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Brazil: Financial System Stability Assessment

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BRAZIL

Financial System Stability Assessment

Prepared by the Monetary and Capital Markets and Western Hemisphere Departments

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June 20, 2012

This report is based on the work of a joint IMF-World Bank Financial Sector Assessment Program (FSAP) mission to Brazil during March 6–21, 2012. The team comprised Dimitri G. Demekas (head of mission, IMF), Augusto de la Torre (head of mission, World Bank), Dawn Chew, Marc Dobler, Mercedes Garcia-Escribano, Heedon Kang, Pamela Madrid-Angers, Joonkyu Park, Guilherme Pedras, José Tuya (consultant), Christian Schmieder, and Rodolfo Wehrhahn (IMF); Laura Ard, Mariano Cortes, Erik Feyen, Catiana Garcia-Kilroy, Alain Ize, Andrei Milyutin, Margaret Miller, Jonathan Katz (consultant), and Roberto Rocha (World Bank); and was assisted by Carlos Fernandez-Valdovinos, IMF Resident Representative in Brazil.

- Like the rest of the Brazilian economy, the financial sector is exposed to the effects of volatility in international markets for commodities and capital, but the flexible exchange rate, strong macro- and microprudential policy frameworks, sound balance sheets, high capital and profitability, and ample liquid assets, provide significant risk mitigants. Although systemic risks have declined since the global financial crisis and stress tests suggest the financial sector is resilient to a wide range of shocks, the rapid credit growth, particularly to households, is creating pockets of vulnerability that will need to be carefully monitored.
- Considerable progress has been made toward implementing the recommendations of the initial FSAP to strengthen supervision and regulation, and compliance with international standards is high, especially in banking supervision. Further strengthening of insurance and pensions supervision is needed nonetheless, including to ensure the operational autonomy and legal protection of supervisors.
- Financial safety nets could be improved by strengthening the procedures for use of the deposit insurance fund, enhancing the central bank's emergency liquidity assistance, and removing impediments to bank resolution tools.
- Despite considerable progress in recent years, capital market development remains constrained by the low duration and high interest rate environment. Further progress will take time and be contingent upon maintaining a stable macrofinancial environment, but could be spurred by financial sector reforms, including providing incentives for longer duration and infrastructure investments, as well as re-focusing BNDES to support private long-term finance.

The main author of this report is Pamela Madrid, with contributions from the members of the IMF team.

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

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GLOSSARY

ANBIMA	*Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais*— National Association of Financial Market Institutions
BCB	*Banco Central do Brasil*—Central Bank of Brazil
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
BCBS	Basel Committee on Banking Supervision
BCPs	Basel Core Principles
BNDES	*Banco Nacional de Desenvolvimento Econômico e Social*—National Bank for Economic and Social Development
BM&FBOVESPA	*Bolsa de Valores, Mercadorias e Futuros* S.A—Commodities and Futures Exchange
CAR	Capital Adequacy Ratio
CD	Certificate of Deposit
CDI	*Certificado de Depósito Interbancário*—Interbank Certificate of Deposit
CETIP	*Central de Custódia e de Liquidação Financeira de Títulos*—Central Custodian and Settlement of Financial Securities
CIS	Collective Investment Scheme
CFC	Federal Accounting Council
CMN	*Conselho Monetário Nacional*—National Monetary Council
CNSP	*Conselho Nacional de Seguros Privados*—National Council of Private Insurance
COMEF	*Comitê de Estabilidade Financeira*—Financial Stability Committee
COPOM	*Comitê de Política Monetária*—Monetary Policy Committee
COREMEC	*Comitê de Regulação e Fiscalização dos Mercados Financeiro, de Capitais, de Seguros, de Previdência e Capitalização*—Committee for the Regulation and Supervision of the Financial, Securities, Insurance, and Complementary Pension
CPSS	Committee on Payment and Settlement Systems
CCI	*Cédulas de Crédito Imobiliário*—Real Estate Credit Bills
CVM	*Comissão de Valores Mobiliário*—Securities and Exchange Commission
DSTI	Debt Service-to-Income Ratio
DTA	Deferred Tax Assets
ELA	Emergency Liquidity Assistance
EMBI+	Emerging Markets Bond Index Plus
ERM	Enterprise Risk Management
FEBRABAN	*Federação Brasileira de Bancos*–Brazilian Banking Association
FDI	Foreign Direct Investment
FGC	*Fundo Garantidor de Créditos*—Credit Guarantee Fund
FGTS	*Fundo de Garantia por Tempo de Serviço*—Workers Severance Fund
FSI	Financial Soundness Indicators
FX	Foreign Exchange
GARCH	Generalized AutoRegressive Conditional Heteroskedasticity
GDP	Gross Domestic Product
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
ICRG	International Country Risk Guide
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IOF	*Imposto Sobre Operações Financeiras*—Financial Transactions Tax
IOSCO	International Organization of Securities Commissions

IRB	Internal Rating Based
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
LIBOR	London Interbank Offered Rate
MOJ	Ministry of Justice
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MPS	*Ministerio de Previdência Social*—Ministry of Social Security
NPL	Nonperforming Loans
NSFR	Net Stable Funding Ratio
OTC	Over the Counter
OECD	Organisation for Economic Co-operation and Development
P&A	Purchase and Assumption
PREVIC	*Superintendência de Previdência Complementar*—Superintendency of Complementary Pensions
ROA	Return on Assets
ROE	Return on Equity
RR	Required Reserves
RTGS	Real Time Gross Settlement
RWA	Risk Weighted Asset
RAET	Temporary Special Administration Regime
SBPE	*Sistema Brasileiro de Poupança e Empréstimo*—Brazilian Loans and Savings System
SELIC	*Sistema Especial de Liquidação e de Custódia*— Special System for Securities Settlement and Custody
SELIC base rate	Central Bank Overnight Policy Rate
SME	Small and Medium Enterprise
SRC	Control and Risk Evaluation System
SUMEF	Subcommittee of Financial Stability
SUSEP	*Superintendência de Seguros Privados*—Superintendency of Private Insurance
VAR	Vector Auto Regression

EXECUTIVE SUMMARY

Since the last FSAP in 2002, Brazil's financial system has grown in size, diversification, and sophistication, hand in hand with the country's economic progress. Over the last decade, financial sector assets doubled, driven by macroeconomic stabilization, significant gains in financial inclusion, the expansion of the securities and derivatives markets, and the considerable involvement of institutional investors. The structure of public debt has become more resilient and the private bond market, though still small, more vibrant. The banking sector remains dominated by domestic financial institutions, with public banks having a significant share, while international investors play important roles in the capital and derivatives markets.

Due to deft policy responses and built-in financial system buffers, the financial system weathered the global crisis remarkably well. A range of complementary measures were adopted to maintain market stability and preserve confidence. These included (i) fiscal and monetary policy stimulus, including a significant release of bank reserves to preserve market liquidity; (ii) a quasi-fiscal stimulus through the national development bank; (iii) other public banks expanding lending; (iv) foreign exchange intervention and the establishment of a swap facility with the U.S. Federal Reserve; and (v) measures to channel liquidity to small and medium-sized banks facing stress.

Although systemic risk is currently low, the Brazilian financial system operates in a challenging environment. Policy-makers need to navigate a volatile global environment and monitor for signs of emerging vulnerabilities domestically. At the same time, policies should be geared toward encouraging the development of private long-term finance. While this may engender new risks, it is necessary to maximize the contribution of the financial sector to growth.

- ***Like the rest of the Brazilian economy, the financial system is exposed to the effects of volatility in international markets***, especially those for commodities and capital. Although the flexible exchange rate and large international reserves provide a significant policy cushion, managing the effects of external volatility continues to be a challenge, especially in an international environment of heightened uncertainty. Brazil has made extensive use of macroprudential and capital flow management measures. These have been effective in achieving their immediate targets, but should continue to be used only as part of a broader policy framework aimed at maintaining macroeconomic stability and ensuring adequate financial sector buffers.

- ***There is a risk that the financial system may become a victim of its own success***. Rapid credit expansion in recent years has supported economic growth and broader financial inclusion, but could also pose risks. Concerns are mitigated by the fact that the level of credit is still low relative to GDP, micro- and macroprudential oversight is strong, banks have significant buffers, and stress tests suggest that the banking system is robust to a variety of severe shocks, although small and medium-size banks, which rely more on wholesale funding, are relatively more vulnerable to liquidity risk. Nonetheless, there are indications of emerging strains in some sectors and asset classes, notably indebted households and rapidly rising housing prices in prime locations. Closer monitoring and proactive measures to contain these emerging vulnerabilities are critical.

- ***The system is still stuck in a high interest rate-short duration equilibrium, which limits capital market development and potential growth***. Interest rates are well above those in comparable countries, most debt instruments are indexed to the overnight interest rate, and domestic investments are concentrated in short-term or indexed instruments. This reflects long-standing fundamental factors, including the legacy of past high and volatile inflation and the low level of domestic savings. Fiscal responsibility legislation, the inflation targeting regime, and a flexible exchange rate have yielded a significant reduction in interest rates in recent years. Further progress will take time and require continued policy effort beyond the financial sector, notably maintaining macroeconomic stability, strengthening domestic savings, and improving the business environment. But supporting financial reforms are also needed to promote the development of longer-term private finance, including steps to lengthen the duration of financial contracts, reform housing finance, and rethink the role of state-owned banks. These steps, alongside continued declines in interest rates, may create new risks, as they will spur an increasing search for yield by domestic investors, which in turn may lead to buildup of asset price bubbles and under-pricing of risk. They will thus require watchful monitoring.

Financial sector oversight and infrastructures are strong, but there is room for improvement in some areas to stay ahead of the rapidly evolving system. Banking supervision, which already had a high degree of compliance with Basel Core Principles in 2002, has been strengthened further; it is risk-based, intrusive, and sophisticated, and leverages strong off-site analytics. In capital markets supervision, transparency standards have been raised and risk-based supervision implemented, improving substantially compliance with IOSCO principles, although a few challenges remain. Insurance supervision has also been strengthened, but the independence of supervisory agency needs to be strengthened and the supervision of brokers and insurance groups enhanced. A cross-cutting challenge for all supervisors is the need to keep pace with an evolving system given constraints on budgets and human resources, as well as the strengthening of legal protection to the agencies or employees.

While the handling of the impact of the last crisis was swift, flexible, and successful, financial safety nets could be further strengthened. The authorities have addressed some gaps and are preparing reforms to the resolution framework to keep up with new international standards and prepare for future shocks. In this regard, the operational procedures and systems for providing emergency liquidity assistance (ELA), including reporting obligations, could be strengthened. Reflecting the evolution of the role of the deposit insurer (the *Fundo Garantidor de Créditos* (FGC)—Credit Guarantee Fund) beyond that of a pay-box, in addition to the recent reform of its governance, which was consistent with the mission's recommendation, its financial situation should be protected. The authorities should also ensure the FGC has a secure and adequate source of funding in case of a systemic crisis. The purchase and assumption and bridge-bank powers need to be supported by removing tax and labor law impediments to their effective implementation. The authorities should consider upgrading the existing multipartite committee for supervisory coordination and information-sharing by giving it an explicit mandate for systemic risk monitoring, crisis preparedness, and crisis management, and expanding it to include the FGC.

Table 1. Brazil: FSAP Key Recommendations

Recommendations and Authority Responsible for Implementation	Timeframe
Macroprudential Institutional Arrangements and Instruments	
1. Issue regulation on credit bureaus to ensure broad availability of reliable positive information on borrowers (¶11). [CMN]	6–12 months
2. Ensure compilation and publishing of a housing price index that is based on purchases, with broad geographic coverage (¶11). [BCB]	1–2 years
3. Create a multi-partite, high-level committee, comprising all financial safety net providers, with an explicit mandate for systemic risk monitoring and crisis coordination (¶24–26). [CMN]	1–2 years
Safety Nets and Crisis Management	
4. Strengthen the procedures and systems of the BCB to deliver ELA (¶36). [BCB, CMN]	6–12 months
5. Revise the composition of the board of the FGC; use the least-cost principle in deciding FGC support for resolution, with OBA provided only when there is a grave systemic threat (capped at 50% of the FGC's cash resources); and secure adequate funding for the FGC in the event of a systemic crisis (¶37–38). [FGC, BCB, MOF]	6–12 months
6. Remove legislative impediments and strengthen the purchase and assumption and bridge bank statutes (¶39). [CMN, BCB, FGC]	1–2 years
7. Extend legal protection to all financial sector supervisory agencies, and elevate the threshold for actions against employees of these agencies, BCB-appointed directors, intervenors, or liquidators to gross negligence (¶40). [CMN, MOF]	1–2 years
Capital Markets	
8. Extend tax incentives on infrastructure bonds to infrastructure FIDCs (¶40). [MOF]	6–12 months
9. Issue stricter market-making rules, e.g., apply a narrow set of the same benchmarks to all market makers, linked to improved incentives, e.g., access to MOF's securities lending facilities (¶41). [MOF]	6–12 months
10. Shift BNDES operations towards co-financing with institutional investors of a broader set of companies and projects to provide market access and facilitate long-term financing (¶42). [MOF, BNDES]	1–2 years
Insurance and Pensions	
11. Provide SUSEP and PREVIC with the same legal status as CVM (e.g., fixed-term appointments and clear mandates for board members) (¶30). [MPS, MOF]	6–12 months
12. Issue a secondary regulation on brokers' self-regulation, which should include a mandatory affiliation to the self-regulating entity, and closely supervise its implementation (¶30). [SUSEP]	6–12 months
13. Implement the required regulation for consolidated supervision, including the introduction of ERM and capital requirements at group level (¶30). [SUSEP, CNSP]	1–2 years
Consumer protection	
14. Establish a dedicated consumer financial protection unit (¶44). [CMN, MOJ]	1–2 years

Table 2. Brazil. Status of Implementation of 2002 FSAP Key Recommendations

Main Recommendations of the 2002 FSAP	Status
Passage of legislation ensuring the autonomy of the BCB, specifically providing for the terms of its Board members and mandating the achievement of price stability as its monetary policy objective.	Not implemented. Authorities consider that BCB has sufficient operational independence to discharge its functions.
Tightening of bank licensing requirements.	Implemented.
Improvement of the standards for auditor certification to effectively support bank supervision, and enhance the transparency and governance of firms.	Implemented.
Granting of legal protection to financial system supervisors and formalizing criteria for bank intervention to further strengthen the supervisory framework.	Partially implemented.
Strengthening of the current bank resolution framework to deal with systemic cases, by developing contingency plans that could include a carefully designed open bank assistance.	Not implemented. Incorporated in recommendation no. 3, Table 1.
Assessment of possible tax deductibility of provisions and of further improvement of quality of banks capital in connection to tax credits, goodwill and Tier I capital.	Partially implemented; quality of capital will be further strengthened with the introduction of Basel III.
Improvement of the operations of Federal Banks, particularly their cost structure, and their loan screening, monitoring, and collection practices, and completion of their financial clean-up.	Ongoing.
Full implementation of the recently agreed MOU between the BCB and the CVM.	Implemented.
Passage of new Bankruptcy Law.	Implemented.
Completion of the amendment to Corporate Law regarding accounting, auditing, and reporting to tighten disclosure requirements, in particular with respect to related party transactions.	Implemented.
Enhancement of the valuation basis and development of a solvency margin for long-term income stream products, and development of local mortality tables.	Implemented.
Completion of the current project to establish a contingency plan in the event of multiple broker/dealer default.	Not implemented.
Review of the personnel hiring practices across the different institutions of the public sector involved with the supervision and prudential regulation of the financial system to improve the scope for attracting and retaining highly qualified personnel.	Partially implemented.

I. MACRO-FINANCIAL PERFORMANCE AND STRUCTURE OF THE FINANCIAL SYSTEM

1. **Brazil has built a strong macroeconomic framework, increasing its policy credibility and resilience to external shocks**. Fiscal responsibility legislation, inflation targeting, and a flexible exchange rate have facilitated declining debt-to-GDP ratios and an impressive reduction in inflation during the last decade. Economic growth has been strong, due in part to favorable terms of trade and strong capital inflows, and the economy is now estimated to be the sixth largest in the world (just ahead of the United Kingdom). As a result of its prudent macroeconomic policies, Brazil achieved investment grade in 2008 and had ample policy space to mitigate the impact of the global financial crisis. In 2011, Brazil was upgraded further to BBB by Fitch and S&P and Baa2 by Moody's.

2. **The financial system is characterized by a high degree of conglomeration and public sector presence, but limited foreign bank participation**. Total assets in the system are around 180 percent of GDP, more than half of which are held by depository institutions, one-third by investment and pension funds, and about 6 percent by insurance companies (Table 3). Financial conglomerates—headed by a commercial bank and typically including investment banking, securities brokerage, asset management, and insurance subsidiaries—control around 75 percent of the system's assets. Public sector presence in the financial sector is significant: government-owned banks account for over 40 percent of total banking assets, and directed credit for low-income housing, agriculture, and infrastructure represents around 35 percent of total credit. Foreign bank participation is only about 17 percent of banking assets, lower than in other large Latin American countries.[1]

3. **Since the global financial crisis, economic activity has been volatile and policies were adjusted accordingly**. In response to the decline in economic activity in 2009, macroeconomic policy was eased, and the Treasury provided the public development bank (BNDES) with funds to expand credit. Altogether the fiscal stimulus, including the quasi-fiscal operations of BNDES, amounted to 3 percent of GDP. Lending by other public banks also played a critical role in compensating for the retrenchment by private lenders. In 2010, economic activity rebounded faster and more strongly than expected, with the economy growing 7½ percent, the fastest pace in more than two decades. The Central Bank of Brazil (BCB) started a tightening cycle in mid-2010. Fiscal policy and Treasury credit to BNDES were also tightened and a range of macroprudential tools were deployed to address financial stability concerns linked to the rapid pace of credit expansion in some sectors. A new monetary easing cycle began in mid-2011, partly in response to the downside risks stemming from advanced economies.

4. **Coping with volatile capital inflows remains a chronic challenge in Brazil**. Confidence in Brazilian economic prospects and high commodity prices fuelled high levels of FDI inflows over the past decade, even during the recent crisis. Portfolio capital has also been flowing into Brazil, as in other emerging economies with good economic prospects and high interest rates,

[1] Foreign bank participation at end-2011 was similar to that in Colombia (18 percent), but significantly less than in Chile (37 percent), Peru (51 percent), and Mexico (74 percent).

