September 2013
IMF Country Report No. 13/300

Italy: Financial System Stability Assessment

This paper on Italy was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on June 2013. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Italy or the Executive Board of the IMF.

The policy of publication of staff reports and other documents by the IMF allows for the deletion of market-sensitive information.

Copies of this report are available to the public from

International Monetary Fund • Publication Services
700 19th Street, N.W. • Washington, D.C. 20431
Telephone: (202) 623-7430 • Telefax: (202) 623-7201
E-mail: publications@imf.org Internet: http://www.imf.org

International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

ITALY

FINANCIAL SYSTEM STABILITY ASSESSMENT

September 6, 2013

Approved By
Christopher Towe and Reza Moghadam

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Italy in January and March 2013. The FSAP findings were discussed with the authorities during the Article IV Consultation mission in June 2013.

- The FSAP team was headed by Dimitri G. Demekas and comprised Amadou Sy, Bergljot Barkbu, Ana Carvajal, Dawn Chew, Marc Dobler, Nadège Jassaud, Emanuel Kopp, Fabiana Melo, Hiroko Oura, and Rodolfo Wehrhahn (all IMF), and Malcolm Rodgers, Christine Sampic, José Tuya, and Christina Urias (external experts).

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

- Italy is deemed by the IMF to have a systemically important financial sector according to Executive Board decision 14736-(10/92), and the stability assessment under this FSAP is part of bilateral surveillance under Article IV of the IMF's Articles of Agreement.

- This report was prepared by Dimitri G. Demekas and Amadou Sy with contributions from the members of the team.

CONTENTS

TABLES

APPENDIXES

Glossary

AFS	Available for sale
AMC	Asset Management Company
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
AUM	Assets under management
BCP	Basel Core Principles
BI	Bank of Italy
BIS	Bank of International Settlements
BRRD	EU Banking Recovery and Resolution Directive
CCA	Contingent claims analysis
CAL	Compulsory administrative liquidation
CEBS	Committee of European Banking Supervisors
CEE	Central and Eastern Europe
CIS	Collective investment scheme
Consob	Companies and Stock Exchange Commission
CC&G	*Cassa di Compensazione e Garanzia*, systemically important infrastructure
CCF	Credit conversion factor
CCP	Central counterparty
CDP	*Cassa Depositi e Prestiti*
CDS	Credit default swap
CET1	Core Equity Tier 1 capital
CT1	Core Tier 1 capital
CRD-IV	EU Capital Requirements Directive IV
CSFS	Committee for the Safeguard of Financial Stability
DGS	Deposit guarantee scheme
DTA	Deferred tax asset
EaD	Exposure at default
EBA	European Banking Authority
ECB	European Central Bank
EDF	Expected default frequency
EIOPA	European Insurance and Occupational Pension Authority
ELA	Emergency liquidity assistance
EMIR	European Market Infrastructure Regulation
ESRB	European Systemic Risk Board
FGDCC	*Fondo di Garanzia Depositanti* BCC—Deposit insurance agency for mutuals
FSAP	Financial Sector Assessment Program
FITD	*Fondo Interancario di Tutela dei Depositi*—Fund for interbank deposits
FVO	Fair value option
GDP	Gross-domestic product
G-SIFI	Global systemically important financial institution

GVAR	Global vector auto-regression
HFT	Held for trading
HTM	Held to maturity
IAIS	International Association of Insurance Supervisors
ICCS	Interministerial Committee on Credit and Savings
IFRS	International Financial Reporting Standards
IMD2	Insurance Mediation Directive
IOSCO	International Organization of Securities Commissions
IRB	Internal ratings-based
ISP	Investment service provider
IVASS	*Istituto per la Vigilanza sulle Assicurazioni*—Insurance supervisory authority
ISVAP	*Istituto per la Vigilanza sulle Assicurazioni Private e di Interesso Publico*—Insurance Supervisory Authority prior to January 1, 2013
LCR	Liquidity Coverage Ratio
LGD	Loss given default
LTRO	Long-term refinancing operation
MEF	Ministry of Economy and Finance
MoU	Memorandum of understanding
MPS	*Banca Monte dei Paschi di Siena*
MTPL	Motor third-party liability
NPL	Non-performing loan
NSFR	Net stable funding ratio
OMT	Outright monetary transactions
OTC	Over the counter
PD	Probability of default
PFMI	Principles for Financial Market Infrastructures
PRIP	Packaged retail investment products
RRP	Recovery and resolution plan
RWA	Risk-weighted assets
SA	Special administration
SCV	Single customer view
SME	Small and medium-size enterprise
SREP	Supervisory review and evaluation process
SSM	Single Supervisory Mechanism
TTC	Through the cycle
VAR	Vector auto-regression

EXECUTIVE SUMMARY

The Italian financial system is coping with a severe and prolonged recession at home and the crisis in Europe. The system has so far managed to overcome these shocks and indeed expand domestic deposits and build additional capital buffers. In contrast to other countries, the latter was accomplished without significant state support. The announcement of outright monetary transactions (OMT) and steps toward a banking union have blunted the impact of the sovereign debt crisis on banks, and the expansion of European Central Bank (ECB) liquidity facilities has temporarily shielded Italian banks from wholesale funding volatility.

While stabilized, the system is not out of danger: continuing weakness in the real economy and the link between the financial sector and the sovereign remain key risks. Weak profitability and deteriorating loan quality are the most pressing vulnerabilities affecting Italian banks, while the coverage of non-performing loans by provisions and collateral has declined since the crisis. The lackluster baseline economic outlook and large exposure to the highly-leveraged Italian corporate sector mean that loan quality will improve only with a lag and profitability will remain a major challenge for banks. Moreover, banks with large holdings of sovereign securities continue to be exposed to direct mark-to-market losses and higher funding costs should sovereign yields surge again. These factors also weigh heavily on Italian insurers. The decline of Italian sovereign yields from their peaks has eased these pressures but the crisis in Europe has not ended.

If downside risks to this baseline materialize, the impact on banks could be significant, albeit substantially cushioned by their own capital buffers and the availability of ECB liquidity. Stress tests suggest that the system as a whole is able to withstand both the already weak baseline macro outlook and the phase-in of Basel III requirements, thanks to banks' capital buffers above regulatory minima, which were strengthened in recent years. These capital buffers are also sufficient to absorb most of the losses in case of an adverse macroeconomic shock, although in such a scenario, the aggregate capital ratios for the system as whole would be reduced to just above minimum Basel III requirements. Some categories of banks—notably cooperatives and banks under significant influence of banking foundations—fare noticeably worse in the stress tests, albeit with significant bank-by-bank variation. These results could be different if the ongoing inspections by BI or the forthcoming asset quality review by the ECB result in significant changes in the credit risk assessment of banks' current loan portfolio. In addition, markets may demand higher capital ratios than the regulatory minima if stresses materialize.

Targeted financial sector action, complemented by continued ECB liquidity support, is thus necessary, and would ultimately also benefit the real economy. To be sure, the most important preconditions for financial stability are maintaining macroeconomic stability and prudent public finances, and persevering with the structural reforms that will raise Italy's growth rate. But specific measures aimed at increasing provisions, improving bank efficiency and profitability, developing a market to dispose of impaired assets, and strengthening capital and funding plans, where needed, are a high priority. Many of these steps have already been initiated by the Bank of Italy (BI) and need to continue. The forthcoming asset quality review and stress tests by the ECB could, depending on their design and available backstops, help pinpoint better any additional necessary actions, further

bolstering Italian banks' resilience. Continued liquidity support by the ECB would also be critical until funding conditions improve.

Enhancing governance in some categories of banks would also strengthen the system. Foundations have been important as stable long-term bank shareholders, but their peculiar governance structure, weak internal accountability, and inadequate oversight create risks. These can be addressed by tightening banking regulations on related-party transactions and fit-and-proper rules for bank shareholders and directors, as well as by strengthening the legal framework for foundations to require minimum standards of transparency, corporate governance, and financial management, encourage further diversification, and ensure robust oversight. The largest cooperative banks should also be encouraged to transform themselves into joint stock companies. The case for these governance reforms is rendered more compelling by the weaker performance of these groups of banks in stress tests.

***Banca Monte dei Paschi di Siena* (MPS) is a systemic bank and its rehabilitation is a key priority**. The problems in MPS are partly rooted in an accumulation of governance and management failures. Successful implementation of the ambitious restructuring plan is critical not only for the bank itself but also for the system as a whole.

The strong financial sector oversight in Italy is a critical pillar of financial stability, and remaining gaps should be addressed, especially given the challenges faced by the sector. Compliance with international standards for banking and securities supervision is high and supervisory practices are strong and sophisticated. Gaps in banking supervision remain in the regulation of related-party transactions; fit-and-proper rules for shareholders and directors; and in the legal authority of BI to take certain corrective actions, such as dismissing individual bank managers. The top fifteen Italian banks are expected to fall under the direct supervision of the ECB, and preparations are underway to support the implementation of the Single Supervisory Mechanism (SSM). The securities supervisor (Consob) should continue to place emphasis on transparency and distribution obligations, as well as increase onsite inspections and strengthen the enforcement regime, including criminal sanctions. Insurance supervision has been relatively weaker, but the recent reorganization has placed it in a much stronger footing. A key challenge would be to ensure that this reorganization does not create supervisory gaps during the transition period.

The framework for crisis management and bank resolution has been effective in countering the impact of the crisis and can be further strengthened. In particular, certain aspects should be enhanced to allow the authorities to differentiate between different classes of creditors in resolution and introduce depositor preference. The resolution regime should prevent shareholders blocking recapitalizations and include bridge bank and bail-in powers. It should be possible to deploy these powers at an early stage, including when liquidity regulations are breached. A statutory basis should be provided for recovery and resolution plans for all systemically important banks. To prevent conflicts of interest, active bankers should be removed from the boards and executive committees of the deposit guarantee schemes. Most of these recommendations are broadly consistent with the recent position of the European Council on the draft EU Bank Recovery and Resolution Directive.

Table 1. Key Recommendations*

Recommendations	Priority**
Banking	
Issue prudential guidance to ensure a minimum level of harmonization in loan loss provisions and write-off practices [*BI*]	Short term
Amend law to ensure effective oversight of banking foundations by the MEF, require the largest foundations to publish audited financial statements, have an asset allocation policy aimed at diversification, and impose leverage limits [*MEF/Parliament*]	Short term
Amend regulation to require that related-party transactions do not carry more favorable terms relative to those with unrelated parties, and that board members with conflicts of interest are excluded from the decision [*BI/MEF*]	Short term
Gradually increase the tax deductibility of bank provisions in the same tax year [*MEF/Parliament*]	Medium term
Monitor closely the implementation of the restructuring plan for *Monte dei Paschi di Siena* and prepare contingency measures if plan targets are not reached [*MEF/BI*]	Medium term
Financial sector oversight	
Expand the definition of fit and proper for bank and investment service providers (ISP) directors so that adverse regulatory judgments can be taken into consideration [MEF/Parliament]	Short term
Clarify in supervisory guidance for licensing that the assessment of financial suitability of major shareholders should include the capacity to provide additional capital [*BI*]	Short term
Adopt a dedicated group supervisory approach for the nationally significant insurers [*IVASS*]	Short term
Increase use of onsite inspections of ISPs, including assets managers [*Consob, BI*]	Medium term
Amend law to empower BI and Consob to impose fines not only on individuals but also on financial sector entities and raise the ceiling for sanctions [*MEF*]	Medium term
Amend law to enable supervisors to remove individual board members, officers, and auditors of financial institutions [*MEF/Parliament*]	Medium term
Introduce risk sensitivity in the current solvency framework for insurers in anticipation of the EU implementation of Solvency II [*IVASS*]	Medium term
Financial safety nets	
Provide a statutory basis and detailed guidelines for RRPs to be prepared by all systemically important banks [*MEF, BI*]	Short term
Adopt depositor preference, expand the resolution tools to include bail-in, bridge bank powers and to recapitalize and transfer ownership, selectively transfer assets and liabilities, and be able to trigger these at an early juncture when the firm is no longer viable [*MEF, BI*]	Short term
Amend the deposit guarantee framework to provide for ex ante funding, with a back-up credit line from the MEF, and remove active bankers from the board and executive committees of deposit guarantee schemes [*MEF, BI*]	Medium term

* See Appendix I for the status of implementation of the recommendations of the 2006 FSAP.

** Short term: 12 months; medium term: one to three years.

STRUCTURE AND RECENT PERFORMANCE OF THE FINANCIAL SYSTEM

1. The Italian financial system is dominated by banks. Banks account for almost 85 percent of total financial sector assets. At end-2012, there were 706 banks with total assets of about 220 percent of GDP, of which 169 were part of 75 banking groups (Figure 1).[1] The sector has become slightly more concentrated over the past decade, following a major banking restructuring in the early 1990s involving the divestment of state holdings. Nonetheless, there are still many small cooperative and regional banks operating under different local economic environments. Partly as a result, the system has a higher branch density (1,806 inhabitants per branch) than European peers (average of 2,168 inhabitants per branch).

2. Banks' balance sheets reflect their "traditional" banking model of providing loans with customer funding. At end-2012, loans accounted for about 65 percent of total assets, and 37 percent of loans were to resident non-financial corporations (Tables 2 and 3)—the highest share in any G-7 country. Italian banks are crucial for the financing of small and medium-size enterprises (SMEs), which account for almost 70 percent of business value added. Loans to non-residents, mainly in Germany and Austria, are concentrated in large banks and account for a quarter of total loans. Sovereign security holdings (mostly Italian sovereign bonds) amount to 9 percent of total assets. Banks are funded primarily by resident deposits and retail bonds (Figure 2).[2] Though still sizeable, Italian banks' funding gap is lower than that of other European banks.

3. Banks weathered the initial impact of the global financial crisis in 2008 relatively well thanks to their "traditional" business model, but were hit hard by the subsequent sovereign-debt crisis and double-dip recession, and credit started contracting in mid-2012. The relatively low exposure to structured finance products shielded Italian banks from the initial phase of the crisis. But as the Italian economy plunged into recession in 2008–09 and again in 2011, and Europe into a sovereign debt crisis, the impact on Italian banks' balance sheets was considerable (Figure 3). The average nonperforming loan (NPL) ratio climbed from 5½ percent in 2007 to about 14 percent at end-2012, and the flow of new NPLs is still high (although it started to abate in 2013). Return on assets dropped from 0.7 percent in 2007 to -0.9 percent at end-2011 (although it recovered to near-zero in 2012), mainly owing to increased credit impairment costs. The rise in Italian sovereign spreads also had a strong negative effect on bank funding: according to BI estimates, a 100 bps increase in the sovereign spread results in an equivalent hike in bank bond yields within one quarter and a 60 bps hike in interest rates on new term deposits and repos within 3-4 quarters. Credit

[1] These figures and the discussion that follows do not cover the *Cassa Depositi e Prestiti* (CDP), a majority state-owned nonbank entity collecting postal deposits (over 80 percent of its liabilities, and fully guaranteed by the state) and required to deposit the bulk of them to the Treasury (over 40 percent of total assets). The rest of its assets represent holdings in Italian companies, holdings in private equity funds, or finance projects of public interest.

[2] In Italy, bank bonds held by households are very close substitutes to term deposits. They have been historically popular due to the favorable tax treatment, compared to deposits, in place until 2012.

Table 2.Financial Soundness Indicators for 63 Banking Groups, 2007–12[1]

	2007	2008	2009	2010	2011	2012
Basic data						
Total assets, in billions of euro	2,709	2,816	2,711	2,765	2,800	2,849
In percent of GDP	174	179	178	178	177	182
Total deposits, in billions of euro	1,542	1,431	1,358	1,458	1,436	1,513
In percent of GDP	99	91	89	94	91	97
Number of institutions	70	68	62	62	69	63
GDP, in billions of euro (WEO)	1,554	1,575	1,520	1,553	1,580	1,566
Financial Soundness Indicators						
Capital adequacy						
Total capital ratio, in percent 2/	9.8	10.4	11.6	12.1	12.7	13.4
Tier 1 ratio, in percent	6.8	7.0	8.3	8.7	9.5	10.5
Core tier 1 ratio, in percent 2/	6.3	6.3	7.4	7.5	8.7	10.0
Tier 1 capital to assets, in percent	4.5	4.2	4.8	5.0	5.5	5.4
Core tier 1, in bilions of euro	111	106	118	119	139	146
Risk-weighted assets, in billions of euros	1,763	1,681	1,583	1,589	1,602	1,463
Credit Risk, in percent						
Large exposures to capital 3/ 4/	20	20	12	89	86	92
NPL net of provisions to capital 3/	27	36	55	60	65	79
NPL to gross loans	5.6	6.3	9.5	10.6	11.9	14
Provisions to NPL	50	46	40	40	40	40
Share of loans to top 5 borrowers	1.7	3.5	3.1	4.2	4.8	4.3
Share of loans to top 10 borrowers	2.4	5.1	4.6	6.5	7.2	6.4
Credit cost to total loans	0.4	0.7	1.1	0.9	1.0	1.5
Sectoral distribution of loans						
Residents	72	72	73	75	75	75
of which						
Deposit takers	4	5	3	2	2	2
Central bank	2	1	1	1	1	1
Other financial corporations	7	3	5	5	4	6
Government	2	2	3	3	3	3
Corporations	36	37	38	38	39	37
Other	20	23	23	26	27	26
Nonresidents	28	28	27	25	25	25
Profitability, in percent						
Return on assets 2/	0.7	0.3	0.3	0.3	-0.9	-0.1
Return on equity 5/	9.2	4.9	4.0	3.7	-12.9	-0.9
Return on equity, excluding impairment on goodwill 5/ 6/	…	…	…	…	2.2	0.2
Interest margin on gross income	55	66	60	58	57	54
Trading income to gross income	3	-7	4	1	3	9
Non-interest expenses to gross income	61	66	60	63	65	63
Personnel expenses to non-interest expenses	57	57	58	58	56	57
Cost to income ratio 2/	61	66	60	63	65	63
Liquidity, in percent						
Liquid asset to total asset	…	7	11	12	12	15
Liquid asset to short-term liabilities	…	42	86	85	72	90
Customer deposits to non-interbank loans	72	64	64	64	59	62
Customer deposits+retail bonds to non-interbank loans	109	98	99	96	93	94
FX and derivative risks, in percent						
Net open FX position to equity 5/	…	2.0	1.5	1.6	1.7	1.2
Gross financial derivative assets to equity 5/	…	105	75	74	111	100
Gross financial derivative liabilities to equity 5/	…	107	76	78	117	106
FX loans to total loans	9	11	10	10	9	9
FX liabilities to total liabilities	…	7	10	9	6	6

Sources: Bank of Italy, WEO, and IMF staff calculations.
1/ The data in the table referto all banking groups that report to the Bank of Italy on a consolidated basis. Data for the remaining 12 banking groups and the 537 individual banks (as of end 2012) are not included in this table.
2/ Excluding overseas subsidiaries.
3/ Total regulatory capital.
4/ Break in 2010 due to the new EU regulatory framework (increase of risk weights for exposures to other regulated entities, mainly interbank exposures).
5/ Equity includes total capital and reserves.
6/ In 2011, several banks wrote-off good-will related to their past mergers.

