality																
*Sectoral distribution of bank credit to the private sector (as percent of total credit to private sector) 4/**																
Agriculture/Food Industry 5/	12.2	13.0	14.4	14.3	15.3	15.5	16.2	19.5	16.4	13.4	3.6	16.1	17.1	17.9	14.7	3.1
Real estate/Construction and Development loans 6/	2.0	2.0	2.0	1.9	2.3	2.3	2.3	2.5	3.0	1.8	0.4	2.3	2.5	2.8	1.8	0.3
Energy and utilities 7/	0.8	1.1	1.3	1.3	1.3	1.5	1.4	1.8	0.9	1.6	0.0	1.2	1.3	1.0	1.5	0.0
Transportation and Road Construction Loans 8/	1.4	1.7	1.6	1.6	1.6	1.7	1.6	0.6	1.4	1.9	10.3	1.6	0.7	1.6	2.0	9.5
Other Industrial/Commercial loans 9/	14.4	15.3	15.5	17.8	17.2	15.3	16.1	11.4	12.7	25.5	3.3	15.7	12.5	12.9	23.8	2.9
Commercial sector	5.4	6.3	7.0	6.3	6.1	7.1	7.2	4.7	8.7	8.4	7.9	7.4	5.0	9.2	8.6	8.6
Rest of services sector	7.0	9.4	10.1	9.0	8.8	9.3	9.1	4.5	14.0	10.2	3.4	8.9	5.2	12.1	10.8	5.0
Employees	20.9	24.4	30.0	32.7	32.0	33.0	33.9	27.3	40.3	31.9	71.0	34.2	29.3	39.2	31.6	69.3
Government loans	31.5	20.6	13.0	11.4	12.4	11.7	9.7	26.6	0.7	0.0	0.0	9.7	25.2	0.9	0.5	0.0
Loans to Banks	3.0	4.9	3.9	3.2	2.4	2.3	2.4	0.9	1.8	4.8	0.0	2.4	1.0	2.1	4.3	1.3
Other 10/	1.4	1.2	1.2	0.5	0.4	0.3	0.1	0.1	0.1	0.3	0.0	0.3	0.2	0.2	0.5	0.0
Asset quality																
Non-performing loans (NPL) as percent of gross loans *	7.6	4.5	3.2	3.1	3.5	2.1	1.4	1.2	1.8	1.0	2.8	1.7	1.4	2.2	1.4	3.7
Provisions as percent of NPL	114.8	107.6	114.4	116.4	111.8	142.8	171.2	195.9	151.9	194.5	118.4	141.0	164.4	129.8	151.9	83.4
NPL net of provisions as percent of tier I capital *	-3.1	-1.1	-1.9	-2.1	-1.5	-4.0	-5.4	-6.3	-5.8	-4.7	-2.1	-3.8	-4.8	-3.9	-3.6	2.8
Large exposures as percent of tier I capital 11/*	17.3	18.7	16.7	13.4	12.1	14.9	25.3	43.9	14.7	19.9	11.7	16.3	30.4	5.9	13.1	10.9
10-largest credit to net credits 12/	112.8	105.3	120.7	118.0	109.1	107.1	112.8	...	...	...	...	130.9	...	...	...	...

Table 4. Argentina: Financial Soundness Indicators of the Banking System (continued)