Table 3. Brazil: Financial Sector Structure

	2002				2007				2011			
		Financial sector assets				Financial Sector Assets				Financial sector assets		
	Number of Institutions	(R$ billion)	(Percent of total)	(Percent of GDP)	Number of Institutions	(R$ billion)	(Percent of total)	(Percent of GDP)	Number of Institutions	(R$ billion)	(Percent of total)	(Percent of GDP)
Depository institutions	1,725	1,143	65.0	77.4	1,761	2,189	54.7	82.3	1,603	4,387	59.4	105.9
Multiple and commercial banks	135	850	48.3	57.5	123	1,698	42.4	63.8	125	3,244	43.9	78.3
of which, by size:												
Large banks	14	693	39.4	46.9	11	1,382	34.5	51.9	9	2,765	37.4	66.7
Medium banks	39	129	7.4	8.8	39	258	6.4	9.7	31	371	5.0	9.0
Small banks	82	28	1.6	1.9	73	58	1.4	2.2	85	108	1	2.6
of which, by ownership:												
Federal government-owned banks	6	211	12.0	14.3	5	341	8.5	12.8	3	753	10	18
State government-owned banks	7	43	2.4	2.9	6	80	2.0	3.0	5	59	0.8	1.4
Private banks, domestically-controlled	67	340	19.4	23.0	62	845	21.1	31.8	64	1,680	22.7	40.5
Private banks, foreign-control	55	256	14.6	17.3	50	432	10.8	16.2	53	752	10.2	18.2
Development banks	3	154	8.8	10.4	3	205	5.1	7.7	4	580	7.8	14.0
Savings banks	1	122	6.9	8.3	1	239	6.0	9.0	1	464	6.3	11.2
Savings and loans associations	2	1	0.1	0.1	2	2	0.1	0.1	2	4	0.0	0.1
Credit Unions	1,372	11	0.7	0.8	1,418	38	0.9	1.4	1,277	85	1.2	2.1
Investment banks	8	0	0.0	0.0	6	3	0.1	0.1	5	3	0.0	0.1
Consumer finance companies	28	1	0.1	0.1	22	1	0.0	0.1	31	4	0.0	0.1
Real estate credit companies	18	3	0.2	0.3	17	2	0.1	0.1	16	3	0.0	0.1
Micro-financing institutions	27	0	0.0	0.0	43	0	0.0	0.0	37	0	0.0	0.0
Non-depository financial institutions	811	9	0.5	0.6	683	16	0.4	0.6	613	23	0.3	0.6
Development agencies	9	2	0.1	0.1	12	4	0.1	0.1	16	7	0.1	0.2
Leasing companies	11	2	0.1	0.2	3	1	0.0	0.0	3	2	0.0	0.0
Securities brokerage companies	108	1	0.1	0.1	65	5	0.1	0.2	57	5	0.1	0.1
Exchange brokerage companies	43	0	0.0	0.0	41	0	0.0	0.0	40	0	0.0	0.0
Security Distribution companies	94	1	0.0	0.0	67	1	0.0	0.0	67	1	0.0	0.0
Consortium managers	332	3	0.1	0.2	285	5	0.1	0.2	226	8	0.1	0.2
Insurance companies	159	63	3.6	4.3	161	206	5.1	7.7	169	426	5.8	10.3
Life (long-term)	60	33	1.9	2.2	65	139	3.5	5.2	63	298	4.0	7.2
Nonlife (general)	12	1	0.0	0.0	29	3	0.1	0.1	31	7	0.1	0.2
Life and non-life	63	29	1.7	2.0	51	64	1.6	2.4	50	107	1.4	2.6
Reinsurance	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	8	14	0.2	0.3
Investment and Asset Managers 1/	-	573	33.2	38.7	472	1,712	41.5	64.3	486	2,815	36.8	67.9
Investment funds management companie	-	355	20.6	24.0	87	1,160	28.2	43.6	93	1,940	25	46.8
Pension fund management companies 1/	-	218	12.6	14.7	-	552	13.4	20.7	-	875	11	21.1
o/w open pension funds	355	30	1.7	2.0	385	120	2.9	4.5	393	261	3.4	6.3
Total financial sector 2/	2,695	1,758	100.0	119.0	2,916	4,003	100.0	150.4	2,702	7,389	100.0	178.3
Memorandum items:												
Money and capital markets 3/	n.a.	1,582	90.0	107.0	n.a.	5,715	142.8	214.7	n.a.	6,826	92.4	164.7
Money market	n.a.	159	9.0	10.8	n.a.	443	11.1	16.6	n.a.	883	13	21.3
Government Bond market	n.a.	623	35.4	42.2	n.a.	1,225	30.6	46.0	n.a.	1,783	26	43.0
Corporate Bond market	n.a.	48	2.8	3.3	n.a.	223	5.6	8.4	n.a.	455	6.7	11.0
Equity market	n.a.	438	24.9	29.7	n.a.	2,478	61.9	93.1	n.a.	2,294	33.6	55.4
Derivatives market 4/	n.a.	313	17.8	21.2	n.a.	1,347	33.6	50.6	n.a.	1,410	20.7	34.0
Nominal GDP		1,478				2,661				4,143		

Sources: ANBIMA, BCB, BM&FBovespa, CVM, PREVIC, SUSEP.

1/ Assets are those under management.

2/ Aggregation overstates total size in absolute terms due to some double-counting.

3/ Amount outstanding unless otherwise noted.

4/ Open positions on BM&FBovespa, notional value.

but has been a lot more volatile. Brazil has utilized several tools to help cope with these inflows, including greater exchange rate flexibility, interventions in the foreign exchange market, and capital flow management measures (Section II). Nonetheless, the policy tensions and dilemmas posed by high and volatile capital inflows will continue to be a challenge in the period ahead.

5. **Financial contracts in Brazil are characterized by high interest rates and short durations, complicating monetary policy transmission and creating challenges for financial development**. Interest rates are well above those in comparable countries, and most *real*-denominated debt contracts are indexed to the overnight interest rate (either the unsecured interbank deposit (CDI) or the repo (SELIC) rate). This largely reflects long-standing fundamental factors, including the legacy of past high inflation and volatility, the low level of domestic savings, and high intermediation spreads. Fiscal responsibility legislation, the inflation targeting regime, and a flexible exchange rate have yielded a sizeable reduction in interest rates in recent years. Banking spreads have also declined with improved efficiency (lower administrative costs) and declines in regulatory costs and the net interest margin.[2] The concentration in short-duration and highly liquid assets reduces market liquidity risks for investment funds and banks but raises debt service costs for borrowers and discourages intermediation. Directed credit at below market rates (notably for agriculture and housing) helps some borrowers cope with these costs but, at the same time, narrows the monetary transmission channel. Indexation and short durations are deleterious to financial development, as they tilt the balance toward short-term consumer finance at the expense of long-term investment finance.

6. **Moving away from the high interest rate-short duration equilibrium will take time and require sustained efforts across a broad policy front.** *First,* it will require perseverance with sound macroeconomic policies to keep inflation expectations anchored. *Second*, it will require addressing shortcomings in the contractual environment[3] and the low rate of national savings and infrastructure investment. *Third,* reforms in the capital markets, housing finance, and the role of state-owned banks could make an important contribution to the development of longer-term finance (see Section V). *Lastly*, this process will require watchful monitoring, as the convergence to a lower level of interest rates will intensify the "search for yield" that could lead to a buildup of risk if assets are under-priced and under-provisioned.

[2] Although the FSAP did not undertake an analysis of intermediation margins, there is an extensive empirical literature focusing in particular on the extent of competition in the Brazilian banking system. The results are mixed, with most studies rejecting the extreme cases of perfect competition and collusion. Among the more recent studies, Lucinda (2010) finds limited evidence of collusion, but Alencar (2011) finds that concentration has a significant impact on loan rates and spreads. On the basis of their research and review of the empirical literature, Nakane & Rocha (2012) conclude that there is a reasonable degree of competition in the Brazilian banking system, and market concentration has, if anything, declined in 2011.

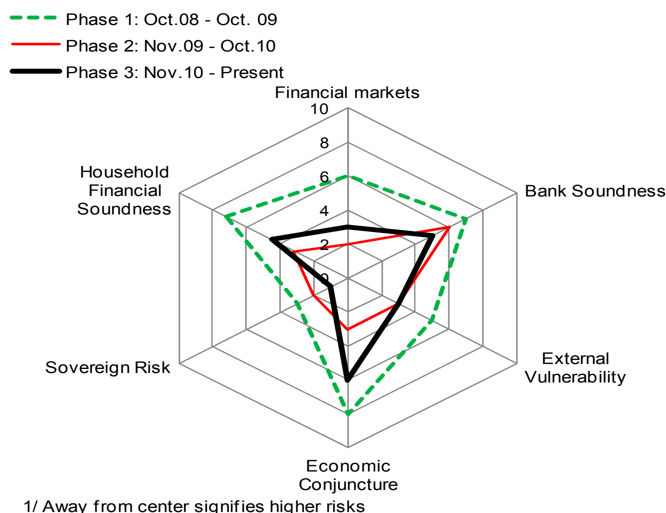
[3] Brazil's World Bank *Doing Business* ranking suggests that there is room for improvement in the business environment—in particular, administrative barriers, taxation, and regulation.

II. Financial Sector Risks and Resilience

A. Assessment of Systemic Risk and Monitoring and Mitigation Policies

7. **Although systemic risk has declined since the peak of the recent crisis, the financial system is still exposed to risks arising from both global and domestic factors**. A Financial Stability Map shows that risk has declined across all dimensions since 2008–09.[4] Nevertheless, Brazil is exposed to both external and domestic sources of risk. Staff's assessment of the likelihood and potential impact of key risks is discussed below and summarized in the Risk Assessment Matrix (Appendix I).

Brazil: Financial Stability Map



Source: Staff calculations.

External risk sources

- **As a major commodity exporter, Brazil is exposed to fluctuations in commodity prices**. The share of commodity exports has increased in the last decade, and the terms of trade and growth are heavily influenced by movements in commodity prices, including oil.[5] A protracted global recession, possibly fueled by adverse developments in advanced economies or a hard landing in China (a major market for Brazilian commodity exports), could therefore have a considerable impact.

- **As a preferred destination for international investments, Brazil is exposed to capital flow volatility**. The equity and derivatives markets are particularly vulnerable to sudden changes in sentiment, since foreign investors account for a significant proportion of trading. On the other hand, banks have limited external liabilities (they are mostly locally funded) and a low net foreign exchange position (around 8 percent of capital); and the impact on the real economy would be

[4] The Financial Stability Map summarizes various dimensions of risk and is similar to those used in many countries' financial stability reports and in the IMF's *Global Financial Stability Report*. Counterclockwise from top, risk in each segment is a weighted average of: (i) a GARCH (1,1) conditional variance of the policy interest rate, stock price index, *real*-U.S. dollar exchange rate, SELIC-CETIP overnight differential, and three-month *cupom cambial (*dollar borrowing cost in Brazil)-LIBOR differential; (ii) households' loan default rate, debt service-to-income ratio, real income growth, deposits to GDP, and consumer confidence index; (iii) public net debt and budget deficit to GDP, JP Morgan EMBI+ sovereign spread, foreign reserves to imports, and ICRG country risk rating; (iv) growth of industrial production, private consumption, CPI, and average real income, and current account to GDP; (v) external debt to foreign reserves, short-term debt to total external debt, bank exposures to Spain, Italy, Portugal, Ireland, and Greece, current account to GDP, and conditional variance of capital inflows; and (vi) bank capital to risk-weighted assets, NPLs, ROAs, liquid assets ratio, and net open foreign exchange position to total capital.

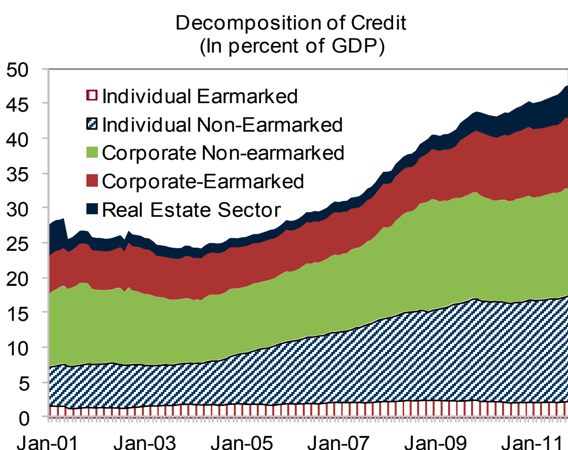
[5] Commodity exports accounted for almost 40 percent of total exports in 2011. Commodity prices account for the largest share of variation in growth from external factors.

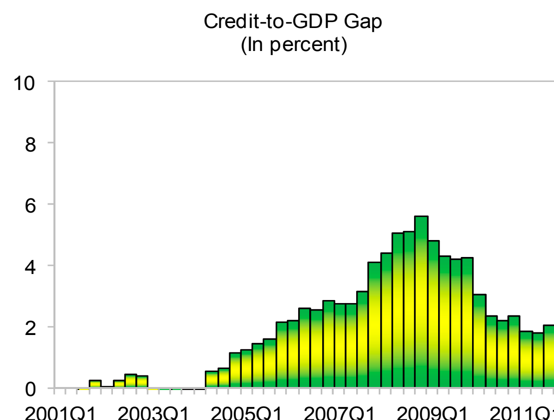
largely mitigated by the flexible exchange rate, while Brazil's large stock of international reserves can be used to mitigate excess volatility.

Domestic risk sources

- **Risk from the rapid credit growth of recent years is mitigated by a number of factors**. Credit-to-GDP in Brazil doubled in the last decade, with annual increases exceeding 3 percentage points during 2007–09 and 2011. Credit growth at this pace and duration has been associated with an increased probability of banking crisis in many countries.[6] In the case of Brazil, however, there are substantial risk mitigants. *First*, the overall level of credit-to-GDP ratio remains relatively low by international standards, while a significant portion of the recent expansion is due to gains in financial inclusion and the effects of macroeconomic stabilization. *Second*, the pace of credit expansion—especially to households—has slowed in recent months and, after peaking in 2009, the estimated credit-to-GDP gap[7] has declined significantly (Figure 1). *Third*, banks hold ample capital, have a strong income position, and stress tests suggest they are resilient to a wide range of adverse shocks (Section II.B). And *fourth*, bank supervision is very strong (Section III). But even though overall bank credit growth does not represent a significant systemic risk right now, it may be contributing to the emergence of vulnerabilities in two specific sectors: financial distress in some segments of the household sector and real estate price pressures.

Figure 1. Brazil: Total Credit and Credit-to-GDP Gap



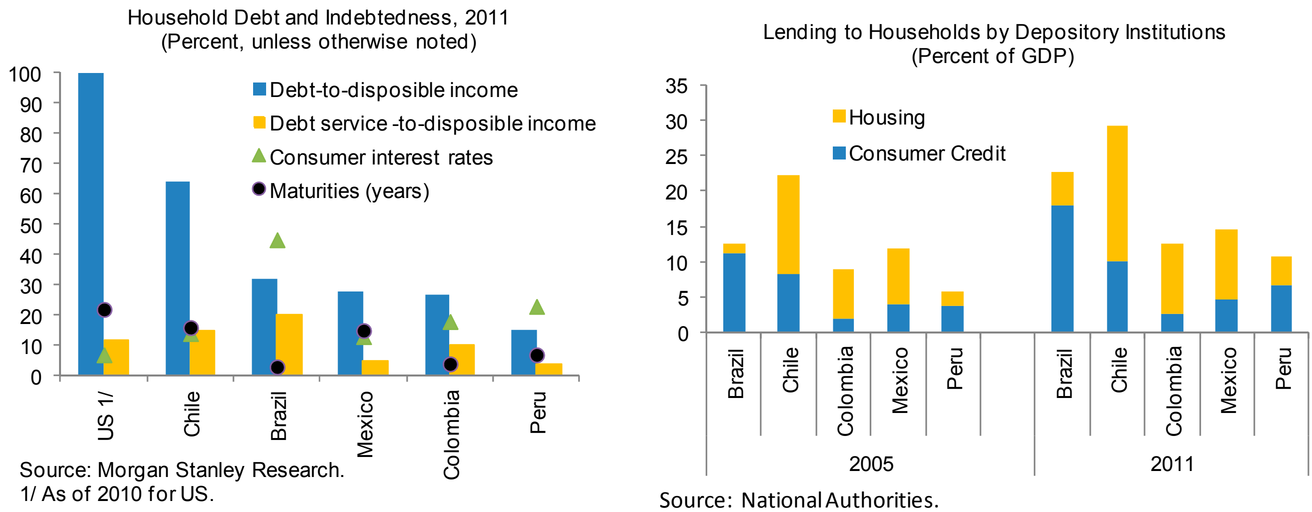


- **There are some signs of financial distress in parts of the household sector**. Although household debt is in line with that in regional peers, the average household debt service-to-income ratio (DSTI) in Brazil (23 percent) is high, reflecting higher interest rates and shorter maturities (Figure 2). Although this debt service burden appears sustainable now, with relatively high levels of employment and real income growth, it may push certain households into financial distress in a cyclical downturn. Moreover, recent credit and delinquency trends suggest that some segments of the household sector may already be under stress (Box 1).

[6] *Global Financial Stability Report*, September 2011, Chapter 3.

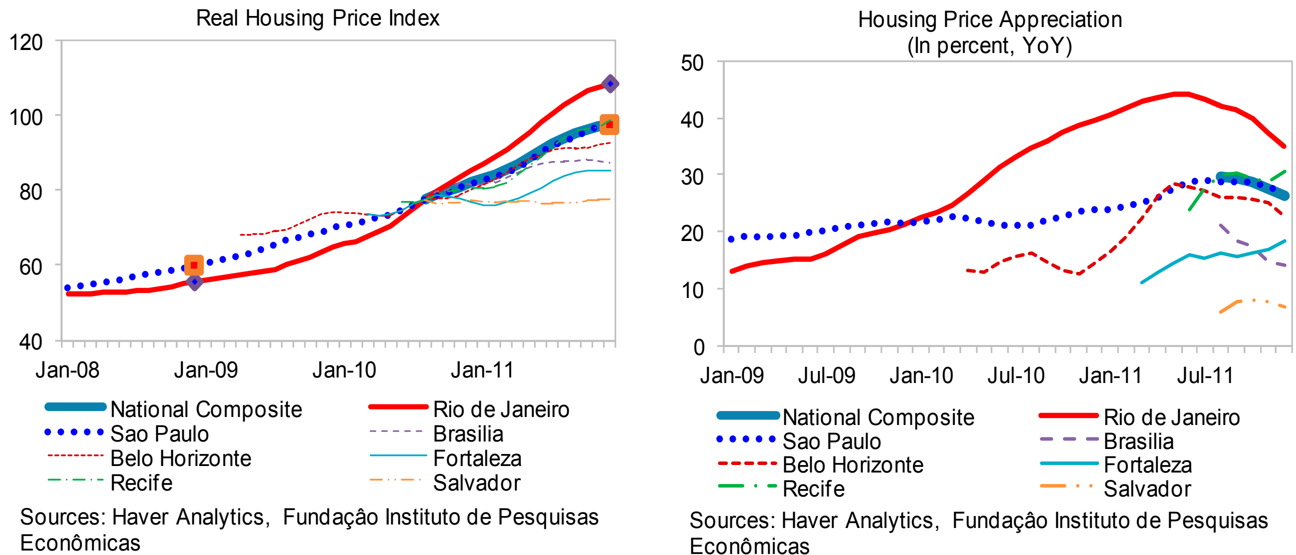
[7] Defined as the deviation of the credit-to-GDP ratio from one-sided HP filter trend.

Figure 2. Brazil: Household Debt and Debt Service Ratios



- **There are indications of rapid real estate price appreciation in prime locations**. Partial data suggest that prices in Sao Paulo and Rio de Janeiro have been growing by about 30 percent annually in recent years (Figure 3), with the pace moderating somewhat since 2011.[8] Although these increases are very large, the stability impact of a decline in prices would be mitigated by the low proportion of housing loans in banks' loan portfolios (except for *Caixa*, a public bank focused on housing loans).

Figure 3. Brazil: Credit Growth and Housing Prices



[8] The only available index is published by the *Fundação Instituto de Pesquisas Econômicas.* It tracks residential properties based on sales announcements (not transactions) in the seven largest metropolitan areas.

Box 1. Are Brazilian Households Financially Stressed?

The degree of financial stress of Brazilian households in 2008–09 was low compared to advanced countries, but the threshold may be lower for an emerging economy. For the purposes of this analysis, "financial stress" is defined as a debt service-to-disposable income ratio (DSTI) of 40 percent or more, a threshold similar to that used in other studies (a 2006 Federal Reserve report and WP/08/255 on Korean households use a 40 percent threshold; and in a study on Chile, Fuenzalida & Ruiz-Tagle (2010) use 50 percent). Data from the latest (2008–09) Household Budget Survey show that only 5 percent of Brazilian households had DSTI > 40 percent. While comparisons to other emerging markets are limited, this proportion is low compared to advanced economies (15 percent in the US and 17 percent in Spain). However, since household wealth and social safety nets may be more limited in emerging than in advanced economies, the threshold for financial stress may also be lower, especially at lower income levels. Moreover, household borrowing in Brazil includes a higher percentage of unsecured loans than in advanced economies, where a large share of household bank debt is mortgages.

