



BANCA D'ITALIA  
EUROSISTEMA

# Financial Stability Report

April 2013

Number

5



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# **Financial Stability Report**

**Number 5 April 2013**

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## SYMBOLS AND CONVENTIONS

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Unless indicated otherwise, figures have been computed by the Bank of Italy.

In the following tables:

- the phenomenon in question does not occur
  - .... the phenomenon occurs but its value is not known
  - .. the value is known but is nil or less than half the final digit shown
  - :: the value is not statistically significant
  - () provisional
-

## OVERVIEW

### **The world recovery is weak and not broadly based**

*The global economic picture is still uncertain. There has been perceptible improvement in the United States and Japan, thanks in part to support from monetary policy. The euro area continues to be weighed down by uncertainty over the development of the sovereign debt crisis.*

### **In Europe, significant risks for financial stability persist**

*The crisis of the banking system in Cyprus and the political uncertainty in Italy played a role in halting the improvement in financial conditions in Europe. The repercussions on the markets were nevertheless cushioned by the progress on fiscal consolidation made in a number of countries, by the advance towards a single banking supervisory system and by the enduring stabilizing effects of the approval by the European Central Bank of the Outright Monetary Transactions programme last September. In recent weeks the tensions have subsided to some extent.*

*The main risks for financial stability, particularly in the euro-area countries most exposed to the sovereign debt crisis, relate to the danger that the recession may be prolonged by a spiral of weak demand, sovereign risk and bank fragility. Vulnerability has also emerged in some economies enjoying exceptionally low interest rates on government securities in the presence of persistently large budget deficits, high private debt, and weak real-estate and labour markets. On the international capital markets yield spreads for corporate bonds have fallen to historically low levels, prompting fears of a correction.*

### **In Italy the recession continues; the public finance balances improve**

*In Italy the risks for financial stability stem from the contraction in economic activity. Positive signs derive from the progress in the field of the public finances, which will make possible the closure of European Union's excessive*

*deficit procedure, and the improvement in the current account of the balance of payments, which has returned to surplus thanks to the continuing moderate growth of exports as well as the fall in imports.*

*In the real-estate market, prices and sales are falling. The recession and tensions in the supply of mortgage loans weigh on the short-term outlook. The risks for the banking system derive chiefly from exposures to construction firms.*

### **Households reduce financial assets and debt**

*Shrinking disposable income is inducing households to pare their holdings of both foreign and domestic financial assets and to curb their borrowing. Indebted households' financial difficulties have been alleviated by a diminution in the burden of debt service, due to a mortgage payment moratorium, to the fall in short-term interest rates (to which over two thirds of mortgages are indexed), and to the spread of flexible loan contracts that permit borrowers to alter the size of repayment instalments at no additional cost.*

### **The condition of firms worsens**

*Firms are feeling the effects of the recession. Negative factors include the accumulation of suppliers' commercial claims on general government and the difficulty in obtaining financing. Benefits should stem from the rapid implementation of the recent measure unfreezing a first tranche of public sector payments to suppliers.*

### **The supply of credit is held back by borrower risk**

*The contraction of lending to the private sector continues. It stems from declining demand for loans and from the tightening of supply conditions by banks, itself due above all to the increasing riskiness of borrowers and the persistent fragmentation of wholesale funding markets. For small firms the financial tensions are exacerbated by difficulty in accessing external sources of finance alternative to bank credit.*



The flow of new bad debts on business loans has increased, especially in the construction industry. The default rate on loans to households remains low.

**Loan loss provisions increase, owing in part to supervisory intervention**

The Bank of Italy has stepped up its supervisory action with inspections to check the adequacy of banks' policies to deal with the deterioration of loan quality. Strengthening the quality of banks' assets and increasing the coverage ratio (defined as the ratio of provisions to non-performing loans) are necessary to maintain investor confidence and a satisfactory flow of credit to firms and households.

**International comparisons of non-performing loans are affected by differences in classification criteria**

If calculated by the same standards as those applied by leading international banks, Italian banks' ratio of non-performing to total loans would be lower than indicated in their balance sheets; and the coverage ratio for non-performing loans would be higher than the average for a sample of large European banks, and rising over time.

What is more, in international comparisons Italian banks are at a disadvantage as a result of the slowness of credit recovery procedures due to the malfunctioning of the civil justice system. This lengthens the period for which bad loans are kept on balance sheets, which, other things being equal, inflates bad debts in proportion to total lending.

**Retail funding grows, but uncertainty leads banks to keep recourse to the Eurosystem constant**

The growth of the retail component imparts stability to Italian banks' funding and reduces the funding gap. Nevertheless, the uncertainty that continues to impede access to the wholesale funding markets has prompted banks to keep recourse to Eurosystem funding stable and to increase their holdings of eligible assets.

The main risk for banks' liquidity consists in a lowering of the sovereign rating and the consequent reduction in the value of assets eligible as collateral with the Eurosystem; the reduction of the volume of eligible government-guaranteed bank bonds will be gradual, and its effects will be circumscribed.

**Loan losses affect banks' profitability and require cost-cutting**

Banks' profitability has been compressed by very substantial loan losses and provisioning, necessitating incisive measures to contain costs. The budgets of the main groups indicate that profitability will be low again in 2013.

**Banks' capital position continues to strengthen**

The core tier 1 ratio of the main banking groups rose further, to 10.5 per cent. The preliminary results of the IMF's stress tests show that the Italian banking system as a whole is adequately capitalized and hence capable of withstanding adverse shocks. The adaptation to the new capital requirements of Basel III continues. For the Italian banks taking part in the Basel Committee's monitoring programme, the additional capital they would need if the new rules were already fully in effect has diminished drastically over the past two years.

**The conditions of insurers are improving**

The profitability of Italian insurance companies has turned positive, thanks to capital gains on their government securities portfolios. Their solvency ratios are well above the minimum requirements. Italian insurers have not suffered significantly from the low level of interest rates, which is causing concern instead for insurance companies in the European countries where government securities yields are at historic lows.

**Interest rates in the Italian money markets are now in line with the euro-area average**

The liquidity of the Italian financial markets is improving. In the money market the cost of funding has come into line with that in the euro area as a whole.

**The liquidity of the government securities market improves**

The placement of government securities continues smoothly, in keeping with the Treasury's issue schedule. The periodic issue of bonds with maturity beyond ten years has been resumed. Issue yields began falling again in April. The most recent data show substantial inflows of capital, suggesting that purchases of Italian government securities by foreign investors are continuing.

# 1 MACROECONOMIC RISKS AND INTERNATIONAL MARKETS

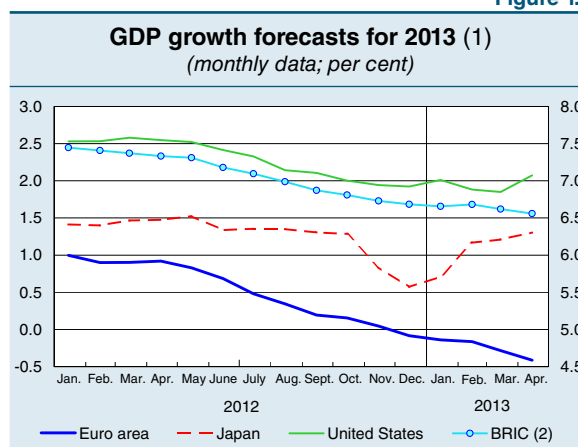
## 1.1 THE MACROECONOMIC AND FINANCIAL CONTEXT

**The global recovery is not uniform** According to the latest cyclical indicators, the global recovery remains weak and by no means generalized (see *Economic Bulletin*, April 2013). There are signs of improvement in the United States and Japan; among the emerging economies, growth remains buoyant in China. Instead, in the euro area growth prospects continue to deteriorate, a trend under way since the spring of 2012 (Figure 1.1), partly owing to uncertainties regarding the evolution of the sovereign debt crisis.

**In Europe the financial markets have experienced alternate phases ...** The improvement in conditions on the European financial markets under way from the beginning of last summer came to an end

early in February. Since then the markets have been through alternate phases, partly as a result of the political uncertainty in some countries and the financial crisis in Cyprus. Overall, the premiums on sovereign CDS in the euro area have fallen to levels below those recorded last summer. The premiums on bank CDS have instead remained relatively high and issues of bank bonds have declined again after the exceptionally high levels recorded in January (Figures 1.2.a and 1.2.b). The tensions have eased somewhat in recent weeks.

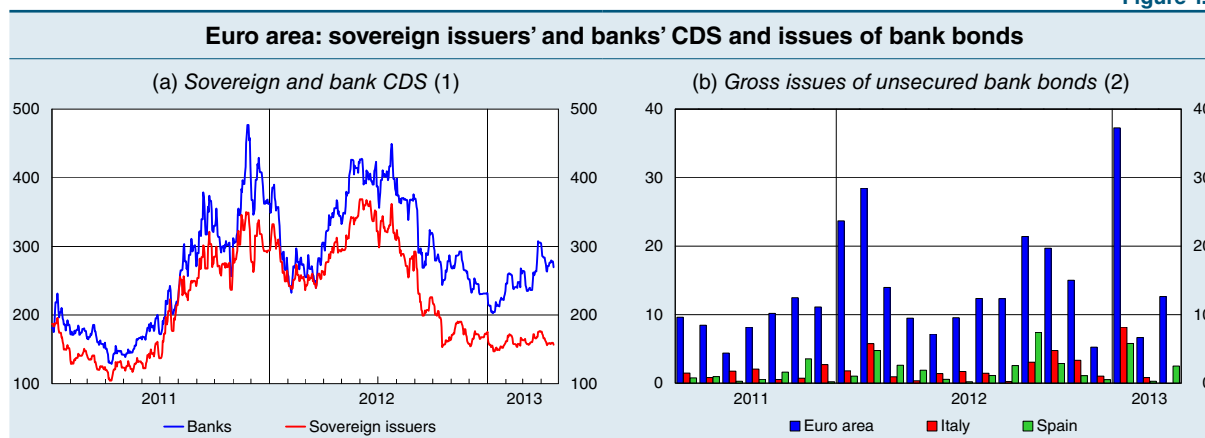
Figure 1.1



Source: Based on Consensus Economics data.

(1) Forecasts made in the months shown on the horizontal axis. – (2) Right-hand scale; average of the forecasts for Brazil, Russia, India and China, weighted on the basis of each country's GDP in 2010 at purchasing power parity.

Figure 1.2



Sources: Based on Bloomberg, Dealogic and Thomson Reuters Datastream data.

(1) Basis points. Basket of sovereign issuers' CDS: simple average of Germany, France, Italy and Spain; basket of bank CDS: simple average of the 10 banks listed, for these four countries, in the note to Figure 3.1. – (2) Monthly data in billions of euros. Bonds not backed by collateral or government guarantees.



... although the measures adopted by the major advanced economies mitigate the risks

The uncertainty surrounding the markets is contained, globally, in part by expectations that monetary policies will continue to provide support to the economy for some time; their massive contribution in Japan was recently increased further. In Europe, the approval of the Outright Monetary Transactions programme continues to have a stabilizing effect, as does the progress made towards the creation of the Single Supervisory Mechanism (see *Economic Bulletin*, January 2013) and the efforts to consolidate public finances.

Italy makes significant progress in the adjustment of its public finances ...

In 2012 Italy achieved the objective of reducing the deficit-to-GDP ratio below the 3 per cent threshold, thus making it possible for the Excessive Deficit Procedure to be closed in the coming months. At 2.5 per cent of GDP, the primary surplus is on a par with Germany's and contrasts with an average primary deficit of 3.1 per cent for the other euro-area countries. Both the European Commission's estimates published in February and those published in April by the IMF and by the Italian Government indicate that structural balance should be broadly achieved in 2013. The public debt sustainability indicators prepared by the European Commission and the IMF, which also take account of ageing-related expenditure, confirm that among the industrial countries only Germany and Italy show overall balance in the long term (Table 1.1). The deterioration in the economic situation and the measures to speed up the payment of general government commercial debts contributed almost equally to the revision, announced in April, of the Government's deficit estimate for this year from 1.8 to 2.9 per cent of GDP (see *Economic Bulletin*, April 2013). These two factors, together with the financial support provided to euro-area countries, are expected to push up the ratio of the public debt to GDP by more than 3 percentage points, to 130.4 per cent. In this difficult situation Italy is expected to maintain its large primary surplus roughly unchanged. Although the public debt is large, the Italian economy continues to be marked by the sound financial situation of households and firms, whose financial debt is one of the lowest in the advanced economies. The risks attached to local government use of derivative instruments are generally limited (see the box "Local authorities' derivatives transactions").

## LOCAL AUTHORITIES' DERIVATIVES TRANSACTIONS

From the middle of the 1990s onwards local authorities made substantial recourse to derivatives (mainly interest rate swaps). Since June 2008, when they were forbidden from entering into new contracts, the scale of local authorities' exposure has decreased considerably; with reference exclusively to derivative contracts concluded with banks resident in Italy, in December 2012 the notional value had fallen to €10.4 billion<sup>1</sup> and the number of authorities involved to about 180 (see table). Taking account of contracts concluded with non-resident banks, it is estimated that at the end of last year the total notional value of derivatives was about €21 billion and the number of local authorities concerned was 284 (of which 220 municipalities, 33 provinces and 19 regions).<sup>2</sup>

Information on the market value of local authorities' derivatives is available only for the contracts concluded with resident banks.<sup>3</sup> The sum of the negative market values (the potential

<sup>1</sup> The notional value of a derivative contract is the value of the instrument underlying the contract. The estimate of the volume of business with resident banks is based on supervisory reports and Central Credit Register data; the derivative components of loan contracts, such as interest rate caps on floating rate loans, are included.

<sup>2</sup> Estimates prepared by the Ministry for the Economy and Finance on the basis of the mandatory notifications by regions, provinces and municipalities (other local authorities are not subject to the notification requirement); the derivative components of loan contracts are not included.

<sup>3</sup> The market value of a derivative contract at a given date is the amount that the holder would receive if the contract were closed on that date. If the market value is negative, the contract is a potential liability for the holder. Under the European rules, that liability is not part of the public debt because it is only potential.

liability) has increased in recent years but remains limited (€1.4 billion in December 2012). The increase, which coincided with the large fall in short-term interest rates in the period in question, indicates that many of the contracts still outstanding were concluded to hedge against a rise in interest rates. The sum of the positive market values is negligible.

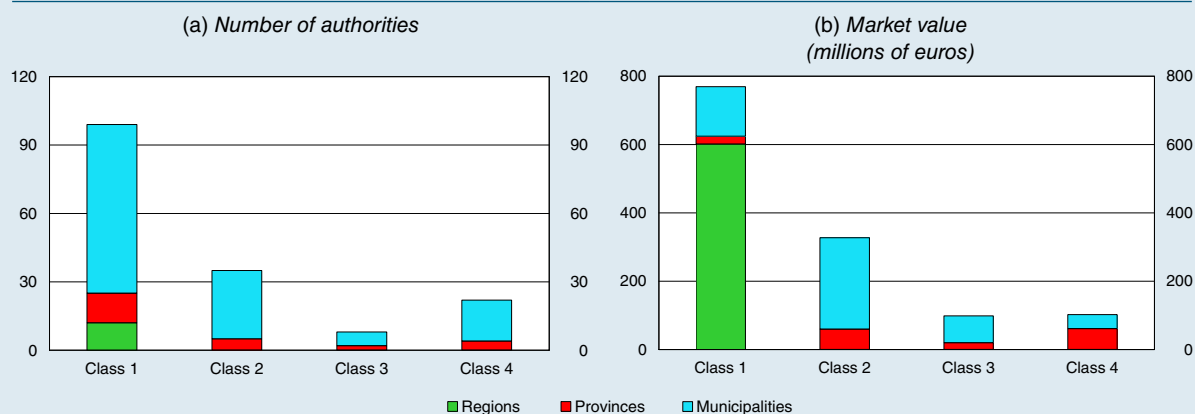
The number of authorities with a high ratio between potential derivative liabilities and current revenues is also small. With reference exclusively to derivative contracts concluded with Italian banks, this ratio was more than 15 per cent for 4 provinces and 18 municipalities (exposure class 4 in panel *a* of the figure), which had total potential liabilities amounting to about €100 million (panel *b* of the figure). It should be noted that some authorities also had contracts in place with foreign banks; however, they were relatively few, about 30, and most of them were in the first two classes.<sup>4</sup>

### Local authorities: derivatives transactions with resident banks (end-of-period data)

	Negative market value (1) (millions of euros)				Local authorities (2) (number)			
	2007	2009	2011	2012	2007	2009	2011	2012
Regions	113	324	492	601	11	12	11	12
as a % of debt (3)	0.1	0.3	0.4	0.5				
Provinces	93	113	136	163	31	28	25	24
as a % of debt (3)	0.1	0.1	0.1	0.1				
Municipalities	693	569	502	533	620	429	184	128
as a % of debt (3)	0.6	0.5	0.4	0.5				
Other local authorities	4	17	40	53	8	13	12	12
as a % of debt (3)	0.0	0.0	0.0	0.0				
Total	902	1,023	1,169	1,351	670	482	232	176
as a % of debt (3)	0.8	0.9	1.0	1.2				
<i>Memorandum items:</i>								
Positive market value (4)	120	99	186	182				
Notional value	31,520	22,499	12,588	10,396				

Sources: Based on supervisory reports and Central Credit Register data.  
(1) Sum of the negative market values for the type of local authority. – (2) Number of local authorities with derivative contracts having a negative market value above the threshold for inclusion in the Central Credit Register (€30,000). – (3) The ratio is calculated with reference to the local authorities' total debt. – (4) Sum of the positive market values for local authorities.

### Derivatives position: distribution by exposure class (1)



Sources: For market values, supervisory reports and the Central Credit Register; for the current revenue of the regions, Istat; for the current revenue of the provinces and the municipalities, the Ministry of the Interior.

(1) The data refer to local authorities with derivative contracts concluded with Italian banks having a negative market value above the threshold for inclusion in the Central Credit Register (€30,000). The authorities were allocated to the exposure classes, shown on the x-axis, on the basis of the ratio between the (absolute value of the) negative market value of each authority's derivative contracts and its current revenue (class 1: ratio of less than 5 per cent; class 2: ratio of between 5 and 10 per cent; class 3: ratio of between 10 and 15 per cent; class 4: ratio of more than 15 per cent). The negative market values refer to the end of 2012; the current revenues refer to 2010.

<sup>4</sup> Estimate obtained by combining data from the Central Credit Register and those of the Ministry for the Economy and Finance.

Table 1.1

Financial sustainability indicators (per cent of GDP, except as specified)												
	Budget deficit (1)			Primary surplus (1)			Public debt (1)			GDP (annual growth rate) (2)		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Italy	3.0	2.6	2.3	2.5	2.7	2.9	127.0	130.6	130.8	-2.4	-1.5	0.5
Germany	-0.2	0.3	0.1	2.6	1.8	1.8	81.9	80.4	78.3	0.9	0.6	1.5
France	4.8	3.7	3.5	-2.3	-1.4	-1.1	90.2	92.7	94.0	0.0	-0.1	0.9
Spain	10.6	6.6	6.9	-7.7	-3.5	-3.6	84.2	91.8	97.6	-1.4	-1.6	0.7
Netherlands	4.1	3.4	3.7	-2.2	-2.2	-2.5	71.2	74.5	75.9	-0.9	-0.5	1.1
Belgium	3.9	2.6	2.1	-0.5	0.6	1.3	99.6	100.3	99.8	-0.2	0.2	1.2
Austria	2.5	2.2	1.5	0.1	-0.2	0.5	73.4	74.2	73.7	0.8	0.8	1.6
Finland	1.9	2.0	1.3	-0.8	-2.2	-1.6	53.0	56.9	58.4	-0.2	0.5	1.2
Greece	10.0	4.6	3.4	-5.0	0.0	1.5	156.9	179.5	175.6	-6.4	-4.2	0.6
Portugal	6.4	5.5	4.0	-2.0	-1.4	-0.1	123.6	122.3	123.7	-3.2	-2.3	0.6
Ireland	7.6	7.5	4.5	-3.9	-3.2	-0.1	117.6	122.0	120.2	0.9	1.1	2.2
Euro area	3.7	2.9	2.6	-0.6	0.0	0.2	90.6	95.0	95.3	-0.6	-0.3	1.1
United Kingdom	6.3	7.0	6.4	-3.4	-5.0	-4.4	90.0	93.6	97.1	0.2	0.7	1.5
United States	8.5	6.5	5.4	-6.4	-4.6	-3.4	106.5	108.1	109.2	2.2	1.9	3.0
Japan	10.2	9.8	7.0	-9.3	-9.0	-6.2	237.9	245.4	244.6	2.0	1.6	1.4
Canada	3.2	2.8	2.3	-2.7	-2.4	-1.9	85.6	87.0	84.6	1.8	1.5	2.4
	Characteristics of public debt (3)			Sustainability indicators		Private sector financial debt at Q3 2012		External positions at end-2012				
	Share maturing plus deficit in 2013	Avg. residual life of gov't securities in 2013 (yrs.)	Non-residents' share in 2012 (% public debt)	S2 indicator (4)	IMF indicator (5)	Households	Non-financial firms	Current account balance	Net international investment position (6)			
Italy	27.8	6.5	35.1	-2.3	1.1	45.2	80.2	-0.7	-22.5			
Germany	8.2	6.4	61.3	1.4	1.0	58.8	62.6	7.0	38.5			
France	17.1	6.8	63.5	1.6	4.2	56.8	107.0	-2.3	-15.9			
Spain	20.7	5.6	29.1	4.8	6.8	79.9	132.4	-1.1	-90.4			
Netherlands	12.0	6.7	53.5	5.9	6.1	128.5	95.3	9.9	55.5			
Belgium	18.4	7.0	57.1	7.4	9.1	55.3	182.9	-1.4	65.5			
Austria	8.4	7.5	83.3	4.1	6.3	54.4	106.4	1.8	-0.5			
Finland	7.9	5.8	91.1	5.8	5.3	64.5	122.2	-1.9	8.6			
Greece	19.5	7.9	68.2	....	6.1	63.2	66.8	-3.1	-107.1			
Portugal	23.0	5.3	60.4	....	8.9	90.8	158.6	-1.5	-110.9			
Ireland	13.2	12.0	63.9	....	8.6	108.4	201.7	4.9	-96.0			
Euro area	....	....	....	2.1	....	65.6	100.4	1.2	-12.6			
United Kingdom	13.0	14.4	31.9	5.2	8.7	95.4	112.1	-3.7	-21.3			
United States	25.2	5.3	32.1	....	13.3	81.9	78.7	-3.0	-28.2			
Japan	59.0	6.3	8.9	....	16.9	65.2	103.1	1.0	65.0			
Canada	16.1	5.1	23.5	....	6.2	93.5	55.7	-3.7	-15.9			

Sources: IMF, Eurostat, ECB, European Commission, Istat, national financial accounts and balance-of-payments data.