Table 3. Financial Soundness Indicators by Size of Banking Groups: 2008 and 2012[1]

	2008, December				2012, December			
	All	Large	Medium	Small	All	Large	Medium	Small
Basic data								
Total assets, in billions of euro	2,816	2,391	300	125	2,849	2,318	458	73
Share in total, in percent	100	85	11	4	100	81	16	3
Total deposits, in billions of euro	1,431	1,180	185	66	1,513	1,171	297	44
Share in total, in percent	100	82	13	5	100	77	20	3
Number of banking groups included	68	10	23	35	63	10	24	29
Financial Soundness Indicators								
Capital adequacy								
Total capital ratio, in percent 2/	10.4	10.5	10.2	10.0	13.4	13.9	11.3	13.6
Tier 1 ratio, in percent	7.0	6.8	7.3	7.9	10.5	11.0	8.4	12.0
Core tier 1 ratio, in percent 2/	6.3	6.0	7.2	7.8	10.0	10.3	8.2	11.9
Tier 1 capital to assets, in percent	4.2	3.9	5.3	5.7	5.4	5.4	5.0	7.4
Core tier 1, in bilions of euro	106	83	16	7	146	118	23	5
Credit Risk, in percent								
Large exposures to capital 3/ 4/	18	15	38	13	92	85	116	149
NPL net of provisions to capital 3/	36	34	35	70	79	79	85	68
NPL to gross loans	6.3	5.9	5.7	29.4	14.0	14.2	13.2	19.1
Provisions to NPL	46	49	39	29	40	41	34	32
Share of loans to top 5 borrowers	3.5	4.1	...	...	4.3	3.7	5.7	15.2
Share of loans to top 10 borrowers	5.1	5.9	...	...	6.4	5.7	8.6	21.8
Credit cost to total loans	0.7	0.6	0.8	4.1	1.5	1.4	1.8	1.4
Sectoral distribution of loans								
Residents	72	69	94	83	75	71	93	96
of which								
Deposit takers	5	5	4	11	2	1	2	8
Central bank	1	1	2	2	1	1	1	8
Other financial corporations	3	3	4	3	6	6	6	4
Government	2	2	1	1	3	3	1	3
Corporations	37	36	49	41	37	36	45	38
Other	23	22	34	26	26	24	38	35
Nonresidents	28	31	6	17	25	29	7	4
Profitability, in percent								
Return on assets 2/	0.3	0.4	0.3	-0.8	-0.1	-0.1	-0.1	0.5
Return on equity 5/ 6/	4.9	6.0	3.4	-10.8	-0.9	-1.1	-1.6	6.4
Interest margin on gross income	66	67	65	63	54	54	53	44
Trading income to gross income	-7	-7	-2	-23	9	9	8	9
Non-interest expenses to gross income	66	65	66	72	63	63	60	62
Personnel expenses to non-interest expenses	57	58	53	56	57	57	53	54
Cost to income ratio 2/	66	65	66	72	63	63	60	62
Liquidity, in percent								
Liquid asset to total asset	7	7	5	8	15	14	16	28
Liquid asset to short-term liabilities	42	45	26	49	90	94	67	201
Customer deposits to non-interbank loans	64	63	63	182	62	60	64	122
Customer deposits+retail bonds to non-interbank loans	98	96	96	214	94	93	88	153
FX and derivative risks, in percent								
Net open FX position to equity 4/	2.0	2.0	0.7	1.1	1.2	1.3	0.5	2.6
Gross financial derivative assets to equity 5/	105	123	13	5	100	118	17	13
Gross financial derivative liabilities to equity 5/	107	126	13	5	106	123	27	14
FX loans to total loans	11	12	3	2	9	10	3	1
FX liabilities to total liabilities	7	7	4	1	6	7	2	1

Sources: Bank of Italy and IMF staff calculations.

1/ Large: top 1-10; Medium: top 11-35; Small: remaining banks. The data in the table refers to all banking groups that report to the Bank of Italy on a consolidated basis. Data for the remaining 12 banking groups and the 537 individual banks (as of end 2012) are not included in this table.

2/ Excluding overseas subsidiaries.

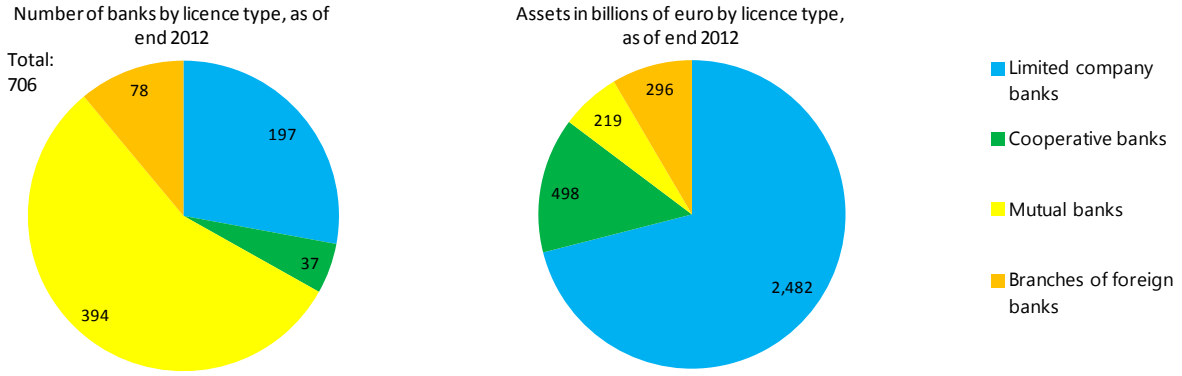
3/ Total regulatory capital.

4/ Break in 2010 due to the new EU regulatory framework (increase of risk weights for exposures to other regulated entities, mainly interbank exposures).

5/ Equity includes total capital and reserves.

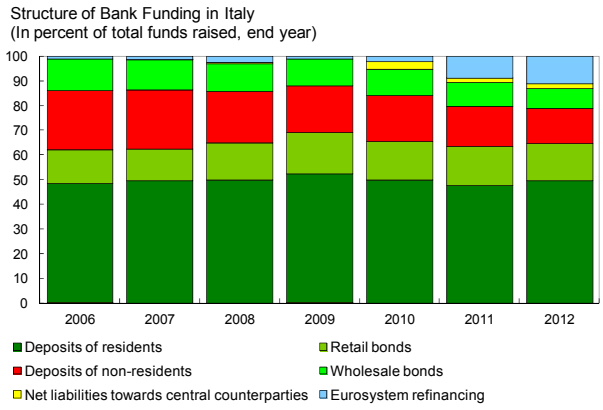
6/ In 2011, several banks wrote-off good-will related to their past mergers.

Figure 1. Structure of the Banking System

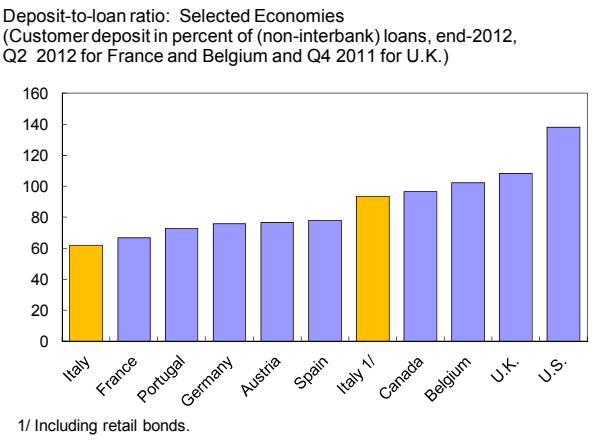


Source: Bank of Italy.

Figure 2. Bank Funding

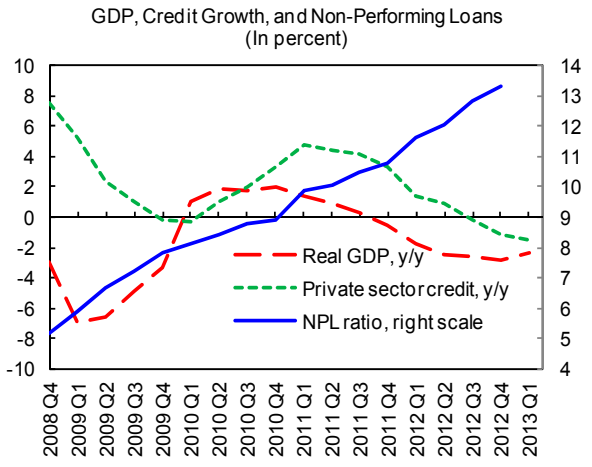


Source: Bank of Italy, and IMF (FSI statistics).

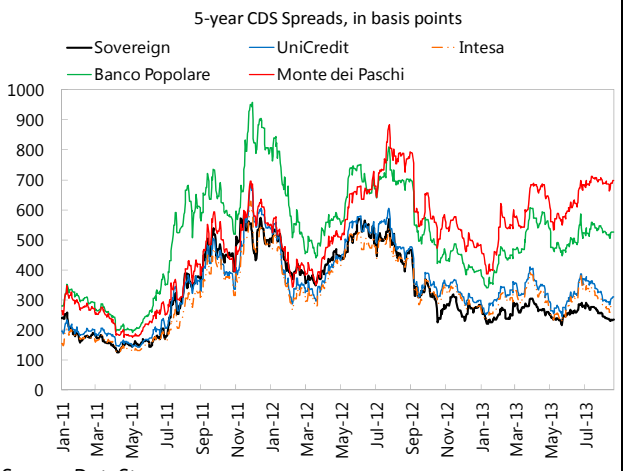


Source: Bank of Italy, and IMF (FSI statistics).

Figure 3. Impact of the Recession and the European Sovereign Debt Crisis



Sources: Bank of Italy and IMF.



Source: DataStream.

growth to the non-financial private sector (year-on-year, corrected for securitization) turned negative in August 2012.

4. Despite these challenges, Italian banks have improved their solvency ratios under very difficult conditions. Aggregate Core Tier 1 (CT1) capital rose by over EUR 40 billion since 2008, raising the system's CT1 ratio to 10 percent by end-2012. Improved solvency ratios partly reflect Pillar 2 capital add-on charges requested by BI, as well as capital buffers mandated by the EBA.[3] Italian banks' leverage ratios compare favorably to those in many other European countries. But given their larger exposures to corporate loans that carry higher risk weights, their solvency ratios are still relatively low compared with their peers (Figure 4).

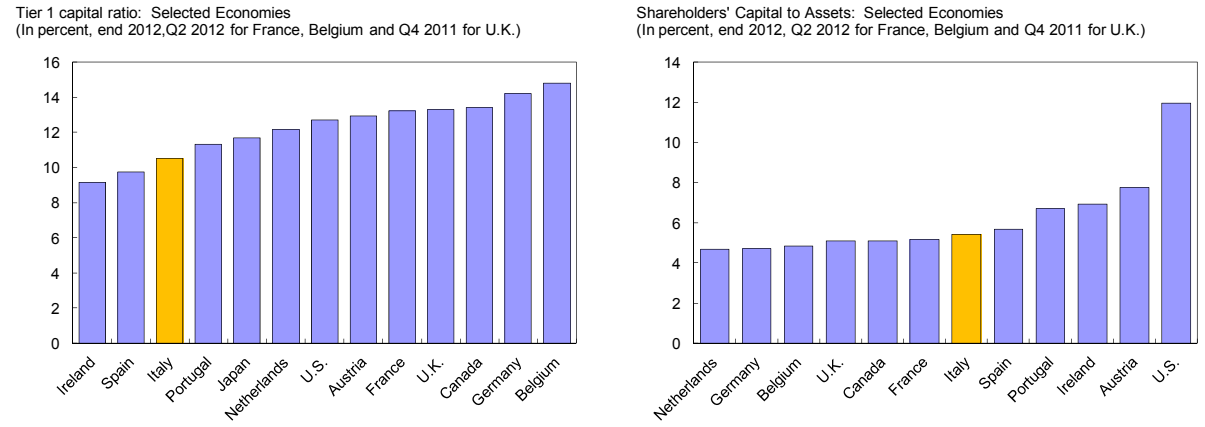
5. Liquidity pressures, including from the impact of higher Italian sovereign spreads, have been mitigated by the ECB's expanded monetary policy framework. Italian banks' funding gap has increased since 2007: the deposit-to-loan ratio (including retail bonds) declined from 109 percent in 2007 to 94 percent at end-2012 due to withdrawals of nonresident deposits. At the same time, banks' funding costs and access to market funding deteriorated due to stress on Italian sovereign yields. These pressures led banks to tap heavily Eurosystem refinancing facilities. After two three-year Long-Term Refinancing Operations (LTROs), ECB financing of the Italian banking system peaked at EUR 283 billion (Figure 5) in July 2012 before declining to EUR 248 in July 2013. This amount, mainly invested in liquid sovereign bonds, exceeds Italian banks' total maturing wholesale debt during the next three years, and is equivalent to almost one-third of the total euro system take-up. The announcement of the Outright Monetary Transactions (OMT) also helped bring down sovereign yields in Italy, from 6.7 percent on 10-year government bonds in July 2012 to 4.5 percent at end-December 2012. So far in 2013, sovereign yields have declined even further.

6. The high-profile case of *Banca Monte dei Paschi di Siena* (MPS) that required capital injections by the state reflects an accumulation of governance and management failures, and possibly unlawful actions, that largely pre-date the crisis. The problems were rooted in weak governance, a large acquisition of another bank in 2008, and the largest exposure to the Italian sovereign among all Italian banks. The state injected a total of EUR 4.1 billion (0.3 percent of GDP) of capital in 2009 and 2013, and MPS currently relies heavily on ECB liquidity facilities. The bank is now undergoing an ambitious restructuring but remains weak, and there is uncertainty regarding the timing of its exit from state support (Box 1). As MPS is a systemic bank, its rehabilitation is an important priority for the system as a whole.

[3] In 2011, the EBA requested the main European banks to constitute a temporary capital buffer against their exposures to sovereign issuers so as to bring their EBA CT1 ratio to 9 percent by June 2012. Four Italian banks (Unicredito, Banco Popolare, UBI, and MPS) were required to add EUR 15 billion. In the event, they added EUR 18 billion, of which EUR 12 billion was new capital, liability management exercises, and contingent capital, and EUR 6 billion reflected risk-weighted assets (RWA) measures (including validation of new advanced models or recalibration of existing ones). In July 2013—following the FSAP—this guidance was superseded by EBA's recommendation on "preservation buffers": the main European banks were asked to maintain capital at the level of the June 2012 EBA requirement till the implementation of the EU CRD-IV.

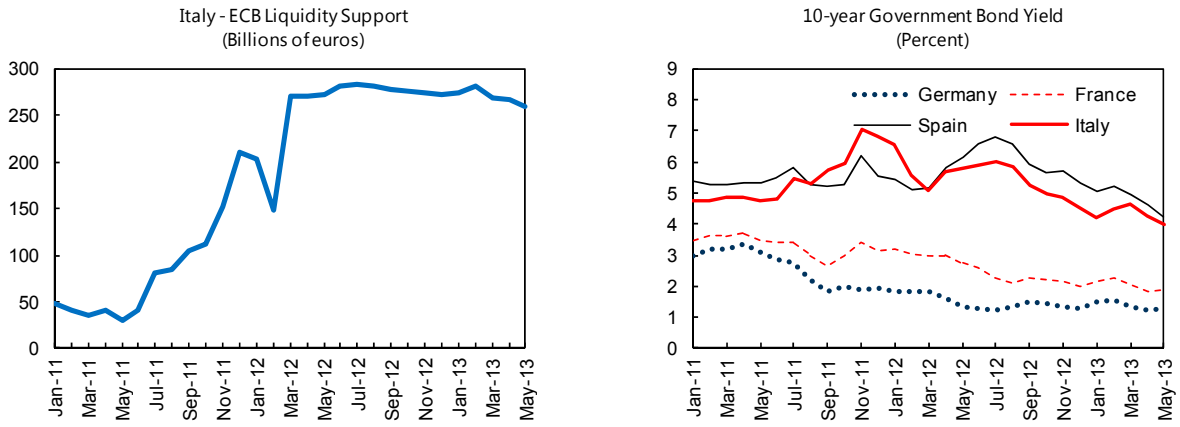
7. The economic outlook suggests a continuing difficult operating environment for Italian banks. The positive contribution from net exports is likely to persist, but domestic demand is not projected to recover before late 2013 at the earliest. The IMF forecasts real GDP to decline by 1.8 percent in 2013, followed by moderate growth of 0.7 percent in 2014. Elevated uncertainty around growth prospects in Italy and Europe means that downside risks dominate this short-term forecast. Over the medium term, low trend productivity growth is likely to keep economic growth—and thus investment and profit opportunities for Italian banks—modest. Financial fragmentation is also likely to keep funding costs high.

Figure 4. Bank Capital



Sources: FSI statistics (IMF) and Bank of Italy.

Figure 5. ECB Support and its Effects



Source: ECB.

Source: Bloomberg L.P.

Box 1. *Monte dei Paschi di Siena*

MPS is the world's oldest bank and ranks as Italy's third largest, with EUR 224 billion in assets. It has a solid national franchise with a 7 percent domestic market share, almost 3,000 branches, and over 30,000 employees. MPS has historically been controlled by a single shareholder (the banking foundation of the city of Siena), whose Board is mainly composed of local political appointees. MPS's own Board—including the CEO—was closely linked to this shareholder until 2012.

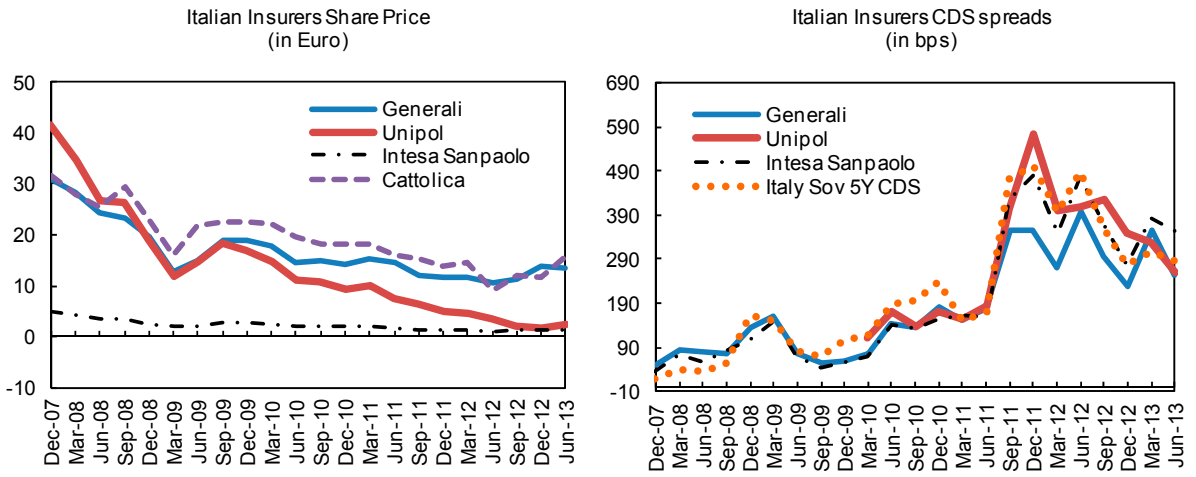
The proximate cause of MPS's recent problems is a series of transactions in 2008–09, although the roots are deeper. In early 2008, MPS acquired *Antonveneta* bank for over EUR 9 billion—more than its own capital at the time—while making commitments to repay a substantial amount of *Antonveneta*'s credit lines within 12 months. The BI approved the acquisition conditional on MPS raising additional capital, which was achieved mainly through a loan. Separately, since MPS held by far the largest sovereign bond portfolio of all Italian banks, its management entered into a number of structured repo transactions during 2008–09—which may not have been fully disclosed to its own Board and the regulator—to profit from carry trades on government bonds. The drying up of liquidity in 2008–09 and the subsequent European sovereign debt crisis meant that MPS's liquidity deteriorated rapidly and the structured repos were subject to frequent margin calls as losses mounted. Several aspects of these transactions are now the subject of criminal investigations. A gradual decline in deposits in the early months of 2013 added to the pressures (this decline has now been arrested). MPS now has the highest NPL ratio among large Italian banks (almost 22 percent at end-March 2013), and its "junk" credit rating by Moody's—Standard & Poor's rating was withdrawn in July 2013—makes an immediate return to the market challenging. As a result, the bank relies heavily on ECB liquidity facilities (EUR 29 billion outstanding in the form of LTRO, equivalent to 13 percent of its total assets—by far the largest access among Italian banks).

The deterioration in MPS triggered increasingly intrusive supervisory action by BI and eventually necessitated official capital support. The BI intervened through intensified onsite inspections, close monitoring of the bank's liquidity, and a ban on bonuses and dividends, among other measures. In 2012, the BI exercised moral suasion to have the Chairman, the CEO, and a number of Board members of MPS removed (the BI has no legal power to remove individual Board members or managers). When MPS did not pass the EBA recapitalization exercise in 2012, early capital support by the state in 2009 (through the so-called "Tremonti bonds," made available to a number of Italian banks to avoid excessively rapid deleveraging) was folded into a much larger recapitalization package for MPS to the tune of EUR 4.1 billion (0.3 percent of GDP, more than 1½ times MPS's market capitalization).

The bank under its new management is undergoing an ambitious restructuring, but there is uncertainty regarding the timing of its exit from state support. The latest recapitalization provides MPS with incentives to restructure and secure new private capital: the recapitalization instrument (so-called "Monti bonds") carry a high (9 percent) and escalating coupon, payable in cash or, if the bank is making losses, shares. In such a case, the state would own 35 percent of shares by 2015. To avoid this outcome, MPS's new management is implementing a restructuring plan involving revamping services, cutting staff and administrative costs, closing branches, and ultimately raising EUR 1 billion of new capital. But this plan is ambitious, has to be implemented under difficult economic circumstances, and is still subject to change as it requires the approval of the European Commission (under state aid rules)—a process that may take the rest of this year. Markets remain skeptical, as indicated inter alia by the persistently high CDS spreads for MPS thus far in 2013, in contrast to those for the sovereign and other large Italian banks (Figure 3). These uncertainties may create challenges in raising the needed private capital.

8. The same factors are posing major challenges for the Italian insurance industry. The current weak economic environment and the high exposure to sovereign debt, together with major impending regulatory changes (such as Solvency II, IFRS, IMD2, and PRIP) are creating major challenges for Italian insurers. In addition, recent changes in the supervisory architecture, notably the setting up of IVASS, risk creating supervisory gaps during the transition period. These factors are reflected in negative market perceptions, with equity prices at about half of their 2007 values and insurers' CDS spreads closely mirroring sovereign CDS spreads (Figure 6).