	2005	2006	2007	2008	2009	2010	2011					2012				
							Total	Public	Private Domestic	Private Foreign	Financial Companies	Total	Public	Private Domestic	Private Foreign	Financial Companies
Earnings and profitability																
Gross profits as percent of average assets (ROAA) 13/*	1.2	2.2	1.9	2.0	3.6	4.0	3.9	3.1	3.9	4.8	8.6	4.3	3.5	4.0	5.7	7.3
Gross profits as percent of average equity capital (ROAE) 14/*	7.0	14.3	11.0	13.4	19.2	24.4	25.3	25.2	24.8	26.3	20.9	25.7	24.9	25.7	27.0	22.4
bearing assets) *	1.9	2.3	2.7	3.9	5.5	5.6	5.8	2.7	7.4	7.8	16.8	7.1	3.7	8.7	10.0	14.0
Gross income as percent of average assets	7.8	9.8	9.7	10.7	12.7	12.8	12.5	9.4	14.7	14.5	23.4	13.7	10.3	15.6	16.5	21.6
Net interest income as percent of gross income	19.2	18.7	22.3	29.2	33.8	33.5	36.6	22.4	40.6	43.2	67.6	41.6	29.5	45.1	47.6	61.9
Non-interest income as percent of gross income	80.8	81.3	77.7	70.8	66.2	66.5	63.4	77.6	59.4	56.8	32.4	58.4	70.5	54.9	52.4	38.1
Trading income as a percent of gross income 15/ *	14.8	22.2	20.0	13.4	25.6	25.1	20.9	36.4	17.0	11.7	1.7	18.8	34.0	14.2	10.6	0.5
Non-interest expenses as percent of gross income *	59.0	52.6	56.8	57.3	52.9	53.6	53.5	53.4	55.3	52.5	45.4	51.2	51.7	54.0	48.9	44.8
Personnel expenses as percent of non-interest expenses *	54.3	55.6	56.1	58.4	59.3	60.5	60.4	74.4	56.1	52.8	41.8	61.0	75.6	56.0	53.4	43.1
Spread between reference loan and deposit rates * - bps	650	730	822	984	1,177	1,158	1,122	820	1,280	1,167	1,688	1,267	906	1,459	1,410	1,590
Liquidity																
Liquid assets as percent of total assets *	21.8	24.8	26.4	26.4	29.1	32.8	27.7	32.3	24.5	25.8	6.6	29.2	33.5	25.8	27.4	7.0
Liquid assets as percent of short-term liabilities *	40.8	43.4	43.2	42.3	47.3	51.7	43.1	45.1	42.8	40.0	53.9	47.8	52.9	40.5	46.8	42.9
Foreign currency loans as percent of total loans *	10.1	12.7	14.1	14.0	12.7	13.6	12.8	11.1	12.7	16.0	1.1	6.6	6.0	7.3	7.4	1.0
Foreign currency liabilities as percent of total liabilities *	16.6	16.7	17.1	18.8	20.2	19.3	15.6	10.8	18.6	20.2	2.6	10.0	8.7	11.2	11.4	1.5
Deposits as percent of assets (ecxl. interbank deposits) 16/	61.8	66.5	69.7	68.8	71.3	75.1	73.3	84.3	67.3	68.3	11.5	76.2	82.9	74.6	72.2	13.3
o/w Household deposis	22.4	23.9	26.0	24.7	25.3	27.0	27.1	23.8	28.0	32.1	4.7	26.4	22.8	28.6	31.7	3.8
o/w Corporate deposits	22.4	23.0	24.9	22.7	25.6	23.2	24.5	17.4	28.4	31.7	6.9	27.1	19.3	31.4	36.3	9.6
o/w Interbank deposits	0.3	0.4	0.4	0.4	0.5	0.2	0.2	0.1	0.1	0.3	0.0	0.1	0.2	0.1	0.1	0.0
o/w Public sector	16.4	18.6	17.7	20.6	19.5	24.6	21.2	43.0	10.9	3.2	0.0	22.4	40.6	14.5	3.3	0.0
o/w other 17/	0.3	0.6	0.7	0.5	0.4	0.2	0.3	0.0	0.0	1.0	0.0	0.2	0.0	0.0	0.8	0.0
Net Interbank positions	1,712.7	4,019.8	3,886.2	3,486.9	2,223.8	4,099.2	8,175	740	1,973	5,090	371	9,322	957	2,423	5,771	171
Gross Interbank Assets 18/	2,449.9	4,962.2	5,030.4	4,792.6	4,051.5	5,017.8	9,263	1,115	2,083	5,693	371	10,294	1,582	2,607	5,935	171
Gross Interbank Liabilities 19/	737.2	942.4	1,144.2	1,305.6	1,827.7	918.7	1,088	375	110	603	0	972	625	184	164	0
Loans as percent of deposits *	60.6	58.8	62.9	64.5	61.1	59.8	71.5	56.0	82.1	79.8	74.4	71.5	57.3	78.1	82.0	66.1

Table 4. Argentina: Financial Soundness Indicators of the Banking System (concluded)

	2005	2006	2007	2008	2009	2010	2011					2012				
							Total	Public	Private Domestic	Private Foreign	Financial Companies	Total	Public	Private Domestic	Private Foreign	Financial Companies
Sensitivity to market risk																
Off-balance sheet operations as percent of assets																
of which foreign exchange operations	-0.4	-0.2	0.9	1.6	-0.1	0.3	2.1	0.4	3.4	3.1	0.0	1.0	0.0	1.2	2.4	0.0
of which interest rate operations	0.2	0.3	0.9	0.5	0.7	1.1	0.9	0.0	1.0	1.6	6.5	0.8	0.0	0.7	1.7	9.5
Duration of assets 20/																
.. In pesos	...	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.8
.. In dollar	...	0.9	0.7	0.6	0.4	0.4	0.4	1.1	0.4	0.2	0.0	0.3	1.0	0.3	0.1	0.0
Duration of liabilities 20/																
.. In pesos	...	0.4	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4
.. In dollar	...	1.8	1.2	0.9	0.7	0.5	0.6	0.5	1.0	0.2	0.1	0.6	0.5	1.2	0.2	0.1
Net long position in foreign exchange as a percentage of tier I capital *	42.6	31.0	38.7	52.5	42.1	34.4	46.9	69.1	41.2	41.0	1.4	47.5	63.7	33.0	51.6	4.4
Net open position in equities as a percentage of tier I capital *	0.1	0.3	0.3	0.1	0.2	0.3	0.2	0.1	0.6	0.0	0.0	0.2	0.0	0.6	0.0	0.0
Outstanding volume of assets originated and securitized 21/	6,386	5,255	7,177	7,273	7,147	8,232	8,996	592	4,960	2,349	41	9,099	654	6,139	1,504	52

Source: BCRA.
*Core and encouraged set of indicators.
1/ Subordinated debt instruments.
2/ "Patrimonio neto complementario".
3/ Interest rate risk.
4/ Original information include all resident sectors (public, private and financial). for this requirement, public administration, defense, compulsory social security and financial intermediation, except insurance and pension funding, were excluded.
5/ Agriculture, hunting and related service activities plus manufacture of food products and beverages.
6/ Construction.
7/ Electricity, gas, steam and water supply.
8/ Transport, storage and communications.
9/ Others.
10/ Foreign residents.
11/ 2012 data to October. Debtors with outstanding debts to total regulatory capital of over 10%.
12/ 2012 data to October.
13/ Gross profits before extraordinary items and taxes.
14/ Return on equity after taxes.
15/ Total gains on securities, including traiding gains and investment account profits.
16/ Total deposits.
17/ Non-Residents.
18/ Loans to financial sector.
19/ Financial sector deposits.
20/ Modified duration. Banking book. In years
21/ 2012 data to November. Bank loans as underlying assets (includes financial trust of non active institutions and indirect securitizations through specialized companies).