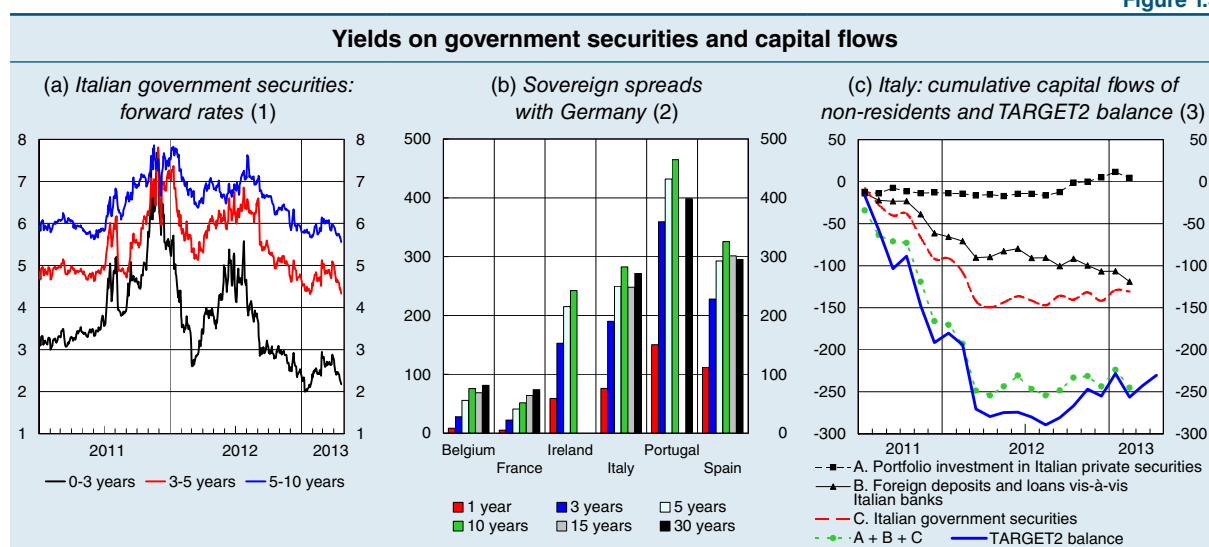
(1) The outturn data for European countries and the euro area in 2012 are from Eurostat, *Newsrelease Euroindicators*, 22 April 2013. The outturn data for non-European countries in 2012 and the 2013 and 2014 forecasts for all countries are from IMF, *Fiscal Monitor*, April 2013. – (2) Data from IMF, *World Economic Outlook*, April 2013. – (3) Data from IMF, *Fiscal Monitor*, April 2013. – (4) Increase in the primary surplus/GDP ratio (with respect to 2011) needed to satisfy the general government intertemporal budget constraint, given demographic and macroeconomic projections. The estimate takes account of the level of the debt, the outlook for economic growth, changes in interest rates and future primary surpluses, which are affected by the trend of age-related expenditure. Data from European Commission, *Fiscal Sustainability Report 2012*. – (5) Increase in the primary surplus/GDP ratio that would need to be achieved by 2020 (and maintained for a further decade) in order to bring the debt/GDP ratio down to 60 per cent by 2030. The value includes the projected increase in health and pension expenditure between 2013 and 2030. – (6) Data at end-2011 for France; data at Q3 2012 for the other European countries and the euro area.

... and external current account, which helps to stabilize the government securities market

From the fourth quarter of 2012 the current account of the balance of payments moved into surplus for the first time in many years. The improvement can be attributed to the lengthy recession, which dampened imports, and to the resilience of exports. Excluding fluctuations due to value adjustments, Italy's net foreign debtor position stabilized and continues to be low by international standards.

This progress, and the improvement in the public finances, help to contain the effects of the recent uncertainty on government securities yields (Figures 1.3.a and 1.3.b). The balance-of-payments data indicate that non-residents' demand for government securities has picked up since spring 2012 (Figure 1.3.c).

Figure 1.3



Source: Based on Bloomberg data for sovereign spreads with Germany. (1) Daily data, per cent. Interest rates implied by the zero-coupon curve of Italian government securities: spot rate at the 3-year maturity and forward rates at the 2-year and 5-year maturities starting, respectively, 3 and 5 years forward. – (2) Data as of 22 April 2013; basis points. No data are available for the 15- and 30-year maturities for Ireland or for the 15-year maturity for Portugal. – (3) Monthly data in billions of euros. Bank of Italy balance vis-à-vis the ECB in TARGET2 recorded at the end of the month; data as of 26 April 2013. For the other variables, non-residents' capital flows accumulated from July 2011.

## 1.2 THE MAIN RISKS FOR FINANCIAL STABILITY

The risks in Europe are still related to the timing of the economic recovery ...

In the euro area fears of tail risk scenarios have abated, but overall the risks for financial stability remain elevated. For the countries most directly exposed to the debt crisis, including Italy, the main risk is that the recession may drag on as a result of the spiral of weak demand, sovereign risk and banks' deleveraging. The economic recovery could also be delayed by the restrictive effects of ongoing fiscal consolidation in several countries, as well as by the general weakness of real-estate

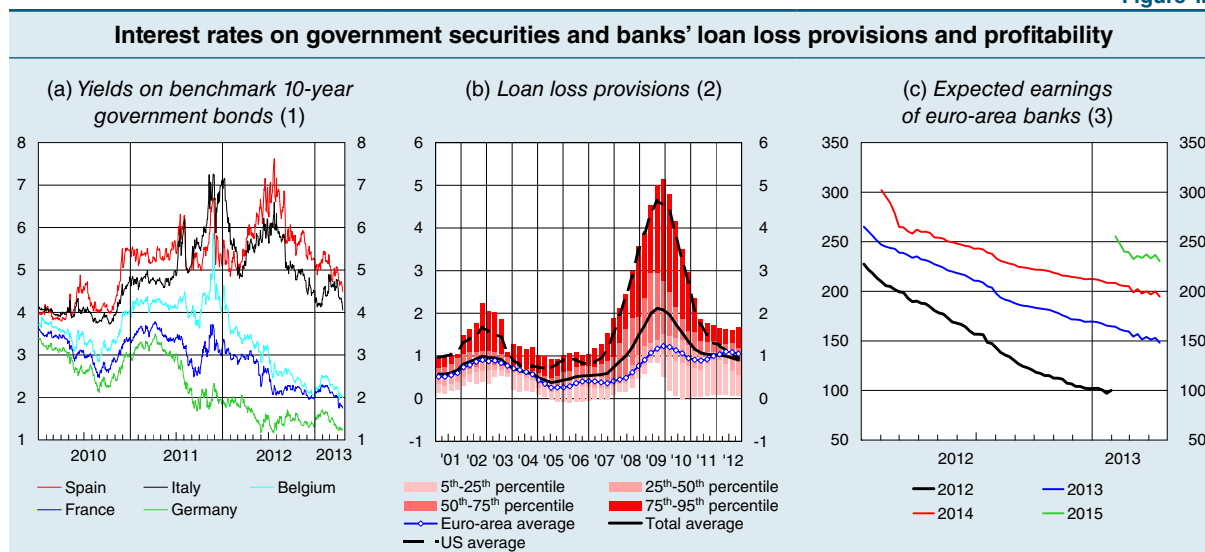
markets. Worldwide, uncertainties linger over the future direction and effectiveness of economic policies in the United States and Japan, countries that have yet to draw up coherent plans for consolidating the public finances in the medium term.

... to uncertainties on the evolution of the debt crisis ...

In the euro area the tendency towards fragmentation of financial markets and the fears of a euro break-up have faded but not entirely vanished, as indicated by the interest-rate spreads vis-à-vis Germany of the countries most exposed to the tensions (Figure 1.4.a), still above the levels consistent with the economic

fundamentals (see the box "Sovereign spreads and euro reversibility risks" in *Financial Stability Report* No. 4, November 2012). The immediate economic costs of the adjustment measures and the lag with which these measures foster growth and employment heighten the danger of adjustment fatigue.

Figure 1.4



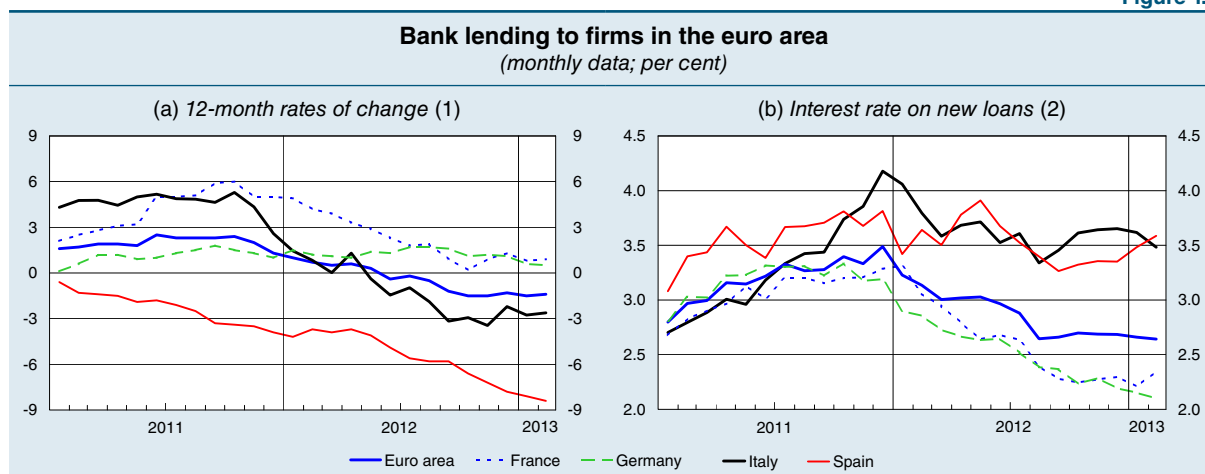
Sources: Based on Bloomberg, I/B/E/S and Thomson Reuters Datastream data. (1) Daily data, per cent. – (2) Quarterly data. Four-quarter moving sum of provisions expressed as a percentage of total loans. The different shades of red correspond to differences between the percentiles shown in the legend. Sample of major international banks comprising large US and European financial institutions that engage in various kinds of banking activity, including at international level: Banco Santander, Bank of America, Barclays, BBVA, BNP Paribas, Citigroup, Crédit Agricole, Credit Suisse, Commerzbank, Deutsche Bank, Goldman Sachs, HSBC, ING, Intesa Sanpaolo, JPMorgan Chase, Lloyds Banking Group, Morgan Stanley, Royal Bank of Scotland, Société Générale, UBS, UniCredit and Wells Fargo. – (3) Weekly data. Indices, last forecast for 2012=100.

Serious problems of coordination emerged during the negotiations concerning financial support measures in favour of Cyprus, raising fears about the level of risk attached to different forms of bank funding. The agreement reached at the end of March (see *Economic Bulletin*, April 2013) reflected the huge size of the country's banking sector, with total assets equal to more than seven times GDP, which made intervention by the government alone impracticable. The risk of contagion appears negligible, partly because the European banks' overall exposure to Cyprus is limited (about €23 billion at the end of 2012).

**... and to the fragility of banks, hindering the supply of credit**

The weakness of the economy continues to weigh on banks in the euro area. Loan loss provisions remain high, only marginally below the peaks of 2009 (Figure 1.4.b). Expected earnings continue to decline (Figure 1.4.c). Pressures on banks'

Figure 1.5



Sources: Based on Bank of Italy and ECB data. (1) Loans are adjusted for the accounting effect of securitizations. – (2) The data on interest rates refer to transactions in euros and are gathered and processed using the Eurosystem's harmonized methodology.

balance sheets, particularly intense in the countries in greatest difficulty, including Italy, are fuelling the large divergences in the growth and the cost of bank lending to firms (Figures 1.5.a and 1.5.b) and households; they are an obstacle to economic recovery.

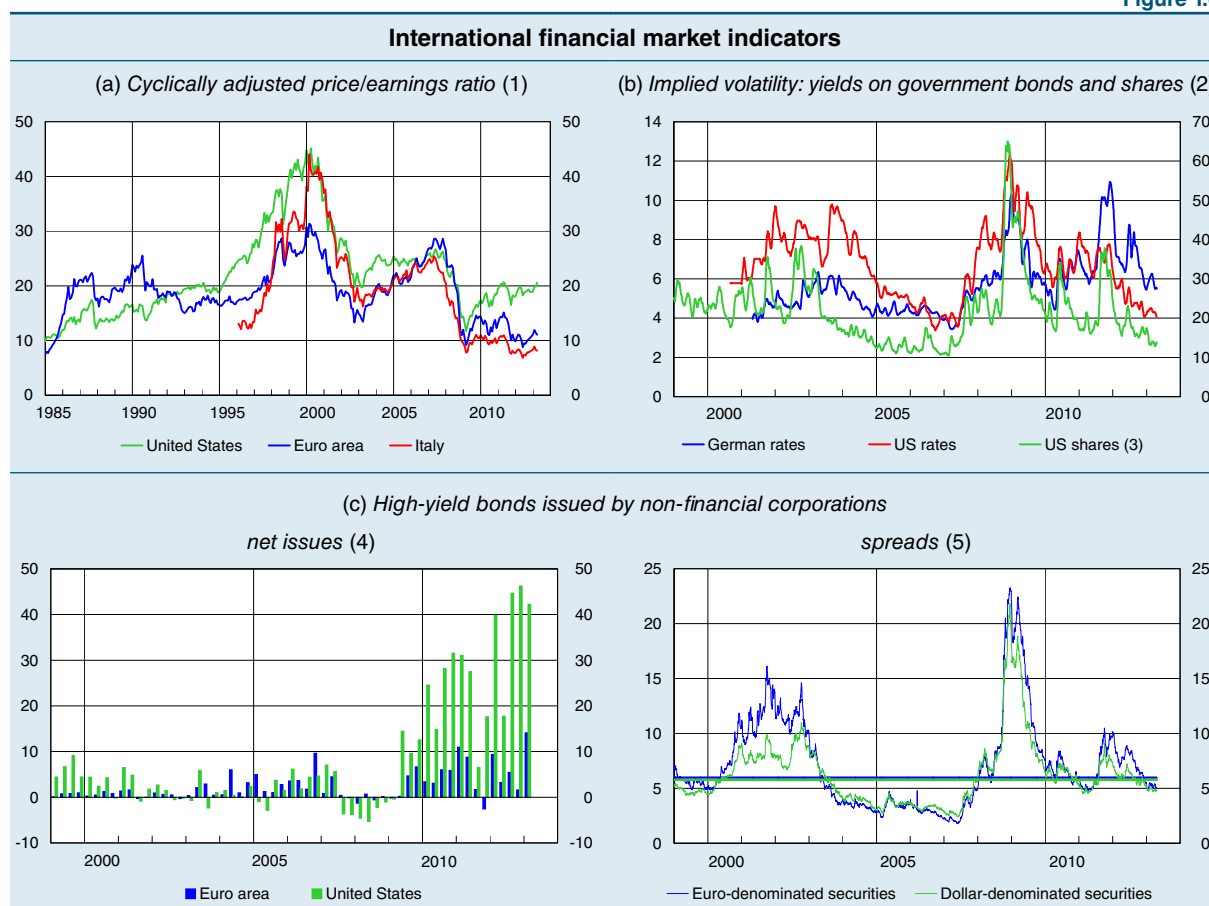
**Weaknesses are not restricted to the countries in difficulty**

Signs of vulnerability are also emerging in the euro-area countries least exposed to the sovereign debt crisis. In France and the Netherlands output is shrinking, against a backdrop of rising unemployment and high public deficits (Table 1.1). In the Netherlands, moreover, households have become highly indebted; following the decline in house prices of recent years, around one fifth of homeowners had negative net equity in their homes last year.

**On financial markets there is a risk of a correction**

There are no clear signs of overvaluation on the international stock markets (Figure 1.6.a), but the recent new increases in the indices are largely ascribable to the fall in risk premiums, which are inherently highly volatile. The implied volatility on the US markets has returned to the very low levels that prevailed up until 2007 (Figure 1.6.b). Signs that investors are taking on too much risk are apparent in a number of segments of the financial market: there were substantial net issues of high-yield securities denominated in dollars and a marked fall in their spreads (Figure 1.6.c); leveraged loans increased

Figure 1.6



Sources: Based on Dealogic and Thomson Reuters Datastream data.

(1) Monthly data. Ratio of the share price index to the moving 10-year average of earnings per share, both expressed at constant prices. – (2) Moving average of 20 daily observations; annualized percentage points. For government bonds, volatility implied in the options on futures listed on Eurex and the Chicago Board of Trade. For US shares, VIX index. – (3) Right-hand scale. – (4) Quarterly data, billions of euros. Redemptions are estimated. – (5) Daily data, percentage points. The horizontal lines indicate the median values, calculated from the beginning of 1999.



significantly, including for extraordinary financial operations (mergers and acquisitions), as did lending to firms at particularly favourable terms (covenant light and payment-in-kind). Renewed risk aversion could provoke widespread falls in the prices of financial assets, especially the riskier ones.

Another, related, element of vulnerability is the historically low level of long-term yields in the countries deemed to have a high credit standing, above all in connection with the expectations of a protracted phase of expansionary monetary policies. A sharp rise in yields could be triggered by mistaken predictions about the timing and manner of the exit from non-conventional monetary policies, by heightened concerns about fiscal consolidation plans in the main advanced economies, and by upward revisions of inflation expectations, spreading rapidly throughout the world.

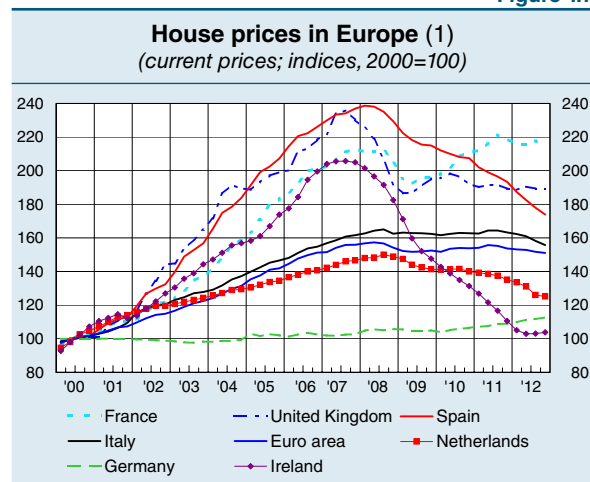
### 1.3 THE REAL-ESTATE MARKETS

**The real-estate markets remain sluggish in the euro area ...**

The US real-estate market is consolidating recent gains, while house prices in the euro area as a whole are

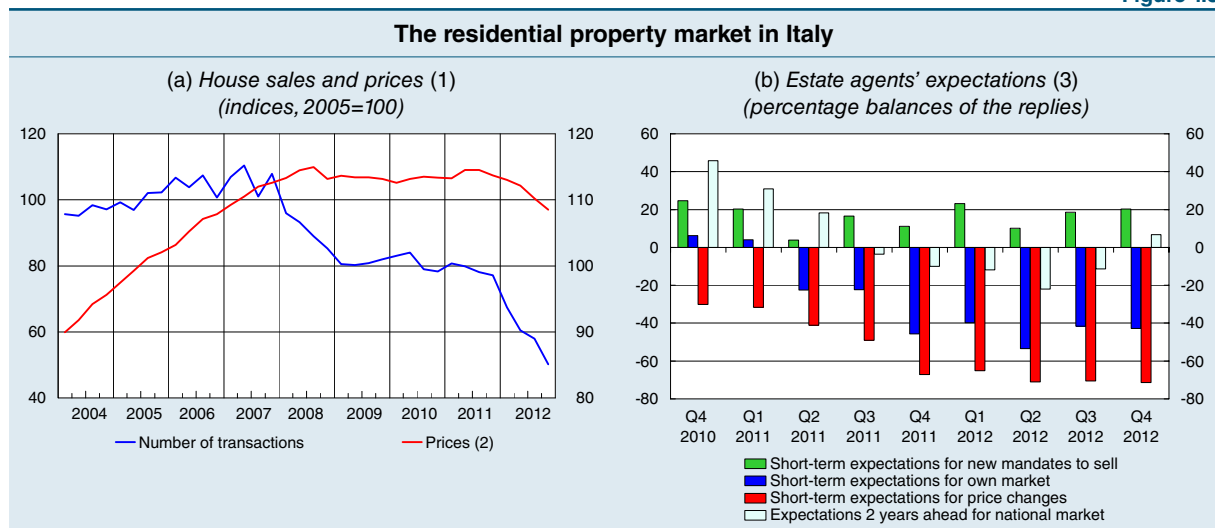
slipping. The decline has been sharp in Spain and more limited in France, where prices are still much higher than at the turn of the century. Property prices appear to have stabilized in Ireland and the Netherlands, where they currently stand at 50 and 20 per cent, respectively, below their previous peaks. In Germany, the upturn under way since mid-2010 continues (Figure 1.7).

Figure 1.7



Sources: Based on national sources and ECB data. 1) Quarterly data.

Figure 1.8



Sources: Based on data from Bank of Italy, Istat, Revenue Agency Property Market Observatory (Osservatorio del mercato immobiliare), *Consulente Immobiliare* and Tecnoborsa.

(1) Seasonally adjusted quarterly data. – (2) Right-hand scale. – (3) Quarterly data from the survey conducted by the Bank of Italy, Tecnoborsa and the Property Market Observatory. Balances between the percentages of replies indicating a situation that is improving or worsening. Short-term expectations for new mandates to sell, for agents' own market and for price changes refer to the quarter following the one indicated; expectations for the national market refer to a 2-year horizon.



### ... and in Italy

Italy's real-estate market is feeling the effects of the economic deterioration, which has been more intense than expected. Activity is also weighed down by the tensions in the supply of mortgages and the increase in property taxes. In 2012 construction investment suffered another decline. In the fourth quarter of 2012 house prices fell by 4.6 per cent compared with a year earlier; on average for the year they declined by 2.7 per cent. The number of transactions recorded a further sharp drop (Figure 1.8.a).

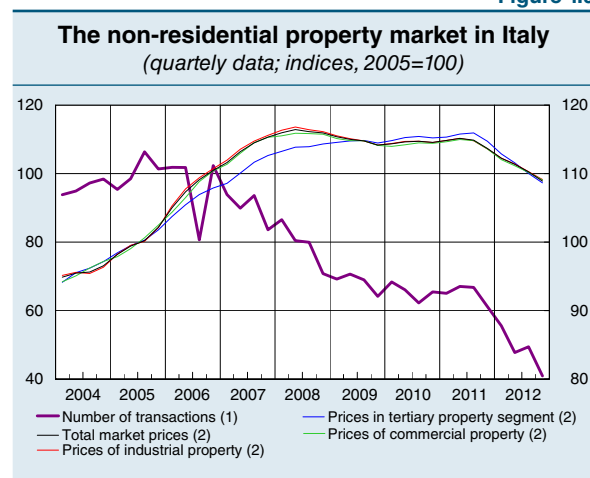
Leading indicators suggest that the weakness will persist over the coming months. Confidence among building firms continues to fluctuate at low levels. Production in the manufacturing sectors that supply the main construction inputs recorded another decline. Estate agents expect a further drop in house prices in the short term (Figure 1.8.b) and a decline in the level of rents. However, the balance between medium-term expectations of improvement and deterioration in the national real-estate market has turned slightly positive, for the first time since mid-2011.