Brazilian Household Debt Service to Disposable Income

Income Percentiles	Percentage with any debt	Distribution of Household DSTI: (as a percent of income percentile) <10	10-20	20-40	>40
5	39.3	52.1	21.8	14.6	11.5
10	42.0	64.3	20.3	10.6	4.8
25	49.9	66.8	20.3	9.5	3.4
50	58.3	66.8	21.8	8.3	3.0
75	69.2	60.4	24.8	10.5	4.3
90	77.6	48.2	32.6	13.8	5.4
95	83.0	37.5	40.7	16.2	5.6
All	63.4	57.3	26.9	11.4	4.5

Source: Institute for Geography and Statistics

Household Debt Service to Income in US and Spain

Income Percentiles	US: Percent of debtors with DSTI >40 percent: 2001	2004	2007	Spain: 2005	2008
<20	29.3	26.8	26.9	48.5	46.7
20-39	16.6	18.5	19.5	22.0	27.5
40-59	12.3	13.7	14.5	9.7	15.4
60-79	6.5	7.1	12.7	5.7	11.9
80-89	3.5	2.4	8.1	3.7	9.8
90-100	2.0	1.8	3.8	1.6	3.3
All	11.8	12.2	14.7	11.8	16.6

Source:Federal Reserve Board of Governors, Bank of Spain.

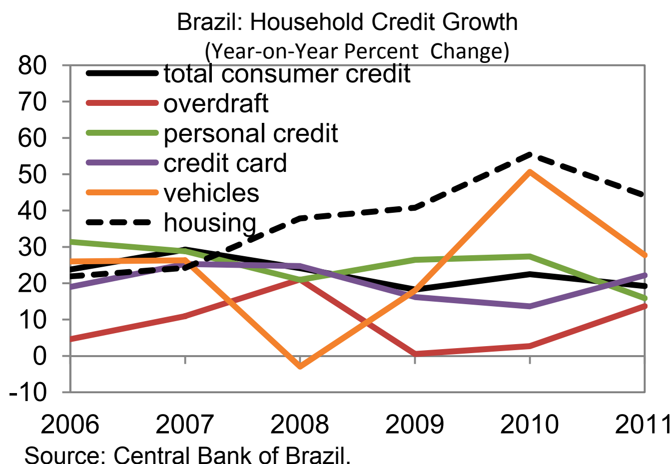
A significant portion of the increase in household debt is due to the success in expanding financial inclusion, which explains why stress levels may still be relatively low. The Household Budget Survey shows that between 2003–2009 the number of households with credit cards and bank loans increased by 7 and 5 percent, respectively, while installment credit increased 18 percent. Separately, the BCB's credit registry shows that the number of new individuals borrowing at least R$5000 from the banking sector increased by 50 percent between 2009–2011.

Brazilian Household Use of Debt,[1] Change 2003-2009
(Percent of Households)

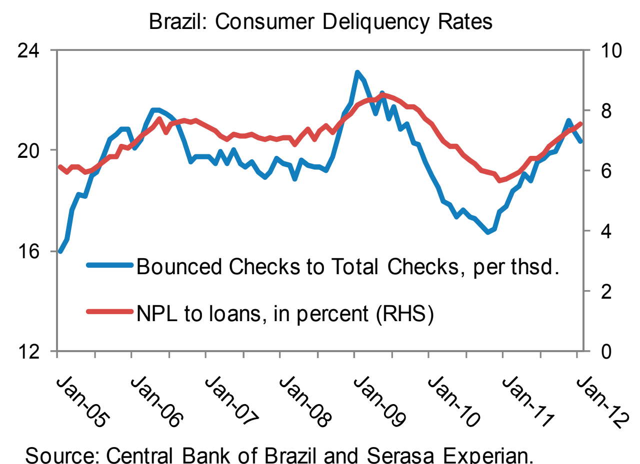
Type of debt	Income Percentiles: 5	10	25	50	75	90	95	All
Mortgage 2/	0.7	0.4	0.5	0.0	0.6	0.9	0.4	0.7
Credit Card	2.8	2.9	6.1	8.9	9.1	7.6	4.5	7.3
Overdraft	0.4	0.8	1.1	1.7	1.9	-2.0	-4.2	0.4
Bank loan	1.0	2.3	4.6	7.0	6.2	3.4	3.6	5.0
Installment credit 3/	20.2	16.5	18.8	17.7	17.9	19.0	18.9	18.3

Source: Institute for Geography and Statistics and staff calculations.
1/ If payments are outstanding, except for credit cards where possession is counted.
2/ Home owner reporting some housing payments or installments.
3/ For purchase of durables.

However, recent data suggest that the financial stress of at least some households may be increasing. One indirect indication of distress is the increasing use of more expensive lending products—e.g., credit cards and overdraft accounts—in 2011. Delinquency rates have also risen: by early 2012, non-performing non-earmarked consumer loans reached 7.6 percent (up by 2 percentage points since December 2010), with a particularly sharp increase for vehicle loans. Also, the number of bounced checks has picked up.



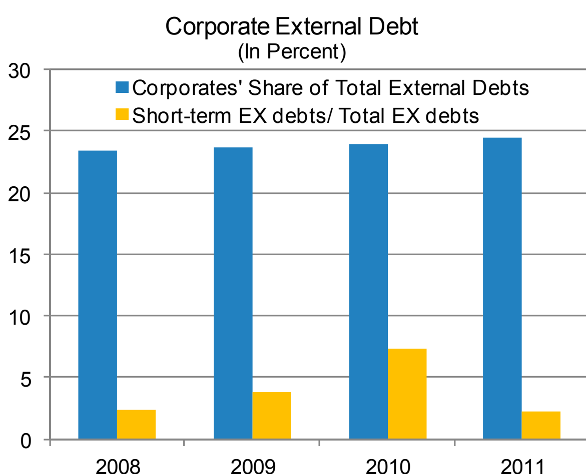
Source: Central Bank of Brazil.



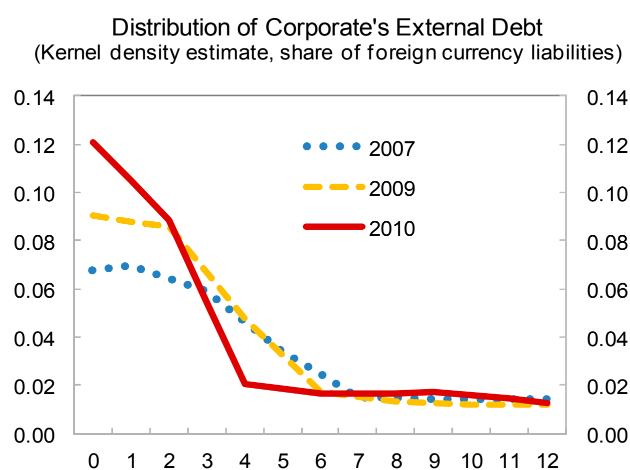
Source: Central Bank of Brazil and Serasa Experian.

8. **In contrast, the corporate sector's resilience to shocks has improved**. With equity and earnings rising faster than debt, Brazilian corporates' leverage has declined and interest coverage and current liquidity ratios have risen in recent years. Their external debt has remained under 25 percent of Brazil's total external debt, while short-term external debt returned to around 2 percent of their external debt after jumping to 7 percent in 2010. Moreover, the distribution of external liabilities has improved for listed companies (Figure 4). Improvements were also made in monitoring the sector's exposure to derivatives: since 2010, companies are required to register all derivatives transactions in local custody houses that, in turn, have to report these on a daily basis to the BCB; and a number of steps were taken to strengthen derivatives monitoring in general (Section C).

Figure 4. Brazil: Corporate Sector's External Debt



Source: Central Bank of Brazil.



Source: Economatica.

9. **The Brazilian authorities have used a number of macroprudential instruments and capital flow management measures to contain both domestic and external sources of systemic risk**, notably a financial transactions tax (IOF), reserve requirements, and differentiated capital requirements. Staff's analysis suggests that these were generally effective in achieving their objective, although in some cases the impact was temporary.

- The IOF was effective in reducing the volume of portfolio inflows and in changing the composition of capital inflows. Moreover, there is no strong evidence that the IOF has had adverse multilateral effects,[9] consistent with the finding in a recent Board paper. But the extension of the IOF to different instruments and maturities suggests that there may have been circumvention through other types of inflows after a short period of time.

[9] Staff analysis shows that estimated equity price responses in neighboring countries to changes in the IOF are mixed: in Peru, equity returns increased, in Mexico returns decreased, while in Chile and Colombia the impacts were statistically insignificant.

- Increases in reserve requirements (RRs) were temporarily effective in raising interest rate spreads and curtailing credit growth. Based on the team's analysis, impulse responses to a one percentage point shock in weighted average RRs show a moderate but transitory slowing of credit growth.

- Increases in the capital requirements on consumer and vehicle loans and in the minimum payments on credit cards were also successful in changing the composition of consumer and vehicle loans and fostering a more prudent handling of credit card debts by households, and may also be a factor behind the substantial slowdown in overall credit growth to households in recent months.

10. **The active countercyclical role of public banks during the global financial crisis was another systemic risk mitigant, helping to contain its impact, but underscored questions about their longer-term impact on the financial system**. The three large federal government-owned banks (Banco do Brazil, BNDES, and Caixa) played a critical role compensating for the retrenchment by private lenders during the crisis, as well as in the government's long-term strategy to expand access to finance and support development. Each bank has a different business model, which includes—especially for Caixa and BNDES—social lending mandates (reflected in relatively low pre-impairment return on assets). Nevertheless, their credit portfolios are less risky than those of private banks, as shown by lower nonperforming loan (NPL) and write-off rates. For Caixa, which focuses on housing loans, this reflects the fact that most of those are granted at prudent loan-to-value and debt-service ratios and amortize rapidly;[10] its riskiest housing loans to low-income families are extended with a government guarantee and thus constitute a fiscal contingency. BNDES also has very low default rates, and uses the high returns on its AAA loan portfolio to absorb losses that might result from social lending. Going forward, however, the role of BNDES, in particular, may need to change in order to support the development of long-term private finance (Section V).

11. **There may be room for improvement in the systemic risk monitoring and macroprudential tool box**. At a minimum, to improve the monitoring of housing prices, comprehensive transactions-based data should be collected. Also, the authorities should issue a regulation on credit bureaus to ensure broad availability of positive information on borrowers. Other targeted macroprudential policy instruments, such as limits on loan-to-value or debt-to-income ratios, have proved effective in other countries to contain housing or consumer credit risks and should be considered. Lastly, the introduction of countercyclical capital buffers planned by the authorities in the context of Basel III would also be useful.

[10] In addition, creditor rights were strengthened by the introduction in 2004 of "chattel mortgages" (*alienação fiduciária*) that in case of default allow a relatively quick out-of-court transfer of the title to the lender and are predominantly used for housing loans.

B. Banking Sector Risks and Resilience

12. **The Brazilian banking system is very profitable, has a strong capital base, and limited exposure to cross-border funding and foreign exchange risks**. Compared to other emerging and advanced countries, the Brazilian banking system has high levels of capitalization, profitability, and liquidity, while NPLs have declined and are in the mid-range (Figure 5). At end-September 2011, the banking system's capital adequacy ratio (CAR) was 17 percent, with tier 1 capital at 12.8 percent and core tier 1 capital at 12.3 of risk-weighted assets (Table 4).[11] Bank profits benefit from high interest rate spreads and high fees and commissions, which more than offset high credit provisioning costs. System-wide liquid assets are very high and exceed short-term liabilities, although the segment of small and medium-size banks relies considerably on wholesale funding (discussed below). Only about 10 percent of banks' assets and liabilities are denominated in foreign currency, all of which are wholesale, given the ban on foreign currency deposits and loans.

13. **Staff estimates of economic capital are lower than reported regulatory capital but still reassuring**. Staff attempted to estimate banks' "true" economic capital based on proxies for the parameters used to calculate capital requirements under the internal ratings-based (IRB) approach, notably probability of default (PD) and loss-given-default (LGD).[12] Brazilian banks have high write-offs due to low recovery rates—thus high LGD rates—for some types of loans (Figure 6). Given this, the quasi-advanced IRB CAR calculated by staff for the largest banks appears to be 20–30 percent lower than the CAR using the Standardized Approach (Figure 7). Still, most large banks remain above the minimum international standard CAR of 8 percent.

14. **The planned early implementation of Basel III will provide the BCB with additional tools to boost the resilience of the system**. As a G-20 country and member of the Basel Committee on Banking Supervision (BCBS), Brazil is firmly committed to implementing Basel III, including countercyclical capital and surcharges for systemically important banks (SIBs). Indeed the BCB has announced that it will start implementing elements of Basel III capital requirements ahead of schedule: the phase-out of deferred tax assets (DTAs) will start in 2014,[13] but banks would be required to meet counter-cyclical capital charges beginning in 2014 (rather than 2016). The BCB has tested the BCBS Global-SIBs assessment framework, and is developing its framework for identifying and measuring the risk posed by domestic SIBs with a view to exploring the scope for surcharges once guidelines are issued by the BCBS.

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[11] Based on the Basel II Standardized Approach.

[12] The IRB approach may be seen as a better measure of risk-adjusted or economic capital than the Standardized Approach, under which risk-weighted assets (RWA) are not adjusted for the change in an asset's risk profile unless the asset has an external rating or is impaired. Staff's quasi-IRB CAR estimates were based on each bank's NPL ratio (a proxy for PD), proxies for LGD consistent with reported write-off and NPL rates, and the maturities of different types of loans.

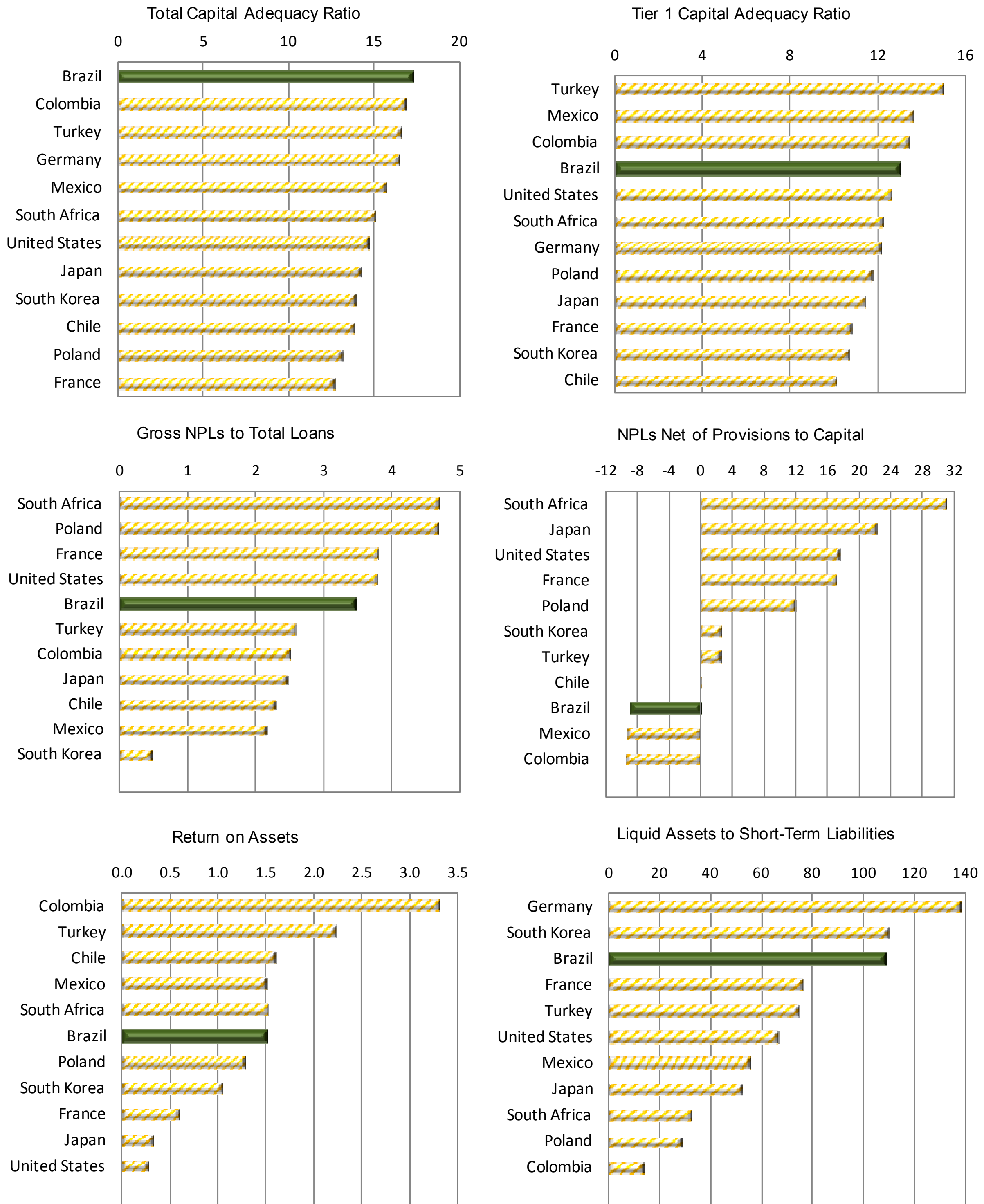
[13] Approximately a quarter of capital will become ineligible under Basel III, mainly due to DTAs, but also some hybrid instruments. This will be a challenge, and banks are already planning to deal with this in different ways, including raising new capital. In discussions during the FSAP, commercial banks, as well as the BCB, expressed confidence that this would be manageable.

Table 4. Brazil: Banking Sector Financial Soundness Indicators
(in percent)

	2005	2006	2007	2008	2009	2010	2011
Capital adequacy							
Regulatory capital to risk-weighted assets	18.1	19.0	18.8	18.3	19.0	17.7	17.3
Large banks	16.9	18.1	17.7	17.5	18.4	17.3	16.8
Medium banks	19.5	19.5	21.1	18.8	18.4	16.2	16.9
Small banks	31.8	28.6	29.0	27.9	27.2	26.4	26.1
Foreign controlled banks	15.8	16.1	16.3	20.1	25.9	22.5	20.8
Regulatory Tier I capital to risk-weighted assets	14.9	14.9	14.3	14.6	15.3	13.7	13.2
Large banks	13.4	13.5	12.5	13.2	14.1	12.8	12.2
Medium banks	18.6	18.4	19.3	17.2	16.6	13.6	13.9
Small banks	30.6	27.1	28.2	28.6	28.7	27.6	27.7
Foreign controlled banks	14.8	14.1	14.0	18.2	22.8	20.3	18.7
Asset composition and quality							
Sectoral distribution of loans to total loans							
Loans to households	43.6	44.5	45.0	46.8	43.8	46.5	43.5
o/w housing loans to total loans	4.7	4.8	4.6	4.8	5.9	7.7	9.2
Loans to non-financial corporations	47.8	47.5	47.5	45.4	48.5	45.6	48.0
NPLs to gross loans	3.5	3.5	3.0	3.1	4.2	3.1	3.5
Large banks	3.5	3.5	3.0	3.1	4.4	3.2	3.6
Medium banks	3.4	3.0	2.7	3.4	3.2	2.3	2.7
Small banks	3.5	3.8	3.0	3.6	3.9	3.5	3.4
Foreign controlled banks	3.1	3.5	3.2	3.7	5.8	4.2	5.0
Earnings and profitability							
Return on average assets (before tax)	3.2	3.1	3.5	1.6	2.4	3.2	1.5
Large banks	3.1	2.9	2.9	1.3	2.4	3.4	1.4
Medium banks	3.4	3.7	6.4	2.7	2.6	1.9	1.9
Small banks	3.3	4.0	5.9	2.3	2.5	3.1	3.0
Foreign controlled banks	2.2	2.6	4.5	2.0	1.5	1.9	1.5
Return on average equity (before tax)	29.4	28.7	32.0	14.3	22.0	28.9	14.0
Large banks	32.3	30.6	30.0	14.1	24.4	33.2	14.1
Medium banks	25.2	27.6	41.6	16.5	16.0	13.3	13.6
Small banks	14.5	18.1	28.1	11.0	12.0	15.0	14.3
Foreign controlled banks	16.2	22.2	37.2	13.9	8.9	11.1	9.3
Interest income to gross income	51.9	50.9	46.4	39.0	46.4	49.0	49.7
Trading income to gross income	6.7	9.4	10.4	7.5	8.5	11.3	2.2
Noninterest expenses to gross income	65.1	64.2	63.1	70.7	62.5	58.0	66.4
Liquidity							
Liquid assets to total assets	40.1	37.1	38.2	35.2	34.7	32.0	32.1
Large banks	40.1	37.3	37.9	34.6	34.2	31.0	31.1
Medium banks	37.9	35.7	39.3	37.0	35.5	36.9	38.2
Small banks	38.8	36.5	42.1	40.9	43.1	42.6	43.3
Foreign controlled banks	41.0	37.6	40.0	37.1	41.0	39.6	38.4
Liquid assets to total short-term liabilities	125.7	111.2	114.1	114.2	118.0	102.4	110.8
Large banks	132.7	117.3	119.0	118.6	121.4	100.2	107.3
Medium banks	80.8	73.5	86.0	82.3	84.7	98.8	114.5
Small banks	126.4	112.9	117.2	127.3	159.9	154.2	179.0
Foreign controlled banks	111.6	94.5	110.8	114.0	130.7	113.6	112.8
Sensitivity to market risk							
Net open positions in FX to capital	1.6	-3.6	-5.8	-7.6	-6.8	-6.4	-8.0