Figure 6. Selected Insurers' Share Price and CDS Spreads



Source: Bloomberg L.P.

SYSTEMIC RISK, TRANSMISSION, AND MITIGATION

A. Key Systemic Risk Sources and Spillovers

9. Since the onset of the crisis, Italy has been faced with three broad sources of risk for financial stability, which remain relevant today (summarized in the Risk Assessment Matrix in Appendix III). First, a new negative growth shock or prolongation of the recession could affect bank profitability and lead to a further deterioration of asset quality. Second, renewed stress and dislocations in wholesale funding markets, especially once the LTRO lapses, could have a significant adverse impact on liquidity and refinancing conditions. Third, renewed pressures on sovereign yields, reflecting an intensification of the euro area crisis, could have a major effect on bank balance sheets and systemic liquidity.

10. The balance of these risks has changed during the various phases of the crisis (Box 2).

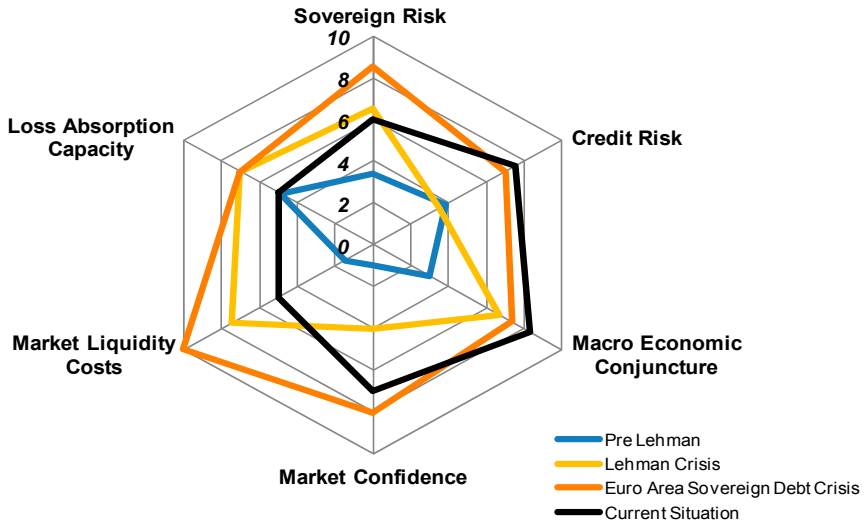
- Concerns about the level of bank capitalization dominated in the early part of the crisis, while all other risk factors, especially liquidity, peaked during the height of the sovereign debt crisis.

- Since then, ECB interventions have lowered significantly market liquidity risk and Italian banks have increased substantially their capital positions.

- Nevertheless, market confidence in Italian banks continues to remain low, and concerns about asset quality, both current and prospective—reflecting the risk of another macroeconomic shock—remain elevated.

Box 2. Italy: Systemic Risk Map

The Systemic Risk Map visually summarizes various sources of systemic financial stability risk. The map includes sovereign risk (debt-to-GDP ratio and Italian sovereign bond yields); credit risk (NPL ratio and credit concentration measure); macroeconomic risk (real GDP, unemployment, and inflation); market confidence in the largest Italian banks (fair value credit default spreads and expected default frequency—measures of financial distress as estimated by the Moody's KMV); market liquidity (average bid-ask spreads and daily turnover in the securities market); and loss absorption capacity of banks (Tier 1 capital ratio and ROE). The Map divides the recent past into four phases: pre-Lehman (2004 to end-2008); Lehman crisis (2009–10); Euro area sovereign debt crisis (2011 to mid-2012); and the current situation (latest available data).



Sources: Bank of Italy, Bankscope, Bloomberg L.P., IMF, Moody's, and IMF staff calculations.
Note: Higher values mean higher risks and less stability, relative to historical observations and future projections. Solely based on market data, the underlying variables were modeled using Holt-Winters procedure.

Domestic macro-financial linkages and risk transmission

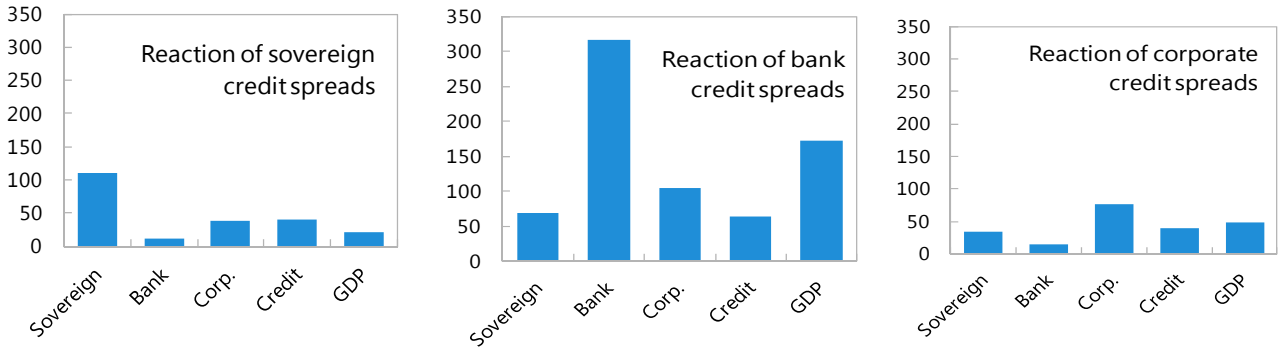
11. Staff analysis suggests that, on average, the feedback effects from other sectors on banks are stronger than the feedback effects from banks to other sectors, although in recent months, there are some indications that supply constraints may be increasingly affecting credit. Italian banks' credit spreads rise appreciably in case of distress in the real economy, the corporate sector, and the sovereign sector. Global VAR (G-VAR) estimates of these transmission channels over the past decade indicate that the negative feedback effects from banks to the rest of the economy are lower than the impact of shocks in other sectors on banks (Figure 7). Yet, recent

lending surveys suggest that, since late 2012, credit supply conditions are becoming important, partly due to weak growth expectations. The G-VAR estimates also suggest that weak GDP and credit growth augment corporate sector vulnerabilities, further jeopardizing bank asset quality.

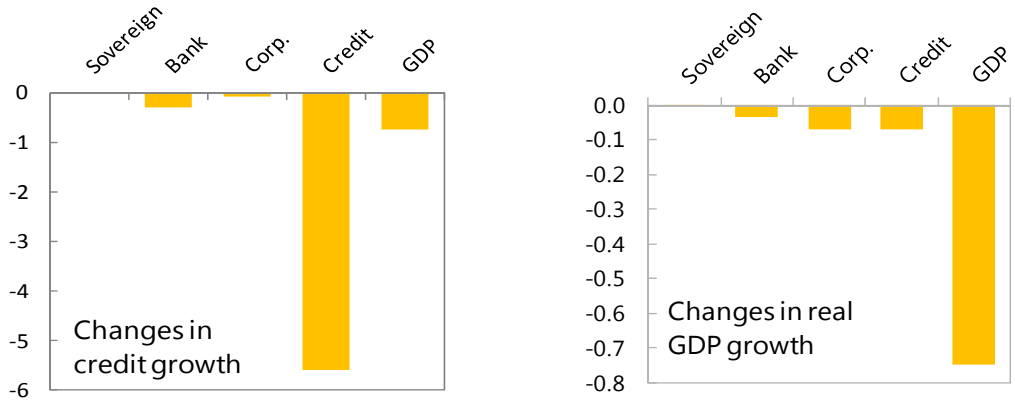
Figure 7. Cross-Sector Linkages Within Italy

(Maximum adverse cumulative response in 24 months to a 1 standard deviation shock in a sector)[1]

(Reaction of credit spreads by triggering sector, in basis points)



(Reaction of growth rate by triggering sector, in percentage points)



Source: Gray, Gross, Sydow and Paredes "Modeling the Joint Dynamics of Banking, Sovereign, Macro and Financial Risk using CCA in a Multi-country Global VAR," IMF Working Paper (forthcoming).

1/ Based on G-VAR estimate for 16 countries (primarily euro area and the United Kingdom, Switzerland, and the United States) and five variables (sovereign, bank, corporate, real GDP, and bank credit) using data for 2002-12. The conditions for the sovereign, bank (asset-weighted average), and corporate sectors (median of listed corporations) are measured by expected loss ratios based on Moody's KMV credit risk indicators. The changes in expected loss ratios are translated into changes in credit spreads using their theoretical relationships. The estimation reflects the average relationship over the past decade (which includes a long period of tranquility, especially regarding the sovereign credit risk indicator) vis-à-vis a standardized shock.

12. Loan quality, reflecting especially the weak corporate sector, is the most pressing vulnerability affecting Italian banks. The sharp hike in NPL (nearly 8 percentage points since 2007 and rising) was concentrated in the corporate sector—26 percent NPL ratio as of May 2013.[4] The

[4] In response to the crisis, temporary debt moratoria for up to one year were introduced for SME and household loans in 2009 and again—focused on SMEs and with more restrictive criteria—in 2012 and 2013. As of March 2013, EUR 27 billion of performing loans were under this facility, compared to total SME loans of about EUR 195 billion.

Italian corporate sector is highly leveraged (Figure 8). About half of corporate sector debt, largely to banks, is from highly leveraged firms, with interest expense accounting for over half of gross operating profit. On the other hand, credit risk from households appears limited, given their modest debt burden and substantial positive net wealth (Appendix II).

Figure 8. Corporate Sector Leverage

Source: Corporate Vulnerability Utility based on Thomson Reuters data (listed firms). Market capitalization weighted average.

13. Relatedly, provision adequacy is a challenge. Comparing the level of provisions in Italy to that in other countries may be misleading: loan classification rules in Italy are more conservative, supervisory practices more stringent, and the tax deductibility of provisions less generous than elsewhere in Europe (Box 3). Moreover, collateral—which was increased during the crisis—provides an additional, if uncertain, buffer. But even after adjusting, where possible, for these factors, there is no doubt that the level of NPL coverage in Italy (across all categories of NPLs, with or without collateral) has deteriorated markedly in recent years. This led to a special targeted inspection program by BI focused on provisions in late 2012–early 2013 on a sample of 20 mid-size and large banks. The inspection covered 40 percent of system NPLs and revealed deficiencies in provisioning practices in a number of banks (which are now subject to more in-depth inspections). The ensuing supervisory action led to an increase of about EUR 7½ billion in provisions reflected in the end-2012 financial statements,[5] and a slight increase in the level of provisioning coverage for the system as a whole. But further raising the overall coverage level substantially will remain a challenge in the near term, given the continuing asset quality deterioration and low profitability of Italian banks.

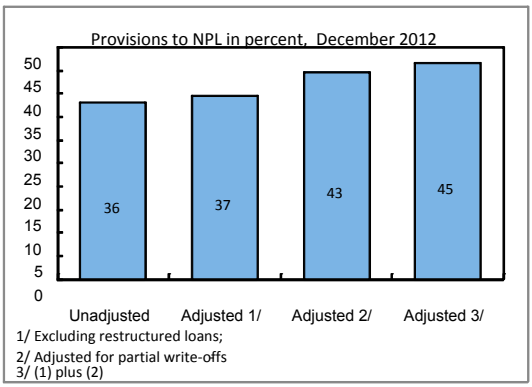
14. Renewed pressures on sovereign yields would impact both bank solvency and liquidity. Banks have Italian sovereign exposures amounting to about 9 percent of the assets, mostly in trading and available-for-sales accounts. This exposure is relatively large compared to other advanced economies, and Italian sovereign spreads have been very volatile. Lower market prices for sovereign bonds would create mark-to-market valuation losses, affecting bank solvency, as well as reduce the collateral value of these bonds for secured funding, including from the ECB. And in addition to these direct effects, the experience of the European debt crisis suggests that acute sovereign distress can spill over to other market yields, further aggravating pressures on the financial sector.

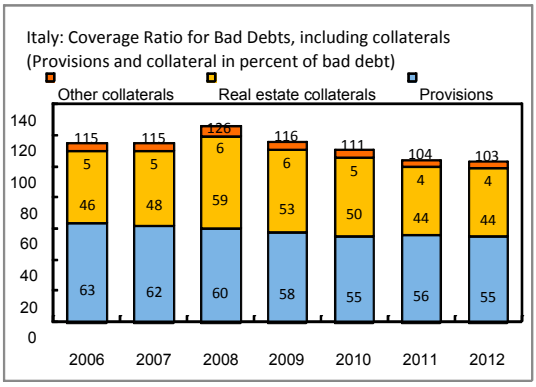
[5] This reflected both collateral value adjustments and, to a lesser extent, loan re-classification. Collateral values (mostly real estate) were adjusted for changes in market valuation and additional haircuts to account for the risk of fire sales.

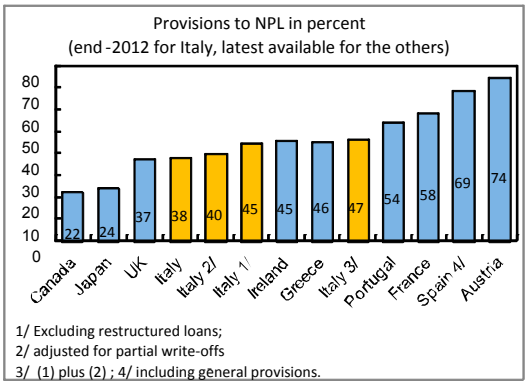
Box 3. Loan Loss Classification and Provisions in International Perspective

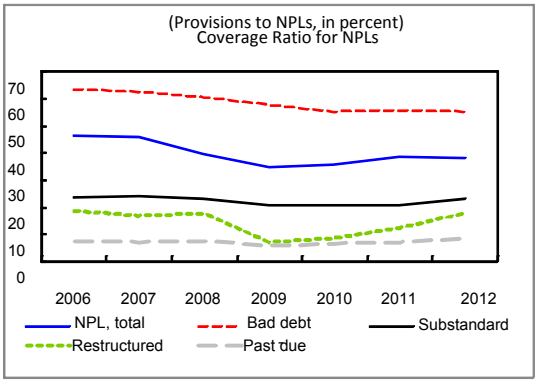
Cross-country comparisons of provisioning levels are difficult because of data constraints and country-specific factors. Adjusting for (i) restructured loans, which in Italy are included in NPLs (unlike in most other IFRS countries) and (ii) partial write-offs would raise the coverage ratio in Italy by nearly 10 percentage points. A fuller assessment of loan coverage should in principle also include (iii) the value of collateral and (iv) capital deductions for the difference between expected losses using IRB models and provisions. Accounting properly for the value of collateral, however, requires information on supervisory practices (which determine the recorded valuation and haircuts), the judicial environment (which affects the time needed to recover collateral), and different practices across banks. For this reason, collateral is often not taken into account in comparisons.

Fiscal requirements, such as tax deductibility, are also important factors driving the decision of banks to increase provisions or take more write-offs. In Italy, the tax regime provides little incentive to do so: write-offs are not tax deductible without declaration of insolvency, and the judicial process can take several years. Without a legal decision, write-offs can be deducted from tax only up to 0.3 percent of the loans at book value, like provisions. The difference creates deferred tax assets (DTAs), to be amortized gradually over 18 years. Two measures mitigate the distortion due to this tax treatment: (i) in the event that a bank reports a loss, DTAs are automatically replaced by tax credits in a percentage calculated as the product of the losses and the ratio between DTAs and capital plus reserves; these tax credits can be offset against any tax liability or reimbursed; (ii) tax deductibility of some write-offs, including those resulting from small loans delinquent for over six months and for losses resulting from the sale of assets, have been allowed. Despite these measures, however, the tax treatment of provisions in Italy remains less favorable than in most other European countries.







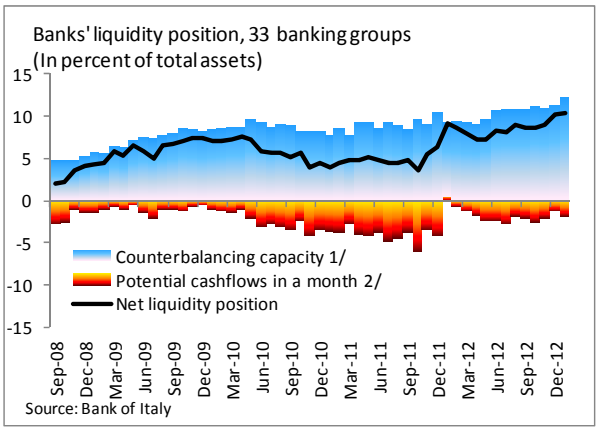


Sources: Bank of Italy (data on solo basis) and IMF (FSI statistics).

15. On the positive side, many Italian banks have strengthened their capital buffers in recent years. These buffers can shield banks from additional shocks and allow them to cope with the phase-in of Basel III requirements.[6] This finding is substantiated by the FSAP stress test results (see below).

16. The expanded ECB monetary policy framework has also contributed to shielding Italian banks against market shocks. Market funding by Italian banks has already been markedly reduced and replaced by LTRO proceeds, lowering the amount of maturing wholesale funding subject to roll-over risks, as indicated in Figure 9. The figure shows BI's weekly liquidity monitoring tool, examining whether banks have enough eligible collateral (counterbalancing capacity) to counter a complete drying up of wholesale funding. The potential cash outflows dropped visibly since the take up of the two LTROs in early 2012. Combined with the expansion of eligible collateral, this has contributed to a rise in the counterbalancing capacity.

Figure 9. Liquidity Risks and Eligible Collateral Buffers of Italian Banks



Source: Bank of Italy.

1/ Unencumbered ECB-eligible collateral, at market prices net of ECB haircut, based on security-by-security information (including the state of encumbrance) of security collateral.
2/ Potential net cash-flows in a month assuming zero roll-over for maturing wholesale funding (including central bank funding).

Cross-Border Spillovers: Inward

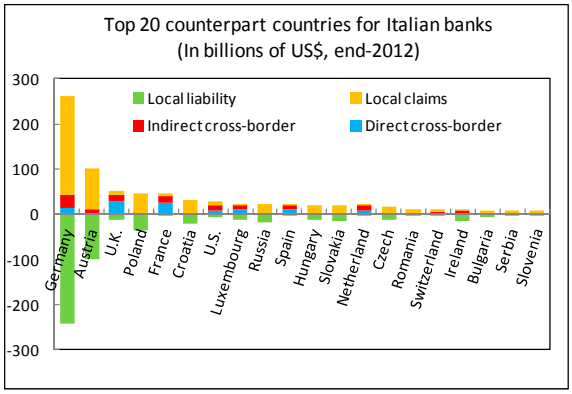
17. The risk from foreign exposures of Italian banks is limited. About 20 percent of Italian banks' total assets (US$3.8 trillion as of end-2012) are vis-à-vis foreign counterparties. Two-thirds of these foreign claims are vis-à-vis developed economies, especially core EU countries, where chances of distress are relatively low (Figure 10).[7] Exposures to CEE countries[8] represent a small share of Italian banks' total foreign exposures (about a quarter) and, so far, banks have maintained these exposures with little or no deleveraging. Moreover, a substantial share of these claims is held by the affiliates of Italian banks in host countries, using local funds.

[6] As in other systems, Basel III is expected to lead to substantial declines in capital ratios for Italian banks. Quantitative impact studies indicate a notable impact on capital ratios, primarily owing to the phase out certain capital components. The rise in RWA is expected to be small, as Italian banks have relatively small trading activities.

[7] Risks from foreign exposures are also explicitly assessed in the stress tests, as part of credit risk—see next section.

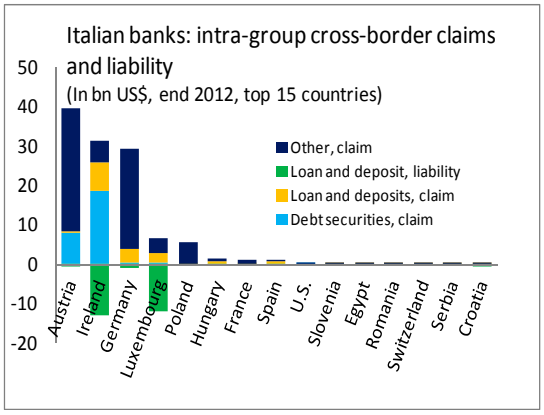
[8] CEE includes developing Europe (following BIS definition) and Cyprus, Estonia, Slovakia, and Slovenia.

Figure 10. Italian Banks' Foreign Claims



Source: Bank of Italy.
Note: Consolidated basis. Local claims are those held by subsidiaries and branches in the host country. Indirect (direct) cross-border claims are those held by offices in a third country (by head office).