### The fall in prices also involves commercial property

The prices of non-residential buildings also declined, falling by 4.2 per cent in the fourth quarter compared with the corresponding period of 2011 and by an average of 3.4 per cent in 2012 (Figure 1.9).

The risks to banks' balance sheets inherent in house purchase loans are limited in Italy by intermediaries' prudent lending policies. Average loan-to-value ratios are low both in absolute terms and by international standards (see the box "The loan-to-value ratio for residential mortgage loans in the euro-area countries"). However, the risks connected with loans to construction firms and real-estate service companies are higher.

Figure 1.9



Sources: Based on Bank of Italy, Revenue Agency Property Market Observatory (Osservatorio del mercato immobiliare), Nomisma and Scenari Immobiliari data.

(1) Total market. – (2) Right-hand scale. This experimental price indicator uses data drawn from transactions actually concluded on the market. The tertiary segment comprises office buildings and credit institutions; commercial property comprises shops, shopping centres and accommodations; industrial property consists of buildings for industrial use.

## THE LOAN-TO-VALUE RATIO FOR RESIDENTIAL MORTGAGE LOANS IN THE EURO-AREA COUNTRIES

The loan-to-value ratio, i.e. the ratio of the loan amount to the property's value, has recently been used as a macro-prudential tool in some euro-area countries as well as elsewhere.<sup>1</sup> Still, data on this indicator are relatively scarce. Figures for the LTV ratios in the euro-area countries at the end of 2011 have been gathered through a survey of national central banks conducted by the Bank of Italy in order to update the information, referring to 2007, which the ECB presented in a 2009 report on "Housing finance in the euro area". The comparison of the figures at the two dates, displayed in columns *a* and *b* of the table, shows that in the four years from 2007 to 2011 the LTV ratio diminished in Italy, Spain, Belgium, France and Portugal and remained stable in most of the other countries. The ratio in Italy is low both in absolute terms and relative to the other countries. Column *c* shows the LTV ratios of total loans for house purchase exclusively for the banks subjected to the

<sup>1</sup> In Cyprus, the central bank has set the limits on the LTV ratio for purchases of first and second homes at 80 and 70 per cent respectively. In the Netherlands the ceiling is 105 per cent, but the Government intends to lower it gradually to 100 per cent.

**Loan-to-value ratios for residential mortgage loans in the euro-area countries**  
(per cent)

	New loans for first-time house buyers		Total loans
	December 2011 (1) (a)	December 2007 (2) (b)	December 2010 (3) (c)
Netherlands	101	101	76
Finland	87 (4)	81	....
Austria	84	84	56
Ireland	81	83	91
France	83	91	....
Cyprus	80	80	67
Malta	74	63	....
Greece	73	73	62
Slovakia	<b>70</b> (5)	....	....
Portugal	<b>65</b>	71	60
Belgium	<b>63</b>	67 (6)	49
<b>Italy</b>	<b>60</b>	65	53
Estonia	60	....	....
Spain	<b>58</b>	73	56
Slovenia	<b>55</b>	54	30
Luxembourg	....	87	–
Germany	....	70	63

Sources: ECB, national central banks, EBA.

(1) Data gathered in a survey by the Bank of Italy of the euro-area national central banks, which were asked to update the data presented in column *b*. The figures in boldface are for the total of new loans. – (2) Typical LTV ratio for first-time house buyers, reported in “Housing finance in the euro area”, *ECB Occasional Paper Series*, No. 101, 2009. – (3) EBA, 2011 EU-wide stress test results. The data are taken from the item “Loan to value (LTV) ratio” for “Non-defaulted exposures”, “Retail (excluding commercial real estate)”, “of which Residential mortgages”, and are aggregated by weighting for the volume of loans of each bank of the countries considered. – (4) May 2012. – (5) June 2012. – (6) Revised figure, provided by the National Bank of Belgium.

stress test conducted by the European Banking Authority (EBA) in 2011. Overall, the data confirm the ranking of countries shown in column *a*.

The table is affected by discrepancies in data definition<sup>2</sup> and aggregation methodology.<sup>3</sup> These discrepancies are an impediment to comparison of the ratios and, going forward, to coordination of macro-prudential policies in the euro-area countries.

<sup>2</sup> Depending on the country, the collateral is valued using one or more of the following methods: at original cost; at market value; linked to the index of house prices; on the basis of the bank’s private appraisals.

<sup>3</sup> The most common method of aggregating LTV ratios is to average the data reported by the banks, weighted by market shares, but there are exceptions: some countries only count loans disbursed by the main banks, while others use an average weighted by classes of LTV ratio.

## 2 THE FINANCIAL CONDITION OF HOUSEHOLDS AND FIRMS

### 2.1 HOUSEHOLDS

#### Italian households' gross wealth declines in 2012

Households' gross wealth is declining. Real wealth has been reduced by the fall in house prices, only partially offset by investment in new construction. Gross financial wealth decreased by some €17 billion in the first nine months of 2012. This contraction reflected net sales, including sales of about €1 billion worth of foreign instruments, while asset prices remained basically unchanged. The stability of the ratio of financial assets to disposable income (Figure 2.1) reflects the decline in the latter. Financial wealth still consists chiefly of low-risk assets (see *Financial Stability Report* No. 4, November 2012).

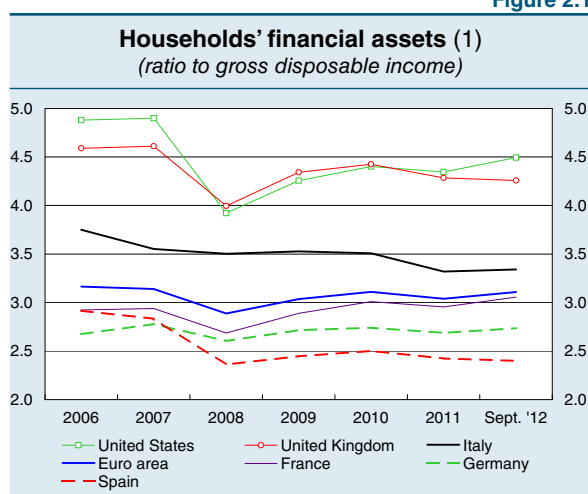
#### Debt decreases but remains stable in relation to disposable income

Households' financial debt is decreasing in absolute terms as a result of a marked weakening of demand for loans and tight credit supply conditions, in particular for the more risky customers. The ratio of financial debt to disposable income is still around 65 per cent, compared with 100 per cent in the rest of the euro area (Figure 2.2); a good part of the difference is due to the lower percentage of indebted households in Italy (about 25 per cent in 2010, according to the *Household Finance and Consumption Survey*, compared with over 40 per cent in the euro area as a whole).

#### Repayment difficulties affect loans other than mortgages

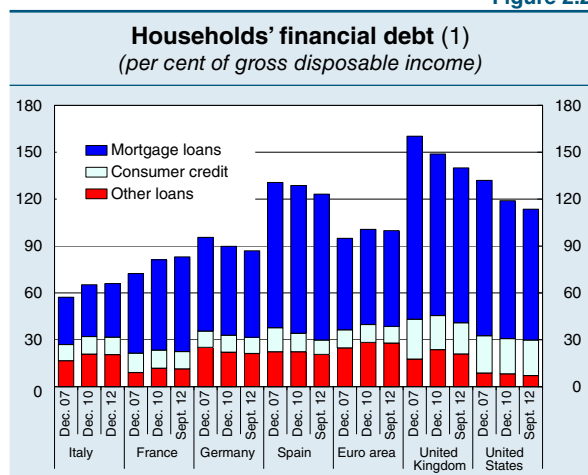
In 2012 the burden of debt servicing was reduced mainly thanks to the mortgage moratorium and the spread of flexible contractual arrangements, which allowed payments to be suspended temporarily and the size of instalments to be changed at no additional cost. A contributory

Figure 2.1



Sources: Bank of Italy and Istat for Italy; Eurostat and ECB for the other euro-area countries; Central Statistical Office and Bank of England for the United Kingdom; Federal Reserve System and Bureau of Economic Analysis for the United States. (1) The data refer to consumer and producer households, except for the United States, for which they refer only to consumer households.

Figure 2.2



Sources: Bank of Italy and Istat for Italy; Eurostat and ECB for the other euro-area countries; Central Statistical Office and Bank of England for the United Kingdom; Federal Reserve System and Bureau of Economic Analysis for the United States. (1) The data refer to consumer and producer households, except for the United States, for which they refer only to consumer households. Financial debt includes bad debts. The data for the fourth quarter of 2012 are provisional.

factor was the fall in the average interest rate on outstanding loans, determined by the reduction in short-term interest rates, to which more than two thirds of house purchase loans are indexed. Looking ahead, the gradual fading of the effects of the mortgage moratorium, which ended last March, will tend to increase the debt-service burden. The Solidarity Fund for the purchase of first homes, in its current form, would appear to have only limited effects.<sup>1</sup> The growth of defaults in the house purchase mortgage sector was again quite modest. In the other sectors (consumer credit, personal loans, other loans) the proportion of loans to borrowers in temporary difficulties (i.e. substandard loans) rose to 4.1 per cent at end-2012, compared with 3.4 per cent a year earlier.

**The proportion of debt held by financially vulnerable households is stable** In 2012 the proportion of household debt held by financially vulnerable households (defined as those with disposable income below the median and debt service equal to more than 30 per cent of income) is estimated to have remained at 16 per cent.

**The main risks derive from income dynamics** On the whole, the financial condition of indebted households is sustainable. The main factor of vulnerability relates to the prolonged phase of income reduction. The risks for intermediaries deriving from the household sector are mostly circumscribed, thanks also to low loan-to-value ratios.

## 2.2 FIRMS

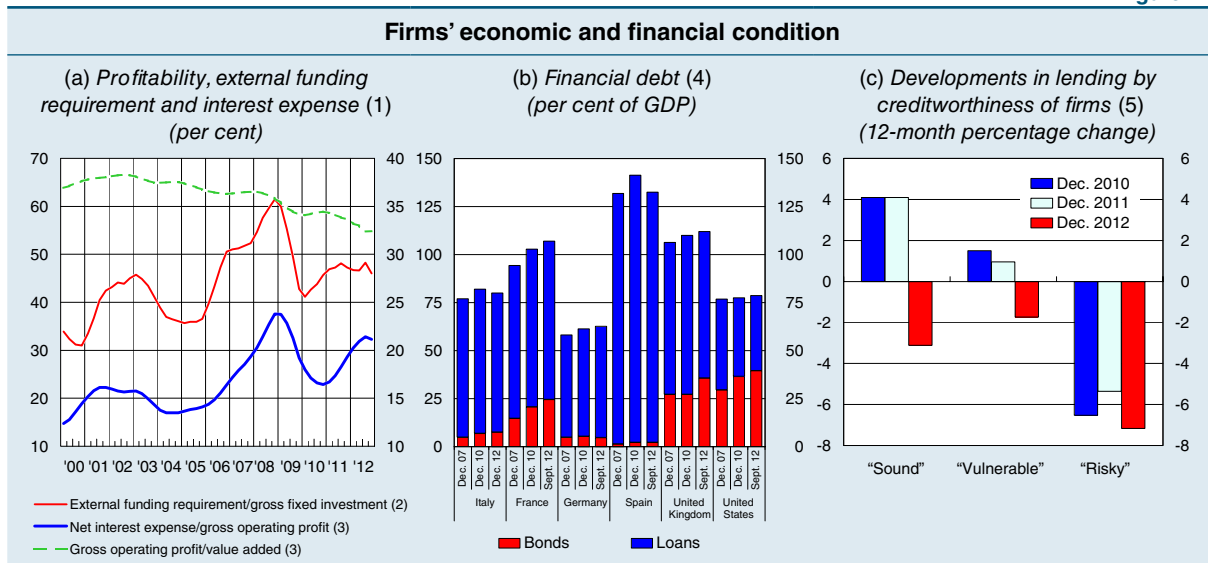
**The long recession continues to dampen firms' profitability** Firms' profits continue to be weighed down by the long recession (see *Economic Bulletin*, April 2013). The ratio of gross operating profit to value added fell further in 2012 (Figure 2.3.a); self-financing also declined. The increased weight of net interest expense on gross operating profit was also the result of the trend in the interest rates on bank loans which, despite falling during the year, over 2012 as a whole were higher than in 2011. Firms' expectations – especially those of smaller firms – remained pessimistic concerning the outlook for the economy, demand and investment.

**The financial conditions of firms show signs of growing tension** Firms' financial and liquidity conditions worsened; difficulties in repaying bank loans increased. CERVED data show that in the last quarter of 2012 the percentage of companies more than two months behind the agreed due dates for their commercial payments rose to 7.1 per cent from 6.0 per cent a year earlier; the increase was greater in the construction sector and in manufacturing linked to the building sector. Firms' difficulties are exacerbated by the substantial volume of general government payments pending, estimated at approximately €90 billion at end-2011. In 2012 some 53,000 companies went out of business, an increase of over 4,000 from 2011 and far more than in the pre-crisis years (Figure 2.4).

**Financial debt is reduced, reflecting the contraction of bank loans** In 2012 Italian firms' financial debt was reduced by 1.9 per cent; in relation to GDP it is relatively low by international standards (Figure 2.3.b). Leverage (the ratio of financial debt to the aggregate of financial debt and shareholders' equity) was 49 per cent in the third quarter of 2012, basically unchanged from a year

<sup>1</sup> The Fund, in operation since November 2010, differs from the mortgage moratorium mainly because the interest payments due for the suspension period are paid by the Fund itself and not by mortgage borrowers. For the two years 2012-13 the Fund received resources of some €20 million, which to date have not been used. With a similar sum available in 2011, repayment was suspended for 6,000 mortgage loans, set against an annual average of 28,000 mortgage borrowers benefiting from the moratorium.

Figure 2.3

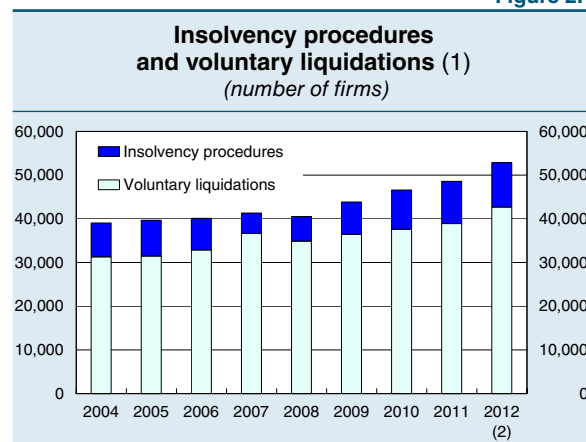


Sources: Bank of Italy, Istat, ECB, Central Statistical Office, Federal Reserve System-Board of Governors and Bureau of Economic Analysis, Central Credit Register and CERVED Group.

(1) Estimates based on national accounts data for the non-financial corporations institutional sector. The indicators are based on the sum of the data for the 4 quarters ending in the reference quarter. – (2) Left-hand scale. The external funding requirement is the difference between firms' investment and self-financing. – (3) Right-hand scale. – (4) Financial debt includes bad debts. The data for the fourth quarter of 2012 are provisional. – (5) The data refer to a sample of some 340,000 firms, distributed among the different risk classes according to their Z-scores (assigned by CERVED on the basis of some balance-sheet indicators). Firms are defined as "sound" with Z-scores of 1 (high safety), 2 (safety), 3 (high solvency), and 4 (solvency); "vulnerable" with Z-scores of 5 (vulnerability) and 6 (high vulnerability); and "risky" with Z-scores of 7 (risk), 8 (high risk) and 9 (very high risk).

earlier; if compared with the pre-crisis period, the ratio increased by 7 percentage points, largely owing to the decline in the market value of equity. The fall in debt mainly involved debt to the banking sector, which reflected weak demand for new loans and restrictive credit supply policies. Differently from the preceding years, the reduction of bank credit affected not only companies in fragile financial conditions but also those with sounder balance sheets (Figure 2.3.c); for these latter companies the reduction largely reflects the replacement of credit with bond issues. Small firms felt the effects of credit restrictions the most (see the box "Access to credit according to size of firm").

Figure 2.4



Source: CERVED Group.

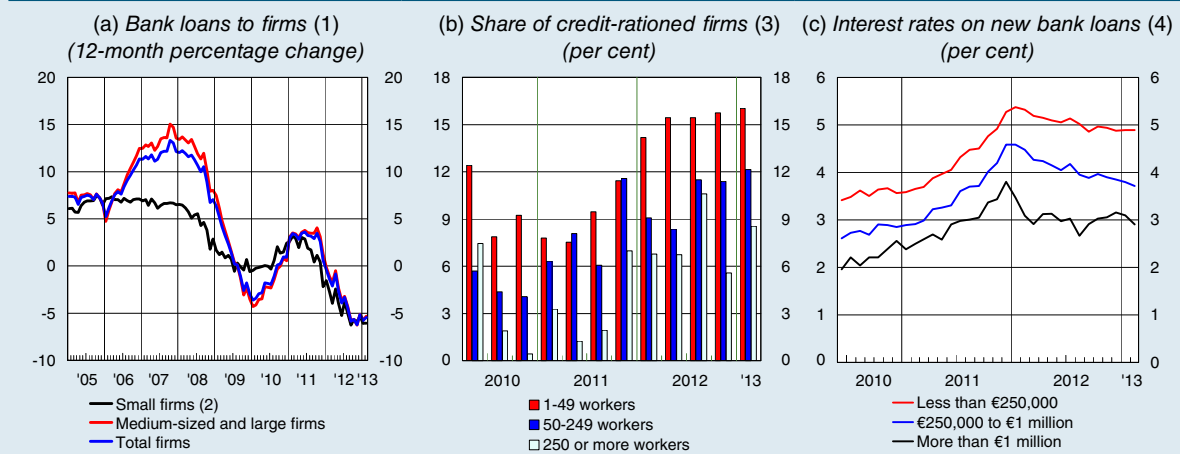
(1) Companies that have deposited at least one valid balance sheet in the preceding 3 years. Insolvency procedures mainly involve bankruptcies. – (2) Partly estimated data.

### ACCESS TO CREDIT ACCORDING TO SIZE OF FIRM

In recent months bank lending has been contracting at a similar pace among all sizes of firm (figure, panel a; see *Economic Bulletin*, April 2013). Unlike smaller companies, with low capacity for tapping alternative sources of finance, medium-sized and large firms dealt with the credit restriction by making gross bond issues worth €32 billion in 2012. Credit access remains tighter for smaller businesses. The percentage of these that declared they had not obtained the credit requested was considerably higher

than in the larger size classes (figure, panel *b*). Since the end of 2011 the spread between interest rates on new loans to small and to large firms has widened (figure, panel *c*). Central Credit Register data signal a rise in the share of loans that are backed by collateral or personal guarantees (from 63.5 per cent in 2007 to 67.6 per cent in 2012), thanks in part to the increased intervention of mutual loan-guarantee consortia, regional financing companies and the Central Guarantee Fund. For small businesses, this backing proved decisive for access to credit; for them the share of loans backed by some form of guarantee was no less than 82 per cent at end-2012.

### Lending, credit rationing and interest rates by size of borrower firm



Sources: Bank of Italy and Istat.

(1) Adjusted for the accounting effect of securitizations. Excludes repos, bad debts and some minor items. – (2) Limited partnerships, general partnerships, informal partnerships, de facto companies and sole proprietorships with up to 19 workers. – (3) Percentage of manufacturing firms reporting that they had applied to a bank or financial company for credit within the last 3 months and been refused. – (4) New loans other than current account overdrafts. The classification by loan size proxies for that by firm size.

#### Various financial support measures for firms are introduced or strengthened

Since the start of the crisis, numerous initiatives have been taken to support firms and to limit their difficulties in accessing credit (see *Relazione Annuale* for 2011). In recent months the uncertain economic situation has led to the introduction of new instruments and the strengthening or renewal of some of those already in operation.<sup>2</sup>

#### The percentage of debt held by firms under financial strain is expected to increase further

Our estimates indicate that in 2013 the percentage of financial debt held by firms with net interest expense of more than 50 per cent of gross operating profit is expected to rise to 48 per cent (Figure 2.5).<sup>3</sup> The percentage could rise to 53 per cent in a particularly unfavourable scenario, in which a reduction in profitability is associated – contrary to what normally happens – with an increase in the cost of the debt.<sup>4</sup>

<sup>2</sup>In 2012 the Central Guarantee Fund granted more than 60,000 guarantees in relation to loans worth more than €8 billion. Cassa Depositi e Prestiti exhausted its reserves of €8 billion earmarked for the banks to lend to small and medium-sized enterprises. A new agreement was signed by the relevant ministries, the Italian Banking Association and various business associations to suspend repayments of the principal on loans in relation to some forms of debt (recently extended to 30 June 2013); between April and December 2012 more than 68,000 applications were accepted, for an overall amount of suspended principal on loans of €3.3 billion.

<sup>3</sup>The attention thresholds normally used by analysts and banks to judge firms' financial strength range between 50 and 75 per cent. Econometric analyses indicate that over the threshold of 50 per cent, there is a noticeable reduction in investment, profitability and self-financing.

<sup>4</sup>This scenario assumes a fall of 10 per cent in gross operating profit, a value not far off that recorded in 2009, the worst year of the crisis, and an increase of 100 basis points in the cost of the debt.

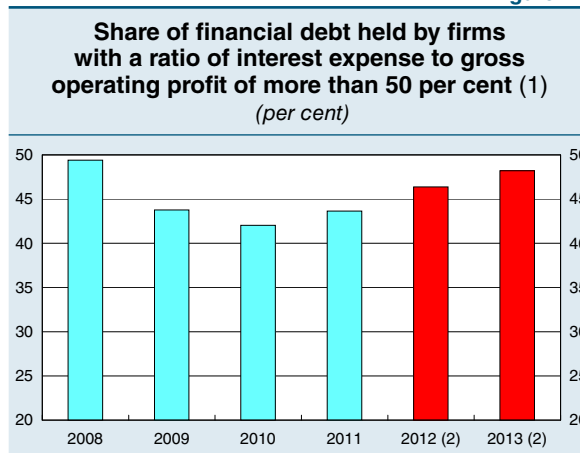
**Some relief may come from the unfreezing of general government payments**

Looking ahead, firms' liquidity situation will benefit from the new allocation of €10 billion that Cassa Depositi e Prestiti has made available to banks to finance small and medium-sized enterprises and from the unfreezing of a first tranche of general government payments of commercial debts to suppliers (see the box "The macroeconomic impact of the unfreezing of general government debts", *Economic Bulletin*, April 2013). The recent Government measure provides for €20 billion of payments this year and the same amount in 2014; rapid implementation of this provision is vital to ease firms' financial constraints. Going forward, it will be crucial to guarantee faster general government payments within the limits of 30-60 days imposed by EU Directive 2011/7 of 16 February 2011, which entered into force last January.

**The risks derive from the recession and difficulties in accessing credit**

The main risk factors for firms are the persistence of the adverse cyclical conditions and difficulties in accessing credit, which tend to create a vicious circle. In this context, which is hard throughout the productive economy, companies connected to the building sector appear to be particularly vulnerable.