Table 5. Argentina: Financial Soundness Indicators of the Nonbanking System

	2005	2006	2007	2008	2009	2010	2011	2012
				(in percent, unless otherwise stated)				
Insurance funds (by product line) in millions pesos								
Slovency margin	4,560	5,657	6,731	7,314	9,830	9,881	12,985	16,525
Solvency margin/technical reserves	25.85	26.38	25.77	23.99	27.63	23.88	25.82	26.98
Life resources	10,399	13,034	15,826	19,153	21,874	24,433	27,931	31,863
Pending Claims	7,243	8,407	10,297	11,337	13,703	16,946	22,367	29,380
Total Reserves	17,642	21,441	26,123	30,491	35,577	41,379	50,298	61,244
Solvency Ratio	220.49	221.64	203.71	179.88	173.67	175.50	178.56	176.39
Profitability (return on average equity)	-2.39	8.22	16.80	12.34	17.33	15.70	22.88	21.71
Distribution (no. of insurers by Solvency Ratio Band)	193	188	182	181	177	179	179	179
<100 %	7	8	5	11	6	5	2	4
100-110 %	23	21	23	32	35	29	22	23
110-125 %	14	19	20	28	20	31	32	30
125-150 %	23	27	34	25	29	27	30	33
>150 %	126	113	100	85	87	87	93	89

Sources: MECON and SSN.

Appendix I. Risk Assessment Matrix

Nature/Source of Main Threats	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years *(high, medium, or low)*	**Expected Impact on Financial Stability if Threat is Realized** *(high, medium, or low)*
1. A Reversal of Capital Flows to Emerging Markets Causes a Recession or a Weak Recovery in Brazil.	***Staff assessment: Medium*** • A sudden stop of capital inflows would cause a correction in asset prices, recession, and currency depreciation in Brazil. • Given the presence of tight trade linkages between Argentina and Brazil, Argentina is exposed to an export-demand shock from its main trade partner. • A generalized capital flight from emerging markets could also have a direct impact on Argentina, limiting the private sector's access to international funding.	***Staff assessment: Medium*** • The macroeconomic effects on Argentina could be sizable. GDP growth would be negatively affected by the decline in exports to Brazil (particularly automobiles) and capital outflows. • The Argentine peso would depreciate against the U.S. dollar to partially prevent a loss of competitiveness vis-à-vis Brazil. • Bank earnings and capital would be affected the rise in NPLs. *(In the stress tests, this risk is incorporated in the adverse macroeconomic scenarios).*
2.Global growth slows, especially in China, causing a Sharp Decline in Commodity Prices	***Staff assessment: Low*** • Soy is a key export product and slower global growth, especially in China, will affect Argentina mainly through the global trade channel, as Argentina's dependence on the external financing is limited.	***Staff assessment: Medium*** • A fall in commodity prices would probably cause a simultaneous (negative) effect in Brazil, exacerbating the vulnerability of the Argentine economy to the shock. • The fall in aggregate demand, associated with the decline in net exports would cause a recession. • Bank earnings and capital would be affected due to higher NPLs. *(In the stress tests, this risk is incorporated in the adverse macroeconomic scenarios).*
3. Tightening of Monetary Conditions to Contain Inflationary Pressures	***Staff assessment: Medium*** • Inflationary pressures could increase in the near term. • Real interest rates have been negative. • Inflation expectations are not well-anchored. • A tightening of monetary conditions would reduce the rate of money growth, increasing nominal and real interest rates.	***Staff assessment: Medium*** • Nominal and real deposit rates would increase immediately; • Given sufficient time, real lending rates would go up as banks pass on to borrowers the increase in deposit funding costs. • Higher real lending rates will increase NPLs, negatively affecting bank earnings and capital. *(In the stress tests, this risk is evaluated*

Nature/Source of Main Threats	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years *(high, medium, or low)*	**Expected Impact on Financial Stability if Threat is Realized** *(high, medium, or low)*
		through sensitivity analysis).
4. Loss of Confidence and Subsequent Decline in Money Demand, Increased Capital Outflows, and Depreciation of the Peso	***Staff assessment: Medium*** • With Argentina's history of volatile growth, money demand is more sensitive to expectations than in other countries. • Many factors could cause a loss in confidence, which could trigger a sharp decline in money demand.	***Staff assessment: Medium*** • Banks would suffer a liquidity shock in the form of deposit withdrawals (associated with the decline in money demand). • Bank solvency could be affected through a number of channels: - In the short term, net interest margins would decline as deposit rates increase faster than lending rates (due to the loan-deposit maturity gap). - With output negatively affected, NPLs would increase. - Peso-denominated, long duration nominal bonds held by banks would decline in value. *(In the stress tests, this risk is evaluated through sensitivity analysis).*

Appendix II. Stress Test Methodology

Solvency Stress Tests[14]

75. Solvency stress tests were based on TD exercises by the authorities and Fund staff, covering credit, market, and sovereign risks. In the stress tests based on the authorities' baseline, the macroeconomic scenarios were constructed using models developed by the BCRA and expert judgment.[15] The effects on individual bank's profitability and capitalization were assessed using satellite models developed by the authorities. This approach allows for growth in credit and deposit to differ from nominal GDP growth. In contract, the stress tests based corresponding to the Fund-staff baseline assumed that banks' balance sheets grow in line with nominal GDP (constant balance sheet growth). In this case, dividend payout ratios are consistent with existing regulations and past experience.

76. The macroeconomic stress tests examined two baseline scenarios. These baseline scenarios were characterized by an improvement in external conditions in 2013–14 that result in a gradual recovery in output growth. Specifically, a faster pace of global growth, particularly in Brazil, gradually boosts the demand for Argentine exports while international commodity prices fluctuate around current levels. Growth is also supported by a recovery in grain harvest, following the drought that affected production in 2012. The two scenarios include one based on the authorities' projections and another based on Fund staff projections. The authorities used BCRA models and expert judgment to construct their scenarios. Fund staff analyzed the transmission of external shocks to the domestic economy using Vector Auto Regression (VAR) analysis.