Figure 11. Indications of Intra-Group Financial Flows



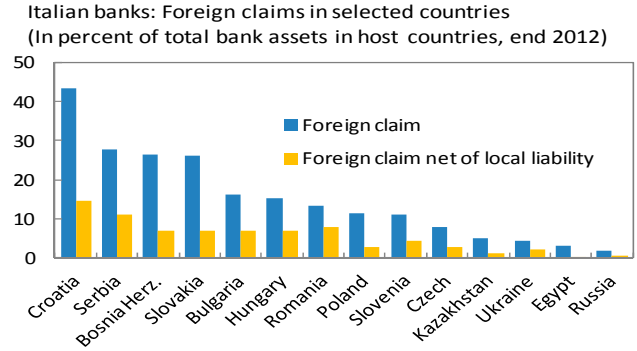
Source: Bank of Italy.
Note: Liability data only available for loans and deposits.

18. Italian banks' cross-border intra-group liquidity activity also appears limited.[9] Data suggest that head offices in Italy typically provide funds to foreign affiliates, as they usually serve as provider of equity capital for their affiliates (Figure 11). There is no strong sign of liquidity inflows from affiliates to Italian head offices, which may be explained by ring-fencing by foreign regulators. In addition, the BI has instructed major banks to limit their reliance on intra-group liquidity sharing even when it is cost effective.

Cross-Border Spillovers: Outward

19. Italian banks' local presence is systemically important in some CEE countries (Figure 12). Italy is the second largest creditor, following Austria, to CEE countries. As a result, the local presence of Italian banks is large and has systemic importance in these countries. In nine CEE countries, the share of Italian banks' gross foreign claims in percent of total bank assets of the host country is above 10 percent, reaching over 40 percent in Croatia. Italian banks' local funding either through deposits or other funding appears to be important.

Figure 12. Italian Banks' Presence in CEE



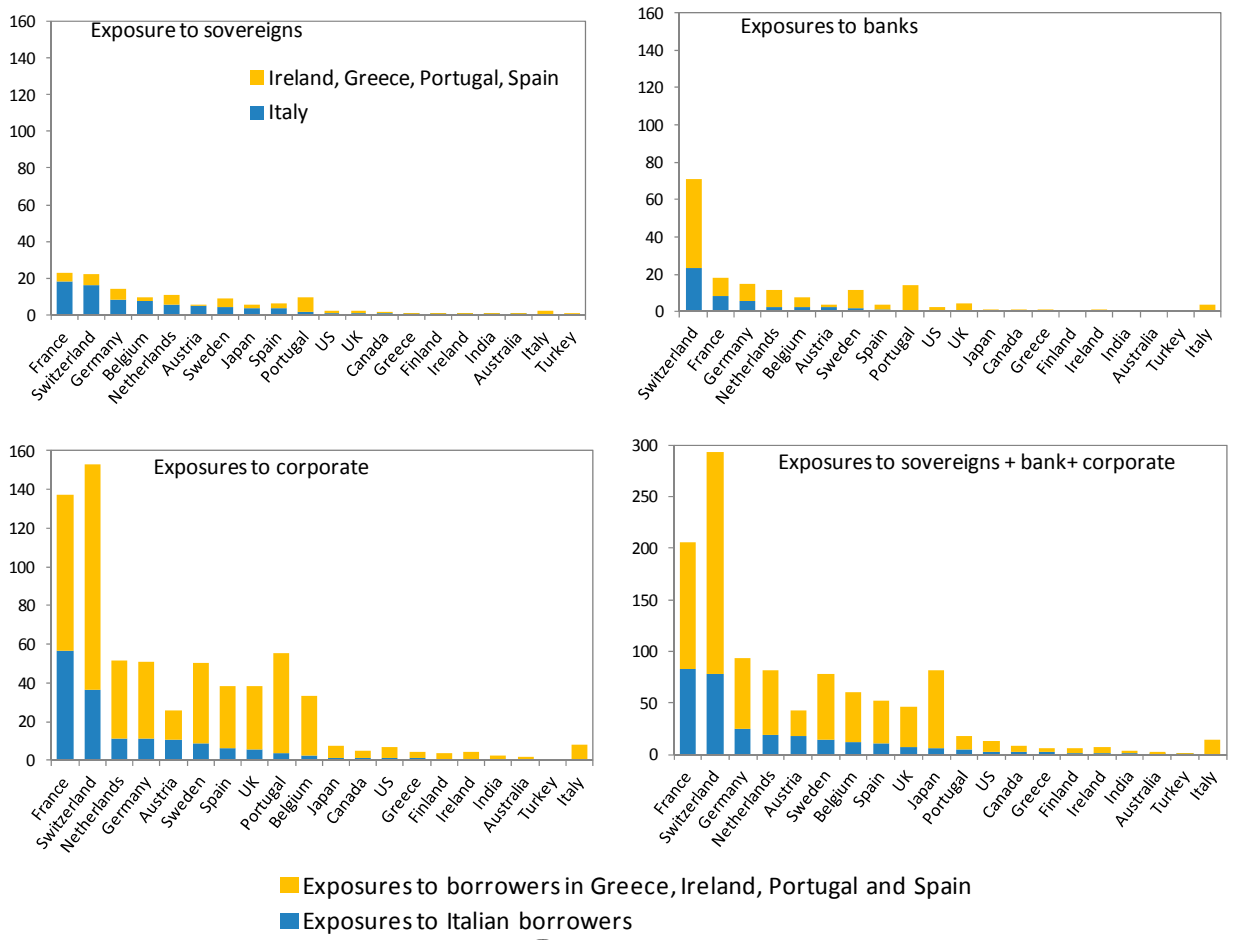
Source: Bank of Italy.

[9] Data showing the precise extent of intra-group liquidity sharing are limited, and only partial information is available. BI data for intra-group claims have limited information covering only the deposit and loan component of the liability side vis-à-vis Italian head office. BIS locational statistics can include transactions across groups and include data for foreign banks operating in Italy.

20. The potential direct spillover to global banks of an isolated shock in Italian banks is limited; instead, macroeconomic conditions in Italy are more important in transmitting shocks from Italy to other countries (Figure 13). Global banks have significantly reduced their Italian sovereign and bank exposures; residual risk stems mainly from corporate exposures. BIS reporting banks' exposure to Italy has declined by over 40 percent between end-2007 and end-2012. This retrenchment was mainly from the sovereign and banking sector and about 60 percent of the remaining claims are vis-à-vis the corporate sector. As of end-2012, the total exposures to countries under market stress are generally smaller than creditor countries' total bank capital in the system, except for French and Swiss banks.

Figure 13. Foreign Claims vis-à-vis Italy and other European Countries Under Market Stress, by Sector

(In percent of existing regulatory capital, as of end 2012)



Source: BIS consolidated statistics, ultimate risk basis; IMF FSI statistics; staff calculation. Domestic claims are excluded.

B. Systemic Risk Monitoring and Mitigation: Macroprudential Architecture

21. In the current institutional architecture, responsibility for financial stability is shared among three entities (BI, IVASS, and Consob), although in practice BI plays the leading role.[10] In addition to the financial sector supervisors, the institutional framework also includes the Ministry of Economy and Finance (MEF), and the two deposit guarantee schemes (DGS). In addition, the MEF chairs two interagency committees, the Inter-ministerial Committee on Credit and Savings (ICCS) and the Committee for the Safeguard of Financial Stability (CSFS).

22. The current arrangement has delivered effective systemic risk monitoring and coordination, and provides a menu of risk-mitigating tools that were used during the recent crisis. Monitoring systemic risk is the main responsibility of BI, which uses a wide range of analytical tools, including a number of early warning indicators and stress tests to assess the resilience of banks.[11] BI also monitors shadow banks and non-banking institutions and is working to expand its toolkit, in particular to capture risk concentration in the financial system. Some prudential tools were used during the recent crisis to mitigate systemic risk in the banking system, such as limits on maturity mismatch and higher risk weights for mortgage loans with high loan-to-value ratios. Additional instruments for banks (countercyclical capital buffers, capital surcharges for systemic institutions, and new liquidity requirements) will be put in place in the context of Basel III and Capital Requirements Directive (CRD) IV. In the insurance sector, as well, a number of anti-crisis measures helped the sector navigate through the recent sovereign debt volatility. These included allowing the difference between cost value and market value of EU sovereign bonds available for sale to be used as capital in the form of a "non-distributable reserve." Use of this tool peaked in 2011 but declined to negligible levels in 2012.

23. The macroprudential policy architecture needs to be adapted to EU norms. Different options could be used to restructure the macroprudential policy architecture in response to the European Systemic Risk Board (ESRB) recommendation. In December 2012, the ESRB recommended EU member states to specify the ultimate objective of macroprudential policy, designate an authority entrusted with its conduct, and entrust it with sufficient tools to pursue its mandate. To implement this recommendation in the case of Italy, two options seem most appropriate.

- **BI as the macroprudential authority**. In practice, the BI has a leading role in financial stability and covers most of the financial system. But since in the area of market infrastructures and non-banking intermediaries Consob has a key role, this option would require some formal cooperation arrangement, such as an MoU.

[10] For the insurance sector, macroprudential analysis has only recently been incorporated into IVASS work. IVASS conducts system-wide analysis of the insurance in coordination with ESRB/EIOPA. IVASS annual industry-wide stress tests have been replaced by the EIOPA stress tests.

[11] Top-down stress tests are used to assess the internal capital adequacy calculations performed by banks and to calibrate Pillar 2 requirements. Since 2010, bottom-up tests have been carried out within the framework of the exercises coordinated by European supervisory authorities.

- **A new macroprudential body**. A new body should make recommendations to other public bodies on the use of prudential measures to contain systemic risk. Consistent with the ESRB framework, recommendations should be public and under the "comply or explain" mechanism. The BI should maintain a leading role in this body.

24. In addition, the roles of the two inter-agency committees could be streamlined in relation to crisis preparedness and management. In the context of the changes that will be introduced to the institutional architecture, the authorities should evaluate whether the two committees can be streamlined, for example by eliminating the ICCS and re-focusing the CSFS on crisis preparedness and management in relation to domestic cooperation and coordination.

BANKING SECTOR RESILIENCE

25. Solvency and liquidity stress tests were undertaken to analyze in greater depth the resilience of the banking system to the vulnerabilities identified above. The stress tests covered banks representing over 90 percent of system assets.[12] Solvency stress tests were based on end-2012 data. Macroeconomic scenarios covered a three- to five-year period, depending on the scenario. The banks were evaluated against the Basel III requirements for Common Equity Tier 1 (CET) and Tier 1 capital. Liquidity stress tests were based on end-March 2013 data and had a one month horizon.

26. The FSAP stress tests combined BI's well-established and sophisticated stress testing framework with the team's own tests. Both the FSAP team and BI ran parallel solvency stress tests using different models but the same data and macroeconomic assumptions, and the results were very similar. The liquidity stress tests were performed by BI using agreed assumptions with the FSAP team.

A. Solvency Stress Tests

27. The scenario-based solvency stress tests included a baseline and two downside scenarios. In the baseline, real GDP growth is similar to the April 2013 WEO forecast. In the "slow growth" scenario, domestic growth is lower than in the baseline by 0.7 percentage points each year during 2013–17, leaving the five-year cumulative growth rate at -0.1 percent. The "adverse" scenario incorporates a 1¼ standard deviation shock (-4.2 percentage points compared to baseline) on two-year cumulative real GDP growth rate during 2013–14. Since Italy is already in recession, this would result in the worst three-year cumulative growth rate and the highest recorded negative output gap in the post-war period. Behavioral assumptions for the tests were set conservatively. Collateral valuations in the downside scenarios are adjusted downward, reflected in higher stressed LGD ratios (for details, see Appendix IV).The downside scenarios include mark-to-market losses from Italian sovereign securities in trading books and AFS accounts assessed with the AFS filter, and are

[12] As with Germany's *Kreditanstalt für Wiederaufbau*, France's *Caisse de Dépôts et Consignations,* or Japan's Postal Bank, FSAP stress tests did not cover the CDP.

supplemented by a single-factor test of sovereign risk covering all exposures without the AFS filter. As in other recent FSAPs, banks are assessed against Basel III minimum requirements with the conservation buffer, which rises gradually following the phase-in arrangements set by the Basel Committee.

28. The results suggest that the Italian banking system as a whole is able to withstand both the weak baseline outlook and the phase-in of Basel III, but its extra capital buffers would be eroded in the "slow growth" scenario and depleted in the "adverse" scenario.

- **Capital adequacy would remain well above Basel III regulatory minima in the baseline for the system as a whole** (Figure 14). In contrast to the Fund team's tests, BI results show rebounding capital ratios toward the end of the forecast period, mainly reflecting different approaches to projecting pre-impairment profits.[13] Between five and ten banks (one-seventh to one-tenth of the covered sample by assets), depending on the capital definition (CET1 or Tier 1, respectively) would need to increase their capital to comply with the Basel III requirements, but the shortfall—the sum of capital needed to bring each individual bank's capital ratio to at least regulatory minima—would be very small (EUR 1.1-3.4 billion, or 0.1-0.2 percent of GDP by the end of 2017).[14]

- **In the "slow growth" scenario, system-wide capital ratios would decline over the medium term, but would still remain well above Basel III minima** (Figure 15). In this scenario, between 11-15 banks (a fifth to a quarter of the sample), again depending on the capital definition, would see their solvency ratios slip below regulatory minima, including some of the larger credit institutions. The total shortfall would be EUR 5-10 billion (0.3-0.7 percent of GDP) by 2017 for CET1 and Tier 1 capital, respectively.

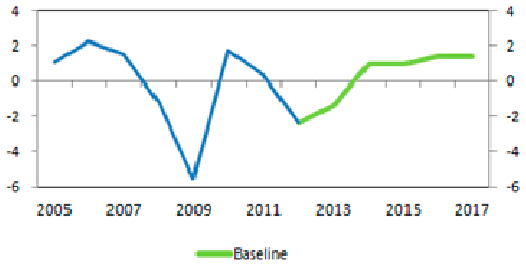
- **Losses under the "adverse" scenario would be greater, reducing system capital by over a third**. System-wide CET1 capital would decline by EUR 51 billion (Tier 1 capital by EUR 59 billion) but both would remain at or above the respective regulatory minima by 2015 (Figure 16). Credit losses would be the main driver of the shortfall in this scenario, while sovereign and other market losses and weak profitability also contribute to the decline. The capital ratio for 13-20 banks (a quarter to a third of the sample) would fall below the CET1 and Tier 1 minima, respectively. For most of these, the shortfall would be very small, limiting the total shortfall to EUR 6-14 billion (0.4-0.9 percent of GDP) for CET1 and Tier 1 capital by the end of the test horizon. However, the shortfall could rise further after the end of the test

[13] BI uses an econometric model linking bank profits to economic growth. The Fund team's approach—in line with most other FSAPs—focuses on the net interest margin (which, in this case, is projected to decline throughout the forecast period); takes into account profit tax; and assumes some dividend distribution. As a result, while gross bank profits are projected to recover by the end of the period, they would remain below the starting point.

[14] The exact additional capital need depends on the quality of the capital. If Common Equity Tier 1 is used to fulfill the Tier 1 shortfall, the required amount would be smaller than the shortfall estimates suggest because of nonlinear substitution effects between Common Equity Tier 1 and Tier 1 capital under Basel III. The Tier 1 shortfall should therefore be seen as an upper bound.

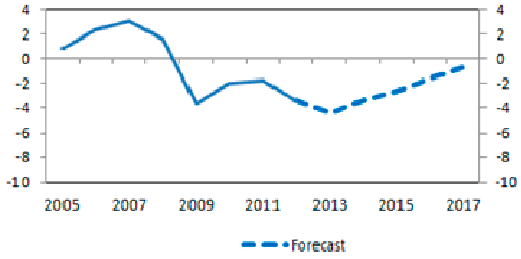
Figure 14. Solvency Stress Tests: Baseline Scenario

Real GDP Growth
(In percent)



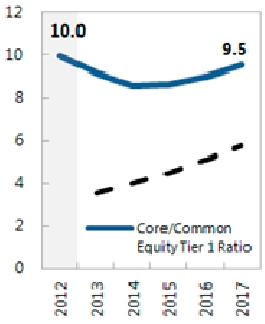
Source: IMF staff estimates.

Output Gap
(In percent on potential GDP)



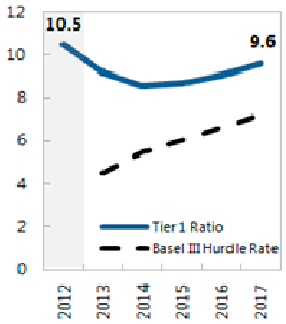
Source: IMF staff estimates.

Core/Common Equity Tier 1
(In percent of RWA) /1



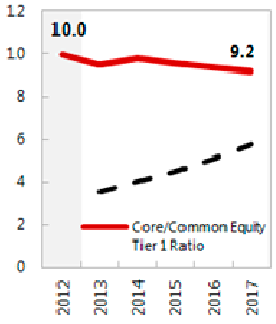
Source: Bank of Italy.

Tier 1 Capital
(In percent of RWA) /1



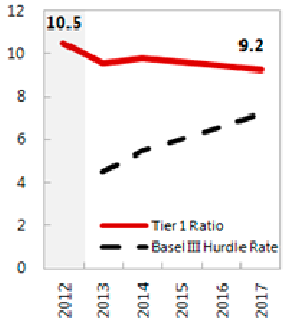
Source: Bank of Italy.

Core/Common Equity Tier 1
(In percent of RWA) /1



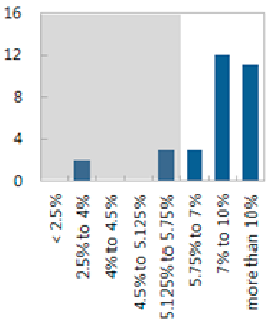
Source: IMF staff calculations.

Tier 1 Capital
(In percent of RWA) /1



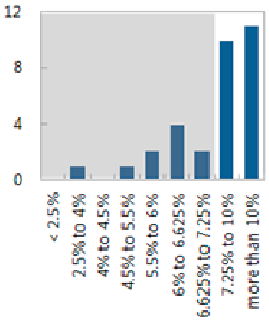
Source: IMF staff calculations.

Common Equity Tier 1 Ratios
(By number of banks, in 2017)



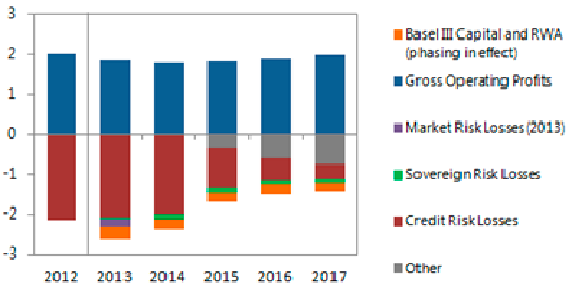
Source: Bank of Italy.

Tier 1 Ratios
(By number of banks, in 2017)



Source: Bank of Italy.

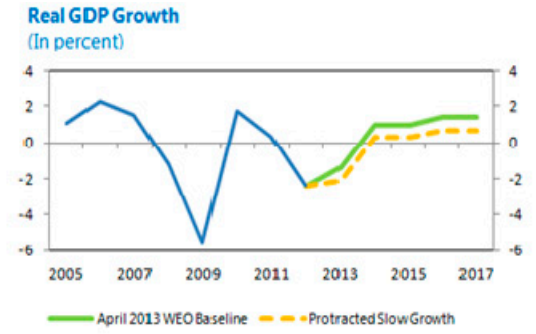
Drivers of Changes in Common Equity Tier 1 Ratio
(In percentage points)



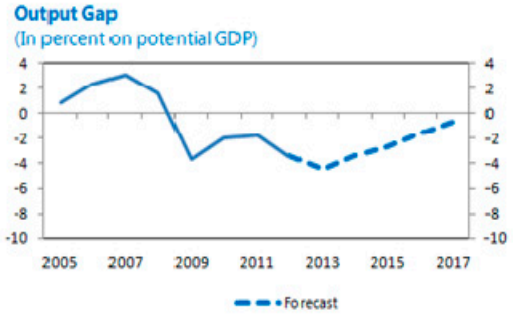
Source: Bank of Italy.

Notes:
/1 Ratios in 2012 according to CRD III (Basel 2.5). From 2013, capital definitions follow Basel III.

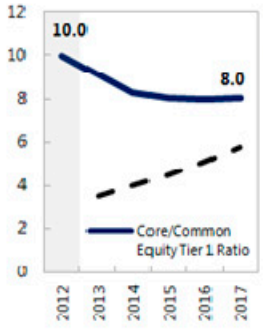
Figure 15. Solvency Stress Tests: "Slow Growth" Scenario



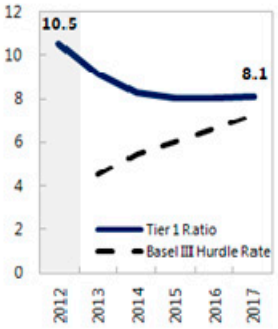
Source: IMF staff estimates.



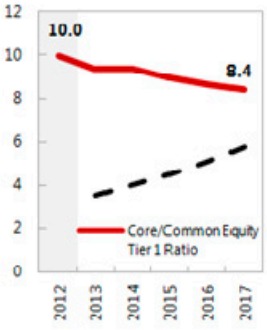
Source: IMF staff estimates.