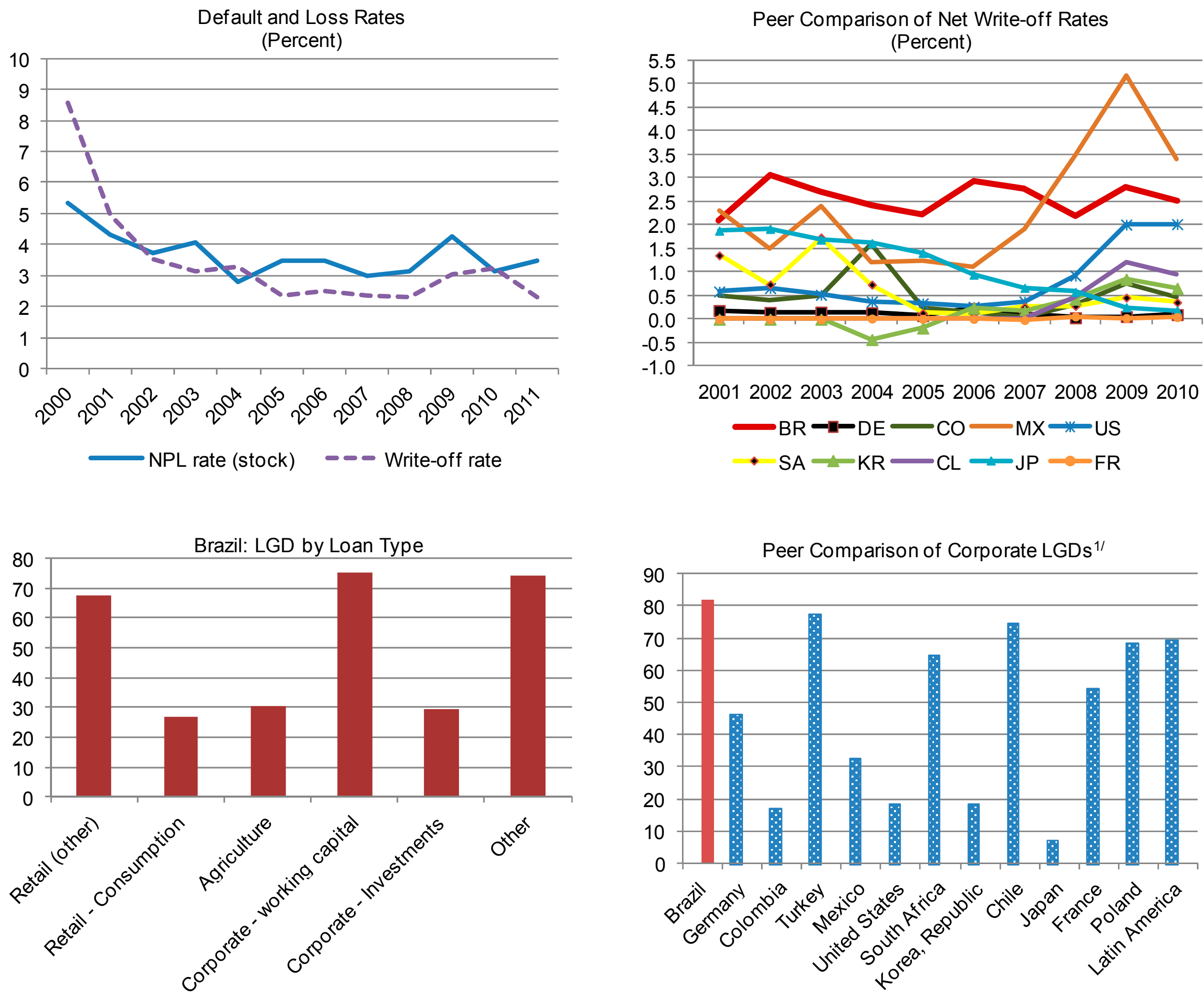
Source: Banco Central do Brasil.

Figure 5. Brazil: Key Financial Soundness Indicators—Cross Country Comparisons, 2011



Source: IMF STA FSI database.

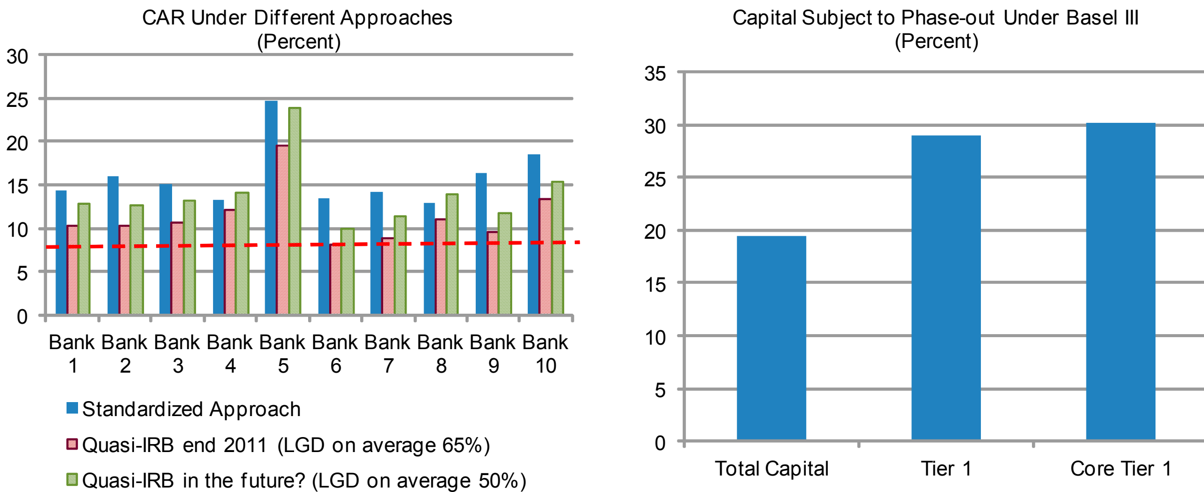
Figure 6. Brazil: Default and Loss Given Default



Source: Banco Central do Brasil (left panel); World Bank (right panel)

1/ Based on simulation of a default of the same firm (a hotel), without taking into account credit mitigation, e.g. collateral type and level (Djankov, Hart, McLiesh & Shleifer, Journal of Political Economy, 2008).

Figure 7. Brazil: Level and Quality of Bank Capitalization



Source: Staff calculations.

Stress tests

15. **Credit risk stress tests suggest that the vast majority of Brazilian banks could withstand extreme shocks, including a severe global recession**. The tests, which were carried out in close cooperation with the BCB (Box 2), included three macroeconomic scenarios: (1) a severe global recession, (2) a reversal of capital flows, and (3) a terms-of-trade shock. Of these, scenario 1—the most severe—was equivalent to a 2.5 standard deviations decline from trend GDP growth in Brazil (a cumulative GDP loss of about 12 percentage points) over a two-year period, with a gradual return to baseline growth thereafter. Under this scenario, the system's CAR would remain well above the current regulatory minimum of 11 percent, with only a few smaller banks temporarily falling below, resulting in a total capital shortfall of about ¼ percentage point of GDP. Even using economic, rather than statutory capital, quasi-IRB capital adequacy would fall below the 8 percent Basel minimum only temporarily (Figure 8). All scenarios conservatively incorporate a structural reduction in bank income over time toward levels observed in peer countries, without which capital levels would be on average 1–1½ percentage points higher.

16. **Single factor tests show that concentration risk in credit portfolios is contained, if uneven, as are market and interest rate risks** (Table 5). The failure of one or more of the largest borrowers would mainly affect about 20 smaller banks. Foreign exchange risk is limited, with a ½ percentage point drop in system CAR and no bank failures in the case of a 50 percent depreciation against all major currencies. Interest rate risk is slightly higher but still manageable, with a 600 basis points shock resulting in a 1.9 percentage point drop in system CAR.

Box 2. Stress Test Scenarios and Methodology

Macroeconomic assumptions. The trajectories of the key macroeconomic variables (GDP, exchange rate, money market rate) were simulated based on historical evidence in VAR or panel models. For Scenario 1 (global recession), the decline in GDP corresponds to 2.5 standard deviations over 2 years; for Scenario 2 (capital flow reversal), the exchange and interest rates shocks are equivalent to twice the changes observed during the global financial crisis; and for Scenario 3, the terms-of-trade shock corresponds to the highest current account deficit observed in the last 20 years.

Bank-specific parameters. The scenarios were translated into financial stress at the bank level using satellite models for credit risk—probability of default (PD) and exposure at default—and pre-impairment profits. Loss-given-default (LGD) was projected conditional on PDs (Schmieder, Puhr, and Hasan (2011). Banks' behavior was modeled through income and payout ratios varying in line with the severity of scenario, and credit growth reflecting limited deleveraging in the stress scenario. Stress tests also covered public banks.

Solvency tests. A balance sheet approach was used, covering all banks, using end-2011 data, and a five-year period (2012–16) to assess banks' ability to cope with a protracted macroeconomic shock, as well as with the introduction of Basel III. Concentration and market risks were assessed based on single-factor shocks.

Liquidity tests. The liquidity stress test used historical maximum funding withdrawal rates, taking into account both market-wide funding stress and bank specific vulnerabilities (e.g., concentration and reliance on wholesale funding). This is equivalent to retail deposit outflows of 15 percent, interbank deposit outflows of 20–90 percent (depending on maturity) , and cuts in other sources of funding of 70–95 percent over a 21-day period. Liquid assets were also subject to haircuts based on their quality and maturity (20 percent for foreign currency government bonds and assets, 5–20 percent for interbank claims, and 30 percent for investment funds). The test was based on the BCB's "liquidity ratio" that compares liquidity inflows (unencumbered liquid assets plus scheduled cash inflows, without recourse to required reserve balances) with potential liquidity outflows (funding losses plus scheduled outflows).

Contagion tests. BCB and IMF network models were used to simulate the impact of a default of a bank through bilateral bank exposures with direct and indirect contagion effects. The latter assume that the default of a large bank triggers deposit withdrawals in all banks, reaching (in the most severe scenario) 35 percent.

Figure 8. Brazil: Solvency Stress Test Results

System CAR (Standardized Approach)

System CAR (Quasi-IRB)

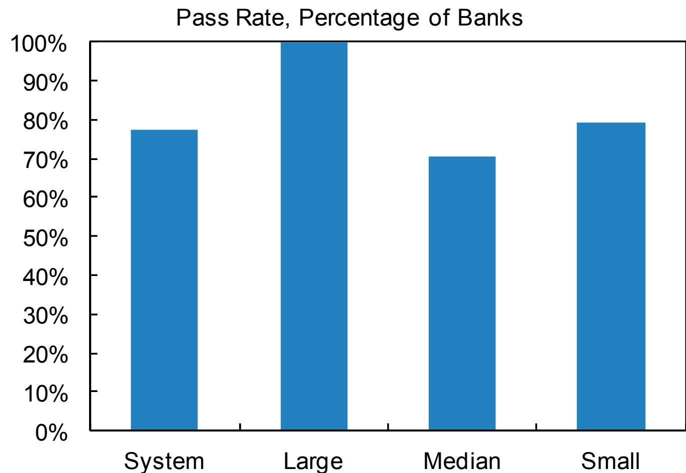
Number of Banks Below Regulatory Minimum (11 percent)

Capitalization Needs Under Current Regulations (Percent of GDP)

Source: Staff calculations.

17. **Liquidity stress tests suggest that the system could withstand substantial stress and contagion through bilateral exposures is limited, although some types of banks appear more vulnerable**. All large banks pass the liquidity stress test, though some of them only by a narrow margin. However, some small and medium-size banks that rely heavily on wholesale funding are vulnerable to bouts of high risk aversion. In the liquidity stress tests, medium-sized banks had the lowest pass rate, followed by small banks (Figure 9),

Figure 9. Brazil: Liquidity Stress Test Results



Source: IMF staff calculations based on superviosry data.

but all failing banks together account for less than 3 percent of banking system deposits and non-deposit funding. Although there are a few key net liquidity providers, direct contagion risk is limited: the failure of any single bank would trigger a maximum loss of 0.8 percent of the system's assets. Indirect contagion risk is more severe: if a bank failure were to trigger severe deposit withdrawals in all banks, maximum asset losses would be higher and non-linear (around 8 percent for a 25 percent withdrawal rate and 22 percent for a 35 percent withdrawal rate). The high level of required reserves, however, is a significant buffer against liquidity shocks.

Table 5. Brazil: Single Factor Shock Results

	CAR (Percent)	Change of CAR (Percentage Points)	Number of Banks Below Minimum
	Market Risk		
Baseline (end-2011)	17.0	NA	3
Foreign exchange rate shock (percentage change)			
20	16.8	-0.2	3
50	16.5	-0.5	3
100	16.0	-1.0	4
Interest Rate Shock (change in basis points)			
-200	16.4	-0.6	4
-400	15.7	-1.3	4
-600	15.1	-1.3	5
Securities Prices (percent)[1]			
Sovereign Bonds			
-20	14.9	-2.1	19
-30	13.9	-3.1	27
Equities			
-30	16.8	-0.2	3
-50	16.7	-0.3	3
	Credit Risk		
Baseline[2]	18.4	NA	3
Default of x largest borrowers			
x = 1	18.3	-0.1	3
x = 2	17.8	-0.6	4
x = 10	15.9	-2.5	28
Relative increase in default rates of all credit risk exposures (percent change)			
100	17.5	-0.9	5
200	16.5	-1.9	8

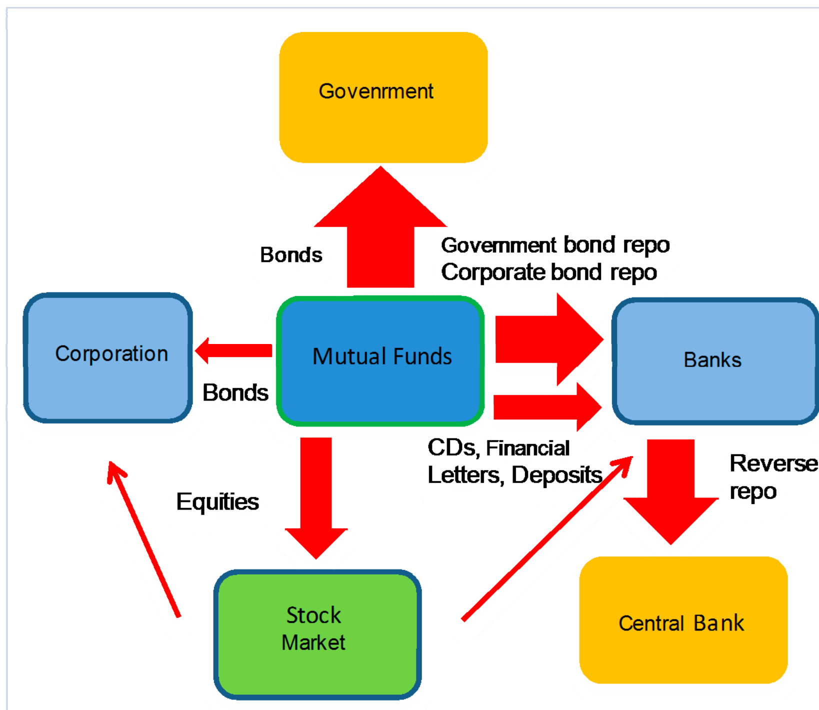
1/ Impact on all securities in the trading book and available for sale portfolio.
2/ Projected end-2012 under baseline macroeconomic scenario.

18. **The direct financial exposure to Europe is limited and the risk of contagion closely monitored**. The two large European bank subsidiaries in Brazil (Santander, with a market share of about 8 percent, and HSBC, with some 3 percent), in particular, are mostly locally funded. FSAP stress tests show that foreign banks have high pass rates in the event of a liquidity shock. Given the uncertainties, the BCB is monitoring the situation closely and is confident that it has all the tools at its disposal to ensure adequate liquidity and, if necessary, ring-fence Brazilian operations.

C. Capital Markets, Insurance, and Interconnections

19. **Mutual funds and banks are highly interconnected through repo transactions and funds' investments in bank deposit, CDs, or bonds**. As of April 2012, mutual funds' repo operations with banks accounted for some 20 percent of mutual funds' total portfolio and their holdings of bank deposits or CDs for another 15 percent. Although this represents a high degree of exposure concentration for mutual funds, repos with banks have low risk because the operations are collateralized by government bonds: banks in effect act as an intermediary, given that mutual funds cannot conduct repos with the BCB. Banks' reverse repo transactions with the BCB tend to have slightly longer maturities (around 30 days), which earns them a profit of around 3–4 basis points. For the same reason, these transactions do not represent a major source of funding risk for banks. Mutual funds' holdings of bank CDs, deposits, or bonds, on the other hand, expose them to counterparty risk, but this risk is limited given funds' conservative asset allocation and liquidity buffers. Nevertheless, as the availability of financial instruments improves over time, the authorities should consider lowering the 20 percent single exposure limit for mutual funds. Moreover, market trends need to be monitored closely, as lower interest rates spur investors to seek higher returns and take more risk.

Figure 10. Mutual Funds and their Interconnectedness with Other Sectors



Sources: ANBIMA, BCB.
Note: The thickness of each arrow represents the relative size of money flows.

20. **Risks stemming from derivatives transactions are contained, as regulations are strict and risk mitigation mechanisms by the clearing houses work well**. Transactions are done through BM&FBOVESPA, a central clearing party, which has strong controls over participant's positions and monitors their exposures on an intraday basis. Recent initiatives, such as the contract between the Central Custodian and Settlement of Financial Securities (CETIP) and Clearstream to

manage collateral and the creation by the Brazilian Banking Association (FEBRABAN) of the Derivatives Exposure Registry to register all the derivative transactions, have further reinforced this framework.

21. **The market for the reference rate for interest rate derivatives is shallow**. Average traded daily volume of CDIs is low, and usually comprises less than a hundred trades. In addition, the top three market participants account for about 85 percent of the volume. Nonetheless, the CDI is used as the reference rate for a very large derivatives market. Although there has been no evidence of excess volatility or market manipulation, the authorities and market participants are studying alternatives to the CDI.

22. **Insurance financial soundness indicators are strong**.

- **Profitability levels have been consistently high over the last five years.** The combined ratio (incurred losses plus expenses-to-earned premium) of life insurers has been around 75 percent and the return on equity (ROE) above 20 percent. Nonlife insurers, while having a higher combined ratio of around 100 percent, have an ROE between 34 and 47 percent. Investment income of around 25 percent of the premium in both industries has supported profitability.

- **Solvency ratios are strong**. The life insurance sector has an average margin of 250 percent above Brazilian regulatory requirements (which are about one-third higher than Solvency I requirements), while the nonlife sector has a 90 percent additional solvency margin.

- **Other financial indicators of the insurance sector also suggest resilience.** The risk ratio (capital plus surplus to underwritten premium) is around 1.7 and the capital plus surplus to total assets is 8.3 percent, both within international norms for sound companies. Foreign currency assets are negligible due to the limitation in foreign investments.