77. Adverse scenarios were developed to assess the impact of external shocks on the economy over a two-year horizon, 2013–14. The macroeconomic scenarios simulated the effects of external shocks, such as declines in main trading partners' growth; adverse terms of trade shocks; and a rise in global risk aversion that triggers capital outflows. Once the macroeconomic scenarios were constructed, the transmission of the external shocks to individual bank's profitability and capitalization were assessed using satellite models developed by the authorities and validated by Fund staff. These "macroeconomic stress tests" were dynamic in nature and required specific assumptions regarding banks' behavior, balance sheet growth, and the evolution of off-balance sheet exposures.

[14] For a more detailed description of the stress testing methodology and final results, see the Argentina FSAP: Technical Note on Stress Testing (forthcoming).

[15] The methodology developed by the BCRA to conduct their stress tests is described in "BCRA, Informe al Directorio 736/45/13."

Credit Satellite Model

Based on the macroeconomic scenarios, bank-specific loan loss rates are projected using the following dynamic panel model:

$$LLR_{i,t} = \mu_i + \delta_1 LLR_{i,t-1} + \beta_1 g_t + \beta_2 \left(g_t\right)^2 + \gamma_1 rr_t + \gamma_2 \pi_t + \gamma_1 CR_{i,t-1} + \gamma_2 \left(CR_{i,t-1}\right)^2 + \gamma_3 \left(CR_{i,t-1}\right)^3 + \varepsilon_{i,t}^j ,$$

where the indexes i and t indicate, respectively, the banking institution and the time period. *LLR* denotes the logistic transformation of the loan loss rate: $LLR = \ln\left(\frac{\text{loan loss rate}}{1 - \text{loan loss rate}}\right)$.

g denotes real GDP growth; *rr* is the (ex-post) real interest rate defined as the difference between the (lagged) short-term nominal lending rate ("adelantos") and contemporaneous inflation measured by the GDP deflator; π denotes the rate of growth of the GDP deflator; *CR* is the bank-specific and time varying capital-assets ratio; $\cdot \mu_i \cdot$ denotes bank specific fixed effects.

Dependent variable: loan loss rate (logistic transformation)

Explanatory variable	Coefficient
Loan loss rate (lagged)	0.19
Real GDP growth	-9.77
Real GDP growth squared	73.70
Capital to assets ratio (lagged)	-2.89
Capital to assets ratio squared (lagged)	2.25
Capital to assets ratio cubic (lagged)	-0.53
Real interest rate: nominal lending rate (peso loans, short term) (lagged) - growth of GDP deflator	1.52
Growth of GDP deflactor	1.86

The model was estimated based on an unbalanced panel dataset including 193 banking institutions and the annual observations for the period 1994–2011. The results were robust to changes in this period. The dynamic panel model was estimated with a two-step Arellano-Bond approach, and the estimated coefficients (except for the bank-specific fixed effects) are presented in the following table:

The sensitivity of the loan loss rate to changes in output can be illustrated with a numerical example that suggests that loss rates could rise significantly under an adverse scenario. Assuming an intercept equal to the average value of the fixed effect (-3.1); a constant real interest rate (rr=0.03); a constant capital-asset ratio (CR=0.09), and an initial loss rate of 1.7 percent (similar to the one corresponding to private banks in 2012); the paths of the loss rates consistent with real GDP growth rates corresponding to the baseline and adverse macroeconomic scenarios would be the following.

	Baseline (WEO)		Adverse (U)		Adverse (V)	
	GDP Growth Rate	Loan Loss Rate	GDP Growth Rate	Loan Loss Rate	GDP Growth Rate	Loan Loss Rate
Year 0		0.017		0.017		0.017
Year 1	0.028	0.017	-0.038	0.034	-0.07	0.059
Year 2	0.035	0.017	-0.031	0.035	0.00	0.027

78. A standard credit risk satellite model was used to translate changes in output growth and real interest rates into bank-specific loan loss rates. The model implies a non-linear response of credit loss rates to changes in output growth. As a result, loss rates increase more sharply in the V-shape scenario than in the U-shape scenario, depending also on the initial level of the loan loss rates in the base year (1.5 percent in 2012). The model also exhibits a low sensitivity of loan loss rates with respect to changes in real interest rates. Fund staff conducted econometric analysis to verify the robustness of the credit risk model used by the authorities. Its results were found to be robust to changes in model specification, sample periods, and time-varying explanatory variables (including price deflators and interest rates). The implications of the model are also robust to the replacement of the loan loss rate by the ratio of NPLs as the dependent variable. Fund staff confirmed the low sensitivity of loan losses with respect to changes in real interest rates in meetings with private and public banks that conduct their own stress tests.

79. Market and sovereign risks were assessed through satellite models for interest rate risks. The authorities used satellite models to project shifts in yield curves dynamically for different types of bond and money market instruments over the projection period. Changes in yields leading to a re-pricing of these instruments were applied to positions held in both the trading and banking books. Although the models projected sizable yield curve movements under stressed conditions, their impact on market losses was mitigated by the low average duration of the banks' positions. As yield changes predicted by the models were large and the modified duration of bank portfolios was low, Fund staff did not attempt a replication of the market risk models. The BCRA introduced revisions to satellite models for net fee and service income and operating and administrative expenses. These revisions were targeted at satellite models that have a meaningful impact on stress test results and were developed by the BCRA and validated by Fund staff. The specifications of the satellite models for net fee income, and operating and administrative expenses, are now similar in structure to those used in the United Kingdom (RAMSI model) and further work is in course to refine those models and find a good fit for small banks.