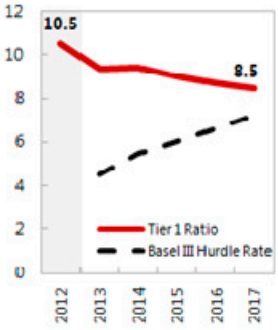
Source: Bank of Italy.



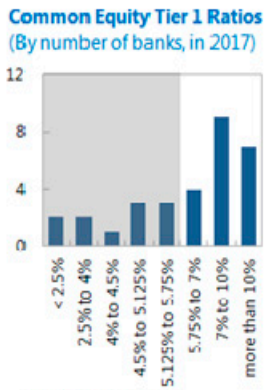
Source: Bank of Italy.



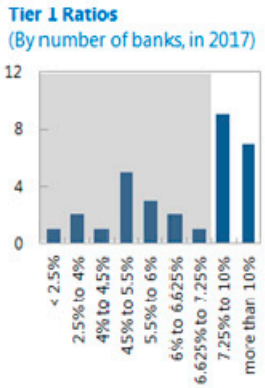
Source: IMF staff calculations.



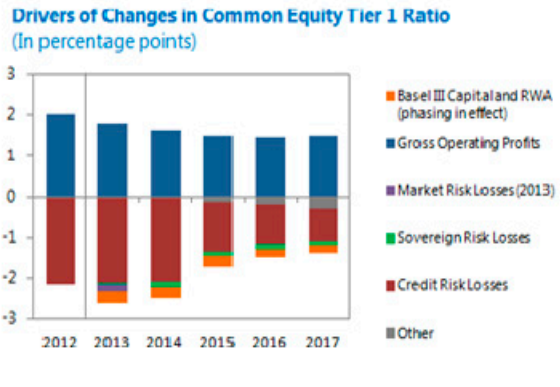
Source: IMF staff calculations.



Source: Bank of Italy.



Source: Bank of Italy.

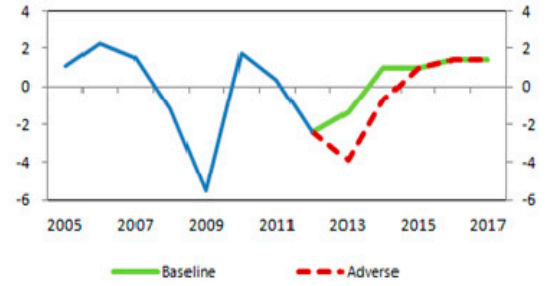


Source: Bank of Italy.

Notes:
/1 Ratios in 2012 according to CRD III (Basel 2.5). From 2013, capital definitions follow Basel III.

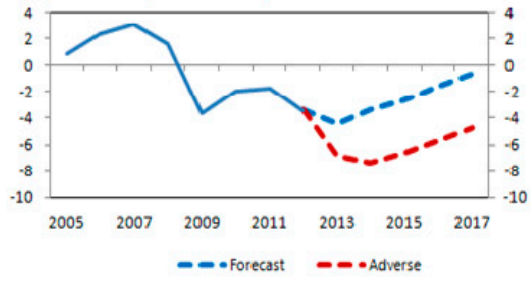
Figure 16. Solvency Stress Tests: "Adverse" Scenario

Real GDP Growth
(In percent)



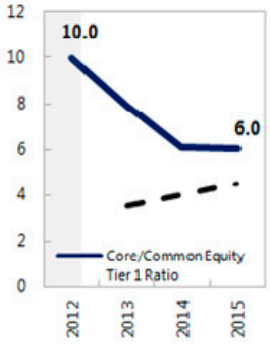
Source: IMF staff estimates.

Output Gap
(In percent on potential GDP)



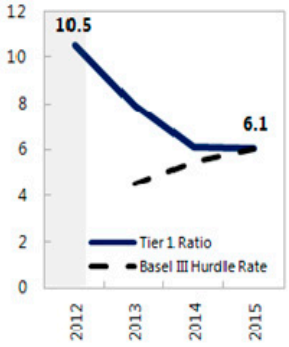
Source: IMF staff estimates.

Core/Common Equity Tier 1
(In Percent of RWA) /1



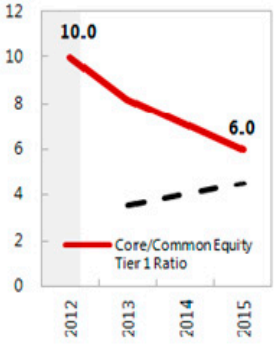
Source: Bank of Italy.

Tier 1 Capital
(In Percent of RWA) /1



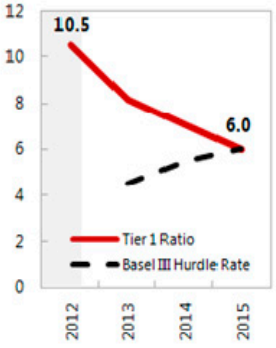
Source: Bank of Italy.

Core/Common Equity Tier 1
(In Percent of RWA) /1



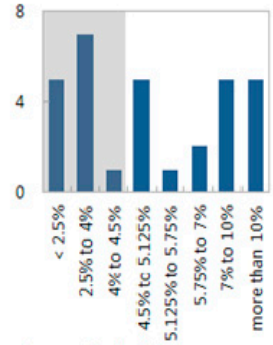
Source: IMF staff calculations.

Tier 1 Capital
(In Percent of RWA) /1



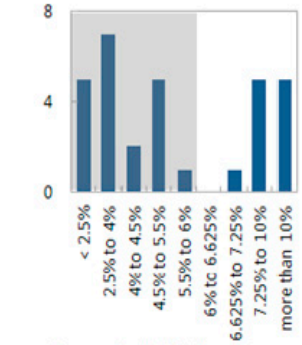
Source: IMF staff calculations.

Common Equity Tier 1 Ratios
(By number of banks, in 2015)



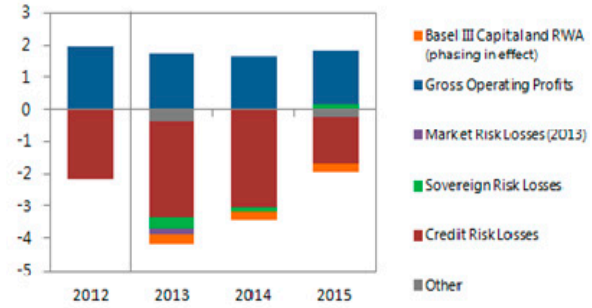
Source: Bank of Italy.

Tier 1 Ratios
(By number of banks, in 2015)



Source: Bank of Italy.

Drivers of Changes in Common Equity Tier 1 Ratio
(In percentage points)



Source: Bank of Italy.

Notes:
/1 Ratios in 2012 according to CRD III (Basel 2.5). From 2013, capital definitions follow Basel III.

horizon in 2015, depending on how quickly bank profits rebound when economic growth returns to baseline.

29. A more in-depth analysis of these stress test results yields additional insights.

- **Examining the results by *bank size* shows that mid-size banks are relatively more vulnerable to stress** (Figure 17). These banks made the least progress in adding extra capital buffers in recent years. Therefore, the combination of weak initial capital ratios at end-2012, relatively low operating profits under stress, and higher impact from Basel III phase-in implies that the aggregate capital ratios for the mid-size bank group (banks ranked 11–20) would drop below hurdle rates in both the "slow growth" and the "adverse" scenarios. In contrast, both large (top 10) and small banks (the rest of the sample) as a group would maintain capital ratios at or above hurdle rates even in the "adverse" scenario.

- **Grouping the results by type of ownership suggests that banks influenced by banking foundations[15] and cooperative banks appear particularly vulnerable** (Figure 18). Banks with a significant presence of banking foundations—defined as those in which foundations control at least 20 percent of shares—are the weakest link of the system. Even in the baseline, the aggregate capital ratio for this group would fall below hurdle rates. In the "adverse" scenario, the shortfall for this group would be up to EUR 5.4 billion (0.3 percent of GDP). The group of cooperative banks (*banche popolari*) would also not pass the test under the "adverse" scenario. Between them, these two groups of banks account for more than three-quarters of the total shortfall for the system as a whole in the "adverse" scenario. These results are attributable to the relatively lower profitability and weaker initial capital position of these banks, as well as a somewhat higher fraction of capital that is not eligible for Basel III CET1 and Tier 1 compared to the rest of the system.

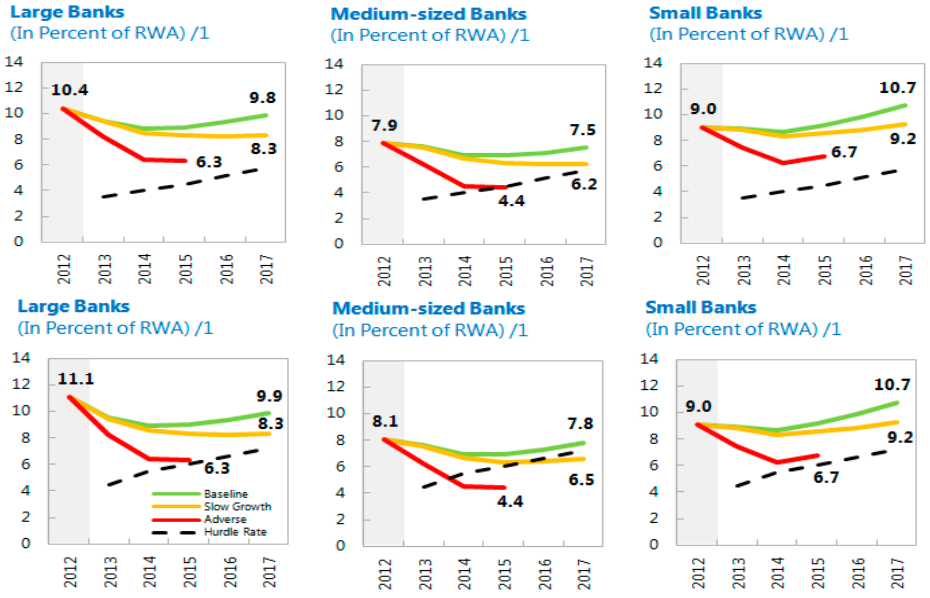
30. In addition to scenario-based solvency tests, sensitivity tests were used to further explore bank vulnerabilities from Italian sovereign risk (Figure 19). The "adverse scenario" stress test already includes a hike in sovereign spreads ranging between 110-270 bps across maturities compared to end-2012 levels. The direct impact on capital ratios from this hike amounts to 50 bps. This result reflects the fact that the stress is applied only to HFT and AFS portfolios of sovereign securities, and the impact on the latter is mitigated by the AFS filter,[16] in line with current regulations. To illustrate the full economic impact of sovereign distress regardless of regulatory treatment, this

[15] Banking foundations (*fondazioni*) are a distinctive feature of the Italian system. They were created in the 1990s during the process of bank privatization, when several state-owned banks were transformed into joint stock companies with the shares transferred to non-profit, typically locally-based foundations, private legal entities intended to pursue public interest or socially-oriented activities. Foundations were expected to diversify their holdings over time—and most did—but still have a significant presence in the Italian banking system. For more details, see section on Financial Sector Governance.

[16] Under Basel II, the AFS filter allows a partial pass-through of unrealized mark-to-market gains and losses in the AFS portfolio to capital. This will be gradually phased out with the introduction of Basel III, which would require full pass-through.

sensitivity test stressed the entire portfolio without applying the AFS filter. The impact is predictably higher: a 100 bps hike across all sovereign maturities from end-2012 would imply a 70 bps decline in capital ratios.

Figure 17. CET 1 Ratios (Top) and Tier 1 Ratios (Bottom) According to Bank Size

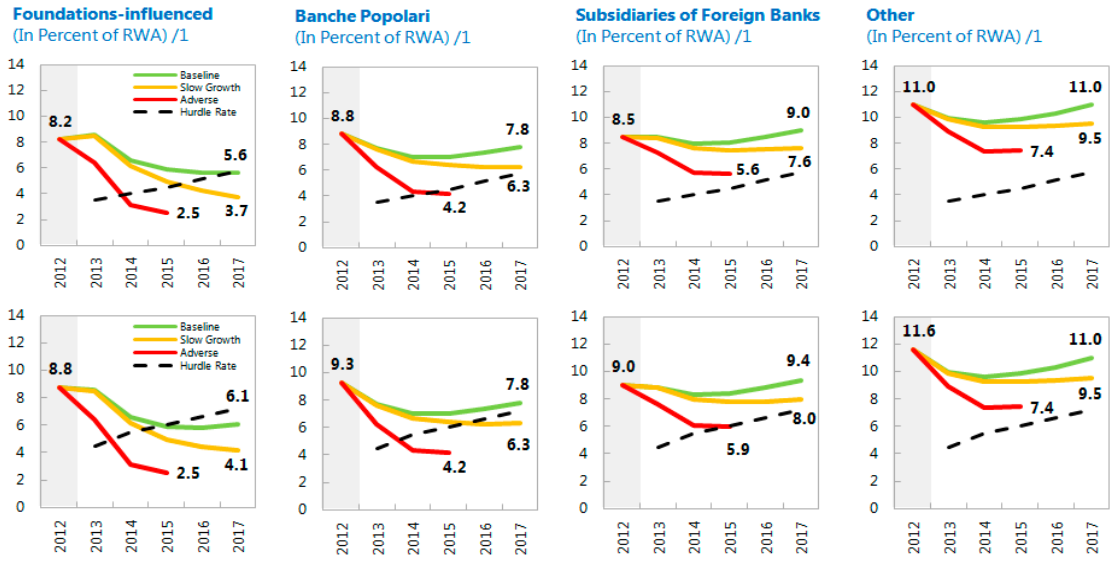


Source: Bank of Italy.

Notes:

/1 Ratios in 2012 according to CRD III (Basel 2.5). From 2013, capital definitions follow Basel III (CRD IV).

Figure 18. CET 1 Ratios (Top) and Tier 1 Ratios (Bottom) According to Type of Bank

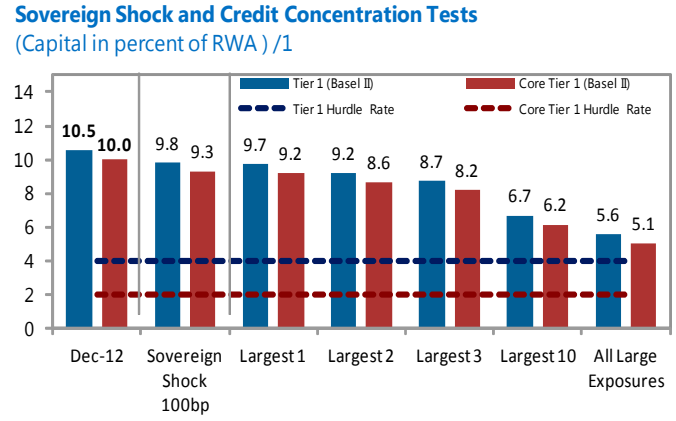


Source: Bank of Italy.

Notes:

/1 Ratios in 2012 according to CRD III (Basel 2.5). From 2013, capital definitions follow Basel III.

Figure 19. Sensitivity Analyses for Sovereign and Credit Concentration Risk



Source: Bank of Italy; IMF Staff Calculations.

Notes:
/1 Capital ratios as of December 2012 (Basel II). Losses are directly calculated towards capital (i.e., profits do not mitigate the impact).

31. A separate sensitivity test on credit concentration suggests this risk is moderate (Figure 19). Credit concentration risk was assessed by simulating the default of the largest borrowers. In international perspective, credit concentration in Italian banks' loan portfolios is moderate, and the banks could digest the default of their largest clients (the default of *all* large exposures would reduce the banking system's capital by less than half).

B. Liquidity Stress Tests

32. BI performed liquidity stress tests based on its existing liquidity monitoring and stress testing framework. In this framework, a bank's ability to withstand a liquidity shock over a one-month time horizon is measured by its Net Liquidity Position (NLP). The NLP is defined as the bank's liquidity buffer ("counterbalancing capacity") net of cash outflows. A bank's liquidity buffer consists of unencumbered ECB eligible collateral valued at market prices net of ECB haircut. A bank passes the test if its NLP remains positive throughout the forecast horizon. The BI monitors systemic liquidity on a weekly basis and uses this framework to stress test banks' market and funding risks (including Eurosystem funding).

33. The stress tests considered two scenarios. Banks' liquidity buffers (through changes in haircuts due to downgrades and changes in security valuation), as well as cash flows (including deposit outflows and margin calls) were stressed. Both these scenarios are more severe than those incorporated in the Basel III LCR.

- The first is an "adverse scenario" with a one-notch downgrade to sovereign (which would raise the ECB haircuts applied to Italian sovereign securities to the maximum possible level); two-notch downgrades to banks (which would bring several Italian banks, including large

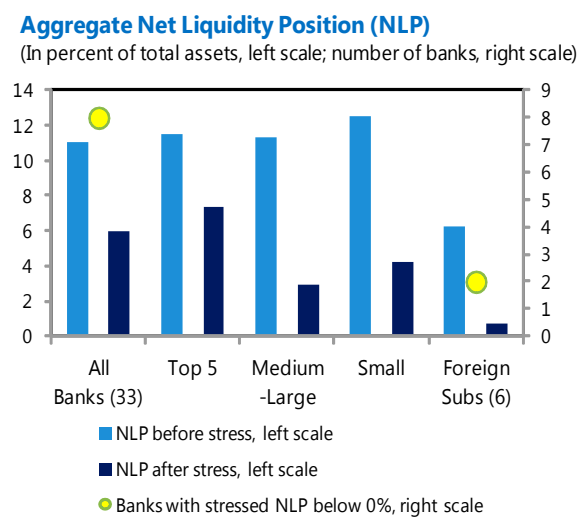
banks, to below investment grade, making their securities ineligible for ECB operations); deposit outflows;[17] and a 150 bps jump in sovereign spreads leading to declines in liquidity buffer and higher margin calls for repos. Combined, these shocks are more extreme than the severe liquidity stress experienced at end-2011.

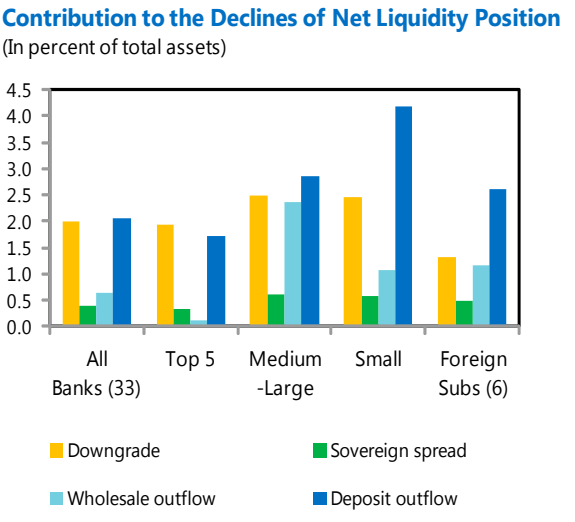
- The second is an "alternative" scenario focused on market funding risks: it is similar to the "adverse scenario" without deposit outflows but with a 180 bps jump in sovereign yields.

34. The results confirm that the availability of ECB liquidity has removed Italian banks' vulnerability to wholesale funding volatility, especially for large banks. The banking system can withstand the shocks in the "adverse scenario" (Figure 20), with the NLP remaining comfortably positive for the system as a whole. Five small and mid-size Italian banks and two foreign banks do not pass the test, but they represent a small share of the system and suffer mainly because of deposit withdrawals. When only market funding are considered ("alternative scenario", Figure 21), almost all banks, except for one Italian and one foreign bank, pass the test, as LTROs have largely substituted short-term wholesale funding, reducing potential outflows, and eligible collateral holdings have increased.

35. Deposit outflows are the single largest component of the liquidity pressures under the stress scenarios. Mid-size and small banks that rely more heavily on deposits for funding are therefore the most affected. Foreign-owned banks operating in Italy also show a weaker liquidity position and a considerably higher sensitivity to liquidity shocks.