III. Financial Sector Oversight

23. **Since the initial FSAP assessments in 2002, there has been material progress in key areas of financial sector oversight**. This progress is reflected in marked improvements in the compliance ratings with international standards in the three key sectors (banking, insurance, and capital markets).[14] Most importantly, the approach to regulation and supervision has shifted from a compliance mode to a risk-based approach, with some agencies already very near full compliance with international standards.

24. **The growth of the financial system and the increased complexity of operations, however, will demand a continuous commitment to maintain and improve supervision**. Each supervisor would likely require additional financial resources and continued upgrading of its human resources, as well as sufficient operational autonomy and legal protection. And the institutional architecture for systemic risk monitoring and mitigation could also be strengthened.

[14] The Reports on Observance of Standards and Codes for the BCPs and IAIS principles are attached; that for IOSCO has not yet been finalized.

A. Institutional Architecture for Financial Stability

25. **Brazil has a well-developed architecture for supervisory cooperation and information sharing**. In 2006, the government created the Committee of Regulation and Supervision of Financial, Securities, Insurance, and Complementary Pension (COREMEC) to promote coordination among the agencies responsible for regulating and supervising financial institutions and sharing information on financial conglomerates. In 2010, a Subcommittee to Monitor the Stability of the National Financial System (SUMEF) was created to expedite information sharing and coordinate supervisory policies. And in May 2011, the BCB established a Financial Stability Committee (COMEF), to better identify and monitor the sources of systemic risk and define strategies to mitigate such risks.

26. **Since the legal framework does not assign explicit responsibility for financial stability to any agency, in practice the BCB takes a lead role.** The BCB assumes *de facto* responsibility for macroprudential policy but does not have an explicit legal mandate. There is also no formal framework among the financial safety net players for crisis management, although it is understood that the BCB will play the lead role. The COREMEC has a purely advisory role, and indeed did not play a major role during the recent global financial crisis.

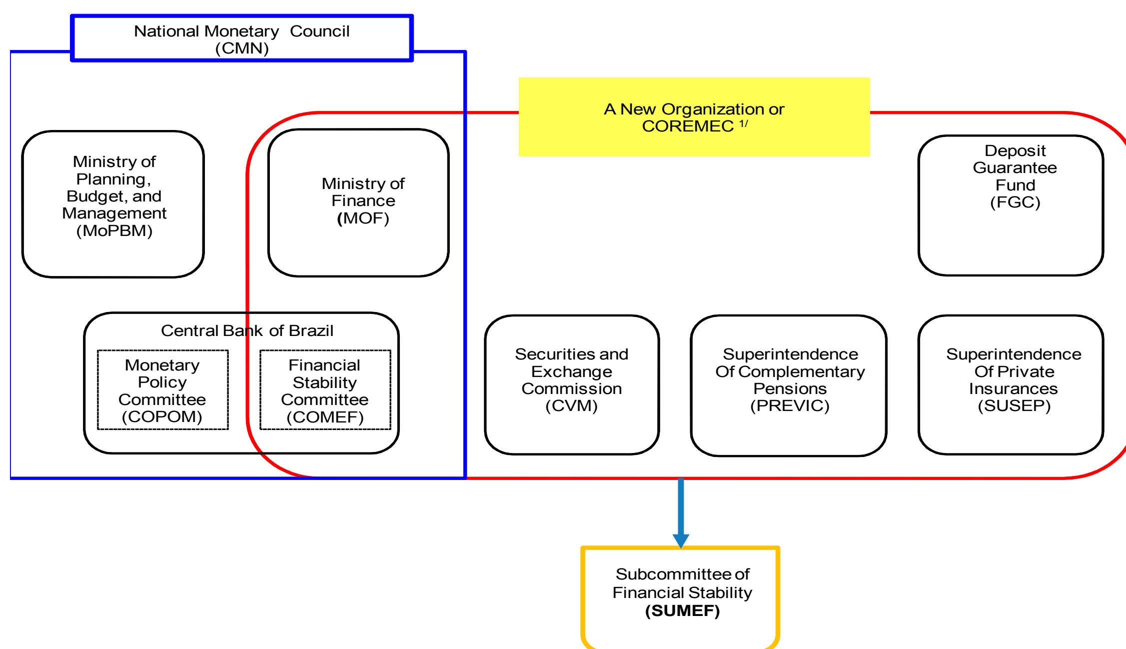
27. **Although these arrangements have been sufficient in the past, the authorities should consider establishing a multipartite financial stability committee**. Due to the dominance of banks in the Brazilian financial sector, the BCB has so far been successful in monitoring systemic risk and implementing timely measures. But as the financial system becomes more complex risks may arise outside banking, and closer coordination among the various supervisory agencies will become increasingly important. While the BCB should retain a key role, reflecting its expertise in systemic risk analysis, more explicit cooperation arrangements, as well as greater transparency and accountability, might be warranted going forward. The authorities should consider upgrading COREMEC or establishing a new multipartite high-level committee including all financial regulators, as well as the FGC and the Ministry of Finance. This committee should be responsible for systemic risk monitoring, macroprudential policy coordination, and systemic crisis preparedness.

- Members should conduct regular joint-assessments of systemic risks in the financial sector as a whole and formulate plans and strategies to address them. This committee could consider also publishing periodic financial stability assessments or reports focusing on the entire financial system as a complement to the BCB's Financial Stability Reports.

- The committee would ensure that all legal and operational hurdles for information exchange among participants are cleared. Consideration could be given to establishing joint databases to facilitate the sharing of information

- The committee would establish a road map for crisis management, clarify individual roles and responsibilities for each agency consistent with the mandate legally vested upon each agency, and undertake crisis simulations.

Figure 11. A Proposed Institutional Architecture for Financial Stability Policy



1/ The COREMEC or new body would have an explicit financial stability mandate.

B. Banking

28. **The BCB's broad powers and well-developed banking supervision are reflected in very high compliance with the Basel Core Principles**. The supervisory process is risk-based, robust, and intrusive. It uses a mix of on-site and off-site supervision and well-structured methodologies to identify and assess the most relevant risks of institutions, as well as the quality of internal controls and risk management systems, in order to allocate supervisory resources. Banks are informed at an early stage of issues and prompt correction is required, followed by close monitoring. The corrective action framework has been strengthened by the adoption of regulations that enhance BCB's discretion, for example on the adequacy of corporate governance. Since the implementation of Pillar 2, the BCB enforcement has taken on a more preventive approach that may arrest unsafe and unsound practices before they impact the bank's condition.

29. **An extensive quantitative and qualitative review results in a comprehensive understanding of an institution's risk profile**. The BCB identifies outliers in prudential ratios, as well as transactions that do not meet the norm for the institution or the system, and produces a quantitative rating for each institution covering capital, asset quality, liabilities/liquidity and earnings. The supervisor also produces a qualitative rating based on an analysis of business risks and controls on credit, legal, operational, market, liquidity and contagion risks from group entities,[15] as well as corporate functions and controls of strategic, reputation, information

[15] The review of contagion risks includes an analysis of the non-banking subsidiaries and affiliates and their possible impact on the condition of the consolidated banking group.

technology, money laundering and operational risks. The overall rating consolidates the quantitative and qualitative ratings. The supervisory process results in a comprehensive understanding of the operations and risk profiles of the banks. Supervisory plans include meetings with bank management, many jointly with insurance supervisors.

C. Insurance and Pensions

30. **Insurance supervision has improved greatly with the implementation of more risk-sensitive solvency requirements and risk-focused inspections**. The Superintendency of Private Insurance (SUSEP) has added specific capital risk surcharges, a major improvement on capital rules that until 2010 were based on the type of license and geographic area of activity plus Solvency I requirements. SUSEP also strongly emphasizes inspecting risk management and internal controls.

31. **However, insurance and pension supervision also has some gaps**.

- **Supervision and disclosure requirements for brokers should be enhanced** with the issuance by SUSEP of rules for a self-regulatory entity, with mandatory affiliation for all brokers, strong governance, and supervision by SUSEP.

- **The regulatory framework for group supervision is weak, and enterprise risk management (ERM) requirements need to be introduced**. There is no definition of a financial group or conglomerate for the purposes of insurance supervision. A regulation for consolidated supervision, including the introduction of ERM and capital requirements at group level, is urgently needed. Also, open pension funds assets are not segregated from those of insurance companies' and there are no explicit corporate governance requirements applicable to insurers other than those set out in the Companies' Act. To meet the new international standards, surveillance and cross-border crisis prevention frameworks need to be strengthened. For cross-border cooperation, in particular, MOUs with foreign jurisdictions are strongly recommended.

- **The operational autonomy of SUSEP's and PREVIC's should be strengthened**. The supervisor of closed pension funds, PREVIC, was established in 2010 and needs to start supervising a larger number of funds and complete its transition to risk-based supervision. Operational independence for both PREVIC and SUSEP should be strengthened by introducing a transparent appointment procedure for senior officers, requiring their technical input on related regulation, and ensuring budgetary autonomy.

D. Capital Markets

32. **The Securities and Exchange Commission (CVM) has made substantial progress since the 2002 FSAP**. CVM has developed a risk-based supervision program that includes on-site inspections of collective investment schemes (CIS), market intermediaries, listed companies, auditors and other regulated entities, as well as becoming a more assertive enforcer. There have been several notable improvements in capital market regulation, including new instructions on

CIS in 2004; on internal controls and investor protection requirements for market intermediaries in 2011; and on the regulation of credit rating agencies in April 2012. In 2009, the CVM created a new company-based electronic disclosure report for listed companies.

33. **However, the highly concentrated financial sector poses regulatory challenges, including ensuring adequate resources**. The CVM should consider whether a single stock exchange operating in the secondary market as a for-profit company warrants regulatory action to promote competition and reduce transaction fees that seem high by international standards. Similarly, the high level of concentration in the CIS sector may partially explain high mutual fund fees, while the preponderance of CIS owned by banks requires continued effective monitoring of related party transactions and the risks associated with high degrees of concentration in portfolios. Also, to meet the challenges posed by an increasingly complex and growing industry, the CVM requires additional resources, an operating budget commensurate with the fees paid by the capital markets, and greater freedom to hire staff with critical skill sets.

IV. Financial Sector Safety Nets

34. **The Brazilian authorities' response to spillovers from the global financial crisis was swift, flexible, and effective**. At the onset of global financial crisis, the central bank moved adroitly to boost systemic liquidity, intervening in the foreign exchange futures market to accommodate hedging, cutting reserve requirements, expanding eligible assets for the rediscount window, and opening a foreign exchange window to help offset the loss of external credit lines. The deposit insurer (FGC) also provided support by extending guarantees on deposits and providing liquidity to small banks, which relied heavily on wholesale funding. In addition, the FGC also extended its deposit insurance coverage and provided solvency support by lending to firms which invested in undercapitalized banks, while the prohibition on the state-owned banks buying banks and loan portfolios was temporarily lifted. These steps were effective in preserving financial stability and, together with the significant capital and liquidity buffers, helping the Brazilian financial system cope with the impact of the crisis.

35. **However, there is scope to improve the existing financial safety nets to ensure they can cope with future shocks and limit moral hazard in a system that is growing in size and sophistication**. While the system had performed well, the financial sector is evolving and future crises are likely to pose different challenges and could entail more severe shocks. The FSAP thus focused on options to make financial safety nets in Brazil more effective, many of which were already under consideration by the authorities. The FSAP recommendations in the areas of emergency liquidity assistance, bank resolution, and deposit insurance were guided by international best practice and the emerging standards in these areas.

36. **The BCB's Emergency Liquidity Assistance (ELA) facilities, while well-designed, could be made more effective in practice**. ELA facilities were not used in the recent crisis, as other sources of liquidity were deployed to support small and medium-size banks under pressure, such as incentives for large banks to buy loan small bank portfolios, asset purchases by state-owned banks, and funding from the FGC. While successful, these methods may prove insufficient in the face of a more severe shock that affects systemically important banks. Therefore, the BCB

should ensure that it is in a position to disburse promptly temporary liquidity to solvent but illiquid banks through its existing facilities by (i) developing clear internal procedures to approve ELA that clarify roles and accountability of different departments and minimize the risk of legal challenges to staff, e.g., by using the legal protection afforded to the Governor (see below); (ii) introducing systems to enable quick acceptance of collateral other than government securities, including valuing and determining haircuts; (iii) pre-determining haircuts for asset classes, reviewing these periodically, and disseminating this information regularly to reduce uncertainty; and (iv) ensuring that sufficient expertise is readily available and undertaking simulation exercises and test transactions.

37. **The authorities are considering a new framework for bank resolution, based on two separate resolution regimes for systemic and non-systemic cases**. For the former, the resolution toolkit is to be expanded to include bail-in powers and allow for related solvency support. For the latter the authorities will maintain the current intervention regime but plan to convert administrative extrajudicial liquidation to a court-based bankruptcy proceeding under the Bankruptcy Law to accelerate the currently lengthy bank bankruptcy process. Staff broadly endorsed these plans but noted that if the latter approach is pursued, the BCB should retain residual powers of direction, as it may not be possible for the intervenor to ensure that all necessary actions are taken to facilitate the resolution within the statutory 120 day-period (including the transfer of crucial services such as IT); as well as the power to petition the court to replace the liquidator in the event that the liquidator does not comply with its directions.

38. **Without reforms, the broader role played by the FGC in the recent crisis creates potential conflict of interest**. The FGC has evolved from a paybox to an institution with a wider role in providing liquidity and guarantees to preserve financial stability. While appropriate, this evolution means that stronger safeguards are needed to protect the funds of the FGC. A key staff recommendation in this regard was implemented shortly after the FSAP mission with the reform of the FGC's governance that removed active bankers from its Board. Its wider role underscores the importance of applying the least cost principle when deciding resolution options in order to mitigate moral hazard and safeguard the soundness and credibility of the fund. The FGC's authority to provide funding beyond least cost assistance in a purchase and assumption (P&A) or bridge-bank transaction (such as open bank assistance in the form of loans to purchasers or capital injections) should be restricted only to cases where there is a systemic threat, with the determination made at a high level in the government and the BCB to limit moral hazard and the risks to the FGC. Furthermore, open bank assistance, if provided by the FGC, should be capped at 50 percent of its cash or cash-equivalent resources.[16] The FGC should also have access to a backstop unsecured credit line from the either the BCB or the government at market rates in case of a systemic crisis.

39. **The recourse to public resources to support banks in a systemic crisis needs to be carefully considered**. The Fiscal Responsibility Law of 2000 bans the use of public funds for

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[16] The current cap of 50 percent is based on the net worth of the fund.

solvency support, unless Congress passes a specific law to allow this. Given this constraint, the authorities are considering empowering the BCB in the new resolution regime to provide funds for bank recapitalization after shareholders have been written off using the proposed bail-in powers. This may not be a first-best approach, but the authorities explained that existing mechanisms ensured that the BCB would be indemnified for any losses incurred as a result of such operations.

40. **In addition, staff suggested strengthening further the resolution regime by removing certain impediments, clarifying the legal provisions for purchase and assumption and bridge banks, and strengthening legal protection**. The legal framework currently provides a broad range of powers for bank intervention and resolution. These were not used during the crisis, due in part to provisions in labor and tax legislation that require the mandatory transfer of tax liabilities and employment contracts to the purchaser or bridge-bank. Moreover, although legal protection for the BCB Governor has been strengthened since the last FSAP, the BCB as an institution does not enjoy such protection and has faced court actions in relation to past exercise of its regulatory powers and provision of financial assistance. To ensure that the full range of effective resolution powers are available in practice, consistent with the FSB's Key Attributes of Effective Resolution Regimes, the authorities should:

- remove these impediments in labor and tax legislation and strengthen the purchase and assumption and bridge bank statutes;
- clarify that FGC's resources can be used to assist in a resolution transaction (P&A or bridge-bank) to facilitate the transfer of insured deposits, with its contribution capped (except in systemic cases) at the amount of insured deposits that would have to otherwise be paid in a liquidation;
- introduce depositor preference, placing depositors above unsecured creditors in the hierarchy of claims in bankruptcy, with the FGC subrogated to the preferred claim if its resources are deployed;[17]
- expand the resolution toolkit to include the ability to override the rights of shareholders to carry out a recapitalization or a transfer of shareholding interests;
- limit the scope of judicial action to suspend resolution proceedings on appeal, since any delay in the resolution of a bank may jeopardize the effectiveness of the resolution action; and
- enhance legal protection by elevating the threshold for civil liability for employees, intervenors, liquidators, and directors during temporary administration to gross negligence, as opposed to mere negligence; and extend a similar level of protection to the BCB.

[17] Depositor preference not only mitigates the risk of depositor runs, it can reduce deposit insurance costs and facilitate the transfer of insured deposits to another institution.

V. Developmental Issues, Consumer Protection, Corporate Governance, and Insolvency and Creditor Rights

41. **The government's Capital Market Reform Package offers some promising initiatives to increase long-term private finance**. The government's proposal includes a series of incentives to issue and invest in long duration bonds. Its most promising measure includes a tax incentive to non-residents investing in long duration investments and infrastructure bonds. The National Association of Financial Market Institutions (ANBIMA)'s New Fixed Income Market proposal also recommends tax incentives to invest in longer duration instruments, and consideration should be given to extending these incentives to infrastructure funds (*Fundos de Investimento em Direitos Creditório*—receivables-backed investment funds).

42. **Stricter market-making rules could also be considered to improve secondary market liquidity**. The New Fixed Income Market proposal includes a set of measures aimed at supporting secondary market liquidity (standardization of issues, market making arrangements, and the set up of a liquidity fund). These initiatives could benefit from measures aimed at further increasing the liquidity of the public bond market, e.g., a narrower set of benchmark issues for all primary dealers; requiring trading through the same electronic platform; and providing a securities lending facility.

43. **BNDES should shift towards supporting market-based financing and capital market development**. BNDES is a pillar of the Brazilian financial system and its mandate has evolved with developmental needs over the years. As the Brazilian economy grows, however, financing constraints will increasingly limit its capacity to remain the single financier of long-term investments. BNDES should now focus on supporting market-based financing by crowding in private sector intermediation, for instance by co-financing projects and securitize the proceeds, placing the securities with institutional investors. Also, BNDES should move away from direct financing of large corporations with market access (such as Petrobas and Vale) towards helping to develop the long-term corporate debt market through standardization, market making, and signaling (through minority investments). Pricing should be actuarially fair (covering expected losses as well as administrative and funding costs), but this will require strengthening governance and transparency, as well enhanced supervisory oversight.

44. **The housing finance system needs to move to longer-term funding, linked to market interest rates**. The system is based on two non-market based funding pillars: the earmarked allocation from savings accounts *Sistema Brasileiro de Poupança e Empréstimo* (SBPE); and earmarked funds from the workers' severance fund *Fundo de Garantia por Tempo de Serviço* (FGTS). While the latter is relatively stable, the interest rate floor and short duration of the former has contributed to lenders limiting mortgage duration. In April 2012, the government eliminated the minimum returns on savings deposits (which previously had a floor of 6 percent), clearing the way for these mortgage rates to fall without undue compression of the interest rate spread. In addition to this first step, the authorities should now introduce a regulatory framework for covered bonds, as well as standardization and use of *cédulas de crédito imobiliário* (CCI) to stimulate broader private capital participation in the housing finance system.

45. **Financial consumer protection could be improved, including by creating a dedicated, adequately staffed unit**. In banking, consumer protection is currently the responsibility of the Ministry of Justice. However, the relevant department is seriously understaffed, and needs to be strengthened and establish ties to the BCB and other members of COREMEC. Also, as a large number of first-time insurance buyers come into the market, further improvements of consumer education and protection will be needed, alongside the strengthening of broker oversight mentioned above.