Figure 2.5



Source: Based on CERVED data.  
(1) Calculated on the total financial debt of firms in the CERVED sample. Firms with negative or null gross operating profit are considered financially vulnerable. For the estimation methodology see the box "The exposure of firms to a cyclical deterioration" in *Financial Stability Report* No. 2, November 2011. – (2) Estimated.

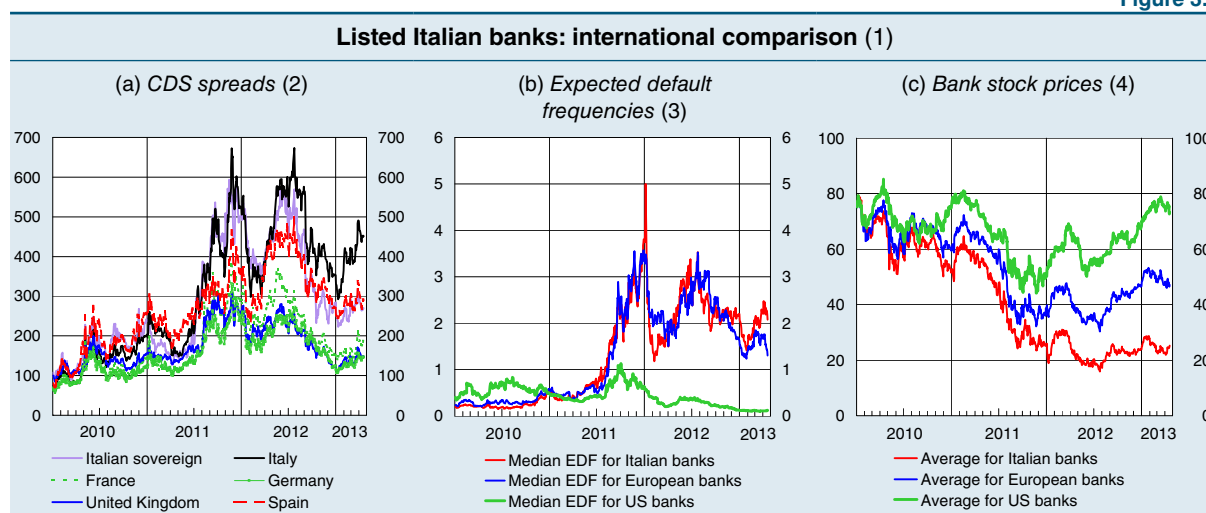


# 3 THE BANKING AND FINANCIAL SYSTEM

## 3.1 THE MARKET'S ASSESSMENT OF ITALIAN BANKS

**Market indicators still point to tensions** Market indicators for the largest Italian banks began to worsen again at the start of the year. Risk premiums and expected default frequencies increased and bank stock prices fell (Figure 3.1); systemic risk indicators for Italian banks (JPoD<sup>1</sup>) have also deteriorated. In the first place, these trends reflect macroeconomic events, such as the bout of uncertainty caused by the elections in Italy and the crisis in Cyprus. Factors linked to developments in Italy's banking sector also contributed, such as the difficulties of Banca Monte dei Paschi di Siena<sup>2</sup> and the downward revision of banks' expectations of earnings growth.

Figure 3.1



Sources: Based on data from Bloomberg and Moody's KMV.

(1) Panel a refers to the following banks: for Italy, UniCredit, Intesa Sanpaolo and Banca Monte dei Paschi di Siena; for France, BNP Paribas, Société Générale and Crédit Agricole; for Germany, Deutsche Bank and Commerzbank; for the United Kingdom, Barclays, Royal Bank of Scotland, HSBC and Lloyds; for Spain, Santander and Banco Bilbao Vizcaya Argentaria. Panels b and c refer to the following sample of banks: for Italy, UniCredit, Intesa Sanpaolo and Banca Monte dei Paschi di Siena; for Europe, UniCredit, Intesa Sanpaolo, Banca Monte dei Paschi di Siena, BNP Paribas, Société Générale, Crédit Agricole, Deutsche Bank, Commerzbank, ING, Banco Santander, Banco Bilbao Vizcaya Argentaria, HSBC, Barclays, Royal Bank of Scotland, Lloyds, UBS and Credit Suisse; for the United States, Citigroup, JPMorgan Chase, Bank of America, Goldman Sachs, Morgan Stanley and Wells Fargo. – (2) Daily data, basis points. Five-year senior debt. – (3) Daily data, percentage points. The expected default frequencies (EDFs), calculated on the basis of the price and volatility of the stock of the banks to which they refer, measure the probability of assets having a lower market value than liabilities over a 1-year horizon. – (4) Average share prices are calculated with reference to price indices; closing price at 29 August 2008=100.

<sup>1</sup> The JPoD (joint probability of distress) estimates the likelihood that several banks will find themselves in difficulty at the same time. For the calculation methodology, see the box "Indicators of interdependence between banks" in *Financial Stability Report* No. 2, November 2011.

<sup>2</sup> As regards Banca Monte dei Paschi di Siena, see the document of 28 January 2013 "Main supervisory activities with regard to the Monte dei Paschi di Siena group" and the [speech by the Governor](#) at the Assiom Forex meeting in Bergamo on 9 February 2013.

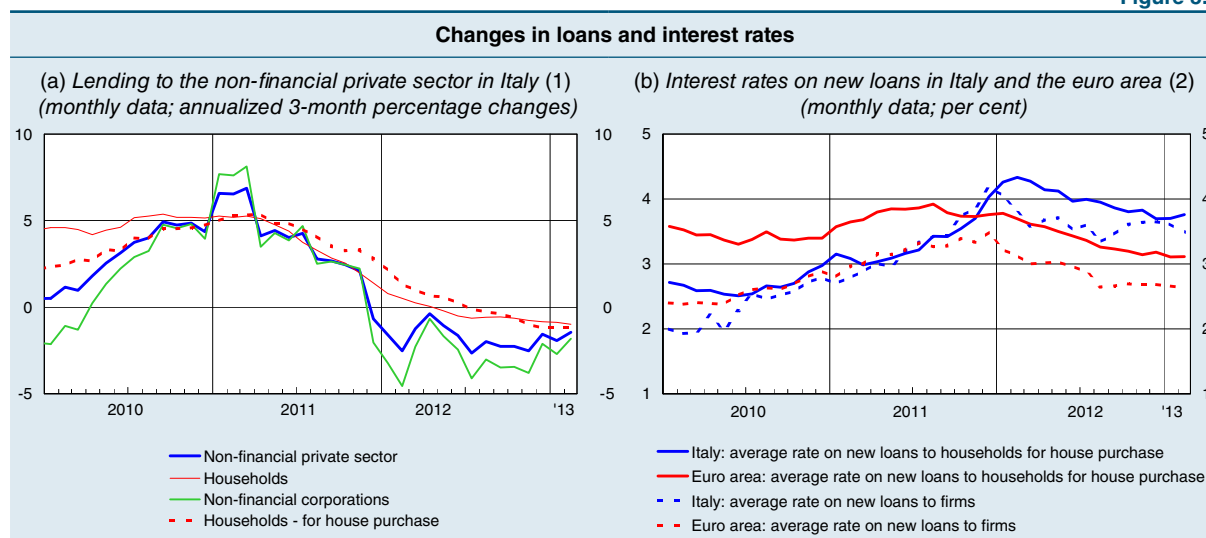
## 3.2 CREDIT

### Lending to the economy

**Credit continues to contract, demand declines ...**

Lending to the non-financial private sector has continued to contract (Figure 3.2.a), mainly as a result of the fall in lending to firms. The decline in demand, due to the poor state of the economy, and uncertainty about the prospects of recovery have both played a part.

Figure 3.2



Sources: Based on Bank of Italy and ECB data. (1) The percentage changes are calculated net of reclassifications, exchange rate variations, value adjustments and other variations not due to transactions. Lending includes an estimate of loans not recorded in banks' balance sheets because they have been securitized. Where necessary the data have been seasonally adjusted. – (2) The data refer to transactions in euros and are collected and processed using the Eurosystem's harmonized method.

**... and supply conditions remain tight, reflecting firms' heightened riskiness ...**

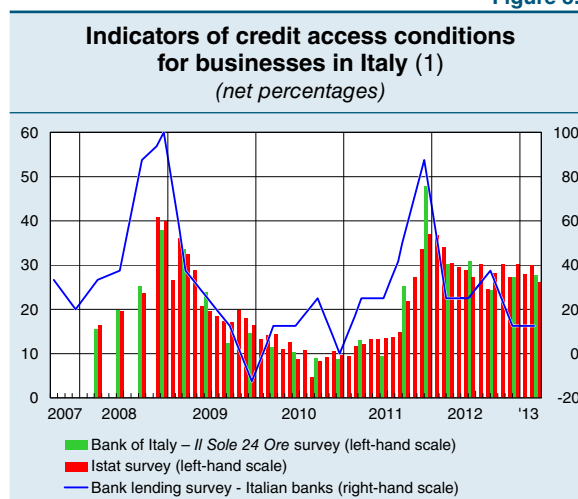
Persistently tight supply conditions have contributed to the credit contraction, particularly for firms (Figure 3.3); the heightened

riskiness of loans has induced banks to raise interest rates and reduce disbursements. Access to bank credit remains more difficult for smaller firms, which find it harder to tap alternative sources of financing (see the box "Access to credit according to size of firm"). In the autumn the interest rates charged to non-financial corporations showed a further, moderate rise (Figure 3.2.b), while those on new mortgage loans to households decreased.

**... and banks' solvency and liquidity position**

The tightness of loan supply also reflects banks' balance-sheet situation: in 2012 the growth in lending to firms was positive for banks

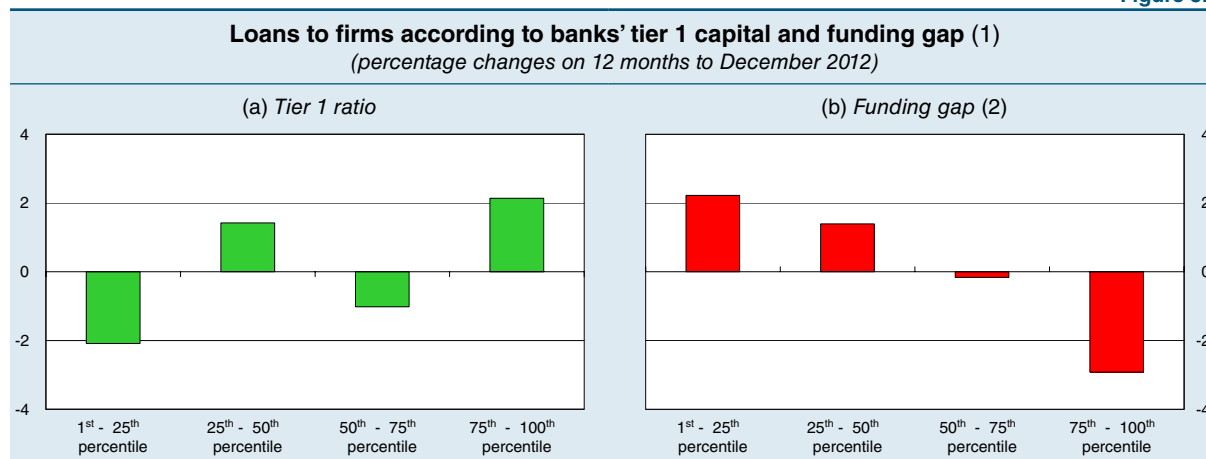
Figure 3.3



Sources: Based on Bank of Italy, Bank of Italy – *Sole 24 Ore*, and Istat data. (1) A fall in the indicators denotes an improvement in credit supply conditions; net percentages calculated as the difference between the percentage of responses indicating a worsening of credit access conditions and the percentage of those indicating an improvement.

with stronger capital ratios and lower funding gaps (Figure 3.4). In addition, supply conditions are affected by the persistent fragmentation of the wholesale funding markets in the euro area.

Figure 3.4



Source: Supervisory reports.

(1) For each quartile of the characteristic indicated, the graph shows the median growth rate of loans to firms calculated using the individual data of Italian banks aggregated on a consolidated basis (mutual banks, branches and subsidiaries of foreign banks and Cassa Depositi e Prestiti are not included). – (2) The funding gap is calculated according to the methodology illustrated in the box, “The funding gap of Italian banks” in *Financial Stability Report* No. 4, November 2012.

## Credit quality

### Credit quality continues to worsen

The flow of new bad debts in relation to total loans to households has remained stable (Figure 3.5), while the corresponding ratio for loans to firms has worsened, particularly in the construction sector. Leading indicators suggest that a further deterioration is under way: the indicator based on the transition of loans to firms between the different classes of quality used by banks for management purposes has worsened further (Figure 3.6); in addition, the probability of default within one year and the share of loans to borrowers in temporary difficulty have both increased.

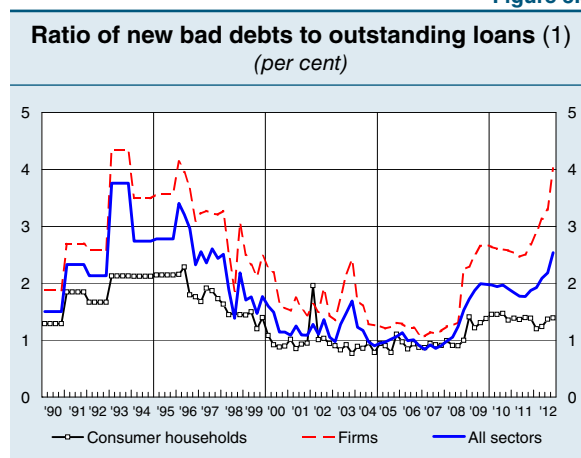
### Non-performing loans increase ...

In December 2012 the stock of bad debts amounted to 7.2 per cent of customer loans on a gross basis; net of provisions, it was equal to 3.5 per cent of customer loans (30 per cent of regulatory capital). For the aggregate of non-performing loans (bad debts, substandard loans, restructured exposures and overdue positions), the ratio to customer loans was 13.4 per cent gross (Table 3.1) and 8.7 per cent net of provisions.

### ... but coverage ratios rise slightly, thanks in part to the Bank of Italy's action

The non-performing loan coverage ratio (the stock of provisions in relation to gross non-performing loans) was 38.8 per cent in December, about 2 percentage points higher than in September; the bad debt coverage ratio was 54.6 per cent, compared with 54.1 per cent in September. The improvement reflects the

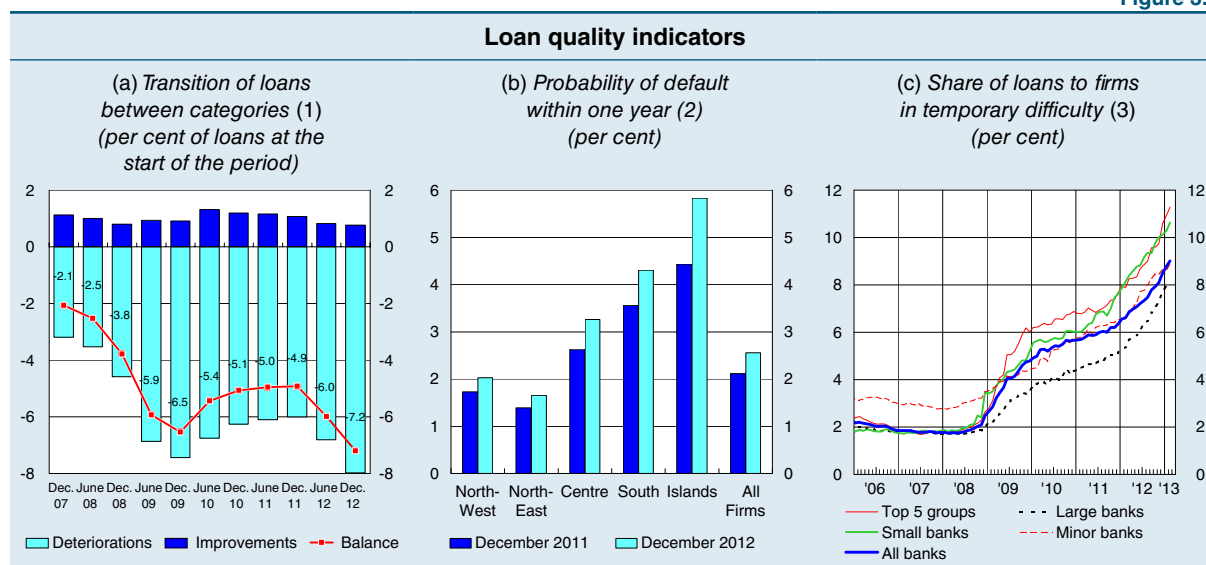
Figure 3.5



Sources: Supervisory reports and Central Credit Register.

(1) Quarterly flow of adjusted bad debts in relation to the stock of loans at the end of the previous quarter; annual data up to the fourth quarter of 1995. Data seasonally adjusted, where necessary, and annualized.

Figure 3.6



Sources: Central Credit Register and company accounts.

(1) The index considers the movements of loans to firms between the different categories (loans with no anomalies, overdrafts in breach of limits, past-due loans, restructured loans, substandard loans and bad debts). It is calculated as the balance between the percentages of loans whose quality deteriorated/improved in the 12 preceding months. – (2) The probabilities of default are estimated for some 800,000 companies on the basis of vulnerability indicators derived from company accounts and indicators of financial strain in credit relationships. – (3) Loans classified by intermediaries as substandard loans and restructured loans. The division into size classes is based on the composition of banking groups at February 2013 and total non-consolidated assets at December 2008. Top 5 groups: banks belonging to the UniCredit, Intesa Sanpaolo, Banca Monte dei Paschi di Siena, UBI Banca and Banco Popolare groups. The size classes “large,” “small” and “minor” refer to banks belonging to groups or independent banks with total assets, respectively, greater than €21.5 billion, between €3.6 billion and €21.5 billion, and below €3.6 billion. Foreign bank branches are not included.

Table 3.1

**Loan quality: ratio of performing loans and non-performing loans to total lending and coverage ratios (1)**  
(per cent; December 2012)

	Top 5 groups		Large banks		Small banks		Minor banks		Financial companies not belonging to a banking group		Total system	
	% composition	Coverage ratio	% composition	Coverage ratio	% composition	Coverage ratio	% composition	Coverage ratio	% composition	Coverage ratio	% composition	Coverage ratio
<b>Customer loans</b>	<b>100</b>	<b>6.3</b>	<b>100</b>	<b>4.7</b>	<b>100</b>	<b>5.9</b>	<b>100</b>	<b>4.1</b>	<b>100</b>	<b>6.6</b>	<b>100</b>	<b>5.7</b>
<i>of which:</i>												
Performing	86.0	0.6	88.5	0.5	85.6	0.6	86.2	0.5	86.2	1.3	86.6	0.6
Non-performing	14.0	41.1	11.5	36.7	14.4	37.8	13.8	27.2	13.8	40.2	13.4	38.8
<i>Bad debts</i>	7.7	56.1	6.1	52.2	7.4	56.0	6.1	46.1	8.1	55.1	7.2	54.6
<i>Substandard</i>	4.1	25.2	3.7	23.1	4.7	22.7	5.8	14.1	3.8	22.2	4.2	23.2
<i>Restructured</i>	1.2	24.0	0.6	17.0	0.5	15.7	0.4	16.1	0.2	10.0	1.0	22.4
<i>Past-due</i>	1.0	10.8	1.1	7.5	1.9	10.1	1.6	4.1	1.7	13.4	1.1	9.4
<i>Memorandum item:</i>												
Customer loans (€ mn)	1,334,548		487,923		137,323		186,948		71,286		2,218,028	

Source: Supervisory reports.

(1) The coverage ratio is the amount of loan loss provisions as a share of the corresponding gross exposure. In the case of performing loans, it is calculated as the ratio of generic provisions to performing loans. Foreign bank branches are not included. The classification of banks is the same as in Figure 3.6.c.

action undertaken by the Bank of Italy regarding the quality of bank assets with a view to checking the adequacy of coverage ratios (see the box “The recent check on the quality of Italian banks’ assets”). A recent Bank of Italy supervisory communication on the occasion of the approval of the financial statements for 2012 reminded banks of the importance of having their provisions reflect the present and prospective performance of the economy.<sup>3</sup> To minimize possible procyclical effects, banks were asked to increase internally generated funds by curbing costs and adopting dividend distribution policies consistent with their own solvency condition and operating performance. The criteria for director and executive compensation must also be compatible with the objective of bolstering banks’ soundness.

The strengthening of the banks at which the Bank of Italy’s supervisory action aims is essential to maintain a high level of investor confidence, attract outside financing and ensure an adequate flow of credit to households and firms.

<sup>3</sup> The communication of 13 March 2013 is published in *Bollettino di Vigilanza*, No. 3, 2013, available on the Bank of Italy’s website.

#### THE RECENT CHECK ON THE QUALITY OF ITALIAN BANKS’ ASSETS

The recession is imposing high credit risk on banks. The Bank of Italy is conducting an assessment of the adequacy of provisioning by an ample set of large and medium-sized banking groups. Where necessary, the Bank requires corrective action to be taken.

Initially, in 2012 the checks were conducted off-site, using statistical methodologies to identify banks whose loss provisions were deemed unsatisfactory. For each banking group, homogeneous portfolios – in terms of the type of impairment (bad debts, substandard loans, restructured loans), collateral and the borrower’s sector of activity – were assessed. For each portfolio, where significant divergence between the effective coverage ratio and the system-wide average was found, additional capital buffers were required under Basel pillar 2. These requirements helped to determine the specific target or minimum trigger capital ratio for each of the groups considered.

Last autumn the Bank of Italy also undertook a programme of inspection of 20 large and medium-sized banking groups, selected on the basis of coverage ratios and the results of statistical analysis. The inspections assess the banks’ policies for coping with the increase in non-performing loans, their internal procedures for calculating loan loss provisions, and the adequacy of these provisions. The inspections will be completed by the middle of this year.

For each intermediary, two samples of impaired loans were inspected. A first set of non-performing exposures, called the targeted sample (accounting on average for 20 per cent of bad debts, 30 per cent of substandard loans and 50 per cent of restructured loans), was examined in detail by the Bank’s inspectors. A second sample, called statistical, representative of the bad debt portfolio and accounting on average for 15 per cent of the total, was analysed by each bank’s internal audit, subject to subsequent verification by the inspection team. Overall, the checks covered about 80 per cent of the banking system’s bad debts plus a significant share of substandard and restructured loans.

The results of the inspections were partly incorporated in the banks’ balance sheets for 2012. Intermediaries were also asked to prepare measures for continuous checking of the adequacy of their coverage ratios. As regards the bad debts within the targeted sample analysed directly by the inspectors, the adjustment of loss provisions has produced a significant increase in the coverage ratio.

**Non-performing loan ratios are high in Italy, partly because of the different treatment of collateral and guarantees ....**

By international standards, Italian banks have a high ratio of non-performing loans to total loans and a low coverage ratio. However, the comparison is vitiated, including within the European Union, by numerous factors that need to be taken into account for a fair assessment of the actual riskiness of bank assets. One such factor is the heterogeneous definition of non-performing loans. If Italian intermediaries' non-performing loans were identified using criteria similar to those prevailing abroad, especially as regards the treatment of collateral and guarantees, the average ratio of non-performing loans to total loans would be significantly lower than it now appears; furthermore, the coverage ratio would be higher and show an increase over the last five years (see the box "Non-performing loans and collateral and guarantees").