Figure 20. Liquidity Stress Tests: "Adverse Scenario"

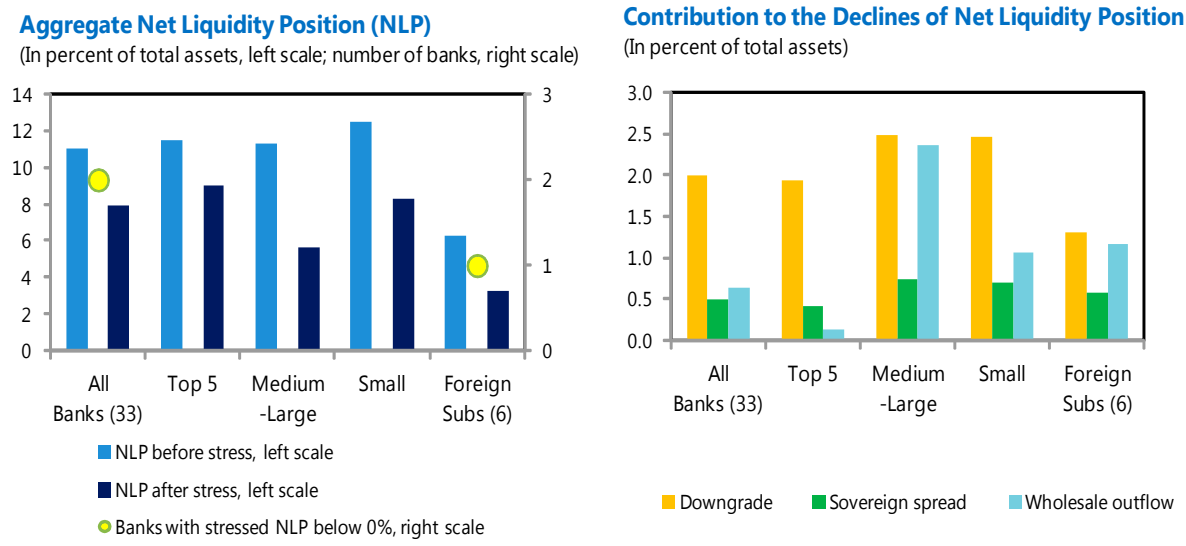




Source: Bank of Italy.

[17] Outflow rates of 5 percent for retail customers, 20 percent for corporate depositors, and 33 percent for sovereign and public sector entities.

Figure 21. Liquidity Stress Tests: "Alternative Scenario"



Source: Bank of Italy.

C. Overall Assessment

36. Stress test results should always be interpreted with caution, especially in light of ongoing asset quality reviews. FSAP stress tests are based on market and supervisory data available at a certain point in time, without independent validation of these data. The results could be different if the ongoing inspections by BI or the forthcoming asset quality review by the ECB result in significant changes in the credit risk assessment of banks' current loan portfolio. More generally, stress tests provide estimates of the potential capital or liquidity shortfalls under hypothetical scenarios based on a number of simplifying assumptions, and do not fully incorporate second-round effects or the impact of policy responses to shocks. While some non-linear effects can be captured in such tests, it is always possible that that unknown patterns emerge, especially if extreme shocks materialize. Renewed distress on the sovereign, for instance, could have more pervasive effects on financial stability beyond its direct impact on bank solvency and liquidity measured in stress tests. Last but not least, as in other FSAPs, these stress tests use Basel III regulatory minima as hurdle ("pass-fail") rates. But in fact, markets and regulators (through Pillar 2) may demand—and banks may have an incentive to target—higher capital ratios in order to keep funding costs below a certain level.

37. The fragile financial situation of the Italian corporate sector adds another layer of uncertainty. If the recovery is delayed or the economy weakens further, the corporates that are already over-leveraged—a significant share in the case of Italy (Appendix II)—may face difficulty servicing existing bank debts, potentially forcing banks to increase the pace of write-offs and eroding their already thin profits.

38. With these caveats, the FSAP stress test results for Italy underscore the value of extra capital buffers above regulatory minima and ECB liquidity support in an uncertain economic environment. They validate the difficult and costly effort of those Italian banks that raised additional capital in the middle of the crisis. They also underscore the crucial role of ECB backstops that has reduced the exposure of Italian banks to volatile wholesale funding. These backstops need to continue until the European crisis is convincingly over and the Italian economy and financial system are on the path of sustainable recovery.

39. Based on this analysis, there is room for additional targeted financial sector action to shore up further the defenses of Italian banks. To be sure, the most important precondition for financial stability is to ensure macroeconomic stability, maintain prudent public finances—the only way to reduce sovereign risk permanently—and persevere with the structural reforms that will raise Italy's growth rate. But until these policies bear fruit, targeted financial sector action, some of which have already been initiated by BI, can make an important contribution. Strengthening bank resilience would also help boost confidence and ultimately support the economic recovery.

- **Increase provisions.** Increasing provision coverage would not only strengthen Italian banks' capacity to absorb losses, it would also bolster their credibility and ultimately improve market access. The BI targeted inspections already had an impact on bank provisions, and BI plans to extend this program. The forthcoming ECB asset quality review, likely to cover a broader sample of loans, will provide another opportunity to probe loan classification and collateral valuation practices. Changing the tax treatment of loan loss provisions to allow deductibility in the same tax year could also provide an important incentive in this regard. BI should also issue guidelines to ensure a minimum level of harmonization and strengthen prudential considerations in loan loss provisions and write-off practices.

- **Improve efficiency and profitability**. Following a wave of mergers during the last decade, Italian banks are yet to reap the full benefits of consolidation. In addition, the number of banks is still large, and Italy has more branches per capita than other European countries. There is thus room to improve further the cost structure in the short term. And over the longer term, further consolidation in the sector could generate more economies of scale.

- **Dispose of impaired assets**. Accelerating the disposal of impaired assets, for instance through NPL sales, would help clean up bank balance sheets. There is scope—and indeed considerable potential—for supporting market-based solutions that would allow banks to unburden their balance sheets. Although there are no legal or institutional impediments to the development of this market, accelerating the judicial process for foreclosing and debt restructuring could make a major contribution. However, for banks to realize the benefits to any such scheme, the key would be to ensure an effective transfer of credit risk to the buyer.

- **Strengthen capital plans, where needed.** At present, the Italian banking system as a whole appears to be able to meet comfortably regulatory minima under baseline projections.

Stress test results underscore the benefit of extra capital buffers above regulatory minima in case of unforeseen shocks. These capital buffers should, as a minimum, be maintained.[18] In addition, some of the weaker banks—in particular among the cooperative banks and banks under considerable influence of banking foundations—need prompt capital planning aimed at building additional buffers, as several of them, without any action, would face difficulty complying with Basel III requirement even under the baseline. The BI has already taken action in this direction, including requiring additional Pillar 2 capital buffers (for Basel III and asset quality) and issuing guidelines on remuneration and dividend policy.

- **Strengthen medium-term funding plans**. The resilience shown in the liquidity tests largely reflects their short-term nature. Over the medium term, many banks will need to reduce further the funding gap and find viable alternative funding sources to prepare for the eventual expiration of the LTROs.

FINANCIAL SECTOR OVERSIGHT, GOVERNANCE, AND INFRASTRUCTURE

A. Financial Sector Oversight

40. The strong financial sector oversight and payments infrastructure in Italy is a critical pillar of financial stability. Compliance with international standards for banking and securities supervision is high, even relative to other advanced economies, and supervisory practices are strong and sophisticated. Insurance supervision has been relatively weaker, but the recent reorganization will place it in a much stronger footing. Given the challenges faced by the sector, the authorities are fully aware of the imperative of maintaining this high standard of oversight.

41. At the authorities' request, the assessment of financial sector oversight was based on detailed compliance assessments with established supervisory standards for banking, securities, and insurance. The associated Reports on Observance of Standards and Codes (ROSCs) are included in a separate document accompanying this report.

Banking

42. Italy is the first country to be assessed under the revised BCP approved by the Basel Committee in September 2012. It is also the first country that requested to be assessed and rated not only on the essential criteria but also on the additional criteria.

43. BI has a strong supervisory review process and applies Pillar 2 capital add-on extensively. The core supervisory process is well-defined, strong, and integrated. BI is has a well-established reputation for independence, professional excellence, and integrity. The information

[18] This would also be consistent with the EBA recommendation issued in July 2013, subsequent to the FSAP.

used for supervision ranges from detailed credit registry records and extensive reporting to broader risk management overview contained in the Internal Capital Adequacy Assessment Process, and these data are available to the offsite unit. As a result of Supervisory Review and Evaluation Process (SREP), banks receive risk assessment grades that determine the supervisory planning for each. Key risk areas (credit, financial, operational, profitability, capital, strategic and governance) are graded and an overall grade is assigned to the bank. The BI also takes corrective actions on quantitative issues, such as credit risk, loan classifications, and capital adequacy but also on qualitative issues, such as the adequacy of corporate governance and internal controls.

44. Gaps in the legal and regulatory framework are largely mitigated by intensive and intrusive supervisory action on- and offsite, on a bank-by-bank basis. However, there are areas requiring attention so that Italy can meet the highest standards of supervisory effectiveness.

- **The lack of powers to suspend and remove individual directors and senior managers may hamper BI's timely corrective action capacity**. Furthermore, the narrow definition of fit and proper criteria should be expanded so that adverse regulatory judgments are taken into account for directors, and financial soundness—including the capacity to provide additional capital, if needed—for shareholders. Similarly, the lack of power to remove external auditors can be a significant limitation.

- **The new regulation for related-party lending is an important addition to the prudential framework**. However, it has some gaps: some exposures are risk-weighted for the calculation of limits, there is no specific requirement that related-party lending is made on market terms, and it would have been preferable if the regulation had aligned the definition of related parties to that used for large exposures. The BI can use its supervisory discretion to apply stricter definitions of connected parties and stricter limits and controls (notably in situations when economic influence is the connecting element between the related parties), thereby mitigating these deficiencies through supervisory practice. But as this regulation is recent, enforcement has only just started.

- **The regulatory framework for management and control of country and transfer risk is not adequate**. In practice, this is not a major supervisory gap, as the BI addresses this risk, if material, in the largest internationally active banks. Nevertheless, there are other Italian banks with exposures to country risk. The BI should therefore issue guidance that applies to all banks. Banks need to be made aware that an increase of credit risk in a country can lead to private contracts not being observed, independently of sovereign or currency risk.

Securities Markets

45. Italy exhibits a very high level of implementation of the IOSCO principles. Overall, the legal and regulatory framework is sound and the regulatory authorities have implemented very sophisticated arrangements for offsite supervision that result in a robust system of supervision—indeed approaching global "best practice" in certain areas. These arrangements have been developed using extensive data reporting obligations that allow the BI and the securities supervisor,

Consob, to have a much more precise understanding of intermediaries and products and their characteristics than is currently available to regulators in many advanced jurisdictions. Staff use these tools to the fullest to target their supervisory interventions. Furthermore, analysis at a system wide-level by the BI complements microprudential supervision and helps in the identification of risk arising from the securities market.

46. In Italy as elsewhere, the dominance of banks as issuers, managers, and distributors of products is a key source of potential conflict of interest in the financial sector. The potential for conflict was evident during the crisis, especially in 2008, when heavy redemptions of open-end funds took place and concerns were raised that banks were transferring this money to deposits to address their funding needs. Since 2009, Consob has put emphasis on distribution obligations in both its policy and supervisory agenda.

47. Arrangements for offsite supervision need to be complemented by additional onsite inspections to make the system more effective. While the robustness and sophistication of offsite monitoring allow targeted use of onsite inspections, onsite work remains a key tool to identify weaknesses in conduct that cannot easily be detected via reporting. The same applies to operational risk, and more generally to poor governance, internal controls, and risk management systems.

48. Enforcement should also be strengthened. Remedial actions are a necessary component of any enforcement program, but they are not sufficient. Stronger fines should be a complement to remedial action. To this end, it is critical that sanctions may also be imposed on legal entities and that their level be increased. Criminal sanctions, in particular imprisonment, should be used sparingly and strategically to punish the most egregious violations and send clear deterrence messages to the market. That said, it should be emphasized that this is a challenging area for regulators in both advanced and emerging economies.

49. Finally, the licensing framework should be strengthened and a few refinements to the current allocation of responsibilities between BI and Consob are encouraged. On the former, the definition of fit and proper should be expanded and the power to remove individual directors added to the toolkit. On the latter, the mission recommends that a consultation process with Consob be established for the review of applications by banks seeking to provide investment services. In addition, the current framework could benefit from a streamlining of the chosen twin peak structure, aimed at eliminating possible ambiguities or inconsistencies and strengthening the functional approach.

Insurance

50. The IAIS assessment, based on the situation prior to the reorganization on January 1, 2013 and the transformation of ISVAP into IVASS, found an adequate regulatory framework but revealed several gaps. Although ISVAP had numerous staff, it was poorly organized, undertook relatively few inspections, and had weak internal quality control. These gaps are already being addressed by the ongoing reorganization. Valuation and capital practices are still based on the

Solvency I framework and brokers are not properly supervised. However, risk management and consumer protection are strong.

51. Notwithstanding the high level of compliance with the IAIS principles, critical areas need improvement. Valuation and the use of capital are based on the Solvency I framework and need to include stronger risk sensitiveness. Further clarification of appropriate margins, parameters, and technical reserve calculation methodology is necessary to assure adequacy of technical reserves. A complete overhaul of the supervisory structure and processes, including quality controls and specialized onsite supervision is needed.

52. A key challenge will be to ensure that the change in the supervisory architecture does not create gaps during the transition. IVASS has only been in existence since January 1, 2013, although preparations have been taking place since September 2012 to implement the transition. At the same time, IVASS is supervising a critical merger of major insurers, the failure of which could have a substantial market impact and undermine IVASS credibility. Also, internal model pre-application continues and is a key process for the proper future capitalization of the sector. The transition into the new organization needs attention to avoid the loss of institutional knowledge and the emergence of supervisory gaps.

53. The use of stress testing as a supervisory tool by IVASS could be improved. IVASS's annual industry-wide stress test has been replaced by the EIOPA stress test in the last years. The main disadvantage of this approach lies in lack of tailor-made shocks for the Italian market conditions to appropriately test resilience of the industry. Using market analysis, the individual stress tests reported by the insurance groups, and the early warning system tools currently in development, IVASS should design market-specific severe but plausible macro scenarios and test the resilience of the sector as a whole. Reverse stress testing as a regular supervisory practice is also recommended.

54. Internal model approval is a major challenge, and the quality work done on the pre-approval process needs to continue. The focus dedicated to the preapproval process of internal models has provided important insight to IVASS on the risk management and risk appetite of the different insurers. The models are complex and only sufficient resources and expertise will allow understanding of the sufficiency of the resulting capital levels.

B. Financial Sector Governance

55. Banking foundations are a distinctive feature of the Italian banking system. They played a critical role in bank privatization in the 1990s. Since then, they have been stable long-term shareholders of banks, in many cases spurring them to expand and modernize. In the recent crisis, they supported the recapitalization efforts (about one-fifth of the capital raised by the largest Italian banks came from foundations). But at the same time, foundations have a peculiar governance structure, weak internal accountability, and little oversight (especially after a 2003 Constitutional Court decision that curtailed the authority of the MEF to supervise them). They do not follow uniform accounting rules, and the appointment of their governing bodies is sometimes non-

transparent. At least 20 percent of banking system assets are currently controlled or under the significant influence of one or more foundations.[19] Foundations are controlling shareholders in four of the top 10 banking groups (Figure 22) and nominate the majority of the board members of the two largest groups.

56. The stress test results make a compelling case for strengthening governance and management in banks owned or significantly influenced by foundations. MPS has also been until recently under the control of a single foundation. Although this case is not representative of all foundation-owned banks, it illustrates how chronic weaknesses in governance can lead to trouble.

57. This can be partly ensured by tightening banking regulations in a few areas, such as fit-and-proper rules to ensure high standards for bank directors and the financial soundness of major bank shareholders, including their ability to provide additional financial support, if needed. BI should also consider tightening its related party transaction provisions in the current regulation or, at a minimum, use its supervisory discretion to apply stricter definition of related parties to and intervene in situations when economic influence is relevant.

58. But the current legal framework for foundations should also be revised to ensure:

- **Minimum standards of transparency**. Foundations should follow a harmonized set of accounting principles to enhance transparency and public accountability. Audited financial accounts should be required at least for the largest foundations.

- **Investment policy aimed at diversification and caps on leverage**. Foundations should move towards a more balanced portfolio and follow prudent asset allocation policies (diversification, minimum reserves invested in safe assets, etc.). A leverage cap would also be advisable in order to prevent excessively leveraged acquisitions.

- **Stronger corporate governance arrangements**, such as terms limits for foundation Board members and a cooling-off period between a political office and the appointment to a foundation (or vice-versa)—a provision currently left to the "Code of Ethics."

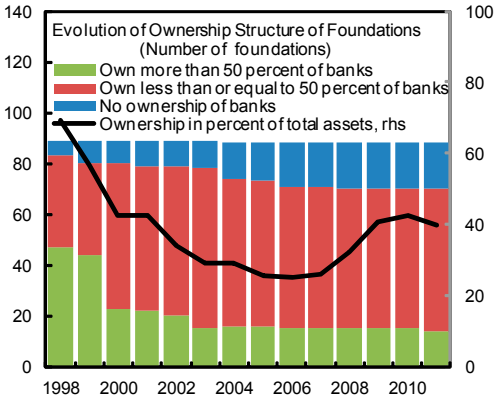
- **Robust oversight**. The MEF (or a new entity) should be empowered to play the oversight role originally envisaged in law 461/98, with adequate sanctioning powers.

59. Certain governance aspects in cooperative banks (*banche popolari*) should also be re-assessed. Unlike foundations, the cooperative bank model is common around the world and works well, especially in a local setting. But certain governance aspects can be problematic, especially for larger cooperatives operating at a national or international level. Restrictions on voting rights ("one

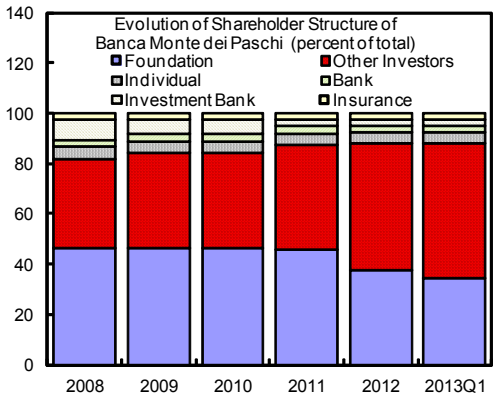
[19] Reporting does not capture participations in banks below 2 percent.

Figure 22. Foundations as Shareholders of Italian Banks, 2012

Since the '90s, the foundations have gradually sold bank shares and diversified



Monte dei Paschi is a recent example

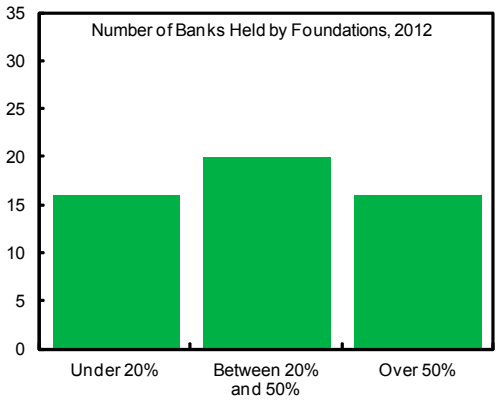


However, foundations remain influencial shareholders in large Italian banks

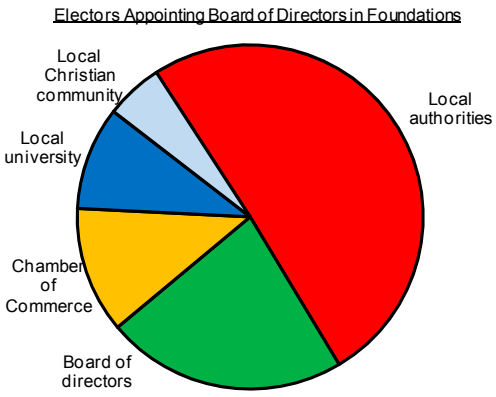
Shareholder Structure of Major Italian Banks and Presence of Foundations

Bank name	Foundations	Percent ownership
Banca delle Marche	4	59.1
Banca Carige s.p.a.	1	49.4
Banco di Sardegna Spa	1	49.0
Banca Monte dei Paschi di Siena s.p.a.	1	34.2
Intesa Sanpaolo s.p.a.	5	24.7
Cassa di Risparmio di Parma e Piacenza	1	15.0
Credito Bergamasco Spa	1	11.6
Unicredit Banca s.p.a.	3	9.0
Mediobanca	2	4.6
Unione di Banche Italiane s.c.p.a.	2	4.5

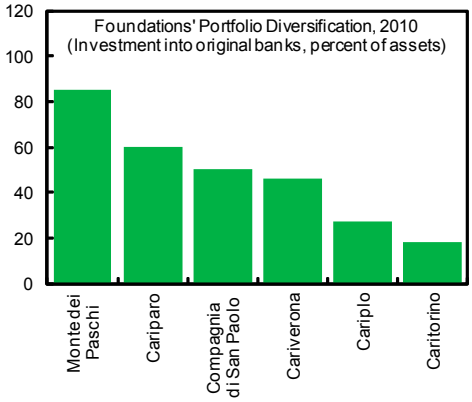
Their stake remains significant in many banks



Foundations remain strongly influenced by local and regional authorities



Some foundations remain vulnerable due to low diversification



Sources: Bank of Italy; Mediobanca; Bloomberg; IMF staff estimates.

member, one vote," limits on proxies, etc.), caps on ownership, and membership requirements may hamper effective shareholder control once the bank grows beyond a certain size, as well as thwart potential outside investors. The latter may have especially pernicious effects in a crisis. The BI has thus urged large listed cooperative banks to reform and turn themselves into joint stock companies.