46. **In preparation for the FSAP, assessments of compliance with standards on Insolvency and Creditor Rights, Auditing and Accounting, and Corporate Governance were undertaken by the World Bank**. While work on some these assessments is continuing, key findings include:

- The legal framework for creditor-debtor relationships has improved, but shortcomings remain that deter debt restructuring or liquidation in some cases. The Law on Business Reorganization and Bankruptcy (2005) improved the insolvency system. However, the system could be more effective by (i) making the tax treatment of debt write-offs neutral; and (ii) reducing legal uncertainty by clarifying that a fraud is required to adjudge the creditor personally liable. Furthermore, rules could be reviewed to encompass sectors that lack access to an effective mechanism of restructuring or insolvency liquidation (e.g., cooperatives, mixed-capital companies, and health care plan companies).
- Judicial enforcement and resources need to be improved. Lenders strongly prefer taking movable collateral or real estate under "fiduciary sales" or financial leasing because they can use either out-of-court settlement or abbreviated judicial enforcement procedures. Judicial enforcement of other security interests (such as classic mortgages) and unsecured claims is still complex and slow, increasing the cost of financing, especially for small and medium enterprises (SMEs). While the specialized courts in Rio de Janeiro and Sao Paulo are generally satisfactory, the backlog of cases is significant, indicating that more resources are necessary.
- The registration system for both immovable assets and charges over movables could be significantly upgraded and centralized at the federal level. Currently, registries are administered at the municipal level and most are not electronic, with significant variation in the reliability of information cross municipalities.
- Corporate governance has improved, but there is room for improvement of minority rights and requirements for Boards of Directors. CVM has introduced new requirements on disclosure (e.g., Instruction 480/2009) that meet international standards and has stepped up enforcement efforts. Disclosure and transparency were improved by the adoption of IFRS accounting standards in 2007 (that came into effect in 2010). However, the ability of minority shareholders to influence Board elections is generally difficult; Board committees are often not well-developed (except for banks, where BCB regulation mandates Board audit committees at institutions of a certain size) and lack independent members; and the rights of shareholder groups during takeovers and corporate restructurings remain a challenging issue.

Appendix I. Brazil: Risk Assessment Matrix

Nature/Source of Main Risks	Likelihood of Severe Realization of Risk in the Next one to three years	Expected Impact on Financial Stability if Risk is Realized
Severe global recession	*Medium* • Loss of confidence in the credit-worthiness of Europe or other advanced economies (e.g., US, Japan) could trigger liquidity stress, higher real interest rates, and output losses. Likewise, a hard-landing in an important emerging market (e.g., China) could lead to a deep global recession, potentially accompanied with a liquidity crisis and/or credit crunch. • The experience from the 2008 global financial crisis shows that the Brazilian economy could be hit hard by the combination of global trade and financial shocks, especially in case of a sustained shock.	*Medium* • Under a multi-year sustained adverse shock scenario, credit and market losses can be expected to increase sharply. Likewise, higher unemployment rates would trigger losses to consumer loans. Banks would also see their pre-impairment income reduced at the same time, amplifying stress conditions. • However, current financial soundness indicators and stress test results show that the banking system as a whole would be resilient to considerable levels of stress. Nevertheless, some small- and medium banks could be severely impacted given their exposure to wholesale funding. • While the potential for direct interbank contagion effects is limited, indirect contagion effects through stress in funding markets could be a potential source of concern, albeit only in case of substantial funding losses. • A mitigating factor is the available policy space, including high required reserves, as well as the policy of using public bank lending countercyclically.
Sudden stop/reversal or persistent terms of trade shock	*Medium* • The risk of a generalized sudden stop/reversal remains intact given the continued sovereign debt crisis in advanced economies and the tendency for an increased demand for “safe haven” assets during times of financial stress. • Such a stress scenario could either materialize though a sudden, rather short-lived reversal of investor sentiment (sudden stop scenario) or a more gradual trend in capital flows (generalized terms-of-trade shock).	*Medium/High* • Further euro area bank deleveraging would have a moderate impact, given the modest level of euro area foreign bank participation and cross-border lending. European banks are also likely to try to maintain their presence in the profitable Brazilian market. • A more generalized sudden stop or reversal of capital inflows could have a more substantial impact on banks, but ample liquid assets reduce banks’ vulnerability. Indeed, stress tests show that even in the case of a more generalized shock to funding and market liquidity, all large banks and about 80 percent of medium and small banks would remain liquid (with the illiquid banks accounting for less than 4 percent of the system’s assets). Only in case of extreme contagion (default of a bank leading to large funding losses for *all* banks) would the system come under significant stress.

Nature/Source of Main Risks	Likelihood of Severe Realization of Risk in the Next one to three years	Expected Impact on Financial Stability if Risk is Realized
		• A sudden-stop or reversal of inflows could also lead to interest rate spikes and declines in assets prices (in 2008, equity prices declined about 50 percent and sovereign spreads increased about 400 bps). Again, however, stress tests show that the direct impact of higher interest rates, a more depreciated exchange rate, and a large drop in equity prices would have only a limited impact on bank CAR, although large declines in sovereign bond prices could have a more significant impact. • The corporate sector does not appear very vulnerable to a sudden stop or reversal of capital inflows. Corporate external debt has declined and it is mostly long-term, and corporates are not engaging in the type of derivatives transactions that resulted in large losses for some large corporations in 2008. • The flexible exchange rate and high level of international reserves can help mitigate the impact of a sudden stop or reversal of capital inflows on the broader economy.
Commodity price shock	*Medium* • The risk of a substantial commodity price shock is related to the uncertainties faced by the global economy (particularly a global recession scenario, see above). In addition, recent technological challenges harvesting deep-water oil reserves have caused some uncertainty with respect to the timing of availability of the Brazilian oil reserves. • The impact of a potential sharp drop in commodity prices on Brazil also depends on the specific economic development of its main trading partners, especially China.	*Medium* • Given the growing importance of commodity exports for Brazil, price movements directly affect the economy. In addition to the direct impact on the commodity sector a sharp decline in commodity prices could trigger downturn pressures for other, related sectors and, depending on the severity and duration of the shock, on the economy overall. • Stress tests show that the system is resilient to severe downward pressures on commodity prices for up to two years. Such shocks might have an impact more on bank solvency rather than liquidity, which is likely to be similar to that of a global economic recession.
Large real estate price shock	*Low* • Given the recent rapid growth in housing prices and credit, the risk of a large decline in real estate prices has increased.	*Medium/Low* • A real estate price shock could lead to increased default rates on housing loans (10 percent of total loans on average, but higher for some banks) as well as loans to property developers (1½ percent of total).

Nature/Source of Main Risks	Likelihood of Severe Realization of Risk in the Next one to three years	Expected Impact on Financial Stability if Risk is Realized
		• Moreover, a real estate price decline could have a negative wealth effect on growth, which would further negatively impact banks' asset quality. • Banks significantly exposed to real estate would not only face higher default rates but recovery rates would also go down (reflecting lower collateral values). Given the high share of residential and commercial real estate loans in some banks' balance sheet (notably the public banks that grant credit to low-income households), the impact on those banks could be substantial. However, the impact on the system as a whole would be limited: sensitivity tests show that even in the event of all mortgages defaulting (with no second-round effects) system CAR would only decline by about one percentage point.
Failure of a foreign parent bank	*Low/Medium* • The condition of various foreign parent banks remains fragile (especially those in peripheral Europe). Even if parent banks did not fail, there could be some degree of contagion within their specific group, affecting confidence in host countries, including Brazil.	*Low* • Given the self-sustainable nature of foreign banks in Brazil (more so in terms of solvency than in case of liquidity), direct risks remain contained. Contagion tests also show that the failure of one bank would not have large knock-on effects given limited direct exposures. Indirect confidence effects could have a more adverse impact, but are difficult to quantify. The high level of required reserves is also a major mitigating factor.

Appendix II. Brazil: Stress Testing Matrices

Stress Test Matrix for Solvency

Domain	Assumptions		
	Bottom-Up by Banks	Top-Down by Authorities	Top-down by FSAP Team
Institutions included	NA	• All banks (137)	
Market share		• Percentage of total sector assets: 100	
Data and baseline date		• Supervisory	
Methodology		• BCB stress testing framework (not reported)	• Schmieder, Puhr and Hasan (2011)
Stress test horizon		• 18 months	• Five years
Shocks		• Macro: severe global recession double dip (2.5 standard deviations from trend growth during two years). • Other scenarios: Sudden Stop and Terms of Trade Shock; simulation of a commodity price shock and a single factor shock for the real estate sector; • The trajectories of the relevant macroeconomic variables were projected based on VAR analysis and econometric models. • Market risk shocks for relevant risks (FX Rates, IR, asset prices)	
Risks/factors assessed		• Credit losses and pre-impairment income (modeling of components) based on satellite models • Market risks.	
Calibration of risk parameters		• Point in time risk parameters for credit risk parameters or proxies.	
Behavioral adjustments		• Credit growth projected by satellite model. • Dividend payout depending on scenario.	
Regulatory standards		• Hurdle rates based on Basel II/III minimum for Core tier 1, Tier 1, and Total Capital, in line with regulation for Brazil • Basel II/III	
		• Standardized Approach	• Standardized Approach & quasi-IRB
Results		• CAR/shortfall, system-wide and by bank. • Pass or fail; percentage of assets that fail. • Distribution of capital ratios across the system by bank group/type. • Sensitivity tests for concentration risk and market risk.	

Source: IMF staff.

Stress Test Matrix for Liquidity

Domain	Assumptions		
	Bottom-Up by Banks (if applicable)	Top-Down by Authorities (if applicable)	Top-down by FSAP Team (if applicable)
Institutions included	NA	• All (137)	NA (Framework by Schmieder and others (2012) used for robustness checks and to shed some light on international comparisons, but not reported).
Market share		• 100	
Data and baseline date		• Supervisory data.	
Methodology		• Bank-run type test (measured through "Liquidity Ratio"), Basel III ratios (LCR, NSFR); Simulation of funding liquidity & market liquidity (idiosyncratic shock and general market shock), maturity mismatch (NSFR), concentration of funding.	
Risks		• Market and funding liquidity risks.	
Regulatory standards		• BCB "Liquidity Ratio" is used in Brazil for monitoring purposes; Basel III ratios will become binding according to Basel III schedule.	
Results		• Pass Rate (by number of banks and assets).	

Source: IMF staff.

Stress Test Matrix for Other Systemic Risks

Domain	Assumptions		
	Bottom-Up by Banks	Top-Down by Authorities	Top-down by FSAP Team
Institutions included		• All (893 financial institutions with interbank exposures (out of a total of 2,000 financial institutions), thereof 137 banks)	• Network model
Market share		• Close to 100 of assets of the financial system	
Data and baseline date		• Supervisory	• Supervisory
Methodology		• BCB's network model, simulating the impact direct and indirect contagion (the latter through liquidity)	• Network model used to analyze direct contagion through interbank exposure.
Stress test iterations		• As many as new equilibrium is found	• As many as new equilibrium is found
Shocks	• Simulation of the impact of a default of whatsoever institution(s)s		
		• Simulation of bilateral knock-on effects; percentage of assets that fail	• Map of interbank lending (based on tiering) • Simulation of bilateral knock-on effects

Source: IMF staff.

Annex I. Basel Core Principles—Summary Assessment

Introduction and Methodology

47. **This assessment of the Basel Core Principles for Effective Supervision (BCP) was conducted as part of the 2012 FSAP update**. The supervisory framework was assessed against the BCP methodology issued by the Basel Committee on Banking Supervision (BCBS) in October 2006, using both essential and additional criteria. The BCB is the sole supervisor of the banking system and as such, the assessment covers only the BCB. The assessment was performed by Laura Ard (World Bank) and José Tuya (IMF consultant) from February 27 through March 20, 2012.

Institutional, Macroprudential Setting and Market Structure

48. **The Brazilian banking system is large, concentrated, and highly interconnected domestically, but with relatively limited foreign participation**. There are 1,475 deposit-taking financial institutions with assets exceeding 100 percent of GDP, including 137 banks, 4 development banks, and one savings bank as of November 2011. The five largest banks account for two-thirds of total assets and are typically part of larger financial conglomerates, which often include insurance, securities brokerage, and asset management operations. Foreign banks (mainly from Europe) control slightly less than 20 percent of total banking assets (down from close to 30 percent in 2002 and significantly less than in some other Latin American countries).

Banks by Ownership
(In percent, unless otherwise noted)

Banks by control[1/]	Number	Net Worth	Total assets	Deposits	Loans
Public	13	33.5	43.3	45.9	41.9
Private	124	66.5	56.7	54.1	58.1
Domestic	67	39.6	39.1	38.0	40.2
Under foreign control	57	26.9	17.7	16.1	18.0
Total	137	100.0	100.0	100.0	100.0

As of September 2011.
1/ Public Includes BNDES and the Federal Savings Bank (Caixa).

49. **The banking system reports high levels of capitalization, liquidity and profitability.** In September 2011, Brazilian banks, in general, were capitalized above regulatory minimum levels. The average Basel capital adequacy ratio was 17.2 percent, well above the 11 percent required in Brazil, and above the 8 percent required by the Basel I and Basel II standards. The leverage ratio (around 10 percent) and liquidity ratio based on a liquidity buffer/stressed cash flow (around 1.1) were also prudentially adequate. The Return on Equity (ROE) of the banking system was 22.8 percent.

50. **The Brazilian legal framework provides adequate support for banking supervision.** The BCB de facto operates independently and has the authority to impose sanctions and preventive or corrective action, and to resolve weak banks.

51. **The debt collection process has improved and supported the increase in credit to individuals.** The reform of the Bankruptcy and Judicial Recovery Law (Law 11101) in 2005 was an important step in the evolution of the Brazilian credit market, since it establishes the priority of bank liabilities over the tax liability. The result is a more efficient debt collection process, especially for home loans and vehicle financing. Along with the introduction in payroll deduction loans in 2004, this is considered the most relevant factor for the increase of credit to individuals over the last few years.

52. **The Brazilian system of payments and settlements exhibits high compliance with international standards and includes mandatory central counterparty (CCP) settlement and reporting of over-the-counter (OTC) derivatives transactions.** The six main components of the system covering payments, foreign exchange, securities, and derivatives settlement that are considered systemically important are the BCB's large-value real time gross settlement system (RTGS); the OTC clearing house for corporate bonds, securities issued by state-owned companies, derivatives and State and Municipal bonds (CETIP); the central depository and clearing and settlement institution for government securities (SELIC); the equities clearing house and CCP (*BM&FBovespa Ações)*; the derivatives clearing house and CCP (*BM&FBovespa Derivativos*); and the foreign exchange clearing house and CCP (*BM&FBovespa Câmbio*).

53. **The accounting council has adopted international auditing norms and is adopting international accounting norms**. The Federal Accounting Council (CFC) was created to advise, regulate and supervise the accounting profession and issues technical and professional norms. There is also the Institute for Independent Auditors of Brazil, which is an independent, non-governmental entity that convenes auditing and accounting professionals, and issues guidelines of a practical nature, which are commonly referred to by the CFC. The CFC already adopted the auditing norms issued by the International Federation of Accountants (IFAC) and is in the process of adopting the accounting norms issued by the International Accounting Standards Board (IASB).

54. **The BCB is responsible for issuing accounting norms for the banking sector, and listed banks must also comply with CVM regulations**. The BCB's responsibility for accounting norms is established in Law 4595/64 and Article 61 of Law 11941/2009. The accounting regime for banks is in the process of convergence with the International Financial Reporting Standards (IFRS) issued by the IASB. CVM's regulations, which do not conflict with those issued by BCB, are also applicable to financial institutions that are listed, as established by Article 22, §2 of Law 6385/1976. Since December 31, 2010, listed banks must publish accounting statements in accordance with international standards.

55. **Auditors that provide services to institutions supervised by the BCB are subject to stringent independence and professional criteria**. These include a certification exam that covers specific knowledge of the financial system, as well the international norms set out by IFAC.

56. **Banks are required to disclose accounting, prudential and other types of information.** In addition to disclosing to the general public, financial institutions are required to send periodically individual and consolidated accounting statements to the BCB, in compliance with both the Banking Law and the Corporate Law.

57. **Deposit insurance is provided by the Credit Guarantee Fund (FGC)**. The FGC is a private entity established by Resolution 2197 to manage a protection mechanism for financial institution creditors in case of a default. Investors and depositors of multiple banks, commercial banks, investment banks, development banks, the Federal Savings Bank, credit, financing and investment companies, mortgage companies, and savings and loan associations are entitled to protection by the FGC. The maximum value guaranteed by the FGC is R$70,000. Funds for the guarantees provided by the FGC come from associated institutions' ordinary contribution, fees from the default of checks, credit rights subrogated by the FGC from associated institutions, as well as from the results of the services rendered by the FGC and the interest from investing its resources.

Main Findings

58. **The main recommendations of the 2002 FSAP with respect to banking supervision were largely addressed.** The licensing process was tightened, the memorandum of understanding (MOU) between BCB and CVM has been fully implemented, and the improvement of capital quality by excluding goodwill and tax credits was (is) being addressed by the implementation of Basel II (and Basel III). However, the recommendation concerning the need to amend legislation to formally ensure the autonomy of the BCB remains unaddressed.

59. **Since 2002, the banking supervision planning process has been upgraded significantly.** The BCB has established the Annual Program of Supervision that encompasses the planning of supervisory activities. The supervisory program is based significantly on the outputs from the Risk and Control Assessment System (SRC), which is a well-structured methodology for identifying and assessing the most relevant risks of institutions, as well as the quality of internal controls and risk management systems. The SRC provides a comprehensive understanding of the operations and risk profiles of the banks and aids in allocating resources in accordance to risk.

60. **Corrective actions and enforcement have also improved, although actions against weak banks could be hindered by the minimum dividend payout rule for preferred stock shareholders**. The timeliness of corrective action has been improved by the adoption of regulations (resolutions) that enable the BCB to impose corrective action based on judgmental factors, such as the adequacy of corporate governance. Furthermore, with the implementation of Pillar 2 BCB enforcement now takes on a more preventive approach that may correct unsafe and unsound practices before they impact the bank condition. However, banks are subject to corporate law in the area of dividend pay-out, which in most cases requires that at least 25 percent of profits must be paid to preferred stock shareholders. Although the BCB could mitigate the requirement by asking for additional provisioning and capital to offset the dividend, the requirement hinders the ability of the BCB to preserve capital in a weak bank situation.

61. **Although the BCB operates with de facto independence, amendments to the Banking Law (Law 4595/1964) could protect operational independence**. The BCB has a tradition of operating independently. However, as also recommended in the previous FSAP, the independence should be codified by granting the BCB authority to directly issue resolutions without having to go

through the National Monetary Council (CMN), establishing in law the a fixed-term and reasons for removal of the BCB Governor.

Objectives, independence, powers, transparency, and cooperation (CP 1)

62. **Formal aspects of independence and hiring remain an issue, although operationally the BCB functions efficiently and without evidence of interference**. There is a long-standing tradition of independent operation and since the last FSAP the legal protection of the BCB governor and the BCB's enforcement powers have been strengthened. However, one of the main recommendations of the 2002 FSAP concerning the need for a fixed term for the Board has not been addressed. Furthermore, the law should require specific reasons ("due cause") to justify removal of the governor and allow the BCB authority to issue prudential regulations directly (without going through the CMN). Hiring is based on civil service entry examinations for entry level positions, and the BCB has the flexibility to tailor the examination to the expertise needed. However, to protect the integrity of the civil service, the BCB is not permitted to hire specialized staff at other than entry level positions. While the supervisory staff is well trained and talented and some experienced staff has been hired at the entry level, it is recommended that the employment framework be reviewed to determine whether technical position staffing depth is adequate.

Licensing and structure (CPs 2–5)

63. **The licensing process has been enhanced and recommendations of the 2002 BCP assessment implemented**. The licensing process involves a thorough analysis of strategic plans, capital projections, and fit-and-proper tests. Additionally, for the first three years of operation the new bank is closely monitored to determine its ability to achieve projections.

64. **Although the Banking Law requires banks to obtain the prior approval of the BCB to invest in any company, this was not implemented until recently**. Article 30 of the Banking Law states that: "private credit institutions, with the exception of investment institutions, may participate in the capital of any company only with prior authorization from the Central Bank of Brazil." However, Resolution 2723 failed to include this requirement. As a result, investments, other than where control of a financial institution is involved, were not subject to BCB approval, but required ex-post notification. After the mission concluded, Resolution 4062 was issued requiring prior BCB approval for acquisition of an interest in nonfinancial institutions.