## NON-PERFORMING LOANS AND COLLATERAL AND GUARANTEES

Some financial analysts have remarked on Italian banks' high ratio of non-performing loans to total loans (NPL ratio) and low ratio of provisions to non-performing loans (coverage ratio). For example, for the 15 main European banking groups, the NPL ratio and the coverage ratio averaged 4.5 and 51.1 per cent respectively in December 2011,<sup>1</sup> compared with 11.2 and 39.2 per cent for the Italian banking system (similar figures were recorded for the five largest Italian groups). However, a number of studies have shown that these comparisons are distorted by a series of factors.

One important factor of divergence is the difference between the methods used to identify non-performing loans, which for some banks are determined partly on the basis of the value of the collateral and guarantees received.<sup>2</sup> An examination of the financial statements of the 15 major European (but non-Italian) banking groups shows that most of them do not classify as impaired those non-performing loans for which, considering the collateral or guarantees available, they do not expect to book losses in the future. By contrast, Italian banks follow criteria established by the Bank of Italy in conformity with prudential regulations that identify impaired positions exclusively on the basis of the borrower's creditworthiness, even when ample collateral or guarantees are available. This criterion, among the most transparent and prudent in Europe, increases the NPL ratio and reduces the coverage ratio of Italian compared with foreign banks.<sup>3</sup>

For more homogeneous cross-country comparison, Italian banks' NPL and coverage ratios were recalculated with methods in line with those adopted by many foreign banks, i.e. excluding loans entirely covered by collateral or guarantees.<sup>4</sup> Under this definition, the Italian banking system's stock of non-performing loans would be 32 per cent lower than that shown in the financial statements.

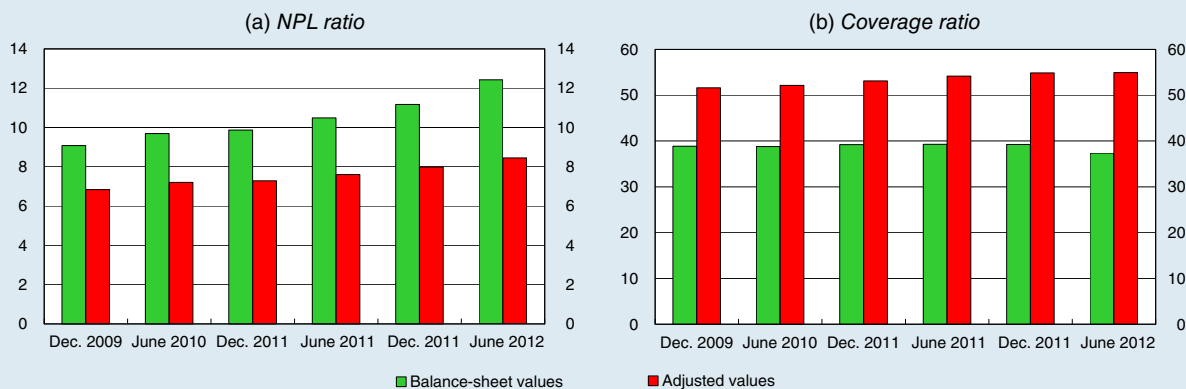
<sup>1</sup> Average weighted by total assets for the European banking groups included in the Financial Stability Board's list of global systemically important banks except for UniCredit, which is included among the Italian banks (see [http://www.financialstabilityboard.org/publications/r\\_121031ac.pdf](http://www.financialstabilityboard.org/publications/r_121031ac.pdf)).

<sup>2</sup> The lack of uniformity across countries in defining the aggregates for non-performing loans emerges both in the regulations governing financial statements and in the balance-sheet information (the only information available for purposes of international comparison) and in the data requested by the supervisory authorities for prudential purposes, which generally are not published.

<sup>3</sup> See S. Barisitz, "Nonperforming Loans in Western Europe – A Selective Comparison of Countries and National Definitions", Oesterreichische Nationalbank, *Focus on European Economic Integration*, Q1/13, [http://www.oenb.at/de/img/feei\\_2013\\_q1\\_studies\\_barisitz\\_tcm14-253775.pdf](http://www.oenb.at/de/img/feei_2013_q1_studies_barisitz_tcm14-253775.pdf). The study shows that for a correct international comparison the Italian banking system's ratio of non-performing loans to total loans should be revised downwards.

<sup>4</sup> The adjusted values shown in the figure were calculated by subtracting from total non-performing exposures (i.e. the numerator of the NPL ratio and the denominator of the coverage ratio) those entirely covered by collateral or by guarantees provided by public sector or financial sector entities, typically characterized by high creditworthiness. The calculation assumes that any provisions relating to these assets in the income statement are nil or negligible. The adjustment method chosen, which excludes partial coverage by collateral or guarantees, reduces but does not eliminate the overestimation of Italian non-performing loans in the international comparison. The unavailability of the requisite data precludes the opposite comparison, i.e. calculating the foreign banks' NPL and coverage ratios using the criteria adopted by Italian banks.

**Effect of collateral and guarantees on the Italian banking system's NPL and coverage ratios (1)**  
(per cent)



Source: Based on supervisory reports.

(1) Balance-sheet values are calculated on the basis of Italian regulations. Adjusted values are calculated by subtracting from non-performing loans those entirely backed by collateral or guarantees for which it is assumed that no losses are expected. For a detailed description, see note 4 to the text of this box.

The NPL ratio would fall from 12.4 to 8.5 per cent (figure, panel *a*). The increase in the NPL ratio since the end of 2009 would be less pronounced than that derived from balance-sheet data (1.6 against 3.3 percentage points). The coverage ratio would also improve considerably, rising from 37.4 to 54.9 per cent (figure, panel *b*). The effect on the changes over the period considered is also substantial: whereas the official coverage ratio decreases by 1.5 percentage points, the adjusted ratio increases by 3.3 points, mainly as a consequence of the rise in the share of real estate pledged as collateral for loans.

The difference between the balance-sheet values and the adjusted values is greater for minor banks; in particular, their adjusted coverage ratio would rise to approach the system-wide average.

**... and lengthy time to credit recovery**

International comparison of non-performing loans is also vitiated by the length of credit recovery procedures, which are particularly slow in Italy. This extends the period during which non-performing loans remain on banks' balance sheets and pushes up the ratio of non-performing loans to total loans (see the box "The relationship between length of credit recovery procedures and volume of bad debts on banks' balance sheets").

**THE RELATIONSHIP BETWEEN LENGTH OF CREDIT RECOVERY PROCEDURES AND VOLUME OF BAD DEBTS ON BANKS' BALANCE SHEETS**

The variations in the ratio between the stock of bad debts and banks' lending depend on three separate factors: the default rate (i.e. the flow of new bad debts in relation to the stock of performing loans); the rate of growth in lending; and the bad debt write-off rate (i.e. assets removed from the bad debt aggregate as a percentage of total bad debts). This third factor is influenced by the length of credit recovery procedures, which is greater in Italy than elsewhere owing to the slowness of bankruptcy and foreclosure proceedings.<sup>1</sup> Other things being equal, this increases the ratio of bad debts to total lending by comparison with countries where credit recovery is faster.

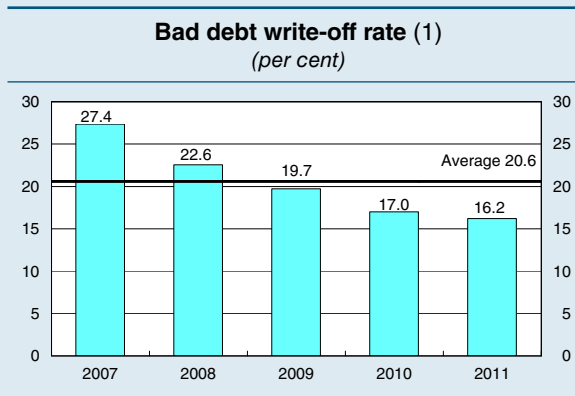
<sup>1</sup> From an accounting and tax perspective, the bad debt write-off rate also depends on the identification of precise, certain elements required for the removal of these assets from the balance sheet and for the full deductibility of loan losses.



A simple analytical model enables us to derive the equation for the equilibrium value of the ratio of bad debts to outstanding lending,  $S/A$ , as a function of the components mentioned above:  $S/A = \delta / (\delta + g + w)$ , where  $\delta$  is the default rate,  $g$  the annual growth of lending, and  $w$  the bad debt write-off rate.<sup>2</sup> The equation indicates that the longer it takes for a bad debt to be written off (which can be proxied by  $1/w$ ), the higher the equilibrium ratio of bad debts to lending will be. For example, let us take two banking systems with the same lending growth rate (say, 5 per cent) and the same default rate (2 per cent) but with different times to write-off (two years in one and five years in the other). In equilibrium the bad debt ratios of the two systems will be different: 3.5 per cent in the first and 7.4 per cent in the second.

Assigning to the parameters  $g$  and  $\delta$  the average values observed in the Italian banking system from 2007 through 2011 (7.1 and 1.8 per cent, respectively), the bad debt ratio of Italian banks would be 6.2 per cent if  $1/w$  were equal to five years; if  $1/w$  were halved, the ratio would fall to 3.7 per cent. The figure shows that between 2007 and 2011 the bad debt write-off rate declined by 11 percentage points (corresponding to a lengthening of the time to write-off from under 4 to over 6 years), contributing to the rise in the bad debt ratio.

<sup>2</sup> Assuming the ratio of bad debts to lending constant, the relationship can be derived from a simplified model consisting of the following four equations:  $A_t = (1 + g)A_{t-1}$ ;  $D_t = \delta(A_{t-1} - S_{t-1})$ ;  $W_t = w \cdot S_{t-1}$ ;  $S_t = S_{t-1} + D_t - W_t$ , where  $S_t$  denotes the volume of bad debts,  $A_t$  lending gross of bad debts,  $D_t$  the flow of new bad debts during the period and  $W_t$  the exit flow from the bad debt aggregate.



Source: Supervisory reports.  
(1) Ratio of the annual flow of bad debts removed from banks' balance sheets to total bad debts. The horizontal line corresponds to the average for the period.

### Exposures to euro-area sovereign risk and foreign assets

#### Holdings of Italian government securities grow ...

At the end of 2012 the banking system's exposure to Italian general government bodies amounted to €390 billion (Table 3.2), of which €321 billion in securities. Purchases in more recent months, widespread among the banks (with the ten largest banking groups accounting for less than half), concentrated on the component with an original maturity of up to three years and were mostly recorded in the banking book. Exposures to the other euro-area governments (including the countries in greatest difficulty, particularly Cyprus) are negligible, except those to Germany and Austria.

#### ... although they are still moderate by historical standards

From a long-term perspective, Italian banks' holdings of Italian government securities are relatively low. In January of this year they represented 44 per cent of the securities portfolio and 9 per cent of total assets, compared with levels in excess of 70 and 10 per cent respectively in 1996-97 (Figure 3.7). In the decade following the changeover to the single currency, banks gradually reduced their holdings of Italian government securities; the resumption of purchases coincided with the Lehman Brothers crisis.

Table 3.2

**Exposures of Italian groups and banks to residents  
in euro-area countries by sector of counterparty (1)**  
(billions of euros at December 2012)

	Public sector	Banks	Financial corporations	Households and non-financial firms	Total	Per cent of the total exposures reported to the BIS (2)
Italy	389.7	114.0	136.2	1,402.4	2,042.4	79.8 (3)
Germany	41.9	32.0	14.7	88.9	177.5	13.5
Austria	12.7	9.5	1.5	53.0	76.7	40.3
France	2.7	21.3	3.7	6.9	34.6	4.1
Luxembourg	0.4	3.7	8.7	4.8	17.6	4.3
Spain	4.1	4.4	2.7	6.1	17.3	4.4
Netherlands	0.4	4.2	5.6	4.8	15.0	2.3
Ireland	0.1	2.2	5.1	0.3	7.7	2.6
Portugal	0.4	0.1	0.2	0.6	1.3	1.1
Greece	0.0	0.1	0.0	0.6	0.7	1.5
Cyprus	0.0	0.0	0.2	0.9	1.0	3.9
Other (4)	5.2	2.3	1.0	17.1	25.6	4.1
Total (5)	457.8	193.7	179.6	1,586.4	2,417.5	

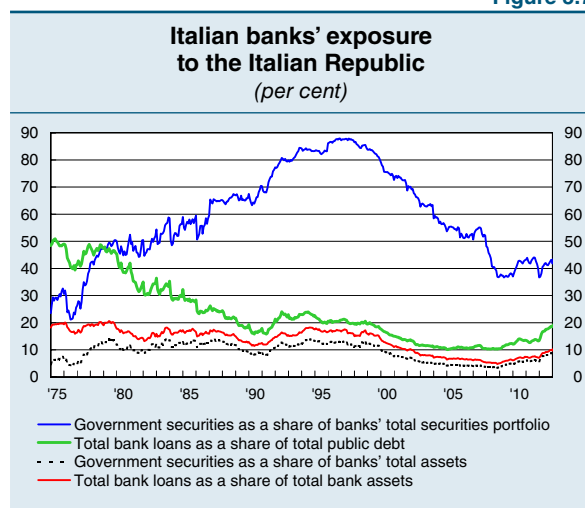
Sources: Consolidated supervisory reports for banking groups and individual supervisory reports for banks not belonging to a group.

(1) Exposures to "ultimate borrowers", gross of bad debts and net of write-downs. BancoPosta and CDP are not included. – (2) As a percentage of the total foreign exposures to each country in September 2012, reported to the BIS by a large set of international intermediaries. – (3) Exposure of Italian banks to resident customers; the difference with respect to 100 is given by the lending of foreign groups and banks to Italian customers, via establishments in Italy and cross-border transactions. – (4) Belgium, Estonia, Finland, Malta, Slovakia, and Slovenia. – (5) Discrepancies in totals are due to rounding.

**Exposure to the countries of Central and Eastern Europe increases**

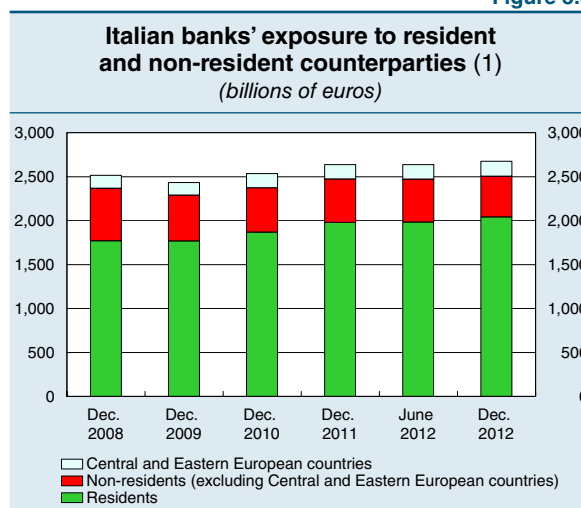
Italian banks increased their exposure to the countries of Central and Eastern Europe by 4.3 per cent compared with the end of 2011 (Figure 3.8). Impaired claims on counterparties resident in those countries amounted to 10.4 per cent of total assets in the region last September, against 9.8 per cent at the end of 2011. In 2012 the two largest banking groups significantly stepped up their provisioning in relation to the stock of outstanding loans in the region (in Ukraine and Hungary, where credit risks are highest, the ratio reached 11 and 6 per cent respectively); the impaired-loan coverage ratio increased to 50 per cent.

Figure 3.7



Sources: Based on Bank of Italy data and supervisory reports.

Figure 3.8



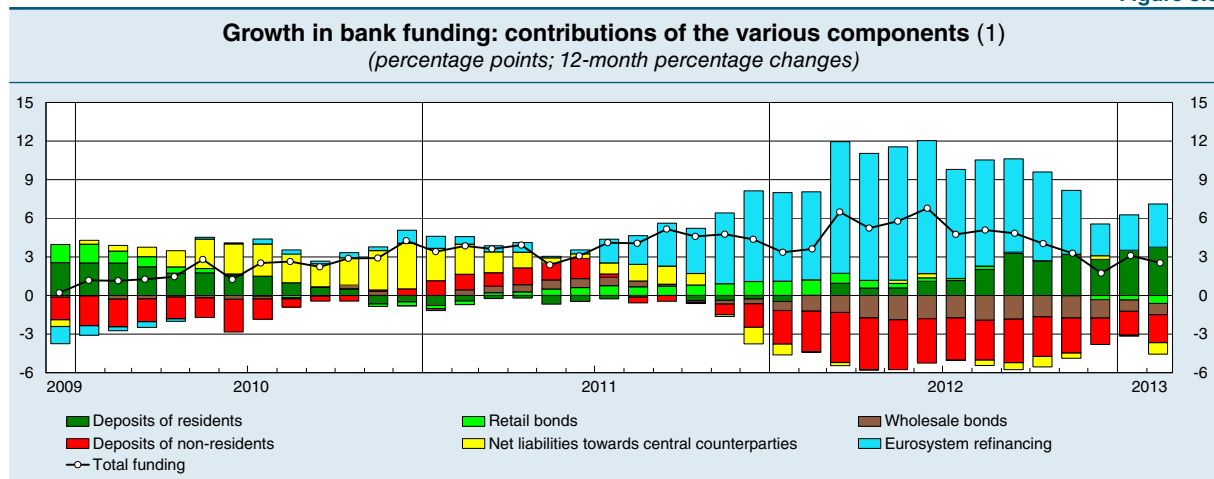
Source: Supervisory reports.

(1) End-of-period exposures in loans and securities to bank and financial counterparties, governments, households and firms; not including intragroup exposures.

### 3.3 BANKS' FUNDING, LIQUIDITY RISK, REFINANCING RISK

**Retail deposits grow** In the twelve months to February 2013 Italian banks' total funding expanded by 2.5 per cent (Figure 3.9), mainly as a result of the good performance of residents' deposits (up by 7.9 per cent) and, to a lesser extent, recourse to the Eurosystem's refinancing operations. The increase in these two components more than offset the decline in fund-raising from non-residents and in wholesale funding.

Figure 3.9



Source: Supervisory reports.

(1) The sum of the contributions is equal to the percentage change over 12 months in the total funding. The percentage changes in the single components are calculated net of reclassifications, exchange-rate variations, value adjustments and other variations not due to transactions. Liabilities towards resident MFIs are excluded. Net liabilities towards central counterparties are the funds raised by way of repos with non-residents via central counterparties.

**The funding gap narrows further and the cost of funding remains stable**

The share of lending financed by wholesale funding (the funding gap) narrowed further, to 12.8 per cent in January, owing to the expansion of retail funding and the decline in loans granted (see the box “The funding gap of Italian banks”,

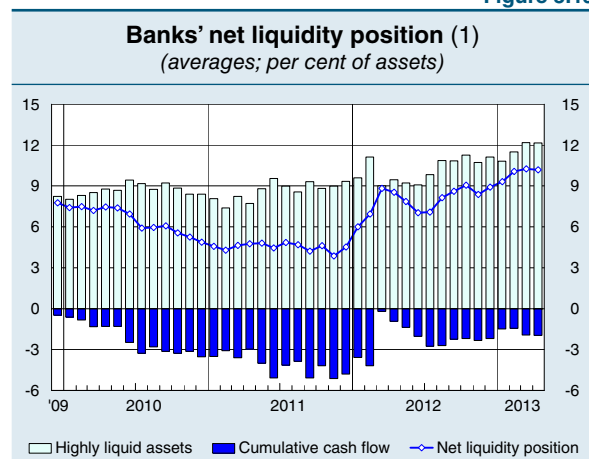
*Financial Stability Report* No. 4, November 2012). The average cost of funding remained practically unchanged at 1.3 per cent.

The 33 Italian banking groups subject to the Bank of Italy's weekly monitoring recorded a further improvement in their short-term liquidity position (Figure 3.10) and a reduction of their refinancing risk: bonds issued on the wholesale market maturing by the end of 2014 amounted to €85 billion (Figure 3.11), while holdings of unencumbered eligible assets remained substantial.

**Refinancing risk diminishes, but political uncertainty weighs on the outlook**

The resumption of wholesale bond issuance in the four months between the end of 2012 and the

Figure 3.10



Source: Data for a sample of 33 banking groups subject to periodic monitoring of their liquidity position by the Bank of Italy.

(1) Data updated to mid-April 2013. The net liquidity position is calculated as the (positive or negative) difference between holdings of assets eligible for use as collateral for Eurosystem refinancing operations and cumulative expected cash flow. The time frame is 1 month; on prudential grounds it is assumed that there is no roll-over of maturing obligations vis-à-vis institutional counterparties.

beginning of 2013 came to a halt with the Italian general election. Uncertainty and the subsequent downgrading of the Republic of Italy and Italian banks by several rating agencies prompted many intermediaries to review their medium-term funding plans, which had foreseen a gradual reduction in recourse to Eurosystem financing. Our analyses indicate that, despite the increase in highly liquid assets, the narrowing of the funding gap and the solidity demonstrated to date by the retail funding component, the short-term liquidity position of the Italian banking system remains vulnerable to a new flare-up in the sovereign debt crisis and downgrading of government and bank securities.

### 3.4 INTEREST-RATE RISK AND MARKET RISK

#### The exposure to interest-rate risk remains limited

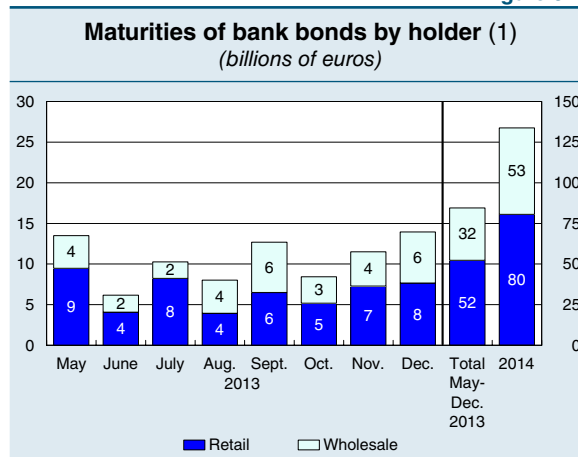
Based on December 2012 data for the 13 Italian banks that use internal systems to measure the effects of changes in interest rates, an upward shift of 200 basis points over the entire yield curve would on average have a negative, but limited, impact on the value of the overall balance sheet (equal to 7.3 per cent of regulatory capital). This impact is mainly attributable to the effects that such a

scenario would have on the value of securities held in the banking book and on long-term loans. A rise in interest rates would, however, have positive effects on net interest income.