60. Italy was last assessed against the anti-money laundering and combating the financing of terrorism (AML/CFT) standard in 2005 and is due for a reassessment. The 2005 assessment concluded that Italy's AML/CFT framework was extensive and mature but nevertheless required some improvements. The authorities reported having taken steps to address the deficiencies identified, notably by strengthening customer due diligence rules and reporting of suspicious transaction requirements. Further action is necessary to implement the 2012 AML/CFT standard. The authorities have requested the Fund to conduct its next assessment, which is tentatively scheduled to take place in January 2015. Although outside the 18-month timeframe, under the circumstances,[20] the planned assessment is acceptable for the purposes of the FSAP.

C. Systemically Important Infrastructures

61. The *Cassa di Compensazione e Garanzia* (CC&G), the Italian CCP, is systemically important for the Italian market and, through the link with the French CCP, also relevant for cross-border financial stability. CC&G is the only CCP that clears the cash and derivatives markets operated by *Borsa Italiana* and shares the clearing activities of electronically traded Italian government securities operations (cash and repos) with the French CCP, LCH Clearnet SA. Through the link with LCH Clearnet SA, a substantial amount of cross-border transactions is handled and large credit exposures have built between both CCPs.

62. CC&G has played an important role in maintaining access to the Italian government bond market in times of crisis. Due in part to the increased use of CC&G and LCH Clearnet SA, activity on the Italian bond market continued even in periods of high risk aversion as in 2011, when Italy was hit by the euro zone's sovereign debt crisis. However, the substantial and abrupt increase in LCH Clearnet SA's margins in November 2011 that was followed by CC&G had a negative pro-cyclical effect, with a further widening of the BTP-Bund spread and liquidity strains for participants of both CCPs.[21] At the authorities' request, the CCPs issued a shared methodology to make the impact of variations in margin requirements for the Italian bond market more gradual and less pro-cyclical.

[20] The report is scheduled to be discussed by the Financial Action Task Force (FATF) in June 2015 as Italy's 4th mutual evaluation, and the FATF does not have sufficient capacity to advance the date of this discussion.

[21] In November 2011, LCH Clearnet SA raised its requirements against positions in Italian government securities substantially (500 basis points on 7–10 year maturities) following the widening of spreads between Italian government paper and European benchmark securities that reached 550 basis points. CC&G had to raise its own margin requirements to maintain the connection with the French CCP. The increase was notified to the markets and went into effect at the opening of the trading day on November 9; the same day CC&G requested the posting of intraday margins about 12 times greater than the average for the other months of 2011. Source: April 2012 BDI Financial Stability Report.

63. CC&G's current risk management framework is robust and further changes are in the process of being implemented to comply with the European Market Infrastructure Regulation (EMIR) and PFMIs, and improvements are underway in the risk management of the link with LCH Clearnet. The positions held by the two CCPs towards the link are currently imbalanced and the bilateral inter-CCPs exposures have greatly increased since 2008. In this context, the current arrangements that require each CCP to deposit initial margins to each other and to exchange an additional initial margin do not appear sufficient to cover fully all current and future exposures in extreme but plausible scenarios, as required by the PFMIs. The French and Italian authorities have jointly requested both CCPs to provide an in-depth joint analysis of the risks created by the current imbalance, and proposals (compliant with EMIR requirements for interoperability arrangements) to adequately address the identified risks, if needed. This issue has been given high priority.

FINANCIAL SECTOR SAFETY NETS

A. Supervisory Early Intervention

64. The BI is empowered to adopt a broad range of measures against banks, graduated to reflect the gravity of the situation. The Banking Law empowers BI to take different measures when a bank does not comply with applicable laws or regulations, or when sound and prudent management is at risk. However, BI lacks powers to suspend and replace management, remove the statutory auditors, and apply pecuniary sanctions at the bank level. The BCP assessment has also highlighted these gaps, some of which will be addressed in the context of the forthcoming CRD IV directive. The authorities should provide the BI with all these powers in legislation.

65. While the Recovery and Resolution Planning (RRP) process is underway for Unicredit Group (UCG), there is no clear regulatory framework for RRPs. BI currently relies on its general power to obtain information to require the preparation of UCG's recovery plan. But the lack of a clear legal basis for RRPs has led to difficulties in obtaining the relevant information from the Polish subsidiaries of UCG, causing possible gaps in the RRP. The authorities should provide a statutory basis and develop comprehensive guidelines for preparing RRPs, which should be required for all systemically important domestic banks.

B. Official Financial Support

66. The official sector used a range of measures to support the banking system during the recent crisis, which were effective in maintaining financial stability. Between October 2008 and February 2009, the authorities announced a series of measures to support the liquidity and solvency positions of banks, including a three-year deposit guarantee. These measures helped preserve depositor confidence and maintain financial stability without ultimately entailing significant costs. Banks also strengthened their buffers by raising capital from core shareholders, selling nonstrategic assets, and cutting dividends. In addition, debt capital was made available to banks by the state in 2009 (the so-called "Tremonti bonds") to avoid excessive deleveraging. Only four banks used this instrument. One of these banks, MPS, has gone on to receive significant further official support, as discussed above, while the other three have repaid or are in the process or repaying these bonds.

67. In principle, state capital support should be accompanied by measures to protect taxpayer money and mitigate moral hazard. State recapitalization of insolvent banks should entail some burden-sharing with private owners and creditors, such as attributing losses to shareholders and subordinated creditors[22] (e.g., through dilution and/or restrictions on dividend and coupon payments) and be accompanied by measures to mitigate moral hazard (such as replacing the Board and senior managers responsible for the failings, and placing restrictions on compensation to management). Plans should also be put in place to secure new capital from private sector sources and ensure an exit strategy for the state.

68. The latest public recapitalization scheme for MPS (Box 1) gives the bank time and incentives to restructure and secure new private capital, but its implementation should be closely monitored. If the bank continues to make losses and coupon payments on these bonds are made in shares, the state will progressively become the major shareholder (with approximately 35 percent of the shares) by 2015. In the meantime, a new management has started implementing the ambitious restructuring plan and searching for new investors. But there are uncertainties: MPS's starting position is weak (its NPL ratio is well above that of its peers); the restructuring plan has to be implemented in a difficult economic environment, and deleveraging could further impair loan quality; the plan is subject to a protracted approval process by the European Commission, creating uncertainties for potential new investors; and in the interim, the state is not represented at the Board and relies on the new management and BI supervision. To safeguard the interest of the taxpayer, intensified oversight by BI should continue and the authorities should prepare contingency measures if plan targets appear out of reach.

69. Emergency liquidity assistance (ELA) is subject to Eurosystem rules. BI provided an asset swap facility for the sector as a whole in 2008-09, which disbursed only EUR 5.4 billion. After this facility expired, BI provided an asset swap on a bilateral basis with MPS in the fall of 2011 which, while not technically ELA, had a similar effect. Subsequently, the Italian banking system has been able to directly access significant liquidity from the ECB using ample available collateral. ECB financing of the Italian banking system peaked at EUR 283 billion in July 2012, equivalent to one-quarter of the total euro system take-up.

70. The current arrangements for publishing the monthly balance sheet of BI could diminish the usefulness of ELA as a policy tool. BI publishes a monthly balance sheet in the Eurosystem format from which disbursement of sizeable ELA could be inferred. Experience in other countries suggests that this treatment could undermine the effectiveness of ELA as a tool to cover temporary liquidity needs of a solvent institution. Financial stability considerations may therefore justify flexibility in both the content and timing of the disclosure of information relating to ELA provision, for example by considering a different format with less granularity for BI's monthly accounts.

[22] Indeed recent changes to the EU State Aid rules now require that bank shareholders and junior capital holders bear losses before any public recapitalization. This should not affect Italian retail bonds that are senior to junior capital.

C. Orderly and Effective Resolution

71. Discussions during the FSAP took place against the background of impending changes in the resolution regime at the EU level. The European Council's position on the draft Bank Recovery and Resolution Directive (BRRD) in July 2013—published subsequent to the FSAP—crystallized many of these changes, although the draft BRRD is still subject to agreement with the European Parliament, and the Directive is only expected to be finalized by end-2013 or early 2014. The proposed directive establishes a range of instruments to tackle potential bank crises at the preparatory and preventive, early intervention, and resolution stages, with powers to appoint a special manager and a broad range of resolution powers, including sale of business, bridge institution, asset separation and bail-in.

72. The current bank resolution framework and toolkit in Italy has been successfully used to resolve small banks during the crisis.[23] The regime extends to parent banks, banking groups, and investment firms, and has two major tools, typically deployed sequentially. A special administrator (SA) can be appointed by BI when a bank has suffered serious capital (but not liquidity) losses or there are serious irregularities in the administration or violations of the law or regulations. The administrator assumes the powers of the managers but cannot take decisions pertaining to shareholders (e.g., mergers, large divestments, new capital issues). If the special administrator is unable to restore the bank to viability, a compulsory administrative liquidation (CAL) can be launched by BI based on the same triggers as SA, but when the grounds are of an exceptionally serious nature.[24] These powers can be used to suspend payments and, in the case of CAL, trigger liquidation and deposit insurance payouts, and transfer assets and liabilities (so called "purchase and assumption"—P&A) to a purchaser.

73. The current resolution powers are effective at preserving depositor confidence but could increase the potential cost to the deposit guarantee funds. Only in rare cases—for example where DGS funds were used to payout insured depositors (one out of the 28 recent resolutions) in liquidation—have uninsured creditors incurred losses. In most resolutions, DGS funding is instead used to support the recovery or merger of the bank (so called "open bank assistance") or to fund transfer of all creditors, not just insured or even eligible deposits, to a purchaser. Protecting uninsured creditors may indeed be necessary in a systemic crisis. But generally, transferring only insured deposits would entail lower cost to the DGS and lower moral hazard, as uninsured creditors (e.g., bondholders) would also absorb losses. In Italy, however, this would not be permitted even in benign systemic conditions due to the strict pari passu provisions in the Italian civil code and insolvency law.[25]

[23] Since 2009, twenty-seven banks and one banking group have been placed into SA of which nine have subsequently went into CAL.

[24] The CAL can also be triggered independently, without the need to go through SA.

[25] Under Article 2741 of the Civil Code and Article 11 of the Insolvency Law, creditors have equal right to be satisfied out of the debtor's assets.

74. A number of aspects of the current framework should be enhanced to align it with the FSB Key Attributes, especially as regards burden-sharing with creditors and the irreversibility of resolution actions. Most of these recommendations are broadly consistent with the draft BRRD as set out in the position of the European Council.

- **Powers for selective transfer of assets and liabilities** (e.g., only insured deposits and assets) should be provided in the legislation, complemented by explicit depositor preference and an exemption from the pari passu requirement.
- **The resolution toolkit should be expanded** to prevent shareholders blocking recapitalization or mergers and include bridge bank, bail-in, and bad-bank powers.
- **The triggers for these resolution powers should be revised** to allow for their deployment at an early juncture, when the firm is no longer viable or likely to be no longer viable, and should include both quantitative (e.g., when regulatory liquidity or capital requirements are seriously breached) and qualitative triggers.[26]
- **A statutory test should be provided in the Banking Law** to ensure that any assistance provided by the DGS is least cost, net of recoveries.
- **The courts' powers to suspend or reverse resolution measures** should be curtailed and redress should only take the form of compensatory damages.

75. The MEF's role in commencing intervention proceedings could be reconsidered. Currently, BI cannot initiate SA or CAL on its own, but an MEF decree is required. This system has worked well (the MEF has thus far always endorsed BI's assessments), and both BI and the MEF feel it is appropriate. However, to prevent any future possibility of divergence of views or conflicts of interest, consideration should be given to empowering BI to commence SA or CAL without the need for MEF approval for bank failures that do not present a systemic risk. Of course, MEF endorsement should always be required when public funds are likely to be involved.

D. Deposit Guarantee

76. There are two Italian deposit guarantee schemes (DGSs): the Interbank Deposit Guarantee Fund (FITD) for banks incorporated as joint-stock companies and cooperatives, and the Mutual Bank Depositor Guarantee Fund (FGDCC) for mutual banks. Both are private-law consortia of banks, administered by representatives of member banks and supervised by BI. They have a broad mandate which, in addition to paying out insured deposits upon liquidation, allows them to provide open bank assistance and fund P&A transactions, provided it is less costly than a payout of insured

[26] Once wider resolution powers, which could be used to impose losses on creditors, are introduced in the context of the BRRD, resolution may need to proceed on a faster track (potentially in a matter of days), as the appointment of a special administrator to an open bank may create a greater risk of triggering creditor flight.

deposits. In line with EU directives, coverage is EUR 100,000 per depositor per bank and payout has to be made within 20 working days.

77. A number of aspects of this framework would need to be revisited. Again, most of the recommendations below are broadly consistent with the draft BRRD and draft DGS Directive.

- **Governance of the DGSs should be strengthened.** Currently, active bankers sit on the Boards and Executive Committees, with a delegate of BI as observer. In light of the broad mandate of the DGSs, the presence of active bankers could create potential conflicts of interests and access to commercially sensitive information. Active bankers should be removed from the Boards and Executive Committees and replaced with independent members. Consideration should also be given to including voting representatives from the MEF and BI. A bankers' consultative committee distinct from the Board and Executive Committee could be established to keep the banking community informed and consulted on major policy changes while protecting the confidentiality of the system.

- **The currently ex-post funded DGSs should move to an ex-ante funded scheme, with access to credible back-up funding.** Both DGSs have thus far been able to raise funds quickly to support transfers of assets and liabilities and, in rare cases, deposit payout. However, to underpin the credibility of the DGS and reduce the pro-cyclical effect of ex-post funded schemes, the funding should move towards an ex-ante basis. This would be in line with current proposed amendments to the EU DGS Directive and the draft BRRD. To ensure credible back-up funding, an unsecured credit line from the MEF[27] should be made available at market rates. Efforts should also be made to assess and enhance public awareness.

- **While the DGS is subrogated to the claims of a depositor, depositor preference rights are not currently embedded in the law.** Insured depositors and the DGS (through subrogation) should be given a priority ranking over the estate of the failed bank. An order that preferred insured deposits, then eligible deposits, then other senior creditors would reduce DGS resolution costs and facilitate partial transfer and bail-in powers. This would be consistent with the current draft BRRD.

[27] In 2008, laws were passed to allow the MEF to grant a guarantee should the DGS be unable to reimburse depositors. There have since expires

Appendix I. 2006 FSAP Key Recommendations: Status of Implementation

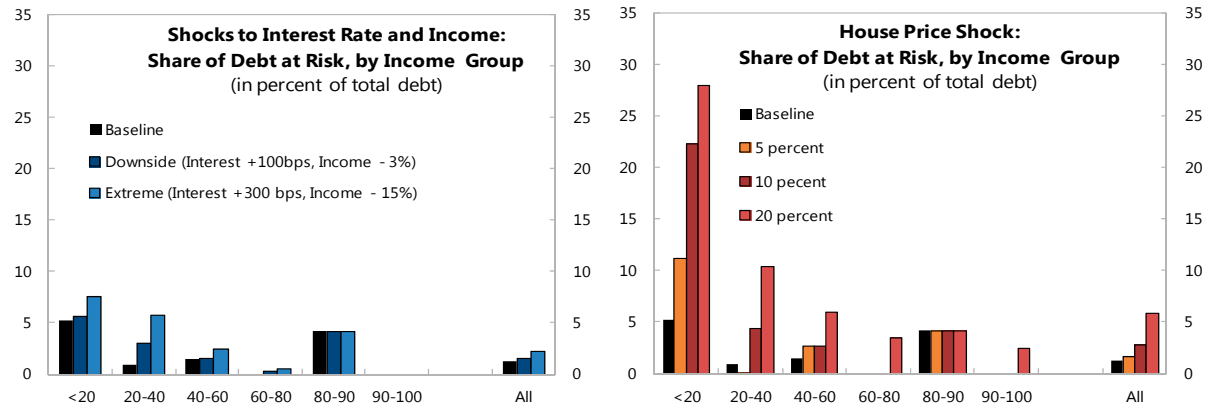
Recommendations	Status
BI governance and transparency	
Amend the BI statute in application of the Savings Law provisions to clarify the role of the Board of Directors in internal oversight and control and modify the ownership structure of BI.	Implemented
Use the opportunity of amending the BI statute to clearly limit its objective to safeguarding the stability of the financial system, omitting the current reference to competitiveness.	Implemented
Supervisory framework	
Accelerate the convergence to the 90-day past-due criteria for impaired loans and probability of default (under the New Basel Capital Accord) and related provisioning requirements.	Implemented
Enhance the comprehensiveness of bank regulation on lending to related parties, including its definition, limit and reporting requirement.	Partially implemented
Continue to monitor closely banks' vulnerability to liquidity risks and, if necessary call for higher liquidity buffers.	Implemented
Provide legal protection to the supervisory authorities and their officers against lawsuits for actions taken in good faith while discharging their duties.	Partially implemented
Strengthen BI's ability to remove promptly bank directors or senior officers who may have become unfit for their duties.	Not implemented
Increase both the number and scope of on-site inspections by ISVAP.	Pending
Subject all insurance intermediaries operating in Italy to registration and direct supervision.	Implemented
Complement market contacts by formal on site inspection of markets and market operators by Consob and BI.	Implemented
Governance	
Strengthen the application of minority shareholder rights by mandating a majority of independent directors and requiring that the Board of Directors include a representative of minority shareholders.	Partially implemented
Consumer protection	
Enhance the monitoring of bank's internal guidelines on the marketing of structured products to small and medium size corporations to ensure that risks are appropriately disclosed.	Implemented
Strengthen disclosure of the financial situation of each insurer and the risks to which it is subject.	Implemented
Extend disclosure requirements to non-listed debt instruments issued by banks.	Partially implemented

Appendix II. The Financial Situation of the Household and Corporate Sectors and Credit Risk Implications for Banks

78. The debt burden of Italian households is modest, and vulnerable households hold a small proportion of that debt. Income has declined during the crisis, leading to tighter financial conditions for households, in particular among low-income and young households. However, based on BI's 2010 Survey of Household Income and Wealth, only 21 percent of households are indebted. Vulnerable households—conservatively defined as households with debt service above 30 percent of income—represent 10 percent of indebted households. These households hold about 20 percent of total household debt. Also, the Italian households' substantial positive net wealth—defined as real and financial assets minus financial debt—provides a buffer. Only 1.3 percent of household debt is held by vulnerable households that that have a negative net wealth position ("debt-at-risk"). In line with this, the loan default rate for Italian households is relatively low.

79. Credit risk from the household sector appears limited. In an adverse scenario where income declines by 3 percent (similar to the decline in gross household disposable income in 2012) and interest rates increase by 100 bps (similar to the increase in rates on new mortgages in 2011-12), staff estimates show that the share of vulnerable households increases to 14 percent of indebted households but debt-at-risk remains low at 1.6 percent. Even more extreme shocks to interest rates (+300 bps) and income (-15 percent) would have a moderate impact on potential credit losses: debt-at-would risk increase to 2.2 percent. A moderate decline in housing prices of 5 percent would increase debt-at-risk to 1.7 percent, reflecting the prudent loan-to-value ratios applied to mortgages. But given the important share of real assets, an extreme shock to house prices (20 percent) would likely generate significant banks' credit losses, as debt-at-risk would reach 6 percent.

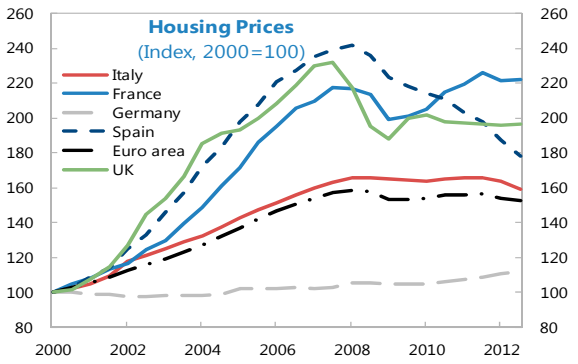
Figure A1. Household Sensitivity Analysis



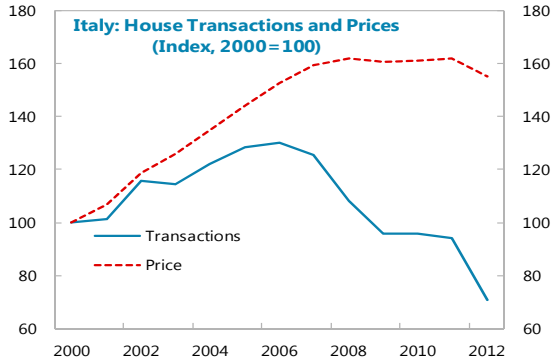
Source: IMF estimates on Bank of Italy data.