Prudential regulation and requirements (CPs 6–18)

65. **The quality and risk-sensitivity of capital has been improved**. The quality of capital was improved by excluding goodwill (which was a recommendation of the 2002 FSAP). Basel II implementation started in 2007; all regulations for credit and market risk approaches are currently in place and the regulation for the advanced approach for operational risk was issued for public comment in March 2012. The prudential framework governing loan securitization was strengthened in 2008 by requiring banks to report securitized loans on their balance sheets, unless a final and irrevocable transfer of risk is in place. The forthcoming implementation of Basel III

will further improve the quality of capital; in particular, Brazil will begin the phase-out of deferred tax assets in 2012 (ahead of the international timetable).

66. **Since June 2010 banks have been allowed to apply for the use of internal models for market risk, and from December 2012 will be allowed to apply for the Internal Ratings Based (IRB) approach for credit risk.** Applications for market risk approaches started being filed in 2011. After a lengthy consultation period, the regulation for IRB approval was issued. Starting in December 2012 banks can apply for approval to implement the IRB approach. Approvals to implement IRB are expected in 2013 after the validation process. Banks will file the first internal capital adequacy assessment process (ICAAP) report in July 2013.

67. **Consultations are now underway for the gradual phase-in of Basel III**. A challenge for some banks will be deductions for deferred tax assets, which now account for about 20–25 percent of Tier 1 capital but which are not allowed under Basel III. Banks are expected to meet the new standard primarily through a mix of retained earnings and some stock issuances.

68. **Collection of country risk data has been expanded and cross-border exposures are not significant**. Banks cannot place abroad funds raised in Brazil and only funds raised directly by the facilities located abroad can be invested in foreign securities and corporates. The vast majority of transactions conducted by Brazilian banks' foreign branches are related to Brazilian bonds issued abroad or financing local clients or Brazilian companies. The total securities of the six largest Brazilian banks in December 2011 were R$630 billion and foreign securities represented only 1.4 percent.

69. **A comprehensive legal framework and supervisory process is in place for Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT)**. The BCB closely monitors compliance through a mix of offsite and onsite activities, including horizontal reviews by its specialized AML/CFT staff. The field work is supported by detailed inspection procedures and is included in the SRC.

70. **Requirements for risk management oversight and structures are comprehensive, include conservative assumptions, and are linked to capital adequacy determination**. For purposes of supervisory oversight, risk is divided into eleven risk categories: credit, market, liquidity, corporate (level) operational, business area operational, contagion, legal, reputational, strategic, information technology (IT) and money laundering. Risk monitoring is a key activity and substantive analysis of each risk group and the respective management process is conducted. Controls are expected to exist and be commensurate with the size and complexity of the operations of each institution. Risks are evaluated at the institution level as well as at the consolidated level. Supervision examines the risk metrics used by banks to measure their risk, including the assumptions used in the stress tests. Supervision also runs stress tests on banks' positions. Capital calculations for each risk are prescribed and are consistent with or more conservative than those of Basel II. Risk ratings are assigned not only for banking and banking related activity but also for insurance and asset management in the relevant cases. Contagion risk is also rated in the context of the impact the given institution would have on the system if it experienced significant financial distress. The risk rating process is quite granular and is built upon layers of various risk

considerations including assessments of corporate governance, management (and AML specifically), as well as of the direction and trend of the risk.

71. **Banks are required to implement adequate internal controls for their activities and must be in compliance with the relevant legal norms and regulations**. The Supervisor can direct additional controls if risk management deficiencies are found, and it can impose more restrictive operational limits when such deficiencies are not corrected on a timely basis. Recent regulation has provided the Supervisor with the basis to address risk management and control concerns on a proactive basis rather than waiting for identified concerns to have an impact on the financial condition and performance of the institution.

Supervisory Process and Accounting and Disclosure (CPs 19–21)

72. **The BCB carries out rigorous, intrusive risk based supervision**. Processes are well developed based on extensive information and intensive analysis. Supervision is tailored to each institution based on its risk profile and the size and complexity of its activities. Accordingly, each institution is on a 12 or 24-month supervisory cycle, which is planned and guided by the plan set out by the SRC. The supervisory plan consists of a combination of continuous monitoring and onsite activities. Systemic banks are considered as high priority due to their impact. Turnover is low at the BCB and the number of existing staff (over 700 supervisors and examiners) supports the number of activities planned in the annual supervisory plan.

73. **An overall risk rating is assigned to each institution based on quantitative and qualitative measures**. The quantitative rating is based on indicators of asset quality, capital adequacy, liquidity, and profitability. The qualitative rating is based on an analysis of: (1) business risks and controls: credit, legal, operational, market, liquidity and contagion risks. (2) corporate functions and controls: strategic, reputation, information technology, money laundering and operational risk. The contagion risk analysis includes the risks posed to the banking group from nonbanking affiliates and subsidiaries. The bank is assigned a qualitative, quantitative and an overall numerical rating ranging from 1–4 and the frequency and scope of the activities will reflect the risk of the institution. Frequent discussions with banks take place to discuss performance and the level of the discussions reflect the risk profile of the bank.

74. **State-banks are systemically significant and are subject to the same supervisory process as private institutions**. A review of annual supervisory plans, reports of inspection, and enforcement actions for the state-owned banks did not reveal any difference when compared with private banks. The inspection reports are detailed and highlight deficiencies concerning corporate governance, information systems, and capital. A case reviewed highlighted internal control deficiencies and the follow-up action by the BCB was prompt, requiring correction plans, and discussions with the bank's board.

75. **Continuous monitoring leverages information from several sources including banks' regulatory reporting and data links with clearing houses and registrars**. Virtually every financial instrument is registered in Brazil, and the supervisor is able to access transactional information for each and every bank with a one day lag. Subsequently, supervisory systems can

monitor transactions as well as reconstruct various bank positions such as liquidity positions, funds provider information, and market risk exposures. The BCB, based on its information flows, is able to stress test certain positions and monitor extraordinary trends. Activity identified outside of normal parameters is flagged and further follow-up conducted.

76. **The onsite department is configured into teams responsible for designated institutions or groups of institutions as well as specific risks**. Teams monitor information generated by continuous monitoring system, as well as conduct their own monitoring and oversight according to the supervisory plan and cycle established for each institution. The onsite department houses teams specialized in specific risks, including: (i) credit, liquidity, market, and operational risks; (ii) legal and fiscal issues; (iii) validation (internal models); (iv) Basel II and III implementation; (v) corporate governance and internal controls; and (vi) AML. Supervisory cycles begin and end with a full review of the given institution, evaluation of supervisory activities and results, and development of a subsequent supervisory plan.

Accounting and Disclosure (CP 22)

77. **Banks are required to comply with BCB established regulatory accounting standards and to appoint a director specifically responsible for compliance with the required standards, basic accounting principles, and professional ethics and banking secrecy rules**. All banks are required to publish semiannually audited statements according to the accounting plan of national financial system institutions. Conglomerates that include a publicly listed financial institution or financial institutions required to appoint an audit committee must also produce annual statements according to IFRS. Furthermore, financial conglomerates are required to publish consolidated statements according to IFRS. All financial institutions must receive an external audit according to international audit standards. Since 2008, the BCB has been conducting an Accounting Convergence Project for the purpose of evaluating the differences between the local and international standard, with the aim of convergence of domestic rules applied to general purpose financial statements of banks to IFRS where feasible. In general, national standards for financial institutions result in more conservative figures, particularly regarding provisioning.

Corrective and remedial powers of supervisors (CP 23)

78. **Enforcement powers are broad and have been significantly enhanced with the issuance of Resolution 4019**. The resolution improved the ability of the BCB to require early correction of issues identified through its supervisory process by making it possible to require correction based on judgmental views on the adequacy of internal controls or corporate governance, thus not having to wait until the bank condition demonstrated quantitative indications of deterioration.

79. **A number of examples of enforcement cases were reviewed and the proactive nature of the BCB was evident**. The BCB has taken enforcement action due to inadequate corporate governance and internal controls and has taken enforcement action for capital and asset quality issues. The actions are initiated by a letter of issues sent to the bank asking for resolution of the issues within a timeframe. The enforcement action escalates quickly after the timeframe expires

without adequate bank response. The actions are closely tracked in the ongoing supervision process and, if needed, intervention of the bank takes place to protect the erosion of bank capital. The BCB meets with the Board and management and stresses the significance of its recommendations.

80. **Brazilian corporate law requires companies to pay a minimum of 25 percent of profits as dividends for preferred shares**. While the BCB could offset this requirement for banks in a weak situation by requiring increased provisioning or additional capital, a permanent solution would exempt banks from the requirement.

Consolidated and cross-border banking supervision (CPs 24–25)

81. **The BCB has broad authority to conduct consolidated supervision**. The BCB is empowered to supervise banks on a solo and consolidated basis, including all the offices or entities within the group, irrespective of their location or legal structure.

82. **Consolidated supervision is primarily based on the information compiled at the parent bank level in order to manage the risks and controls across the group**. Parent banks are subject to mandatory detailed regular reporting to the BCB, which also covers internal global risk management and information on internal controls. Additionally, the BCB coordinates and exchanges information with domestic and foreign supervisors to attain a full view of risk.

83. **Through supervisory colleges and on a bilateral basis, the BCB collaborates with home-host supervisors**. As home supervisor, the BCB conducts supervisory colleges for Banco do Brasil and Itaú-Unibanco and participates as host in a number of others. Additionally, the BCB has signed MOUs with a number of countries.

Table 6. Summary Compliance with the Basel Core Principles—ROSCs

Core Principle	Comments
1. Objectives, independence, powers, transparency, and cooperation	
1.1 Responsibilities and objectives	
1.2 Independence, accountability and transparency	The BCB cannot issue prudential regulations directly. The Banking Law does not require "due cause" for the removal of the Governor.
1.3 Legal framework	
1.4 Legal powers	
1.5 Legal protection	
1.6 Cooperation	
2. Permissible activities	
3. Licensing criteria	
4. Transfer of significant ownership	
5. Major acquisitions	The banking law requires that investments by banks need the prior approval of the BCB. However, in practice the BCB has not implemented the requirement. To address the deficiency, the BCB adopted Resolution 4062 on March 29, 2012.
6. Capital adequacy	
7. Risk management process	
8. Credit risk	
9. Problem assets, provisions, and reserves	
10. Large exposure limits	
11. Exposure to related parties	
12. Country and transfer risks	
13. Market risks	
14. Liquidity risk	
15. Operational risk	
16. Interest rate risk in the banking book	
17. Internal control and audit	
18. Abuse of financial services	
19. Supervisory approach	
20. Supervisory techniques	
21. Supervisory reporting	
22. Accounting and disclosure	
23. Corrective and remedial powers of supervisors	There is a floor of 25 percent of net profits that must be distributed to holders of preferred shares of banks.
24. Consolidated supervision	
25. Home-host relationships	

Table 7. Recommended Action Plan to Improve Compliance with the Basel Core Principles

Reference Principle	Recommended Action
1(2). Independence, accountability and transparency	Enhance the *de jure* independence of the BCB by providing in the law that the Governor and the Board of the BCB can only be removed for "due cause," which should be detailed in the law. Also consider establishing a fixed term. Grant the BCB authority to issue prudential regulations directly without having to work through the CMN. Inject limited flexibility to hire technical experts at other than entry level.
5. Major acquisitions	Adoption of Resolution 4062 on March 29, 2012 addressed the deficiency of the prior regulation, which did not stipulate that banks' investment in other companies receive the prior approval of the BCB (as required by law). A *de minimis* level should be established to avoid excessive filings.
23. Corrective and remedial powers of supervisors	Exempt non-listed banks from the corporate law requirement that 25 percent of net profits must be paid as dividends to preferred shareholders.

Authorities' response to the assessment

84. **The authorities indicated their overall agreement with the assessment and offered additional inputs to clarify several of the points contained in the text**. To address the rating on CP5, the BCB, on March 29, 2012, approved Resolution 4062 requiring banks to seek the prior approval of the BCB to invest in the shares of other financial institutions or companies.

Annex II. IAIS Core Principles—Summary Assessment

Introduction and Methodology

85. **This report is based on a full assessment of Brazil's compliance with the International Association of Insurance Supervisors (IAIS) Insurance Core Principles (ICPs)**. The review was carried out by Rodolfo Wehrhahn (MCM) as part of the 2012 Financial Sector Assessment Program (FSAP) assessment of Brazil. It used the ICPs adopted in October 2011, and was based on the regulatory framework, the supervisory practices, and other conditions as they existed in March 2012. The assessor had access to a complete self-assessment and responses to a detailed questionnaire that had been provided by Superintendency of Private Insurance (SUSEP) prior to the commencement of the exercise. The assessor met with staff from SUSEP and various government ministries, insurers, industry associations, professional bodies and firms, and rating agencies.

Institutional and Market Structure

86. **Regulation and supervision of the insurance industry in Brazil is the responsibility of the National Council for Private Insurance (CNSP), with implementation by SUSEP**. Ultimate supervisory authority is held by the *Conselho Nacional de Seguros Privados* (CNSP)—National Council for Private Insurance, which is the system's deliberative body, responsible for setting the Brazilian government's policies, guidelines, and directives for insurance, reinsurance, capitalization, and open private pension entities. SUSEP, which is directly linked to the Ministry of Finance, acts as the executive arm of the CNSP and is responsible for the supervision and control of these entities.

87. **The insurance industry has grown rapidly in the last few years, and has the potential to grow further given its relative underdevelopment**. Premiums doubled between 2005 and 2010, supported by financial and currency stability, the steady growth of the economy, credit availability as well as policies to promote savings through insurance vehicles, e.g., tax incentives. Notwithstanding this surge, the average Brazilian spends less than US$350 on insurance per year and insurance penetration is only 3.5 percent, which is around 50 percent of the average for OECD countries. Much effort has been dedicated to encourage further growth of the insurance sector, in particular in the low income segment, including a specific regulation for microinsurance enacted at the end of 2011.

88. **Profitability has been consistently high over the last five years, the solvency ratio is strong, and other financial indicators also suggest resilience**. For life insurers the combined ratio (incurred losses plus expenses to earned premium) has been around 75 percent and the return on equity (ROE) above 20 percent. The nonlife business, while having a higher combined ratio of around 100 percent, has nevertheless been able to maintain a high ROE of between 47 percent and 34 percent. The investment income of around 25 percent of the premium in both industries has also supported profitability. Under the current regulatory solvency requirements the life insurance sector has an average margin of 250 percent above the regulatory requirements, while the nonlife sector is 90 percent above the required solvency margin. The risk ratio (capital and surplus to underwritten premium) is around 1.7 and capital plus surplus to total assets is 8.3 percent, both

within international norms for sound companies. Investments are conservative and short term, primarily comprising fixed income instruments.

Main Findings

89. **SUSEP has been strengthening the solvency requirements towards a more risk sensitive regime**. It has recently incorporated specific capital risk surcharges for the nonlife underwriting risk and for credit risk, and is working on the surcharges for the market, operational, and life underwriting risks. This upgraded capital requirements, which until 2010 were based on the type of license and geographic area of action plus Solvency I requirements. As a result, on average, an additional capital surcharge of 35 percent has been required under the new regime.

90. **Public disclosure is extensive and timely**. Detailed organizational, operational, financial, statistical, and risk management information are disclosed, including the composition of the capital requirements. The information is disclosed in a timely manner and allows a good understanding of the current financial position and risk exposures of insurers. Audited information is required biannually.

91. **SUSEP engagement on internal controls is commendable**. In recent years, SUSEP has emphasized the importance of risk management and internal controls, including requiring insurers and intermediaries to have controls in place to deter, prevent, detect, report and remedy fraud in insurance. SUSEP also requires an opinion of the external auditor on the effectiveness and well-functioning of the firm's internal controls, as prescribed in CNSP Resolution 280 of 2004.

92. **Licensing, changes in control, portfolio transfers, and suitability requirements are largely in line with international standards, although there is some room for improvement in the licensing process**. The licensing requirements are clearly stated and cover both financial as well as non financial aspects warranted for sound operation. However, there is room for improvement in the licensing process: consultation with the home supervisor should be part of the licensing process of foreign participants, and a period to grant a license should be introduced to increase transparency in the licensing process.

93. **The complex mandatory reinsurance cessions rules should be replaced with risk-based supervision**. A complex mechanism is in place to track the mandatory reinsurance sessions to local reinsurers. This adds costs and possibly hinders market development. SUSEP should remove any limits on the type of cessions that are allowed in dependence of the reinsurer's license and move to a system based on risk capital, such that the use of a reinsurer that presents higher risk to the insurer should require a higher capital charge, or a limited recognition of the reinsurance credit on its balance sheet.

94. **Governance and enterprise risk management for solvency purposes, cooperation, and information sharing, as well as cross-border crisis prevention and macroprudential surveillance, need to be developed further**. Minimum corporate governance requirements applicable to insurers in Brazil are contained in a few CNSP resolutions in addition to those set out in the Companies' Act. The establishment of corporate governance should be required by

regulation, which should be consistent with international standards. No requirements exist with respect to enterprise risk management for solvency purposes. Furthermore, regulatory and supervisory action is needed to meet the new international standards with respect to cross-border crisis prevention and insurance supervision, as well as macroprudential surveillance. In particular, cooperation with foreign jurisdictions needs to be enhanced and formalized, and the signing of the IAIS Multilateral MOU is strongly recommended.

95. **There has been important progress in consumer protection in the last few years, but more work is needed**. The requirement for each insurer to establish an effective ombudsman has proven to be a successful measure to protect consumers, and that of having claims paid within 30 days is also commendable. However, except for pension plans, there are no requirements on the type of information consumers should receive before, during, and after purchasing an insurance product. There are also no requirements on the disclosure of commissions, nor with regard to the conflict of interest that intermediaries may have when advising on the purchase of insurance. This is important, given the large financial conglomerates operating in Brazil. Also, the large number of first-time consumers into the insurance marketplace requires further strengthening of consumer education and protection, in particular through the design of simple products for low-income consumers. To enhance consumer protection, transparency requirements need to be introduced (i.e., clear disclosure of conflict of interests of intermediaries, requirements to offer a number of similar products together with the disclosure of the product with the highest commission, etc.). Microinsurance regulation should place particular emphasis on the simplicity of products.

96. **The legal framework should be strengthened to provide SUSEP the independence and capacity to fulfill effectively its mandate and objectives**. Currently, the law has several weaknesses that should be addressed to enhance SUSEP's operational independence. Weaknesses include:

- The CNSP can and has issued regulation based on limited technical input from SUSEP.
- The MOF must approve how SUSEP uses its allocated budget.
- There is no framework for the nomination of the Superintendent and Directors and there are no minimal requirements on their qualification. The President of the Republic nominates and can dismiss at any time the Superintendent and the Directors of SUSEP. Similarly, the Superintendent nominates and can dismiss at any time the officers of SUSEP. Dismissal reasons are not published.

97. **The regulatory framework for group supervision is weak and lacks a definition of a financial group or conglomerate for the purposes of insurance supervision**. The market is dominated by insurers that belong to large financial groups or conglomerates. However the supervision of insurance companies is carried out on a solo basis. The lack of consolidated supervision of the insurance group can create supervisory vulnerabilities that need to be addressed. The required regulation for consolidated supervision need to be developed and implemented, including the introduction of enterprise risk management (ERM) and capital requirements at the insurance group level.

98. **SUSEP needs to strengthen the supervision and inspection of brokers**. Currently around 88 percent of the insurance business is sold by around 70,000 active brokers, but the supervision and disclosure requirements for these are thin. SUSEP should urgently publish the missing regulations for the brokers' self-regulation entity created by CL 137 to start supporting a tighter supervision of insurance intermediation. A mandatory affiliation to the self-regulating entity of all brokers together with strong governance and supervision of the entity by SUSEP is recommended.