80. Sensitivity stress tests assessed vulnerabilities of the banking system to key domestic shocks. These included: a tightening of domestic monetary conditions aimed at containing inflation pressures (a rise in domestic real interest rates); a loss of confidence in the monetary and financial system that triggers capital outflows and widens the gap between the parallel and official exchange rates (a nominal depreciation of the peso);[16] and a failure of a number of large corporate exposures (concentration. Unlike macroeconomic stress tests, sensitivity tests were static. They assessed the instantaneous impact of different shocks on the banks' balance sheets and outstanding off-balance sheet positions as of September 2012.

[16] These tests assume that banks earn no pre-impairment profits under stress; also, the increase in real interest rates is sustained for a period of two years and only affects banks' credit losses and NPL ratios.

Liquidity Stress Tests

81. Liquidity stress tests of the banking sector were implemented using TD approaches based on data provided by individual banks. The exercise was based on cash flow based-stress testing using maturity buckets to capture (i) the bank's liquidity needs derived from outflows, (ii) the available standby liquidity from inflows, and (iii) the available liquidity buffers to counterbalance liquidity gaps. As Argentine banks have a traditional business model with heavy reliance on deposit funding, the stress testing exercise assumed high run-off rates for the main deposit lines. Regarding the banks' capacity to counterbalance liquidity gaps and in absence of special central bank assistance, banks can access liquidity by using the repo market (with other banks or through open market operations with the BCRA), through outright sale of government securities (including those issued by the BCRA), or by using their cash and reserve deposits at the central bank. Regarding the latter source of liquidity, it was assumed that banks are allowed to use the compulsory minimum reserves for a maximum period of one month. If negative funding gaps persist once all these sources of liquidity have been exhausted, a bank would have to use special central bank liquidity assistance. Reserve liquidity stress testing were also undertaken.

Contagion Stress Tests

82. Network model techniques and interbank contagion models were used to assess contagion effects. A network model map using centrality measures was created to illustrate the linkages between the bank and non-banking institutions. A pure contagion interbank model was used to assess the low interbank activity.

Appendix III. Stress Test Matrix for the Banking Sector: Solvency, Liquidity, and Contagion Risks

Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
BANKING SECTOR: SOLVENCY RISK				
1. Institutional Perimeter	Institutions included	n.a.	• 22 major banks : Banco de la Nación Argentina; Banco de la Provincia de Buenos Aires; Banco de Galicia y Buenos Aires S.A.; Banco Santander Río S.A.; Banco Macro S.A.; BBVA Banco Frances S.A.; HSBC Bank Argentina S.A.; Banco de la Ciudad de Buenos Aires; Banco Credicoop Cooperativo Limitado; Banco Patagonia S.A.; Standard Bank Argentina S.A.; Citibank N.A.; Banco Hipotecario S.A.; Banco de la Provincia de Cordoba S.A.; Banco Supervielle S.A.; Nuevo Banco de Santa Fe S.A.; Banco Itaú Argentina S.A.; Banco de San Juan S.A.; Banco Comafi S.A.; Banco de la Pampa Sociedad de Economía Mixta; Nuevo Banco de Entre Rios S.A.; and Banco Industrial S.A.	• 22 major banks : Banco de la Nación Argentina; Banco de la Provincia de Buenos Aires; Banco de Galicia y Buenos Aires S.A.; Banco Santander Río S.A.; Banco Macro S.A.; BBVA Banco Frances S.A.; HSBC Bank Argentina S.A.; Banco de la Ciudad de Buenos Aires; Banco Credicoop Cooperativo Limitado; Banco Patagonia S.A.; Standard Bank Argentina S.A.; Citibank N.A.; Banco Hipotecario S.A.; Banco de la Provincia de Cordoba S.A.; Banco Supervielle S.A.; Nuevo Banco de Santa Fe S.A.; Banco Itaú Argentina S.A.; Banco de San Juan S.A.; Banco Comafi S.A.; Banco de la Pampa Sociedad de Economía Mixta; Nuevo Banco de Entre Rios S.A.; and Banco Industrial S.A.
	Market share	n.a.	• Ninety percent of total sector assets.	• Ninety percent of total sector assets.
	Data and baseline date	n.a.	• September 2012. • Supervisory data. • Scope of consolidation: Solo. • Coverage of sovereign	• September 2012. • Publicly available data: balance sheet and income statements.

Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
			exposures: Trading and banking books including own sovereign, valuated at market to market values.	• Data provided by authorities. • Scope of consolidation: Solo. • Coverage of sovereign exposures: Trading and banking books including own sovereign, valuated at market to market values.
2. Channels of Risk Propagation	Methodology	n.a.	• Authorities' macroeconomic and satellite models, with FSAP team guidance.	• FSAP team VAR model. • Breaking Point Method by Ong, Maino, and Duma (2010).
	Satellite Models for Macro-Financial linkages	n.a.	• Models for credit losses. • Methodology to calculate net interest income. • Methodology to calculate losses from bonds and money market instruments (sovereign and other issuers). • Models for market risk. • Expert judgment.	• Model for credit losses.
	Stress test horizon	n.a.	• 2013–14.	• 2013–14.
3. Tail shocks	Scenario analysis	n.a.	• Two baseline scenarios: Baseline (authorities) and Adjusted Baseline (World Economic Outlook, WEO). • Three adverse scenarios incorporate the *external shocks* listed in the Risk Assessment Matrix, including a recession in Brazil caused by a sudden stop of capital inflows to emerging markets; and a sharp decline in commodity prices caused by a global recession: (i) a U-shaped adverse scenario based on authorities' baseline based on a cumulative decline of GDP	