80. The recent modest drop in housing market activity reflects the sharp economic downturn. During the decade preceding the crisis, housing prices and sales increased at a moderate rate, in line with euro area averages. However, since 2006, housing transactions have dropped by almost 50 percent, mainly due to the deterioration in households' financial situation and tighter lending conditions. As a result, the increasing trend in housing prices has been reversed, with a cumulative decline of 3¼ percent since the peak in 2011. Affordability indices suggest that the gap between market and long-term prices is limited. But continued weak activity is likely to put further downward pressure on prices in the next few years, consistent with the current slow sale times (more than eight months) and considerable discount-to-ask price (16 percent).

Figure A2. Housing Market Indicators



Source: ECB, Halifax and Nationwide Building Society.

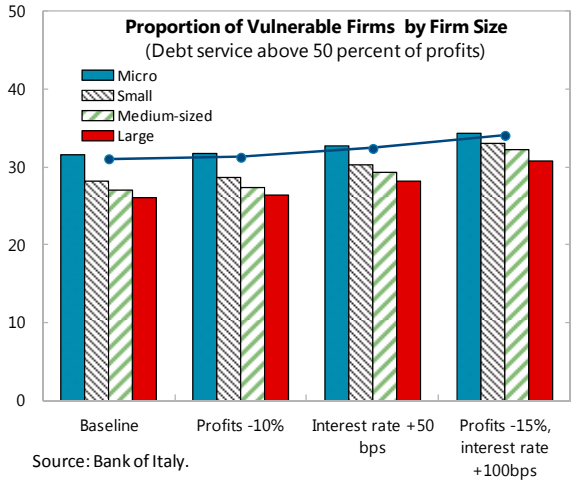


Source: Agenzia del Territorio, Bank of Italy, and ISTAT.

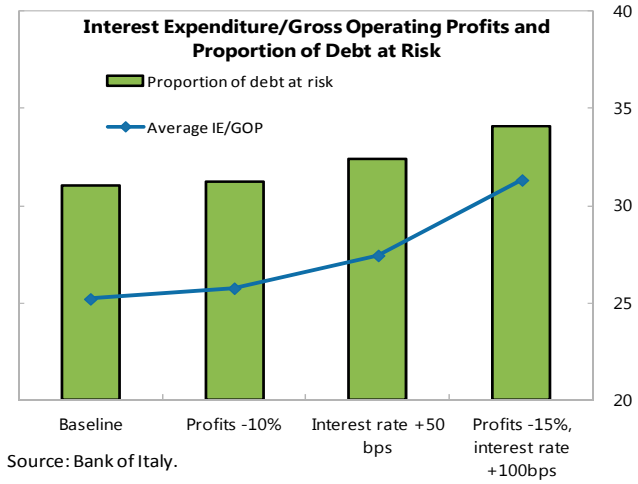
81. The financial situation of non-financial corporates, in particular SMEs, is more fragile, as evidenced by already high default rates. Even though indebtedness of Italian firms is moderate, leverage is high and has increased, mostly reflecting lower market value of equity. In 2011, BI estimates, based on a database covering almost 700,000 Italian firms, the leverage ratio (debt to debt plus equity at balance sheet value) at 52 percent on average and at 55–58 percent for micro and small firms. The proportion of distressed firms—defined as having interest expenses above 50 percent of gross operating profits—is estimated at 31 percent (based on the 2011 balance sheets extrapolated to 2013 using macro data). These firms hold 48 percent of corporate sector debt ("debt at risk"). These firms' loan default rate is already high.

82. Downside shocks would increase credit risk stemming from the corporate sector. The BI performed a simulation on corporate debt, assessing the impact of a combined severe shock on profit (15 percent decline in profits compared to below a 10 percent decline in the 2011-12 downturn) and on interest rates (100 bps increase in interest rates, compared to about a 50 bps increase seen in 2011/12). This would raise the share of debt at risk by 9 percentage points to almost 55 percent.

Figure A3. Corporate Sector Vulnerability Analysis



Source: Bank of Italy.



Source: Bank of Italy.

Appendix III. Risk Assessment Matrix

Source of main risks	Likelihood of severe realization in the next 1–3 years	Expected impact on financial stability if risk is realized
Financial stress re-emerging in the euro area	**Medium** • Italy is prone to contagion from the euro area crisis and could experience a loss of investor confidence in the sustainability of its debt, leading to higher Italian government bond yields and exacerbating the debt dynamics. • Higher interest rates, combined with a deeper downturn in the euro area, would hurt growth and, in particular, corporate balance sheets, in Italy.	**High** • Weaker growth and corporate sector performance could worsen an already weak loan quality further, reducing bank profits and capital. • Banks are substantially exposed to the Italian sovereign debt, and hence vulnerable to lower market valuation of sovereign debt. Exposures to other sovereigns are limited, though. • Banks could face funding pressure due to spillover from the euro area and higher Italian sovereign yields, which would reduce profits and increase dependence on ECB funding. • Insurers' solvency position could deteriorate due to large holdings of sovereign debt.
Stalled structural and fiscal reforms leading to weaker medium-term domestic growth	**Medium** • Structural reform implementation may stall due to policy complacency or social opposition. Potential growth could decline and unemployment remain persistently high over the medium term • Slippage or reversal of fiscal reforms could lead to weaker confidence, higher interest rates, and lower growth. • In such circumstances, stress could also arise from rising corporate bankruptcies, given the fragile situation of the corporate sector.	**Medium** • Prolonged weak growth and high unemployment weighs on loan quality and asset prices, limiting bank profitability over the medium-term. • As a result, banks may need to limit credit growth, further weakening economic activities, which in turn would have a negative feedback effect on credit demand.
Renewed stress in wholesale funding markets	**Medium** • Throughout the European debt crisis, turbulence in sovereign debt markets has often limited banks' access to wholesale funding markets and increased funding costs.	**Low** • Italian banks have experienced difficulties in rolling over wholesale bonds and maintaining non-resident deposits. • ECB funding has all but eliminated the reliance of Italian banks on wholesale funding: two three-year LTROs, amounting to EUR 270 billion, cover repayment of maturing debt over the next three years. • Additional ECB liquidity support would further mitigate the effects of renewed turbulence in the wholesale funding market.

Appendix IV. Stress Test Matrix (STeM): Solvency and Liquidity Risks

Banking Sector: Solvency Test			
Domain		**Framework**	
		Top-Down by Authorities	**Top-Down by FSAP Team**
1.Institutional Perimeter	Institutions included	• Bank by bank analysis for top 32 banking groups. • Excluding *Cassa Depositi e Prestiti*.[1]	
	Market share	• Approximately 90 percent of total domestic and foreign banking sector assets.	
	Data	• Cut-off date for balance sheet data: December 2012 (reflecting the increased provision as per BI's special inspection). • Consolidated, bank-by-bank supervisory data. • Scope of consolidation: banking group level (excluding the insurance arms but including other non-bank and cross-border subsidiaries). Two foreign banks' data are on unconsolidated basis.	
	Exposures to be assessed	<u>Credit risk exposure</u> • Consolidated credit exposures to domestic and foreign customers, excluding interbank and public exposures. <u>Sovereign risk exposures</u> • Scenario analysis: Italian sovereign exposures in AFS, FVO and HFT, with AFS filter. • Sensitivity test: all Italian sovereign exposures regardless of the accounting treatment without AFS filter (phased out gradually following Basel III schedule). • Risks from foreign sovereign exposures are excluded. Most of the foreign sovereign securities are from Germany and other core euro area countries, where downside risks are minimal due to flight-to-quality effects. <u>Other market risk exposure</u> • Equity exposures. • Funds. • Sovereign and corporate debt instruments. • FX risk (endogenously modeled in macroeconomic scenarios).	
2. Channels of Risk Propagation	Methodology	• BI top-down solvency stress testing framework; balance sheet-based approach. • Marked-to-market losses from securities including Italian sovereign.	• Balance sheet-based solvency stress test for individual banks specifically developed for Italy FSAP. • Marked-to-market losses from securities including Italian sovereign.

<table>
<tr><td rowspan="3"></td><td>Satellite Models for Macro-Financial linkages</td><td>• Econometric credit risk model: Seemingly Unrelated Regression models including systemic components (Fiori and others, 2008).
• Gross Operating Profit: Pre-impairment profit is forecasted based on GDP and other macroeconomic variables.</td><td>• Macro-financial model for credit risk: Multi-factor dynamic state space model taking into account dynamic lag structures for macro variables. The credit cycle is explicitly modeled as an unobservable, latent factor, and integrated as an autoregressive state space process that evolves over time.
• Net interest income: Interest margin declines in part due to increases in banks' funding costs (reflecting their empirical relationship with sovereign yields).</td></tr>
<tr><td colspan="2">• Sovereign risk: Marked-to-market losses are calculated by applying haircuts, calculated using modified duration (with convexity adjustment) corresponding to the yield changes. Possible marked-to-market gains from some sovereigns (e.g., due to flight-to-quality effects) are not incorporated. In sensitivity tests, valuation effects are proportional to the shock size (namely, the impact of a 200 bps shock is a double of the impact of a 100 bps shock).</td></tr>
<tr><td>Stress test horizon</td><td colspan="2">• 5 years for baseline and slow growth scenario.
• 3 years for adverse scenario.
• Instantaneous shocks in sensitivity analyses.</td></tr>
<tr><td>3. Tail shocks</td><td>Scenario analysis</td><td colspan="2">Macroeconomic variables are projected using the BI macroeconomic forecasting model and IMF projection models for Italy and other countries/regions. Stress assumptions on sovereign yields, corporate debt yields, and equity as well as fund prices are calibrated from historical volatilities during 2006-2012.
• Baseline scenario: BI baseline projections (GDP growth very similar to WEO in April 2013). Sovereign yields are set at forward rates as of end 2012 (30-160 bps increases across maturities).
• Protracted slow growth scenario: Growth is assumed 0.7 percentage points weaker than baseline each year during 2013-17 (resulting in growth rates of -2.4, -0.7, 0.3, 0.7, and 0.7 percent); cumulative growth over 5 years at -0.1 percent. Sovereign yields are set at forward rates as of end 2012 (30-160 bps increases across maturities).
• Adverse scenario (double-dip): Growth rates of -4.2 percent in 2013, -1.7 percent in 2014, and 1.0 percent in 2015; cumulative growth over 2 (3) years at -4.6 (-3.6) percent. Double-dip shock constitutes a 1¼ standard deviation move in two-year cumulative real GDP growth rate for 2013–14. While growth recovers in the third year, output gap remains. Sovereign yields increase by 80-110 bps across maturities compared to the baseline, corresponding to the 80th percentile of the empirical distributions for annual yield changes. This amounts to a 110-270 bps increase across maturities compared to end 2012, and this corresponds to the 95th percentile of the empirical distribution for annual yield changes.</td></tr>
</table>

	Sensitivity analysis	• Sovereign risk: a 100 basis point parallel shift in the Italian sovereign yield curve compared to end 2012 levels. • Credit concentration risk: Default of the largest, the largest three, five, ten, and all large exposures (according to FSI definition). LGD is set at 45 percent.	
4.Risks and Buffers	Risks/factors assessed	Exposures to sovereign • Sovereign risks (Italy): mark-to-market valuation of securities in HFT and AFS/FVO. • In sensitivity test, HTM exposures were stress tested, too (banking and trading book). Credit risk • Estimated according to Basel II/III framework, i.e., EaD*PD*LGD. • Increasing asset correlations proxied by expert judgment (15% add-on to PDs under the adverse scenario). Market risk other than sovereign • Equity and funds price shock. • Debt instruments issued by private sector Profits • Estimated according to evolution of macroeconomic variables (satellite model). Off-balance sheet (OBS) items • Included using Credit Conversion Factor; • In adverse scenario, higher fraction of OBS exposures faces stress. • Securitization exposures are excluded as analysis revealed that the exposures no longer pose a threat to banks. Cross-border exposures • Credit risks from cross-border loan exposures in all economies, excluding interbank and	Exposures to sovereign • Sovereign risks (Italy): mark-to-market valuation of securities in HFT and AFS/FVO. • In sensitivity test, HTM exposures were stress tested, too. Credit risk • Loan losses estimated according to Basel II/III framework, i.e., EaD*PD*LGD. • Asset correlations are reflected in changes of RWA as per Basel formula. Market risks other than sovereign • Equity and funds price shock. • Debt instruments issued by private sector Profits • Interest income declines for the amount of lost income from defaulted loans. • Interest expenses increase due to rising funding costs (in line with higher sovereign yields). • Net fee and commission income, and other income are kept constant at 2012 levels • No change in business models (i.e., no new income). Off-balance sheet (OBS) items • Included using Credit Conversion Factor; • Securitization exposures are excluded as analysis revealed that the exposures no longer pose a threat to banks. Cross-border exposures

		public loans. Basel III phase-in • The effects on capital components and RWA are estimated by BI in consultation with individual banks for each year of the forecasting time-horizon.	• Credit risks from cross-border loan exposures in all economies, excluding interbank and public loans. Basel III phase-in • The effects on capital components and RWA are estimated by BI in consultation with individual banks for each year of the forecasting time-horizon.
	Behavioral adjustments in macro scenario tests	Balance sheet • Constant balance sheet and RWA, except for the impact of Basel III • EaD under stress increases about 20 percent, reflecting higher use of committed but previously unused credit lines (using a CCF of 75 percent). • Maturing assets are replaced by exposures of the same type and risk. • No changes to credit portfolio or funding structure. No credit growth. Retained earnings • No payout or tax effects. Realization of Losses • Losses are recognized in the same year when a shock hits (no gradual recognition over time is allowed. • Elimination of prudential filter on AFS portfolio (unrealized gains and losses) as foreseen under Basel III (20 percent a year).	Balance sheet • Time-varying RWA according to regulatory Basel II/III framework. • No changes to credit portfolio or funding structure. No credit growth. No strategic asset disposals or other managerial responses are allowed. • Maturing assets are replaced by exposures of the same type and risk. Retained earnings • Dividend payout: 50 percent payout ratio. • Positive net operating income is taxed at 25 percent. Realization of Losses • Losses are recognized in the same year when a shock hits (no gradual recognition over time is allowed) • Elimination of prudential filter on AFS portfolio (unrealized gains and losses) as foreseen under Basel III (20 percent a year).
5. Regulatory and Market-Based Standards and Parameters	Calibration of risk parameters	Parameter definition • Point-in-time (PiT) PDs and LGDs. Starting point RWA is measured with through-the cycle (TTC) approach.	Parameter definition • Point-in-time (PiT) PDs and LGDs. • Starting point RWA is measured with through-the cycle (TTC) approach. Additional changes are driven by point-in-time (PiT) PDs and LGDs.

		Parameter calibration • Starting point PD is proxied by inflows into four NPL categories over total loans, including transitions across different categories. • Evolution of PDs under stress determined by SUR model incorporating three systematic factors. • Initial LGDs are approximated by actual coverage ratios. The coverage ratios as of December 2012 data reflect the results of the BI's on-site inspections performed in early 2013. • In each scenario, loan migrations across different NPL categories increase LGDs (at least 20 percent on average across banks).	Parameter calibration • Starting point PD is proxied by inflows into four NPL categories over total loans, including transitions across different categories. • Evolution of PDs under scenarios is forecasted using dynamic credit risk model estimates incorporating latent aggregate credit cycle. • Initial LGDs are approximated by actual coverage ratios. The coverage ratios as of December 2012 data reflect the results of the BI's on-site inspections performed in early 2013. • LGDs remain constant in baseline scenario. They increase in stress scenarios in line with house prices, as projected in macroeconomic scenarios. Bank specific LGDs increase by 7.5 and 12.4 percent under the slow growth and the adverse scenario, respectively. These shocks are assumed instantaneous and persistent.
	Regulatory standards	Scenario analysis • Capital definition according to Basel III / CRD IV, including Common Equity Tier 1, and Tier 1. Capital components that is no longer eligible for CET1 and Tier 2 capital components are phased out gradually, as in other stress tests in recent G7 and euro area FSAPs. • Hurdle rates (including conservation buffer) follow Basel III minimum and phase-in arrangements, including Capital Conservation Buffer on top of all capital definitions. No SIFI surcharges were applied. • Treatment of prudential AFS filter according to Basel III phase-in, i.e. 20% a year. Sensitivity analysis • Since the reference date was Dec-2012, Basel II capital definitions were applied. Unrealized losses from AFS portfolio is assessed without AFS filter.	
6. Reporting Format for Results	Output presentation	Scenario analysis • Evolution of CET1 and Tier 1 capital ratios over time, for system as a whole and specific groups of banks (by size: top 10 banks, top 11-20, and top 21-32; by type of institutions: cooperative banks (*banche popolari*), banks under considerable influence of banking foundations, subsidiaries of foreign banks). • Evolution of risk parameters resulting from satellite models. • Contribution of key drivers to aggregate results, expressed in terms of CET 1 ratio. • Distribution of individual banks' capital ratios; • Number of banks and share of total assets below hurdle rates. • Capital shortfall under each scenario resulting from the aggregation of each bank's individual capital	

		shortfall (in absolute terms and in relation to annual GDP). Sensitivity analysis • Changes in capital ratios for banking system as a whole. • Associated recapitalization costs, if any.
Notes: CRD IV, Capital Requirements Directive IV; CCF, Credit Conversion Factor; EaD, Exposure at Default; LGD, Loss Given Default; TTC, Through-the cycle; PD, Probability of Default; PIT, Point-in-time. 1/ The CDP is a specialized lending entity majority owned by the government. It funds itself mostly with postal and customer deposits, and it is required to deposit the liquidity provided by postal savings on an account at the treasury, which makes up nearly a half of it assets.		

Source: IMF staff.

Banking Sector Liquidity Risk		
Domain		**Bank of Italy in collaboration with FSAP team**
1. Institutional Perimeter	Institutions included	• Top 33 banks, including 6 foreign banks' subsidiaries, bank by bank analysis. • Excluding *Cassa Depositi e Prestiti*.[1]
	Market share	• Together more than 90 percent of the sector's total assets.
	Data and base date	• BI's standard weekly liquidity monitoring data on consolidated basis (except for foreign banks), covering short, medium and long term maturities for both retail deposits and wholesale funding, including durations. • Supervisory information/ data on sovereign risk, collaterals, and retail deposit volatility in weekly/monthly time intervals. • Base date: Liquidity position data as of end 2012. Rating and other market valuation data as of March 2013.
2. Channels of Risk Propagation	Methodology	• Liquidity stress for 30 days. • Cash outflows due to refinancing risks with wholesale funding and deposit outflows. • Reduction of liquidity buffer owing to sovereign and bank downgrades (which can increase haircuts set by the ECB) and declines of market valuation of sovereign securities.
3.Risks and Buffers	Risks	• Funding liquidity shock, involving deposit withdrawal and complete loss of wholesale funding.
	Buffers	• Unencumbered securities eligible for ECB collaterals, assessed at market values net of ECB haircut at security-by-security levels (i.e., "counterbalancing capacity").
4. Tail shocks	Size of the shock	Adverse scenario (motivated by actual distress experience at end 2011) • Refinancing risk with wholesale funding: 0 percent roll-over rate for maturing wholesale funding (including central bank funding).

		• Changes of ECB haircut caused by multiple downgrades: one-notch downgrade to sovereign by all four rating agencies (causing jumps in ECB haircut to the highest possible levels for sovereign securities that remain eligible for ECB operation without a program); and two-notch downgrade to banks by all four rating agencies (some banks, including large ones, lose investment grade as a result, and therefore their securities become ineligible for ECB operations) including their covered bonds and asset backed securities. • Increased volatility of deposits: deposit outflows (5 percent for retail customers, 20 percent for corporate depositors, and 33 percent for sovereign and public entities). Outflow rates are estimated as the maximum experienced by each bank in 2011-12 periods with LCR-prescribed outflow rates as floors. • Widening credit spreads: a 150 bps jump in Italian sovereign yields, which increases haircut as well as margin requirements for repo positions. <u>Alternative scenario focusing on market factors</u> • Same assumption on refinancing risks and changes with ECB funding as in adverse scenario. • No deposit outflows. • Widening credit spreads: a 180 bps jump in Italian sovereign yields.
5. Regulatory and Market-Based Standards and Parameters	Regulatory standards	• Maintaining net positive liquidity position (i.e., counterbalancing capacity above potential cash outflows in stress scenario in 30day horizon).
6. Reporting Format for Results	Output presentation	• Changes in net liquidity position and counterbalancing capacity for each scenario. • Results drivers of banks' liquidity position and counterbalancing capacity, for each scenario. • Number of banks (pass rates) below minimum requirement, for each scenario. • Differentiation between foreign-owned banks operating in Italy and Italian banks (top five, large-medium sized and small-sized).
1/ The CDP is a specialized lending entity majority owned by the government. It funds itself mostly with postal and customer deposits, and it is required to deposit the liquidity provided by postal savings on an account at the Treasury, which makes up nearly a half of it assets.		

Source: IMF staff.