Table 8. Brazil—Summary of Observance of the Insurance Core Principles

Insurance Core Principle	Overall Comments
1. Objectives, Powers and Responsibilities of the Supervisor	The authorities responsible for insurance supervision are clearly defined in the law. SUSEP, National Supplementary Health Agency and PREVIC are supervising insurance activity and therefore coordination among these entities is important to ensure consistency. SUSEP and the two agencies have started a dialogue that needs to be intensified and formalized. The objectives of supervision are well defined and include the protection of the interests of policyholders and beneficiaries and also the promotion of the development of the insurance market. SUSEP follows both objectives, avoiding conflicts by interpreting the development of the market as the development of a sound market. The recently-passed microinsurance regulation allows new distribution channels but maintains, following the proportionality principle of the complexity of the operations, prudential requirements on the providers.
2. Supervisor	The legal framework governing SUSEP contains elements that undermine the independence and capacity of the supervisor to fulfill effectively its mandate and objectives: • The CNSP can and has issued regulation limited technical input from SUSEP. • The MOF must approve the operational uses of the allocated budget, for instance the approval of international travel. • There are no framework or minimum requirements for the nomination of the Superintendent and Directors. They are nominated and can at any time be dismissed by the President of the Republic. Similarly, the officers of SUSEP are nominated and can at any time be dismissed by the Superintendent. Dismissal reasons are not published. • Legal protection for supervisors provides for defense by the Advocate General, however, this may not always be sufficient to ensure that no intimidation will take place. SUSEP lacks sufficient financial and staff resources to enable it to conduct supervision as effectively as necessary to fully meet its supervisory objectives. For instance, 55 inspectors inspect 183 insurers on a 3 years cycle; however, this frequency can create supervisory vulnerabilities especially in the case of large groups that require more intense onsite supervision. Brokers are only inspected in case of complaints, but over 80 percent of the insurance business is done through an intermediary. Limitations on its budget and number of staff, together with the requirement that all staff be hired through public competition, have led to shortages of staff in all departments. Furthermore, SUSEP has a very low training budget and does not have an organized, ongoing training program for its staff in spite of the large number of newly recruited staff (around 138 persons).

	Also, the legal provisions governing potential liability for officers and employees of SUSEP could be strengthened by clarifying that they will not be held liable while carrying out their duties in good faith. While they will be defended by the Advocate General, this may not always be sufficient to ensure that intimidation does not take place.
3.Information Exchange and Confidentiality Requirements	SUSEP has MOUs with the BCB and the CVM that are used regularly to exchange supervisory information. SUSEP has the authority to enter into agreements to exchange information with other regulators, supervisors, and self-regulatory organizations, both local and foreign. However, it has not yet entered into bilateral agreements with any foreign authorities. SUSEP has applied to participate in the IAIS Multilateral Memorandum of Understanding, but is not yet a signatory. The international aspect of information sharing is assessed in ICP 25.
4. Licensing	Licensing requirements to engage in insurance activities are set in the Insurance Law and unlicensed operations can be severely sanctioned. SUSEP only issues full licenses. However, composite insurers are allowed. The licensing requirements are clearly stated and cover both financial as well as non-financial aspects warranted for a sound operation. However, this does not include consultation with the home supervisor in the case of foreign insurers.
5. Suitability of Persons	The suitability of statutory position holders and of significant owners must be maintained at all times as a condition of maintaining a license. However, there are no specific requirements to communicate any changes on the suitability of these persons. SUSEP does not exchange information with foreign authorities in the process of approval; rather it puts the onus on the foreign individual to provide the required information from the foreign authorities.
6. Changes in Control and Portfolio Transfers	Both changes in control and portfolio transfers require written approval by SUSEP. There are clear rules and expectations set up by regulation on when SUSEP may approve such a petition. SUSEP's approval is required on acquisition of shares above five percent in one transaction or on an accumulated annual basis. With respect to portfolio transfers, the interests of the insured are taken into consideration as well as the economic and operational capacity of the entity assuming the business.
7.Corporate Governance	Minimum corporate governance requirements applicable to insurers in Brazil are contained in a few CNSP resolutions in addition to those set out in the Companies' Act.
8. Risk Management and Internal Controls	In recent years, SUSEP has more strongly emphasized the importance of risk management and internal controls. SUSEP requires an opinion of the external auditors on the effectiveness and well functioning of the internal controls of the audited company as defined in CNSP Resolution 280 of 2004. The quality of internal controls varies according to the size and complexity of the insurers. Large insurers have sophisticated systems in place according to international standards.
9.Supervisory Review and Reporting	SUSEP's inspections of insurers appear to be comprehensive. However, the frequency between inspections is not gauged to the size, complexity and risk profile of the insurers. The risk-based approach of supervision needs to be further developed and become part of SUSEP's culture. This will optimize the use of the limited resources with a stronger focus on the more complex and riskier insurers. While SUSEP has developed inspection modules for different areas, a comprehensive Inspection Manual does not exist. Onsite inspection of entities to which the insurers has outsourced certain functions is done indirectly through the supervised entity.
10.Preventive and Corrective	The supervisor has sufficient powers to take preventive and corrective

Measures	actions on a timely basis to protect the policyholders and SUSEP uses these powers extensively. SUSEP has the faculty to freeze the assets of the company backing up the reserves at any given time and without any condition. The possibility for escalation is provided by warnings, letters, and action.
11. Enforcement	SUSEP has the powers to enforce the measures imposed on the supervised entities and the process of recourses guarantees similar treatment for similar actions. However, the process of recourses takes too long and sanctions may be prescribed.
12. Winding-up and Exit from the Market	The winding up of insurers is carried out by SUSEP with the exception of major deficit or bankruptcy crimes. Legal priority is given to the protection of the rights and entitlements of policyholders only after liquidator fees, owed tax, and salaries within certain limits, and credits with collaterals (e.g., mortgages). However, the assets corresponding to retirement products are not legally segregated from the insurers' assets. By regulation, the insurers' assets backing up the technical provisions present a lien assigned to SUSEP and the insurer needs an explicit approval by SUSEP to gain control over them. This provides strong protection for policyholders and allows SUSEP a timely and effective enforcement tool in case of serious problems. In a winding up situation, however, there is legal uncertainty of the actions a liquidator might take in assigning those assets that legally belong to the insurer to policyholders' claims first.
13.Reinsurance and Other Forms of Risk Transfer	The opening of the reinsurance market is recent and as such the participants are still in the process of adaptation. SUSEP currently does not analyze the reinsurance contract to assess if the intended risk transfer has taken place Reinsurance contracts lack transparency.
14.Valuation	The methods used for the valuation of assets and liabilities have been specified by SUSEP and basically reflect IFRS 4 rules. In general, consistent and objective bases are used for the valuations of assets and liabilities: the valuation of assets and liabilities is largely an economic valuation. The recent introduction of the LAT is a step in the right direction in recognizing full economic valuation of the liabilities.
15.Investment	The investment requirements are transparent and their objectives include diversification, safety, profitability, solvency, and liquidity. The industry does not seem to be hindered by the existing investment limitations to execute appropriate investment strategies according to their liabilities, with the exception of the lack of long term assets to match long term liabilities existing in old annuity products.
16. Enterprise Risk Management for Solvency Purposes	Current regulation has no requirements with respect to enterprise risk management for solvency purposes. Enterprise risk management is an evolving field, both in Brazil and internationally. Some Brazilian insurers have sophisticated enterprise risk management systems, while others are at earlier stages of development.
17. Capital Adequacy	SUSEP has recently incorporated specific capital risk surcharges for the nonlife underwriting risk and for the credit risk. This is a positive step to modernize its capital requirements that until 2010 were based on the type of license and geographic area of action plus Solvency I. The use by insurers of approved internal models is recognized by SUSEP as a better risk control by allowing a lower capital surcharge in the nonlife underwriting risk. All capital requirements are at the legal entity level only.
18. Intermediaries	Brokers are required to be registered and to acquire sufficient level of professional knowledge to intermediate insurance. Currently, around 88 percent of the insurance business is sold by around

	70,000 active brokers, of which 46,000 are physical persons. However, the supervision and disclosure requirements are thin: Brokers are not required to submit financial and operational information of a nature that will demonstrate that consumer funds are not being misdirected or misused. SUSEP does not perform onsite inspections on a regular basis; rather it analyses all complaints received against brokers and performs onsite inspections in those cases it deems necessary. There are no requirements for insurance intermediaries to apply appropriate corporate governance. SUSEP has not developed specific requirements for the intermediation of insurance. There is no legal requirement that a broker who handles client monies must have safeguards in place to protect these funds. Only reinsurance brokers are required to obtain professional liability insurance and any reinsurance contract contains the intermediation clause.
19. Conduct of Business	The requirement to establish an ombudsman by each insurer has proven to be a successful measure to protect consumers. Since 2006, the number of complaints received by the ombudsman has more than doubled (from 1,756 cases to 4,114), attesting a greater acceptance of this system of resolution by the consumers. The high number of satisfactory outcomes, with only 4 percent of cases remaining unresolved and only 0.8 percent of them resulting in a fine, indicates a well-functioning consumer complaints process. The requirement of having the claims paid within 30 days is also a commendable element in the protection of customers, in particular given that the 30 days can only be stopped to request justified additional information. With the exception of open pension plans, there are no requirements on the type of information consumers should receive before, during, and after the insurance intermediation. Nor is there disclosure of commissions or the conflict of interest that intermediaries may have when advising customers on the purchase of insurance. The large conglomerates operating in Brazil creates a challenging environment when making sure the best advice, free from conflict of interests, is provided to customers. Another challenge is the large number of first time consumers of insurance products.
20. Public Disclosure	The amount of information publicly disclosed is timely and allows for a good understanding of the current financial position as well as risks exposures of insurers.
21. Countering Fraud in Insurance	SUSEP has taken an active role in the formalization of the requirements on internal controls to deter, prevent, detect, report and remedy fraud in insurance with Circular No. 344 of 2007. Quantification of fraud by the industry has been carried out since 2004 in a systematic way. The statistics show a constant level of proven fraud of around 1.4 percent of all claims paid throughout the years, while the relation between suspected fraud and proven fraud has increased from 11 percent in 2008 to 15 percent in 2010 indicating a higher level of effectiveness in combating insurance fraud after the formal involvement of SUSEP.
22. Anti-Money Laundering and Combating the Financing of Terrorism	Brazil has developed a comprehensive AML/CFT strategy which has enabled it to make systematic progress to enhance its implementation of AML/CFT measures. SUSEP participation in the implemented the strategy is strong and it has developed an inspection module dedicated to AML/CFT. The resources at SUSEP are limited and as such onsite inspections are carried out by general inspectors and not AML/CFT experts.
23. Group-wide Supervision	The market is dominated by insurers belonging to large financial groups. However the supervision of these large conglomerates is carried out on a

	solo basis. The missing picture of the whole group can created supervisory vulnerabilities that need to be addressed.
24. Macroprudential Surveillance and Insurance Supervision	SUSEPs current involvement on macroprudential surveillance and insurance supervision is limited to its role in the Subcommittee to Monitor the Stability of the National Financial System (SUMEF), which was created to expedite information sharing and coordinate macroprudential policies among domestic financial sector supervisory agencies.
25. Supervisory Cooperation and Coordination	SUSEP does not regularly communicate with foreign supervisors with respect to either foreign or Brazilian insurers. Being the host supervisor of all major international insurers and home supervisor of large conglomerates justifies the need for strong regular exchange of information with foreign supervisors.
26. Cross-border Cooperation and Coordination on Crisis Management	Cross-border cooperation and coordination specifically related to crisis management of Brazilian insurers is in its initial stages.

Table 9. Brazil—Recommendations to Improve Observance of ICPs

Insurance Core Principle	Recommendations
1. Objectives, Powers and Responsibilities of the Supervisor	To help ensure that the objectives of insurance and pensions supervision are pursued in a consistent manner, the CNSP, SUSEP, the National Supplementary Health Agency, and the PREVIC should consider establishing a formal process that would facilitate the regular exchange of views on the objectives of supervision and the manner in which those objectives might be achieved. In particular, the supervision of the same products, as is the case of pension funds, should be closely coordinated. The DL 73 dates from 1966 and needs urgent update.
2. Supervisor	Legislation should be enacted to strengthen SUSEP's operational independence by introducing a transparent appointment procedure, requiring technical input on any regulation, and providing autonomy on the use of the allocated budget. The legal provisions governing potential liability for officers and employees of SUSEP could be strengthened by clarifying that they will not be held liable while carrying out their duties in good faith. The establishment of ongoing and comprehensive training program for newly incorporated staff is strongly recommended.
3. Information Exchange and Confidentiality Requirements	The signature of the IAIS MMOU is recommended. To avoid a time-consuming case-by-case decision on information requests by foreign authorities, clarification on the conditions that allow exchanging information in the absence of an MOU is recommended. This will also allow for an active exchange of information with relevant foreign supervisors.
4. Licensing	Granting licenses with add-ons or limitations can be a way to increase market participation without endangering the protection of consumers. SUSEP should consider having the option to limit or restrict the licenses, at least for a period of time until it feels comfortable with issuing a full license.

	Consultation with the home supervisor should be part of the licensing process of foreign participants. A period to grant a license should be introduced to increase transparency in the licensing process. Licensing of composite insurers should be banned. The savings elements and long-term duration of the life insurance business as compared with nonlife business warrants a separate legal entity, in particular to increase transparency in winding-up situations with respect to customer investments in saving products.
5. Suitability of Persons	SUSEP should require proactive communication from the insurers in cases the statutory position-holders and significant owners are no longer suitable. To gain first-hand information and accelerate the approval process, SUSEP should exchange information with foreign authorities during the approval process of key positions and significant owners.
6. Changes in Control and Portfolio Transfers	
7. Corporate Governance	The establishment of corporate governance should be required by regulation, consistent with the standards under this principle, and supervision processes should be created to assess implementation. A good place to begin is with a “duty of skill and care” provision, which is a powerful motivator for boards of directors to follow sound business and financial practices. This can serve as the cornerstone of an effective corporate governance regime.
8. Risk Management and Internal Controls	A general opinion on the completeness and effectiveness of the internal models should be required of the external auditors, or CNSP Resolution 280 should be enhanced with an overarching statement on the effectiveness of the internal controls.
9. Supervisory Review and Reporting	The risk-based approach of supervision needs to be further developed and become part of SUSEP’s culture. This will optimize the use of the limited resources with a stronger focus on the more complex and riskier insurers. A comprehensive Inspection Manual needs to be created and—ideally—made public. This will reduce the chances of supervisors missing something during the inspection as well as set clear expectations for the insurers. SUSEP should be granted the power to conduct onsite inspections directly.
10. Preventive and Corrective Measures	Going forward, SUSEP should consider formalizing the ladder of intervention that it uses by introducing a proactive intervention framework that classifies supervised entities in different stages, each one requiring different types of preventive measures. Such a framework would have two key purposes. First, it would support early identification of risks to a firm’s viability and ensure that firms take appropriate remedial action to reduce the probability of failure. Second, it would flag actions that the authorities need to

	take in advance to prepare for the resolution of a firm.
11. Enforcement	The process of recourses needs to be streamlined to avoid any prescription of the sanctions. Also a shorter time between a sanction and a final decision is needed to maintain the effectiveness and timeliness of fines.
12. Winding-up and Exit from the Market	To improve protection of policyholders' interests, it is recommended that legal segregation be required, at least for assets corresponding to retirement products. This should be done without losing the current lien on the assets backing up the technical provisions.
13. Reinsurance and Other Forms of Risk Transfer	SUSEP should remove any limits on the type of cessions that are allowed in dependence of the reinsurer's license and move to a system based on risk capital. Thus the use of a reinsurer that presents higher risk to the insurer should require a higher capital charge for the insurer or a limited recognition of the reinsurance credit on its balance sheet. SUSEP should establish risk transfer requirements to reinsurance contracts and analyze them as part of its supervisory work. To enhance the transparency of reinsurance contracts SUSEP should forbid side letters. Steps should be taken to require more timely receipt of reinsurance documentation by cedants.
14. Valuation	Further development of the mandatory scenarios to assess the adequacy of the technical provisions is recommended.
15. Investment	To enhance transparency, investment limits should be set for investment funds that take into consideration the quality and nature of their underlying assets.
16. Enterprise Risk Management for Solvency Purposes	SUSEP should establish enterprise risk management requirements for solvency purposes that address all relevant and material risks, consistent with international standards. SUSEP should also actively supervise the efforts of insurers in this area, to help ensure that their capabilities are evolving at an appropriate pace.
17 .Capital Adequacy	SUSEP is encouraged to further develop the missing risk charges for life underwriting risk, operational risk, and for capitalization of underwriting risk. A cautious approach is recommended before internal models can be used for solvency calculation purposes. Due to the complexity in the approval of internal models, as international experience attests, a few years of experience should pass before internal models can be used for solvency calculation purposes. SUSEP should introduce capital requirements at the group level.
18. Intermediaries	Amending the law to make payment of a premium to a broker constitute payment to the insurer would provide an additional measure of protection to customers. SUSEP should urgently implement the self-regulation of brokers by publishing the missing regulation for the brokers' self-

	regulation entity created by CL 137, to start supporting a tighter supervision of insurance intermediation. A mandatory affiliation to the self-regulating entity of all brokers together with strong governance and supervision of the entity by SUSEP is recommended. If necessary, legislation supporting this change should be enacted. To avoid conflict of interests the self-regulation should not be through any existing trade organization but rather through a separate organization which would carry out the supervisory activities utilizing former brokers that are currently not licensed to practice.
19. Conduct of Business	SUSEP should develop regulation for proper information disclosure by brokers given that the market is basically sold through these intermediaries. To enhance consumer protection, transparency requirements need to be introduced (e.g., clear disclosure of conflict of interests; offering a number of similar products together with the disclosure of the product with the highest commission; etc.). When introducing microinsurance regulation, particular emphasis on the simplicity of the products should be required.
20. Public Disclosure	
21. Countering Fraud in Insurance	
22. Anti-Money Laundering and Combating the Financing of Terrorism	SUSEP should consider creating a group of dedicated inspectors for the supervision of AML/CFT matters. Circular 380 is in the process of being updated, incorporating requirements to follow up on suspicion of AMF/CFT transactions. The updated Circular should also require identification of the ultimate beneficiary on group policies.
23. Group-wide Supervision	The required regulation for consolidated supervision, including the introduction of ERM and capital requirements at group level, needs to be developed and implemented. Resources should be allocated to achieve a level of supervisory intensity commensurate with the complexity and relevance of the insurance and financial groups.
24. Macroprudential Surveillance and Insurance Supervision	SUSEP should develop and use a variety of tools as part of its macroprudential surveillance. At a minimum SUSEP should: • Create a unit responsible for market analysis, which prepares a timely report on local and international market developments, including quantitative information. The report should be reviewed and commented on by senior supervisors as to the effects of these developments on insurers. • Interview senior management of the major insurers annually for their views on industry risks and trends. The results should be fed back to industry. • Analyze supervisory financial information by insurer, insurance group, and across the industry. The

	information analyzed should include solvency margins, reinsurance exposures, and credit exposures. • SUSEP should perform top-down stress testing of the insurance sector each quarter and as necessary with respect to equity-price, exchange-rate, and credit risks. Action should be taken with individual insurers in response to concerns that are identified. Senior management of SUSEP should periodically discuss the results of the surveillance and consider whether additional supervisory measures are needed to deal with macroprudential concerns. SUSEP should comment publicly on market developments, trends, and its outlook. And the market data should be made publicly available.
25. Supervisory Cooperation and Coordination	SUSEP should sign MOUs with relevant jurisdictions and start to actively exchange information. SUSEP should have the ability to participate in international supervisory meetings. Such decisions, including on the necessary budget, should be with SUSEP. SUSEP should establish supervisory colleges for Brazilian insurers should their foreign operations become material.
26. Cross-border Cooperation and Coordination on Crisis Management	SUSEP should develop comprehensive plans for dealing with insurers in a crisis and ensure that it has the tools needed to carry out such plans. It should ensure that the plans are internationally-coordinated by working with foreign supervisors, for example, through supervisory colleges.

Authorities' response to the assessment

99. **In general terms, the FSAP assessment reflects well the current situation of the regulatory and supervisory regime, as well as that of the industry participants**. However, there were a few points raised by SUSEP that could have been addressed in more depth or better had the assessment work been carried out over a longer period of time. Some actions are already underway to implement the recommendations, such as the regulation on the establishment, organization, operation and dissolution of self-regulated entities as supporting bodies to SUSEP.