#### There is a reduction in market risk

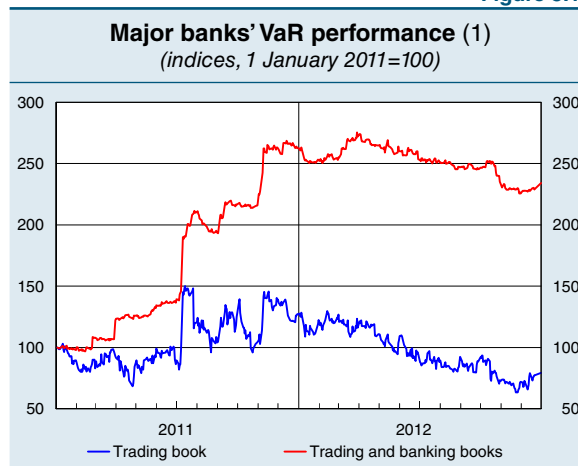
In the second half of 2012, the major Italian banking groups' exposure to market risk, measured using VaR models, continued to decline (Figure 3.12). However, the VaR for the entire securities portfolio (trading and banking books) valued at fair value remains well above the levels recorded at the beginning of 2011, also owing to the substantial amount of government securities purchased in this period and allocated to the banking book (see the box "Banking book versus trading book: the incentives introduced by Basel 2.5"). During 2012 the composition of these investments changed significantly: exploiting the improvement in prices, banks sold securities with longer maturities and replaced them with investments over shorter horizons, to the benefit of profitability and risk profiles.

Figure 3.11



Source: Data for a sample of 33 banking groups subject to periodic monitoring of their liquidity position by the Bank of Italy.  
 (1) Data updated to mid-April 2013; excludes government-guaranteed bonds pursuant to Decree Law 201/2011. Values referring to total maturities in 2013 and 2014, right-hand scale. The discrepancies in the totals for 2013 are due to rounding.

Figure 3.12



Source: Data from a sample of six banking groups using internal models to quantify market risk.  
 (1) The indices are constructed so as to reflect the performance of the VaRs in relation to all positions valued at fair value (in red) and to the trading book component alone (in blue). A decline indicates a reduction in risk. Compared with the same figure published in *Financial Stability Report* No. 4, November 2012, the six banking groups in question have revised the extent of asset coverage by their internal models, and one has revised some of the hypotheses used for risk quantification. The time series has been reconstructed to take account of these modifications.

## BANKING BOOK VERSUS TRADING BOOK: THE INCENTIVES INTRODUCED BY BASEL 2.5

The package of measures known as Basel 2.5 has greatly tightened the capital requirements on assets held in trading books. The regulatory changes stemmed from the observation that under the previous rules the amount of capital to be held against new investments included in the trading book was generally less than the amount required for the banking book. An exercise was conducted recently to assess how the reform would affect the relative advantage of using the two books.<sup>1</sup> It involved simulating the case of a bank authorized to use internal models for both the trading and the banking book (a common situation among leading European banks) that invests in bonds and decides where to allocate them according to the amount of capital absorbed in each option. Since this depends not only on the type of bonds but also on the composition of the trading book before their purchase, the exercise was replicated for investments in different bonds and for various “starting” portfolios representing likely compositions of the trading book of a bank active on the financial markets. The capital absorption was assessed by means of models similar to those actually in use by the banks.

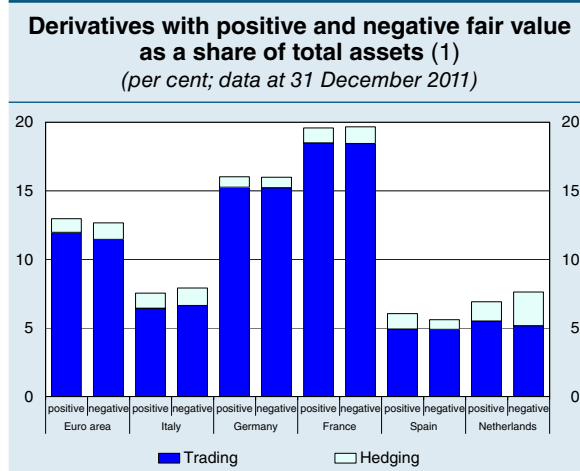
The simulation revealed, first of all, that by removing the incentives to treat positions in credit instruments as part of the trading book, Basel 2.5 has made it more advantageous in terms of capital requirements to allocate bonds and similar instruments traded on the financial markets to the banking book. Second, because of the different way in which the two books treat concentration risk, it is more advantageous to use the banking book when allocation to the trading book would entail a more marked concentration towards one economic sector or issuer. This effect is particularly evident in the case of investments in government securities, which normally make up a large part of a bank’s portfolio. Last, allocation to the banking book is particularly advantageous in the case of medium-to-low-rated securities because the capital requirements of the trading book are subject to threshold effects caused by minor variations in the rating.

<sup>1</sup> G. Pepe, “Basel 2.5: potential benefits and unintended consequences”, Banca d’Italia, *Occasional Papers*, No. 159, 2013.

### Operations in derivatives for trading purposes are limited

Derivatives held for trading by Italian banking groups are modest by international standards (Figure 3.13), while there is no significant difference from other countries in the proportion of derivative contracts stipulated to hedge asset and liability items. The bulk of the derivatives held by Italian banks are interest-rate contracts (88.1 per cent, as against 77.3 per cent for the sample of intermediaries surveyed by the Bank for International Settlements), mostly consisting in linear instruments. The share of contracts with non-financial institutions is 16 per cent (as against 22.4 per cent for the BIS sample). This reflects the lesser presence of large corporations in Italy, which typically have greater recourse to these instruments. The use of derivatives is highly concentrated: the three largest banking groups account for over 80 per cent of the total notional value.

Figure 3.13



Source: ECB, “Consolidated banking data”.  
(1) Derivatives with negative (positive) fair value represent a potential liability (asset) for banks.

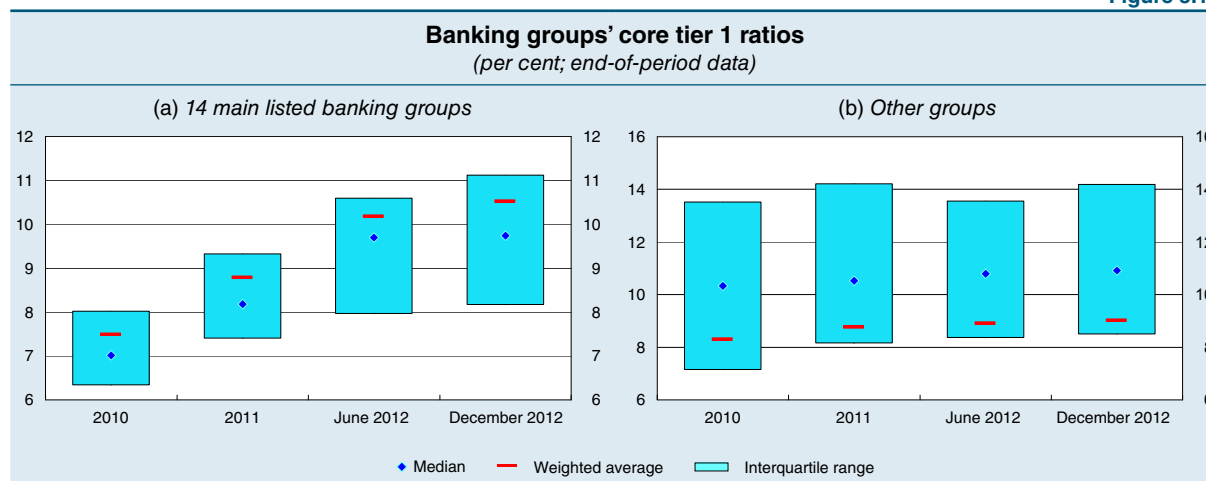
### 3.5 BANKS' CAPITAL AND PROFITABILITY

#### Banks' capital position strengthens further

In the second half of 2012 the fourteen main listed banking groups continued to strengthen their capital positions. The improvement, although small, was due to their risk-weighted assets contracting more than their capital. Their highest quality capital was adversely affected by the losses recorded in the period. The reduction in risk-weighted assets stemmed partly from the banking groups' portfolio rebalancing in favour of assets attracting lower capital charges. Some of the largest groups also completed the switch to internal models for the calculation of capital charges or expanded the scope of their application, thus completing a process initiated some time ago and monitored by the Bank of Italy.

By December 2012 the core tier 1 capital ratio of the fourteen main listed groups had risen on average to 10.5 per cent, from 10.2 per cent in June 2012 (Figure 3.14). Their tier 1 and total capital ratios were respectively 11.1 and 14.1 per cent. The preliminary results of the stress tests carried out on the Italian banking system under the IMF's Financial Sector Assessment Program (FSAP) show that the capital strengthening achieved allows the system as a whole to withstand adverse shocks.<sup>4</sup>

Figure 3.14



Source: Consolidated supervisory reports.

The capital ratios of the largest Italian groups remain slightly lower than those of the major European banks, which in several cases have benefited from large-scale public support. However, Italian banks' financial leverage, measured as the ratio of total balance-sheet assets to tier 1 capital, is lower – 18 as against a European average of 23 in June 2012. When assessing capital adequacy, one must take account of the manner of calculating risk-weighted assets, which are higher for Italian banks in proportion to total assets (see the box “International banks' risk-weighted assets”).

<sup>4</sup> See the IMF's press release of 26 March 2013: <http://www.imf.org/external/np/sec/pr/2013/pr1394.htm>.

#### INTERNATIONAL BANKS' RISK-WEIGHTED ASSETS

The methods used to calculate risk-weighted assets have been studied by regulators and analysts for some time (see the box “The risk-weighted assets of Italian banks”, *Financial Stability Report* No. 4, November 2012). The comparability of the measures of banks' capital may be undermined by discrepancies in risk-weighted assets caused by differences in the models used by banks or in the



supervisory approaches adopted for validation. In 2012 the Basel Committee and the European Banking Authority began working on these issues.

**The work on the trading book.** – The trading book analyses, recently published by the Basel Committee, include a simulation involving 15 large international banks,<sup>1</sup> each of which was asked to use its own internal models to calculate its risk-weighted assets, and corresponding capital requirement, for an identical set of 24 hypothetical portfolios of tradable assets and for a diversified portfolio obtained by summing the 24 portfolios. The use of homogeneous portfolios made the comparison possible by isolating the diversity of the risk-weighted assets due to the differences in the internal models and supervisory interventions. The banks were also asked to determine the capital requirement using both the regulatory multiplier (the value actually applied by each bank's national supervisory authority) and the minimum value, equal to three.<sup>2</sup> This makes it possible to distinguish, as the difference, the change in the capital requirements attributable to the internal models used from that attributable to the discretionary action taken by the supervisory authorities.

The table shows the main statistics of the distribution of the capital requirement generated by the diversified portfolio.<sup>3</sup> From the first column, corresponding to the minimum multiplier, it is clear that most of the diversity of the capital requirement is attributable to the differences between the internal models: the same portfolio, representative of the transactions in securities and derivatives carried out by banks operating on the financial markets, gives rise to a capital requirement of €13 million when computed with the least conservative model in the sample and of €29 million when computed with the most conservative. The values in the second column, obtained using the regulatory multiplier, show that the choices of the supervisory authorities make a material contribution to the diversity of the capital requirements: the standard deviation of the distribution rises from €4.1 million to €6.3 million.

The last row of the table shows the average capital requirement for the two largest Italian groups.<sup>4</sup> The value in the first column is higher than the average and the median of the sample. Turning to the second column, obtained using the regulatory multiplier, it can be seen that the capital requirement for the Italian banks is close to the maximum value for the sample as a whole.

**The work on the banking book.** – In the last few months the EBA has released the preliminary results of an analysis of the risk-weighted assets of the banking book for a sample of about 90 European banks.<sup>5</sup> The work shows that a significant part of the dispersion among the risk-weighted assets was attributable to the differences in banks' balance-sheet structures and the adoption of the internal ratings-based approach, which generally produces lower risk-weighted assets than the standardized method. The remaining part of the dispersion depends, however, on the hypotheses regarding the risk parameters of the internal ratings-based models adopted by banks and validated by supervisory authorities. The analysis of this part of the dispersion among risk-weighted assets will continue in

<sup>1</sup> See Basel Committee, "Regulatory consistency assessment programme (RCAP) – Analysis of risk-weighted assets for market risk", January 2013 (<http://www.bis.org/publ/bcbs240.pdf>).

<sup>2</sup> The capital requirement for trading-book assets is computed by multiplying the result obtained with a bank's internal models by the regulatory multiplier, established at the discretion of the supervisory authority.

<sup>3</sup> The transactions making up the diversified portfolio are shown in Annex 3 of the Basel Committee document. The results, given in terms of capital requirements to facilitate comparison with the above-mentioned document, can be expressed in terms of risk-weighted assets by multiplying them by 12.5, the reciprocal of the minimum regulatory capital ratio (8 per cent).

<sup>4</sup> The only Italian bank involved in the analysis made by the Basel Committee was UniCredit. Subsequently, the Bank of Italy asked Intesa Sanpaolo to repeat the exercise. This made it possible to publish the average for the two groups (the confidentiality agreement signed by the Basel Committee with the banks participating in the analysis forbade the publication of the results of individual banks).

<sup>5</sup> See EBA, "Interim results of the EBA review of the consistency of risk-weighted assets. Top-down assessment of the banking book", February 2013 ([http://www.eba.europa.eu/cebs/media/aboutus/News%20and%20Communications/Interim-results-EBA-review-consistency-RWAs\\_1.pdf](http://www.eba.europa.eu/cebs/media/aboutus/News%20and%20Communications/Interim-results-EBA-review-consistency-RWAs_1.pdf)).



the coming months; the work on the banking book carried out by the Basel Committee has not yet been completed.

The Bank of Italy has carried out an analysis using different methods and data from those adopted for the trading book exercise referred to above. The research focuses on the dispersion among European banks of the ratio of risk-weighted assets for credit risk to the related exposure valid for prudential purposes (exposure at default).<sup>6</sup> The indicator measures the average weighting of a bank's total loan exposure; the fact that banks with apparently similar business models have significantly different ratios of risk-weighted assets to exposure at default has raised doubts among analysts and investors about the reliability of capital ratios.

The results of the analysis, in line with those of the EBA, show that part of the dispersion of the ratio of risk-weighted assets to exposure at default is attributable to factors other than the parameters connected with the riskiness of exposures. When account is taken of the differences in both the coverage of the internal ratings-based models and the composition of individual banks' balance sheets, the ratio's range decreases from 23 to 16 percentage points. The remaining dispersion could be affected by the differences in the internal ratings-based models and in the validation methods used by national supervisory authorities.

For the two Italian banks included in the analysis the ratio of risk-weighted assets to exposure at default is above the sample average. This reflects the still limited use – compared with the other main European banking systems – of internal ratings-based models due in part to the Bank of Italy's gradual approach in approving their adoption.

<sup>6</sup> The sample comprises Barclays, BBVA, BPCE, Crédit Agricole, Commerzbank, Credit Suisse, Deutsche Bank, HSBC, Intesa Sanpaolo, Nordea, Royal Bank of Scotland, Banco Santander, Société Générale, UBS and UniCredit. The data refer to December 2011.

**Capital requirement arising from a trading book investment: differences between banks (1)**  
(millions of euros)

	Minimum multiplier (equal to 3)	Regulatory multiplier
Minimum	12.6	13.4
Maximum	28.7	34.1
Median	17.5	17.8
Average	18.1	20.5
Standard deviation	4.1	6.3
Coefficient of variation (%)	23	31
Italian average	22.5	29.9

Sources: Basel Committee, "Regulatory consistency assessment programme (RCAP) – Analysis of risk-weighted assets for market risk", January 2013, and Bank of Italy.

(1) The statistics shown in the table refer to the empirical distribution of the capital requirements generated by the same portfolio, calculated individually by the 15 banks participating in the exercise described in the text. The row "Italian average" was calculated as the average of the values obtained for UniCredit and Intesa Sanpaolo.

**Preparation continues for the entry into force of Basel III**

A series of steps taken in the last two years have contributed to Italian banks coming steadily closer to satisfying the new capital requirements of the Basel III regulations, which will be fully phased in starting in 2019. A simulation based on data at June 2012 for a sample of large banks<sup>5</sup> shows that if the regulations had been fully in force at that date, all the banks would have reached the regulatory minimum for the common equity tier 1 (CET1) ratio, equal to 4.5 per cent; the capital needed to achieve the CET1 ratio of 7 per cent (the minimum capital requirement of 4.5 per cent plus a capital conservation buffer of 2.5 per cent) would have been €9.4 billion, while the excess capital would have been €14.5 billion for the banks in the sample that already met the new requirements (Figure 3.15). At the same date the average CET1 ratio for the system's five largest banks was 7.7 per cent.

<sup>5</sup> The data refer to 13 Italian banking groups, accounting for more than 70 per cent of the banking system's total assets, that participate in the periodic monitoring coordinated at global level by the Basel Committee and at European level by the EBA. See F. Cannata et al., "Looking ahead to Basel 3: Italian banks on the move", Banca d'Italia, *Occasional Papers*, No. 157, 2013.

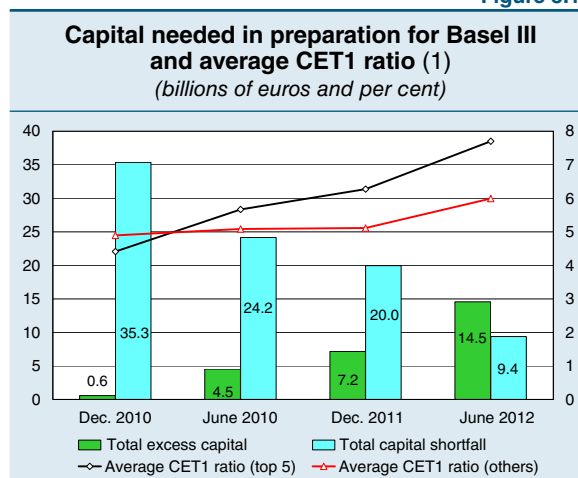
**Loan losses reduce profitability and force banks to curb costs**

In 2012 the profitability of the fourteen main groups decreased as a consequence of the deterioration in loan quality. Excluding the extraordinary items connected with goodwill impairment, their return on equity fell to just below 1 per cent, from 3 per cent in 2011.

Gross income was basically stable; the fall of 8 per cent in net interest income was offset by the increase of 10 per cent in other income, mainly trading profits booked in the first quarter. Operating costs decreased by 4 per cent, in line with the decline in staff costs; the cost/income ratio (operating costs over gross income) fell by 2 percentage points to 63 per cent. Overall these banks' operating profits improved by 6 per cent. The fall in net income was due to the large increase of 53 per cent in loan losses, which absorbed almost all the operating profit. The increase in provisions was partly in response to supervisory action aimed at ensuring that impaired assets were adequately covered and increasing the transparency of banks' financial statements.

In 2013 bank profitability will again be low, depressed by the difficult economic environment, as shown by the analysis that the Bank of Italy conducts on the main banking groups' annual budgets (see the box "The earnings prospects of listed banking groups: an analysis of their budgets for 2013"). The Bank of Italy intends to pay more attention to strategic and operational planning, with the aim of improving banks' ability to establish mutually consistent objectives for profitability, capital adequacy and liquidity, encouraging the use of several scenarios to forecast target variables and strengthening the control on operational projects.

Figure 3.15



Source: Based on Quantitative Impact Study data.  
(1) CET1 is the new definition of capital that will come into force with the transposition of Basel III. The average CET1 ratio (right-hand scale) is weighted. The total capital shortfall (excess capital) (left-hand scale) is calculated as the sum of the capital shortfall (excess capital) of the individual banks with a CET1 ratio of less (more) than 7 per cent.

**THE EARNINGS PROSPECTS OF LISTED BANKING GROUPS: AN ANALYSIS OF THEIR BUDGETS FOR 2013**

According to the budgets of ten medium-sized and large listed banking groups (representing over 60 per cent of the banking system's total assets), expectations for 2013 are for modest growth in lending and somewhat higher growth in funding (see the table). Net interest income is forecast to contract, partly owing to low interest rates. By contrast, the banks forecast a significant rise in net fee income, mainly thanks to the resumption of placements of investment products, and a reduction in loan loss provisions. Given customers' diminished appetite for risk and the deterioration in loan quality, such expectations may turn out to be optimistic. On the other hand, a recent survey by the Bank of Italy suggests that banks are taking active measures to contain credit risk through better management of both performing

**Main balance-sheet and income variables**  
(percentage changes)

	2012 (1)	2013 (2)
<b>Balance sheet</b>		
Lending	-1.2	1.3
Funding	3.0	2.4
<b>Income statement</b>		
Revenue	3.3	-4.3
of which: net interest income	-4.7	-1.9
net fee income	-1.3	7.3
Costs	-3.3	0.2
of which: staff costs	-3.3	0.5
Cost of credit risk (basis points) (3)	153	104

Sources: Based on banks' balance sheets and 2013 budget data.  
(1) Weighted average rates of change with respect to 2011 calculated on the basis of balance-sheet data. – (2) Weighted average rates of change between 2013 budget data and 2012 balance-sheet data. – (3) Ratio of net value adjustments to loans during the period to customer loans at end of period.

and non-performing loans and improved customer selection procedures. This could help to limit the amount of losses on loans. The banks' budgets also envisage a slight upturn in operating costs, which had fallen in 2012 mainly owing to reductions of 3.5 per cent in branch numbers and 3.1 per cent in staff. Notwithstanding the expected savings from the new collective bargaining agreement, the trend in staff costs could reflect the delaying of retirement under the pension reforms.

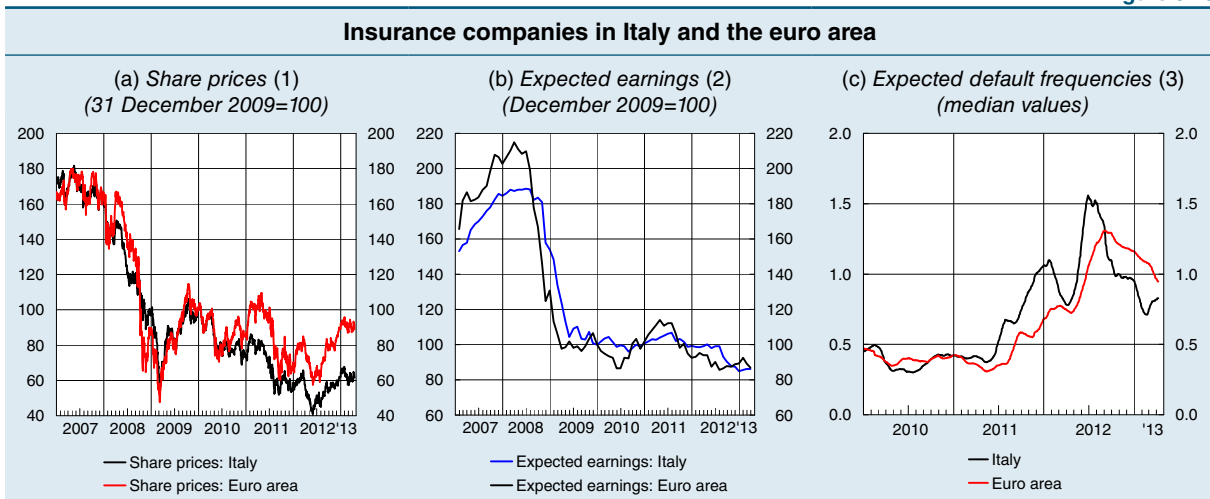
### 3.6 INSURANCE COMPANIES

#### *The market's assessment*

**The markets reflect the still uncertain economic outlook**

The rise in the share prices of the main Italian insurance companies in response to the general improvement in financial conditions in the euro area came to a halt at the beginning of 2013 (Figure 3.16.a). Analysts' forecasts of earnings per share continue to reflect the uncertainty surrounding the sector's future profitability (Figure 3.16.b). The expected default frequencies implied by share prices remain high despite showing an improvement compared with the peak of the crisis (Figure 3.16.c). The credit ratings assigned by the main agencies are unchanged.