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-down by FSAP Team
			of 1.7 standard deviations over two years; (ii) a U-shaped adverse scenario based on the WEO baseline; and (iii) a V-shaped adverse scenario based on the WEO baseline. The latter two scenarios result in a cumulative decline of GDP equivalent to 2 standard deviations over two years.	
	Sensitivity analysis	n.a.	• Sensitivity analysis to evaluate domestic shocks: (i) tightening of domestic monetary conditions aimed at containing inflation pressures and (ii) a loss of confidence in the monetary and financial system that triggers capital outflows and widens the gap between the parallel and official exchange rates; • A failure of a number of large corporate exposures; • Sovereign shock based on the ninetieth percentile of the changes in bond yields.	
4. Risks and Buffers	Risks/factors assessed (How each element is derived, assumptions.)	n.a.	• Credit losses. • Losses from bonds and money market instruments (sovereign and other issuers) in the banking and trading books. • Market risk, including foreign exchange risk.	• Credit losses. • Losses from fixed income holdings/ sovereign. • Market risk.
	Behavioral adjustments	n.a.	• Balance sheet growth in line with nominal GDP. • Dividends can only be paid out by banks that remain adequately capitalized and subject to BCRA regulation.	• Balance sheet growth in line with nominal GDP. • Dividends can only be paid out by banks that remain adequately capitalized and subject to BCRA regulation.
5. Regulatory and Market-Based Standards and Parameters	Calibration of risk parameters	n.a.	• Backward-looking rates for specific provisioning. • Fixed risk-weights for risk-weighted assets.	• Backward-looking rates for specific provisioning. • Fixed risk-weights for risk-weighted assets.

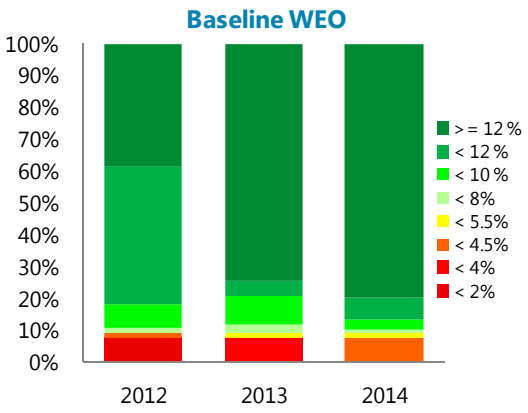
Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
	Regulatory/Accounting and Market-Based Standards	n.a.	• Regulatory Capital and Tier 1 Capital. • Standard approach. • Basell III hurdle rates.	• Regulatory Capital and Tier 1 Capital. • Standard approach. • Basel III hurdle rates.
6. Reporting Format for Results	Output presentation	n.a.	• Capital shortfall system wide. • For each hurdle rate (or range), percentage of assets that fail.	• Capital shortfall system wide. • For each hurdle rate (or range), percentage of assets that fail.
BANKING SECTOR: LIQUIDITY RISK				
1. Institutional Perimeter	Institutions included	n.a.	• 22 major banks : Banco de la Nación Argentina; Banco de la Provincia de Buenos Aires; Banco de Galicia y Buenos Aires S.A.; Banco Santander Río S.A.; Banco Macro S.A.; BBVA Banco Frances S.A.; HSBC Bank Argentina S.A.; Banco de la Ciudad de Buenos Aires; Banco Credicoop Cooperativo Limitado; Banco Patagonia S.A.; Standard Bank Argentina S.A.; Citibank N.A.; Banco Hipotecario S.A.; Banco de la Provincia de Cordoba S.A.; Banco Supervielle S.A.; Nuevo Banco de Santa Fe S.A.; Banco Itaú Argentina S.A.; Banco de San Juan S.A.; Banco Comafi S.A.; Banco de la Pampa Sociedad de Economía Mixta; Nuevo Banco de Entre Rios S.A.; and Banco Industrial S.A.;	n.a.

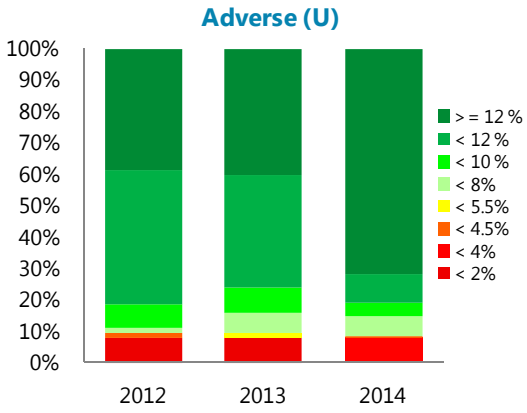
Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
	Market share	n.a.	• 90 percent of total sector assets.	n.a.
	Data and baseline date	n.a.	• September 2012. • Source: Granular data provided by banks for this purpose and supervisory data. • Scope of consolidation: solo.	n.a.
2. Channels of Risk Propagation	Methodology	n.a.	• Three methods: • Cash flow-based liquidity stress test using maturity buckets. • Macro stress tests: authorities' macroeconomic and satellite models with FSAP team guidance. • Reserve liquidity test as sensitivity tests.	n.a.
3. Risks and Buffers	Risks	n.a.	• Funding liquidity. • Market liquidity.	n.a.
	Buffers	n.a.	• Counterbalancing capacity. • Central bank facilities.	n.a.
4. Tail shocks	Size of the shock	n.a.	• Bank run and dry up of wholesale funding markets, taking into account haircuts to liquid assets. • Run-off rates calculated following historical events and LCR rates.	n.a.