Figure 3.16



Sources: Based on Thomson Reuters Datastream and Moody's KMV data.

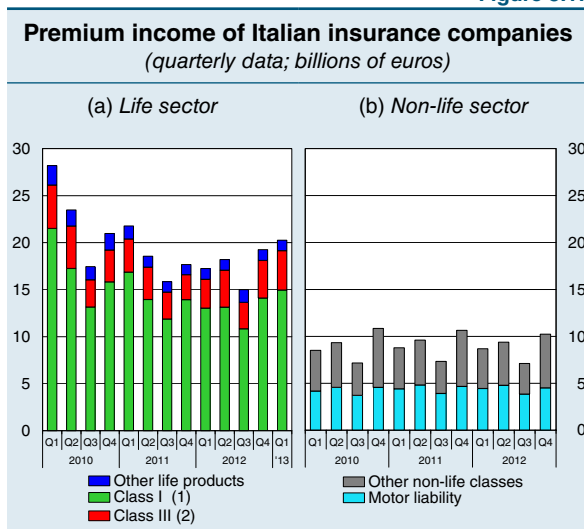
(1) Daily data. Insurance company share indices. – (2) Weighted average (by the number of shares in circulation) of expected earnings per share in the 12 months following the reference date. Monthly data. For Italy the data refer to the following companies: Assicurazioni Generali, Mediolanum Assicurazioni, Società Cattolica Assicurazioni, UGF Assicurazioni, Vittoria Assicurazioni; for the euro area the data refer to the companies included in the Datastream insurance sector index. – (3) Thirty-day averages of daily data in per cent. The expected default frequencies, calculated on the basis of the price and volatility of the shares of the companies to which they refer, measure the likelihood of the market value of the assets being lower than that of liabilities over a period of one year. The graph shows the median values of the expected default frequencies of the Italian insurance companies considered (see note 2) and of the companies included in Moody's KMV European insurance sector index.

#### *Premium income and the liquidity position*

**Premium income suffers from the poor state of the economy and competition from banking products**

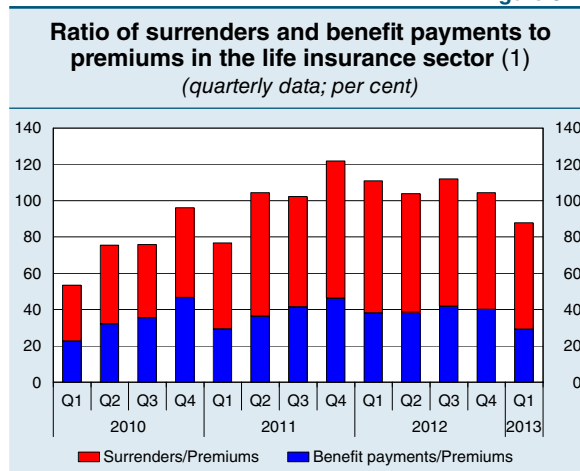
Premium income continued to contract in 2012, but less steeply than in 2011 (-4.6 per cent against -12.5 per cent). The decline was sharper in the life sector, reflecting both the weakness of demand and the lesser propensity of banks to distribute third-party products. The fourth quarter saw an upturn in premium income compared with a year earlier (Figure 3.17), chiefly in the life sector. This trend continued into the first quarter of the current year.

Figure 3.17



Source: IVASS.  
 (1) Mostly with-profits policies. – (2) Mostly unit- and index-linked policies.

Figure 3.18



Source: IVASS.  
 (1) The indicators are calculated as the sum of policy surrenders and benefit payments at policy maturity (principal and annuities) in proportion to premium income during the period. An amount higher (lower) than 100 indicates a net outflow (inflow) of funds.

**Liquidity risk remains limited**

The liquidity indicators for the life sector continue to improve, largely thanks to a drop in policy surrenders (Figure 3.18). In the first quarter of this year the ratio of surrenders and benefit payments to premiums fell back below the 100 per cent threshold. Insurance companies managed the risk of an increase in surrenders by augmenting their holdings of more liquid assets, notably sight deposits and bonds with a residual maturity of less than 24 months.

**Investments**

**Sovereign risk exposure is still high**

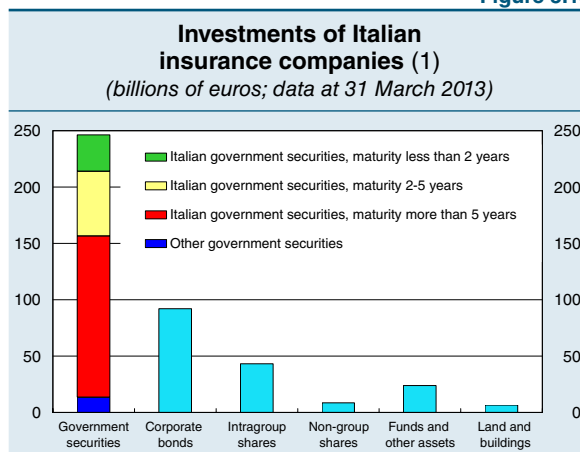
Italian insurance companies' holdings of government securities remain very substantial (Figure 3.19) and are slightly larger than in September 2012. The average residual maturity of their portfolio is long, although the need to hedge liquidity risk is prompting them to step up their purchases of shorter-term securities. The sharp drop in the yields on Italian government securities has led to a further increase in net unrealized capital gains (Figure 3.20). In 2013, however, the result of financial operations could be jeopardized by a reappearance of strains on the financial markets and by an increase in the credit risk on corporate bonds owing to the weakness of economic activity.

**Profitability and capital adequacy**

**The profitability of insurance companies turns positive ...**

The results for 2012 show a significant improvement in insurance companies' profitability. ROE rose on average to 15.2 per cent in the life sector (thanks to revaluation gains on the portfolio of government

Figure 3.19



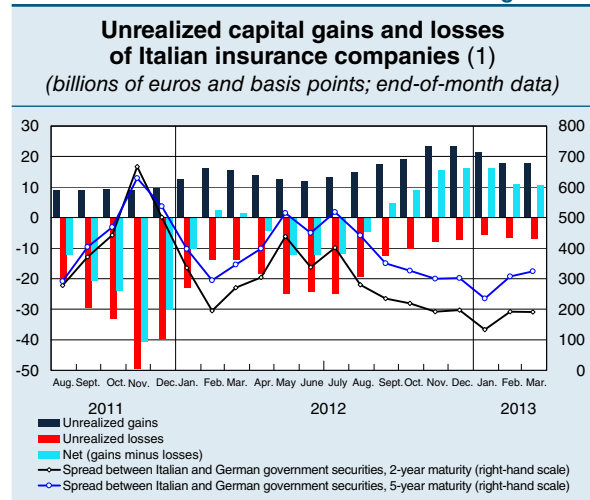
Source: IVASS.  
 (1) Balance-sheet values. The composition of government securities is partially estimated.

securities) and 3.1 per cent in the non-life sector (Figure 3.21.a). In the non-life sector the combined ratio (ratio of disbursements plus operating expenses to premium income; Figure 3.21.b) showed a general improvement, partly owing to the drop in the number of automobile accident claims and the initial effects on surrenders and benefit payments of the recent reforms to motor liability, notably the tightening of standards for the valuation of minor injuries.

**... and their solvency position improves**

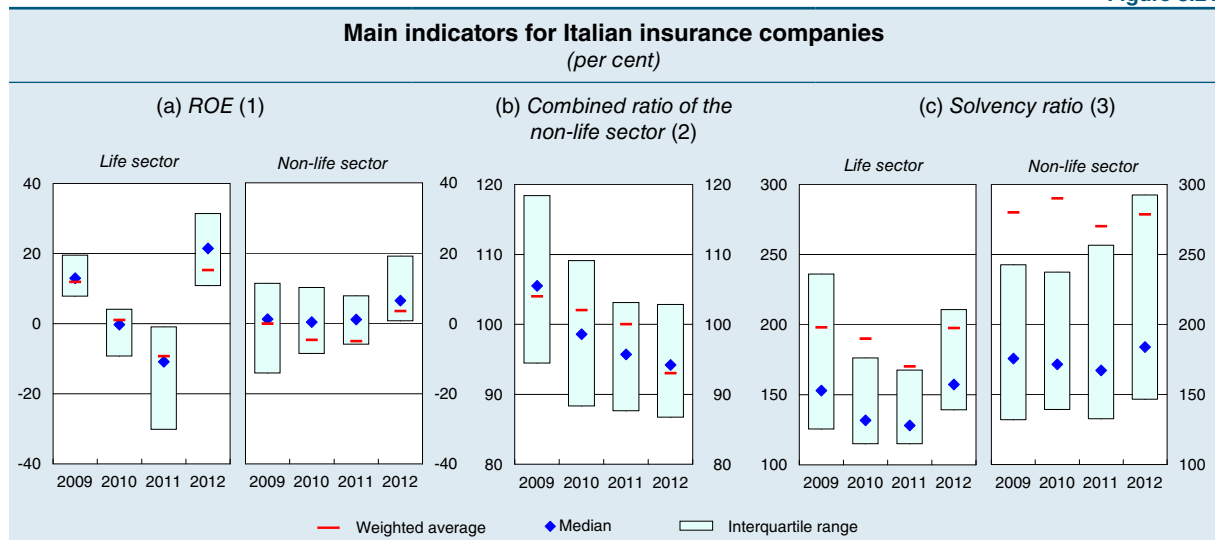
The solvency ratios of the life and non-life sectors are well above the regulatory requirements. Regulatory capital is equal on average to twice the amount required for companies in the life sector and 2.8 times for those in the non-life sector (Figure 3.21.c). Only twelve companies, whose premium income represents 2.7 per cent of the total, took advantage of the anti-crisis measures to neutralize the impact on their financial statements of unrealized losses on government securities (in 2011 the number was 69, representing a market share of 65 per cent). The improvement in the solvency position of insurance companies is borne out by the consolidated data for the leading groups. Only three of the smaller groups had recourse to the anti-crisis measures, against nine in 2011.

Figure 3.20



Sources: IVASS and Bloomberg.  
 (1) Unrealized gains and losses represent the difference between market value and balance-sheet value of the securities held.

Figure 3.21



Source: IVASS.  
 (1) Ratio of earnings to shareholders' equity. – (2) Ratio of disbursements plus operating expenses to premium income for the period. – (3) Ratio of regulatory capital to capital requirement. It is calculated for single insurance companies and refers to the Italian market. The high overall averages reflect the presence of companies (for the most part parent companies of conglomerates, including international groups) whose individual solvency ratios are far above the minimum requirement.

**The risks stemming from low interest rates are limited**

The European Insurance and Occupational Pension Authority (EIOPA) recently issued a set of recommendations designed to raise awareness among the national regulatory authorities regarding the risks for the insurance industry deriving from a protracted phase of low interest rates. In European countries where interest rates

on government securities are at an all-time low, the return on investments could be lower than the minimum yield guaranteed to policyholders in the past, when long-term interest rates were higher. For Italian insurance companies the risk is limited, given the large proportion of Italian government securities in their portfolios and the limited mismatching between the duration of asset and liability items. Information from the sample surveys indicates that Italian insurers are revising life-sector products with a view to reducing the cost of guarantees.

# 4 MARKETS, EUROSISTEM REFINANCING AND PAYMENT INFRASTRUCTURES

## 4.1 THE LIQUIDITY MARKET

**The liquidity of the Italian financial markets continues to improve**

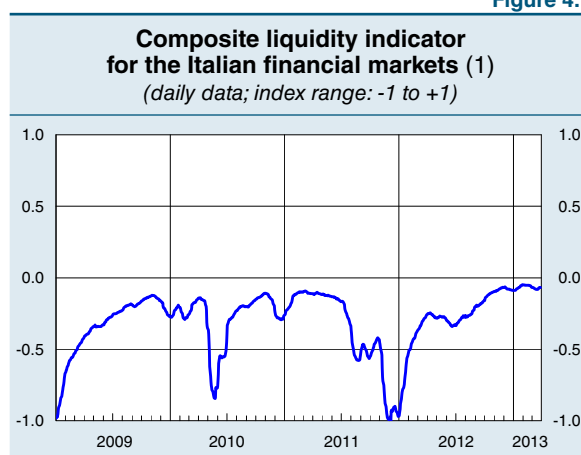
Liquidity conditions are improving on the Italian financial markets, especially in the government securities segment, despite the uncertainty engendered by the outcome of the general elections in February (Figure 4.1).

**Collateralized transactions dominate both in Italy and in the rest of the euro area**

Repo trading has expanded further on the market operated by MTS S.p.A. (Figure 4.2.a), where the presence of foreign institutions remains substantial.

Trading is still concentrated in one-day maturities and transactions are backed by central counterparty guarantees (see the box “An evaluation of the main risks for the MTS Repo market”).

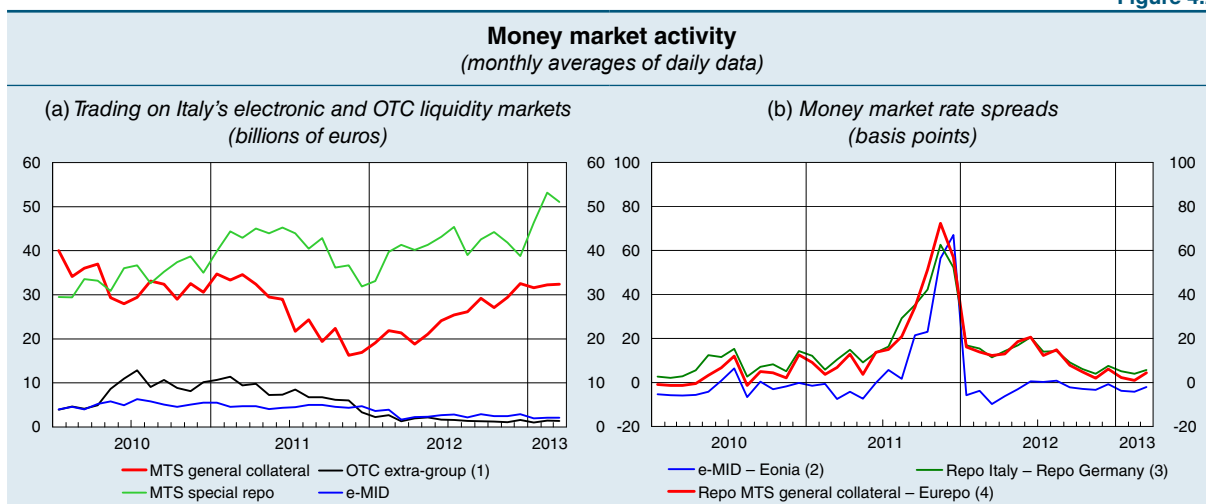
Figure 4.1



Sources: Based on Thomson Reuters Datastream, Bloomberg and Bank of Italy data.

(1) Positive (negative) values indicate higher (lower) liquidity than the average for 1999-2006; 20-day moving averages. For the method of constructing the index, see *Financial Stability Report* No. 1, December 2010.

Figure 4.2



Sources: Based on e-MID SIM S.p.A., MTS S.p.A., TARGET2-Banca d'Italia and RepoFunds Rate data.

(1) Estimates of unsecured money market trading with maturity up to one week between Italian banks, based on TARGET2 data. – (2) Overnight. – (3) Repo Italy and Repo Germany: interest rates on repos with maturity of one business day (overnight, tomorrow-next, spot-next) in government securities executed on electronic trading platforms operated by MTS S.p.A. and ICAP and guaranteed by the central counterparty. – (4) Tomorrow-next.



Unsecured interbank trading is still limited, both on e-MID and over the counter. The preference for secured transactions is widespread throughout the euro area.<sup>1</sup>

<sup>1</sup> See <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/short-term-markets/Repo-Markets/repo/> and <http://www.ecb.europa.eu/press/pr/date/2012/html/pr121217.en.html>.

## AN EVALUATION OF THE MAIN RISKS FOR THE MTS REPO MARKET

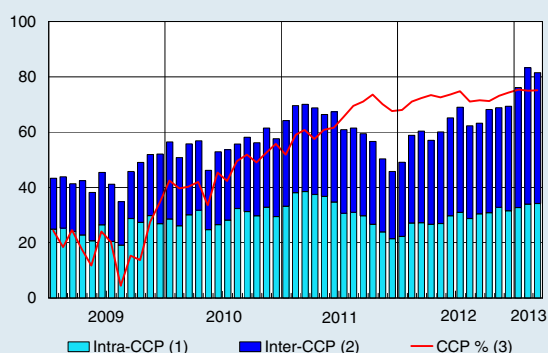
The significant growth of trading on the repo market operated by MTS S.p.A. in recent years has been accompanied by adjustments in the risk control mechanisms and conduct of intermediaries.

Counterparty risk, already mitigated by the fact that these trades are collateralized, has been further attenuated by recourse to the services of the central counterparty, which now extends to practically 100 per cent of trades (Figure, panel *a*). There has been a substantial increase in cross-border transactions carried out through the two central counterparties linked by interoperability agreements, namely the Italian Clearing and Guarantee House (CCG) and LCH.Clearnet SA in France. The central counterparties have increased both the relative amount of the guarantees required of participants (margins and default funds) in proportion to their net positions and the margins that they themselves exchange to guard against reciprocal default risk. Since July 2012, moreover, they have instituted the Sovereign Risk Framework, which decreases the importance of rating agency assessments in calculating margin requirements.<sup>1</sup>

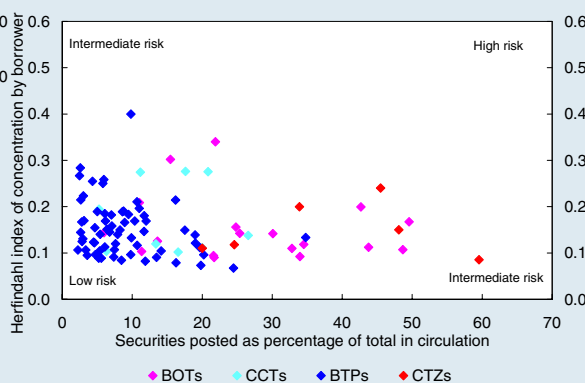
The risk that the default of a borrower may drive down the price of the securities it has posted as collateral – fire sale risk – is also limited, because the individual securities posted as collateral for repos are relatively little concentrated at single intermediaries and ordinarily constitute a small portion of the total volume of each issue in circulation (Figure, panel *b*).

### The MTS Repo market: trading through central counterparties and fire sale risk

(a) Volume of trade intermediated by central counterparties (monthly data; billions of euros and per cent)



(b) Fire sale risk (4) (calculated using data as of 28 February 2013)



Source: Based on MTS S.p.A. data.

(1) Trading between intermediaries that use the same central counterparty (CCP). – (2) Trading between intermediaries that use the two different central counterparties, CCG and LCH.Clearnet SA. – (3) Percentage of total trading using CCP services. Right-hand scale. – (4) The horizontal axis gives, for each security used in trading, the amount posted as a percentage of the total amount of that type (at ISIN code level) in circulation. The vertical axis measures the concentration (Herfindahl index) of the utilization of each security according to borrower; the index ranges from 0 (minimum concentration) to 1 (maximum concentration).

<sup>1</sup> See <http://www.ccg.it/jportal/pcontroller/AllegatoHandler?lingua=1&allegato=111276>.

**Interest rate spreads return to pre-crisis levels**

The improvement in conditions on Italian liquidity markets can also be gauged by the cost of funding, which has come gradually back into line with that of the euro area as a whole in both the secured and the unsecured segments (Figure 4.2.b). The positive trend continued even after the election results and the outbreak of the crisis in Cyprus.

**4.2 EUROSISTEM REFINANCING**

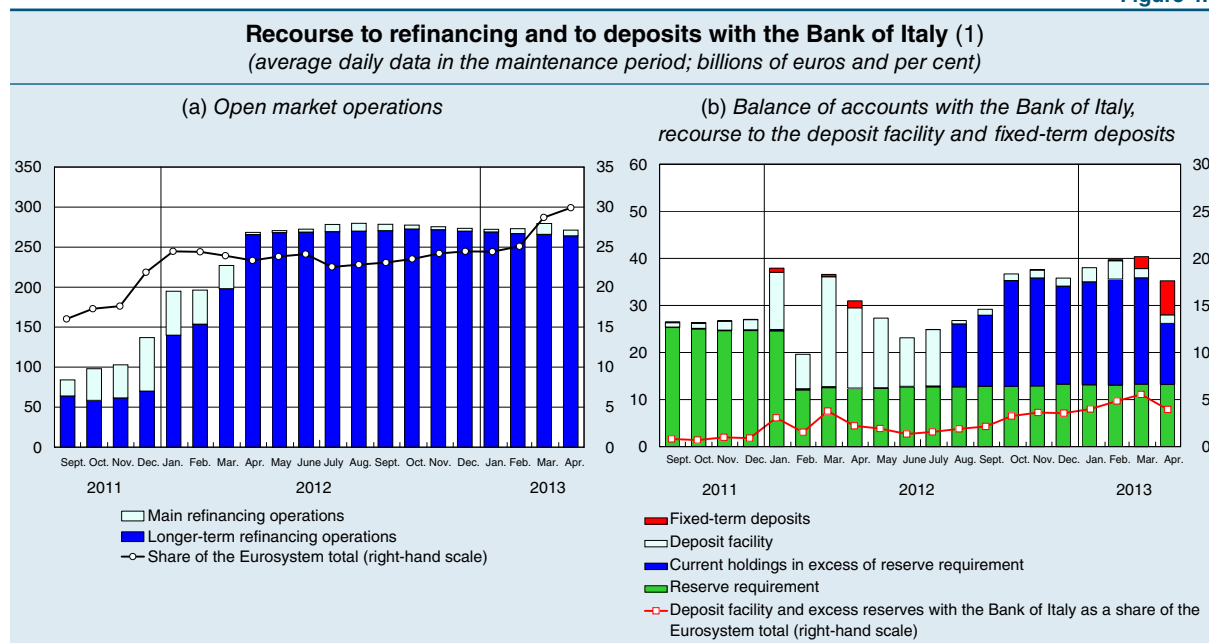
**Italian banks' recourse to the Eurosystem remains stable**

Italian banks' recourse to Eurosystem credit has fluctuated between €270 billion and €280 billion in recent months (Figure 4.3.a); the option of early repayment of the funds obtained with the three-year refinancing operations, open to the banks from 30 January 2013 at weekly intervals, has been exercised so far for modest amounts (€3.5 billion as of 24 April, equal to just over 1 per cent of the amount initially allotted). This prudent stance reflects uncertainties on the financial markets, deriving in part from the general election in Italy and the recent crisis in Cyprus. The excess funds deposited by banks with the Bank of Italy remain limited (less than 5 per cent of the Eurosystem total; Figure 4.3.b).