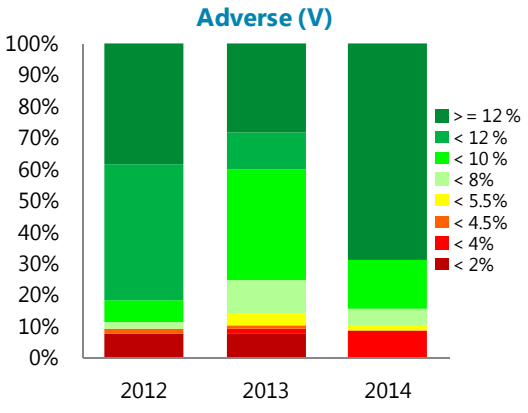
Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
5. Regulatory and Market-Based Standards and Parameters	Regulatory standards	n.a.	• Liquidity gap, survival period. • Basel III draft standards (LCR and NSFR).	n.a.
6. Reporting Format for Results	Output presentation	n.a.	• Liquidity gap by bank and currency, aggregated. • Survival period in days by bank, number of banks that still can meet their obligations.	n.a.
BANKING SECTOR: CONTAGION RISK				
1. Institutional Perimeter	Institutions included	n.a.	n.a.	• 22 major banks : Banco de la Nación Argentina; Banco de la Provincia de Buenos Aires; Banco de Galicia y Buenos Aires S.A.; Banco Santander Río S.A.; Banco Macro S.A.; BBVA Banco Frances S.A.; HSBC Bank Argentina S.A.; Banco de la Ciudad de Buenos Aires; Banco Credicoop Cooperativo Limitado; Banco Patagonia S.A.; Standard Bank Argentina S.A.; Citibank N.A.; Banco Hipotecario S.A.; Banco de la Provincia de Cordoba S.A.; Banco Supervielle S.A.; Nuevo Banco de Santa Fe S.A.; Banco Itaú Argentina S.A.; Banco de San Juan S.A.; Banco Comafi S.A.; Banco de la Pampa Sociedad de Economía Mixta; Nuevo Banco de Entre Rios S.A.; and Banco Industrial S.A.;

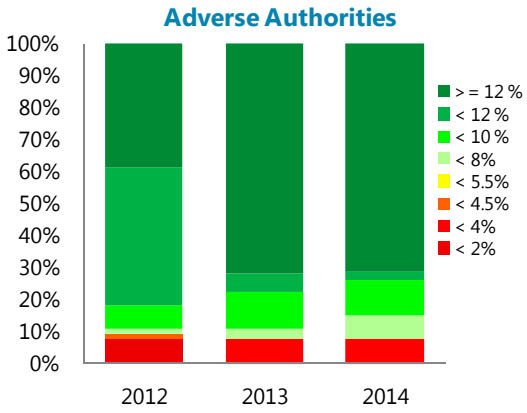
Domain		Assumptions		
		Bottom-Up by Banks	**Top-Down by Authorities**	**Top-down by FSAP Team**
				• FGS; mutual funds; insurance companies, retirement funds, brokerages.
	Market share	n.a.	n.a.	• 90 percent of total sector assets.
	Data and baseline date	n.a.	n.a.	• December 2012. • Source: institutions' own, supervisory. • Scope of consolidation: Solo.
2. Channels of Risk Propagation	Methodology	n.a.	n.a.	• Network model map using centrality measures for contagion between banks and non-banks financial institutions. • Pure contagion interbank model by Cihak (2007).
3. Tail shocks	Size of the shock	n.a.	n.a.	• Pure contagion: default of institutions; market closure; or retrenchment of claims.
4. Reporting Format for Results	Output presentation	n.a.	n.a.	• Network Model Map.

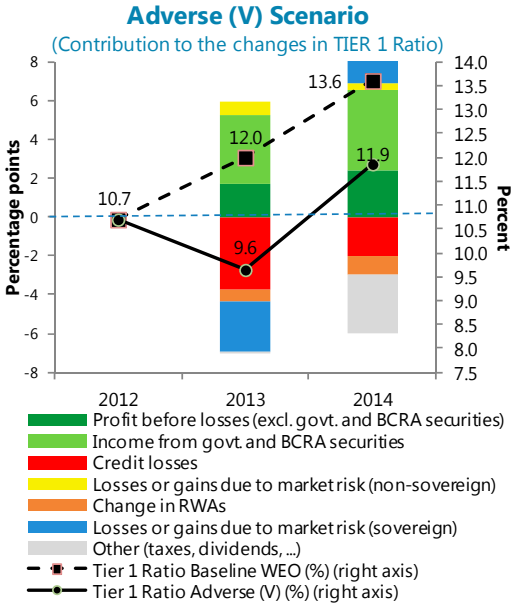
Appendix IV. Bank Solvency Stress Test Results, Tier 1 Ratios

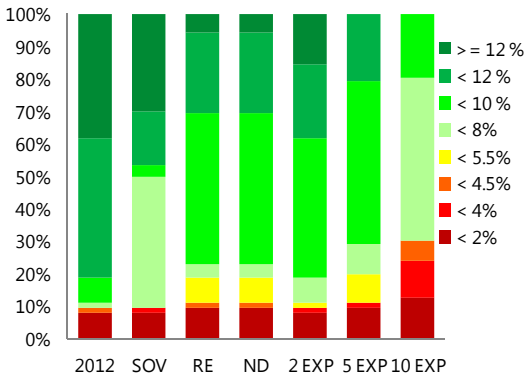












Note: 1/ SOV = Increase in Sovereign Yields VAR 90%, RE = Real Interest Rate Increases 900 bps, ND = Nominal Depreciation of 30%, 2 EXP = Failure of Largest 2 Exposures, 5 EXP = Failure of Largest 5 Exposures, 10 EXP = Failure of Largest 10 Exposures

Source: Banco Central de la República Argentina

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International Monetary Fund
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Washington, D. C. 20431 USA

IMF Executive Board Discusses Argentina's 2013 Financial System Stability Assessment

On July 12, 2013, the Executive Board of the International Monetary Fund (IMF) discussed the Financial System Stability Assessment with Argentina, conducted in the first half of 2013.[1]

Argentina's financial system is very small compared to countries at a similar stage of development and mostly transactional. Banks account for about two-thirds of financial sector assets, or 35 percent of GDP, and state-owned banks are key players in this sector. The state-owned Sustainability Guarantee Fund (FGS) was, at the time of the review, the country's largest institutional investor, with assets of over 10 percent of GDP. Insurance companies, mutual funds, and other nonbank financial institutions (NBFIs) play a relatively small role.

[1] The Financial Sector Assessment Program (FSAP), established in 1999, is a comprehensive and in-depth assessment of a country's financial sector. FSAPs provide input for Article IV consultations and thus enhance Fund surveillance. FSAPs are mandatory for the 25 jurisdictions with systemically important financial sectors and otherwise conducted upon request from member countries. The key findings of an FSAP are summarized in a Financial System Stability Assessment (FSSA), which is discussed by the IMF Executive Board. In cases where the FSSA is discussed separately from the Article IV consultation, at the conclusion of the discussion, the Chairperson of the Board summarizes the views of Executive Directors and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in a summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

Banks appeared resilient to a wide range of shocks. They had significant buffers, with solid capitalization, low leverage, ample liquidity, conservative funding strategies and strong asset quality. Banks were generally profitable in nominal terms, benefitting from a low cost of funding, but the return on equity in real terms was still low by regional standards.

In the years before the Assessment was conducted, the public sector had taken steps to influence the allocation of credit. The Banco Central de la República Argentina (BCRA) adopted several programs aimed at increasing bank lending to small- and medium-size enterprises at lower interest rates and longer maturities, and the government introduced at the time requirements for insurance companies to invest a significant share of their assets in infrastructure or other growth-oriented projects.

In addition the main institutional investor was the Sustainability Guarantee Fund (FGS), controlled by the Social Security Administration (ANSES). It accounted then for 20 percent of the financial system (11 percent of GDP) and was interconnected with the financial system through deposits as well as large equity stakes in some private banks.

The insurance sector showed signs of financial vulnerabilities in 2013. A large percentage of the available capital for solvency was illiquid and not fully suitable to protect the companies in case of adverse events. The non-life sector was on a weaker financial footing than the life or retirement sectors, and faced credit and liquidity risks.

The May 2011 assessment of the regulatory and supervisory framework for banking, insurance and securities markets highlighted several areas for improvement of supervision. The BCRA had made important strides in upgrading regulation and supervision to Basel II standards, and developed a road map for full implementation of Basel III. However, at the time of the assessment, independence, legal protection to supervisors, loan provisioning rules, and consolidated supervision needed to be strengthened. The insurance sector needed to adopt a risk-based supervisory approach and strengthen the resources and independence of the National Insurance Supervisor (SSN). The capital markets law addressed many of the deficiencies identified in the assessment of securities market supervision, but also contained features that could hinder the development of capital markets.

Executive Board Assessment, as expressed at the July 12, 2013 Board meeting:

Executive Directors welcomed the first FSSA for Argentina, which they saw as a positive step toward fuller engagement of the authorities with the Fund. Directors noted that the banking system appears resilient, with large capital and liquidity buffers and good quality assets. Banking supervision and regulation has a number of strengths, and financial safety nets are well designed. At the same time, Directors saw room for further improvements to address potential vulnerabilities, while deepening financial markets will be key to support economic growth. Many Directors also stressed that the uncertainty surrounding the measurement of key economic variables complicates the task of analyzing macro-financial linkages and hinders the development of financial markets by making it more difficult to price financial risks, evaluate credit quality, and conduct forward-looking risk assessments.

Directors generally recommended caution regarding the government's expanded role in the allocation of credit, which could reduce the efficiency of financial intermediation and lead to distortions. While a few Directors saw a limited role for such programs, most Directors recommended capping the *Líneas de Crédito para el Sector Productivo* program and phasing it out as the loans are repaid to avoid eroding the profitability of the banking system.

Directors noted that the increasing role of the Sustainability Guarantee Fund (FGS) in supporting productive investments would benefit from additional safeguards. They recommended strengthening the prudential regulation and governance of FGS to contain liquidity and credit risks. Many Directors considered that the FGS should focus only on its role as a pension reserve fund.

Directors welcomed the steps taken by the authorities in response to the 2011 assessment of compliance with international standards. They commended their efforts to develop a roadmap to fully implement Basel III, noting that banking supervision is anchored by a thorough supervision and examination process. Directors underscored the importance of greater independence for the central bank (BCRA) and other supervisory agencies. They noted that the new regulatory

framework would enhance loan provisioning standards, and called for efforts to strengthen consolidated supervision and the legal protection of supervisors.

Directors stressed the importance of strengthening the financial oversight framework of the insurance sector and securities markets. They recommended the adoption of a risk-based supervisory approach for the insurance sector and steps to strengthen the resources and independence of the National Insurance Supervisor and the National Securities Commission. Most Directors also recommended lifting the recently introduced mandatory investment requirements for insurance companies.

Directors noted that there is room to further enhance financial sector safety nets. They supported the recommendation to establish a high-level systemic risk monitoring committee comprised of all relevant institutions to ensure coordinated and effective policy responses. The BCRA would benefit from working with other supervisors to monitor potential liquidity risks outside its regulatory perimeter and develop a contingency plan for systemic crises and an enhanced prompt corrective action regime.