**Eligible assets continue to grow**

While there has been a slight reduction in the assets deposited with the Bank of Italy as collateral for Eurosystem operations (the collateral pool; Figure 4.4.a), freely available eligible securities held outside the pool have increased sharply owing to the release of government securities previously committed on the repo market and to net purchases of securities. The availability of government securities affords banks flexibility in coping with bond redemptions if conditions on the wholesale funding market do not permit the bonds to be rolled over and enables them to improve their profitability at a time when income statements are under strong pressure. At the end of February banks would have been able, if necessary, to draw an additional €302 billion on the credit granted by the Eurosystem. The composition of eligible collateral, consisting largely

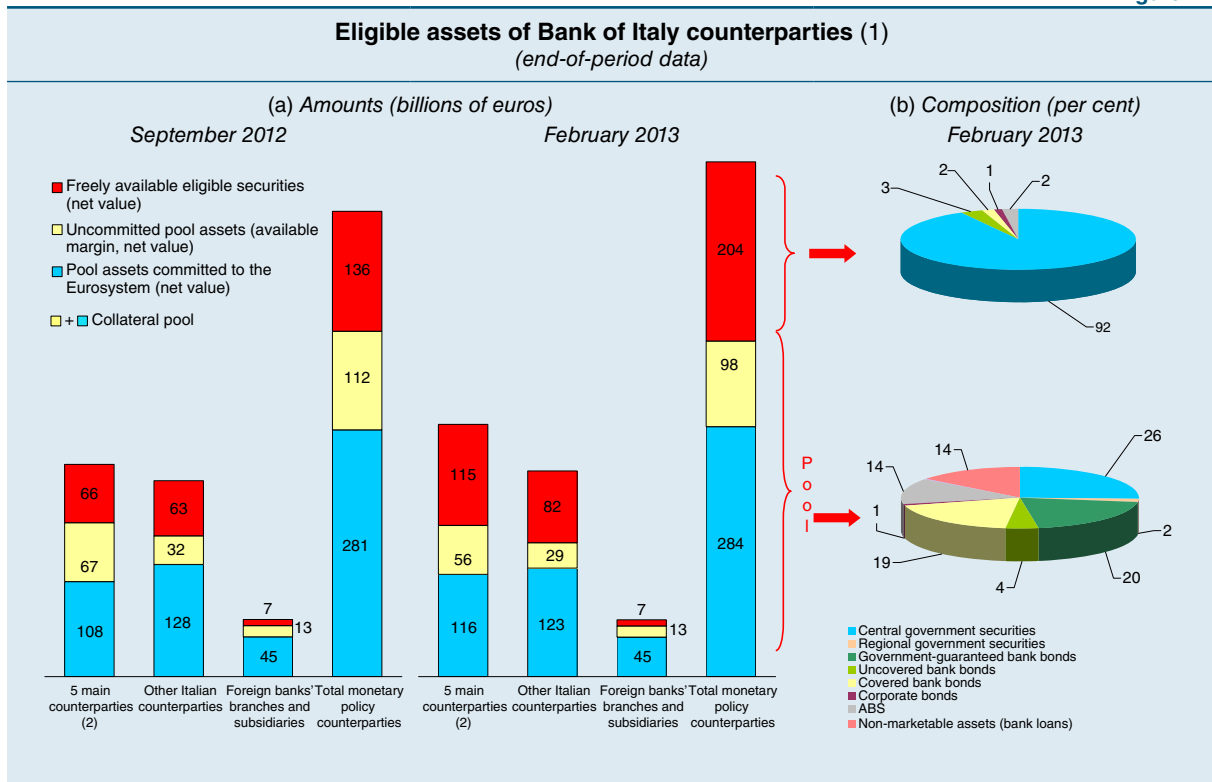
**Figure 4.3**



Sources: Based on ECB and Bank of Italy data.

(1) The date indicated on the x-axis refers to the month in which each maintenance period ends.

Figure 4.4



Sources: Based on ECB data and supervisory reports.

(1) The amount of assets committed to the Eurosystem includes the portion covering interest accrued and dollar refinancing. – (2) Main monetary policy counterparties by volume of assets of the groups to which they belong.

of Italian government and government-guaranteed securities and covered bank bonds, has not changed significantly with respect to last September (Figure 4.4.b).

**A lowering of the sovereign rating is the main risk for eligible collateral**

The ample quantity of freely available eligible assets provides margins of flexibility in case of a resurgence of tensions on the liquidity front. At present, the haircuts envisaged for securities rated A or better are applied to Italian central government securities.<sup>2</sup> It is estimated that if the sovereign rating fell below A-, the increase in the haircuts would reduce the value of the collateral pool by about €30 billion and

that of collateral outside the pool by €9 billion. If the rating of the banks and of the structured products they issue (asset-backed securities and covered bonds) were lowered one notch, the value of the collateral pool would be reduced by a further €6 billion.

**Banks can manage the phasing-out of government-guaranteed bank bonds**

In the medium term, the collateral pool could shrink as government-guaranteed bank bonds mature and as a result of the ECB Governing Council's decision to exclude own-use government-guaranteed bank bonds from the set of eligible assets with effect from 1 March 2015 (Table 4.1).<sup>3</sup> Given the abundant availability of eligible assets, no counterparty would find it difficult to maintain its amount of refinancing with the Eurosystem at roughly the current levels up to the beginning of 2015. In the absence

<sup>2</sup> DBRS currently assigns Italian sovereign debt a rating of A-; the remaining three recognized rating agencies (Fitch, Moody's and S&P) give it lower ratings. The Eurosystem defines a minimum threshold credit rating for eligible collateral. Generally, the first best rule is applied: where more than one rating is available the best one is selected. For assets with lower ratings, larger haircuts are applied.

<sup>3</sup> In the Eurosystem, own-use refers to securities issued by a bank (or by an entity closely linked to a bank) that uses them as collateral in monetary policy operations. See [www.ecb.int/press/pr/date/2013/html/pr130322.en.html](http://www.ecb.int/press/pr/date/2013/html/pr130322.en.html).

of corrective measures, after that date shortfalls of eligible assets would arise for 13 banks, which account for less than 10 per cent of system assets; the bonds still to mature (some €42 billion worth of value as collateral) could nevertheless be used to procure liquidity on the market.

### 4.3 THE GOVERNMENT SECURITIES MARKET

#### The primary market continues to work smoothly

The placement of government securities proceeded regularly in accordance with the Treasury's issue plan even during the phase of rising yields subsequent to the uncertain outcome of the elections. The ratio of amounts demanded to those supplied (cover ratio) has stayed consistently well above one. Periodic issues of securities with maturities beyond ten years resumed. Auction yields turned back downwards in April on the whole (Figure 4.5.a), bringing the average yield at issue down to around 2 per cent, near the historical lows of the last decade (Figure 4.5.b). The average yield on the entire domestic stock remains at about 4 per cent.

#### The residual life of the public debt diminishes slightly but is still long

The decline in the cost of the debt stemmed in part from a reduction in the average maturity of new issues (Figure 4.6.a). At the end of 2012 the average residual life of the Italian public debt thus came down to 6.6 years, still one of the highest figures in the euro area. Our analyses indicate that if the average original maturity of issues over

Table 4.1

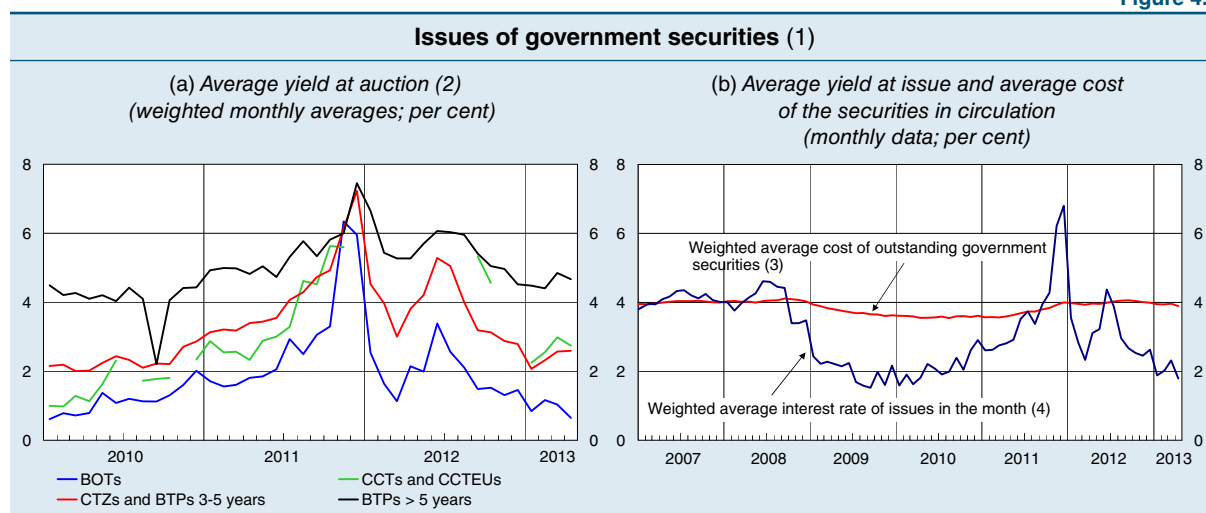
#### Italian government-guaranteed bank bonds: distribution by maturity

(millions of euros and number of banks)

	Collateral value of outstanding bonds (1)		Banks with matured or ineligible bonds (2)	
		of which: eligible own-use bonds in the pool		of which: banks with insufficient availability of eligible assets (3)
28 Feb. 2013	77,650	73,132	–	–
31 Dec. 2014	62,968	58,500	6	0
1 Mar. 2015 (4)	42,436	0	63	13
31 Dec. 2016	19,792	0	20	3

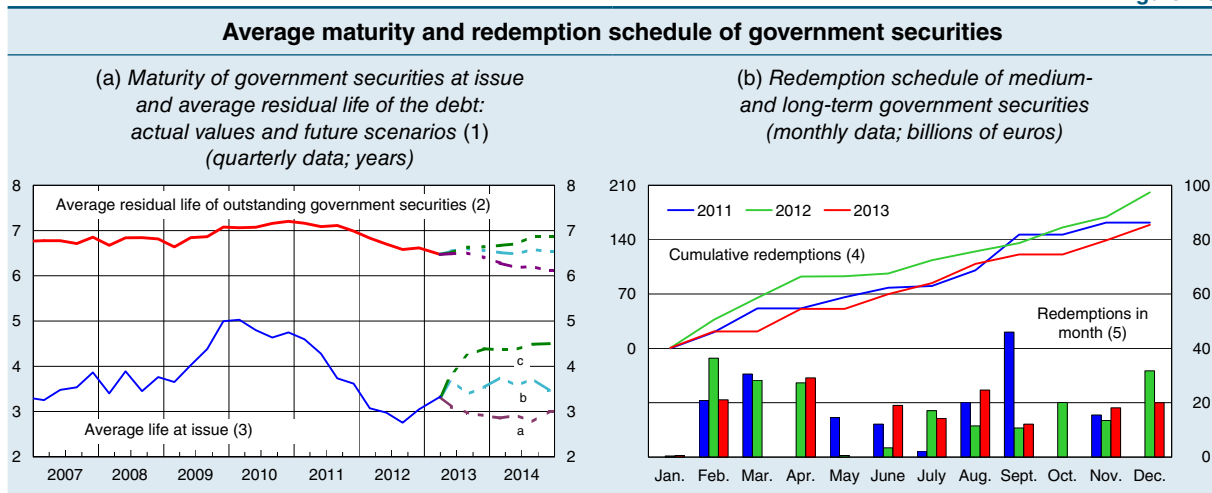
Sources: Bank of Italy and ECB. Data at 28 February 2013.  
 (1) Collateral value determined using prices at 28 February 2013 and the haircuts established by the Eurosystem. – (2) Number of banks for which there was a reduction in the amount of guaranteed bonds with respect to the previous date, either because of bonds' maturing or because of a loss of eligibility of own-use bonds with the Eurosystem. – (3) Number of banks for which the value of bonds maturing or not eligible as collateral with the Eurosystem exceeded that of promptly available eligible assets at 28 February 2013. – (4) Date at which own-use government-guaranteed bank bonds become ineligible as collateral with the Eurosystem.

Figure 4.5



(1) Unindexed government securities placed on the domestic market. Data as of 26 April 2013. – (2) The gaps correspond to the absence of auctions or the postponement of settlement to the following month. – (3) Weighted average of the interest rates at issue of government securities outstanding at the end of the month. – (4) Weighted average of the interest rates of the government securities placed during the month, by settlement date.

Figure 4.6



Sources: Based on Ministry for the Economy and Finance and Bank of Italy data. (1) The two series differ in level mainly due to the weighting of BOTs, which is greater in the series of average life at issue. – (2) End-of-quarter data, weighted by stocks outstanding. – (3) Government securities placed on the domestic market; weighted by issue volume in the quarter; 3-term moving average. – (4) Left-hand scale. Cumulative redemptions of government securities with original maturity of more than 1 year. – (5) Right-hand scale.

the next two years were the same as in 2012, the residual life of the debt would shorten to about 6 years in 2014 (scenario *a*). Regular issues of long-term paper along the lines of the Treasury’s programme of recent months would stabilize residual life at around 6.5 years (scenario *b*); lengthening the average residual life of the public debt would require the resumption of large-scale issues of 15- and 30-year bonds (scenario *c*).

**There is no bunching of redemptions during the year**

The Treasury has already covered more than 40 per cent of the entire year’s refinancing requirement, thanks among other things to the success of the BTP Italia issue in April.<sup>4</sup> The amount of medium- and long-term securities for redemption this year is less

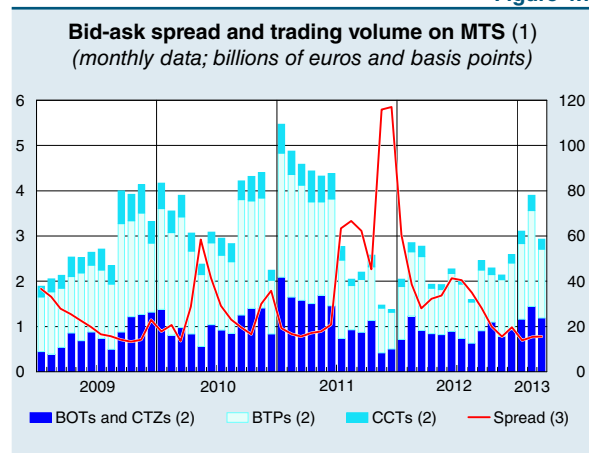
than in 2012 (€159 billion as against €201 billion), and with no peak periods (Figure 4.6.b).

**Secondary market liquidity improves**

The liquidity of the MTS Cash market has improved steadily, as is shown by the

increase in the volumes offered and traded and the narrowing of the bid-ask spread (Figure 4.7). The proportion of trades not settled on the scheduled day (fails) remains small. The settlement of trades on time is facilitated by the high liquidity of the MTS special repo segment, where specific securities can be borrowed. Trading on this market has expanded considerably in recent months owing partly to the new European regulation on short selling, which has imposed a ban on uncovered short sales (see the box “The new European regulation on short selling”).

Figure 4.7



Source: Based on MTS S.p.A. data. (1) The spread is measured as the simple average of the bid-ask spreads observed during the trading day for all the BTPs listed on MTS. – (2) Volumes traded on MTS. Left-hand scale. – (3) Bid-ask spread. Right-hand scale.

<sup>4</sup> The requirement for the year is calculated as the sum of the maximum ceiling on new government securities issues, including the funds allocated to pay the debts of general government, plus the volume at the start of the year of securities maturing during the year; six-month BOTs are counted twice on the assumption that they will be rolled over.

## THE NEW EUROPEAN REGULATION ON SHORT SELLING

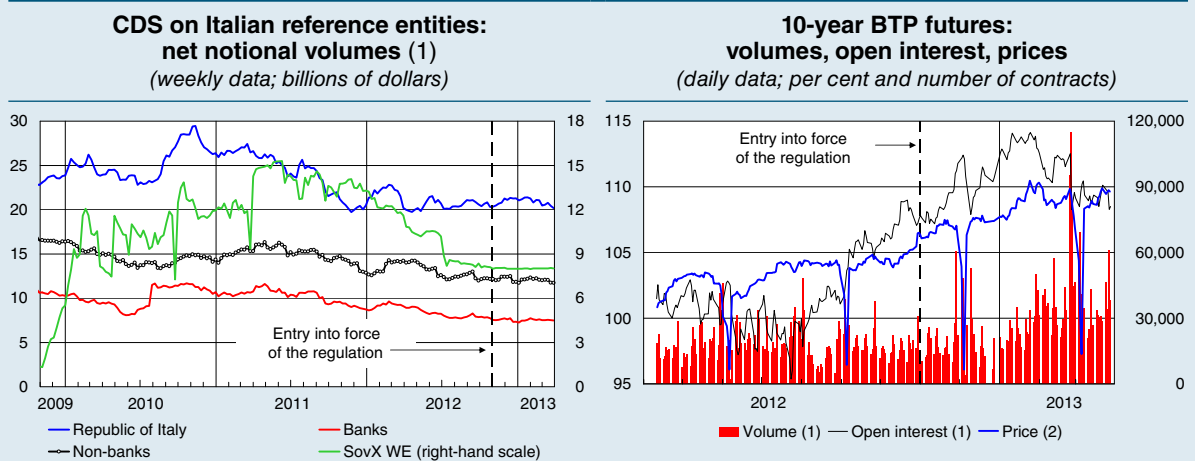
The new European regulation on short selling (Regulation EU 236/2012 of the European Parliament and of the Council of 14 March 2012), which came into force on 1 November 2012, is intended to reduce the risks for financial stability that can derive from the short selling of shares and sovereign debt securities. To this end, investors, including those not resident in the European Union, are required to notify the competent authorities of any significant net short positions they hold in such securities (created by trading on the cash market or by using derivatives) and may not make uncovered short sales. The regulation also forbids purchases of CDS on sovereign issuers in the absence of an exposure towards the underlying country. Lastly, as part of the new harmonized regulatory framework, authorities may temporarily forbid short selling in exceptional circumstances, such as conditions of extreme volatility or threats to financial stability.

To date the regulation does not appear to have had a significant adverse effect on the liquidity of the secondary market in government securities (Figure 4.7); the net notional volumes of CDS on Italian sovereign debt have also held up, in line with the trend of the segments not subject to restrictions (Figure A). The exemption of government securities primary dealers and market makers from the restrictions and notification requirements may have been a factor. On the other hand, the regulation may have had a major impact in the market for the indices on European sovereign CDS. For instance, the fall in the net notional volumes on the Markit iTraxx SovX Western Europe index between the spring and summer of 2012 may have been partly due to the requirement for holders of CDS indices to maintain exposures towards all the countries in the index, a condition that was presumably complied with by only a few and that may have led to the liquidation of some holdings before the regulation came into effect.

The new regulation has not imposed restrictions on activity in futures markets: investors may therefore continue to take short positions on such contracts (including on sovereign securities) without any restrictions. The increase in the volumes traded on the 10-year BTP futures market (Figure B) may have been due to transactions being shifted from markets on which the regulation has imposed restrictions.

Figure A

Figure B



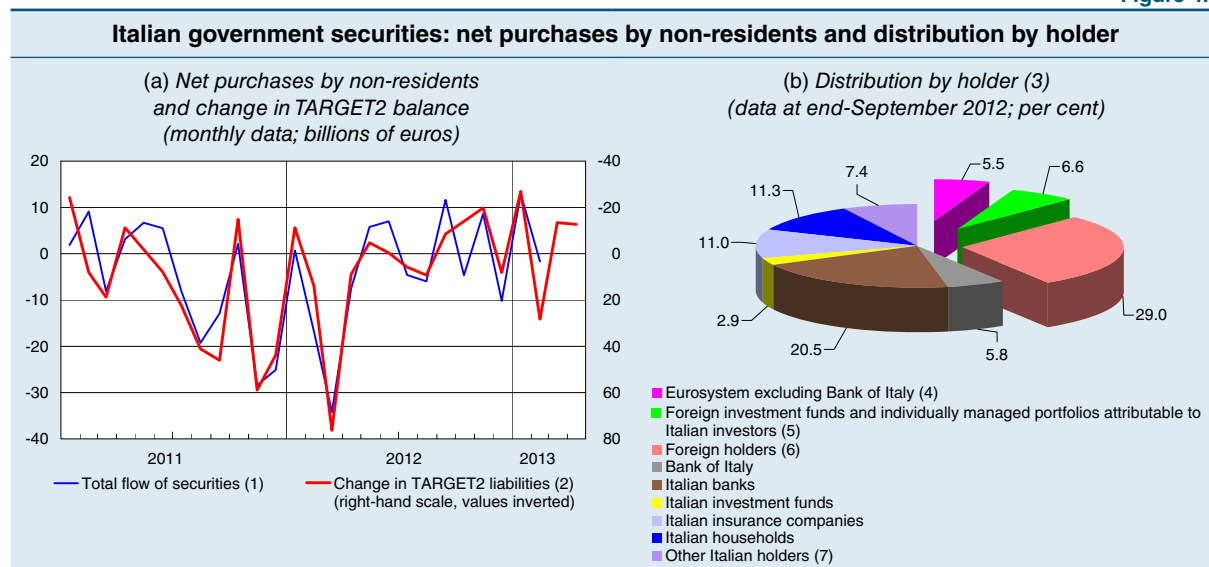
Source: Based on Depository Trust & Clearing Corporation data.  
(1) The reference entity is the issuer of the security underlying the CDS. Of the instruments shown in the figure only CDS on the Republic of Italy and the iTraxx SovX Western Europe index are subject to the restrictions imposed by the regulation.

Source: Based on Thomson Reuters Datastream data.  
(1) Right-hand scale; the open interest is the sum of all the futures contracts with the nearest maturity still open at a given date. – (2) Left-hand scale.

**The share of Italian government securities held by non-residents rises slightly**

Since the spring of 2012 there has been a recovery in net purchases of Italian government securities by non-resident investors (Figures 1.3.c and 4.8.a). TARGET2 balances in the last few months confirm the trend. The proportion of Italian government securities held by non-residents rose to about 29 per cent in September 2012 (Figure 4.8.b), one of the lowest shares registered internationally (see the box “Non-residents’ demand for Italian government securities,” *Financial Stability Report* No. 4, November 2012).

**Figure 4.8**



(1) Balance-of-payments data. – (2) Bank of Italy's TARGET2 balance with ECB at end of month; data as of 26 April 2013. – (3) Financial accounts data. Shares calculated at market prices net of securities held by Italian general government entities. The shares of non-resident holders are shown separately from those of Italian residents. – (4) Estimate, based on market sources, of Italian government securities held by the Eurosystem (net of those of the Bank of Italy) in the framework of the Securities Markets Programme. – (5) Individually managed portfolios and investment funds managed by foreign institutions but attributable to Italian investors. Partially estimated data. – (6) Net of securities held by foreign individually managed portfolios and investment funds but attributable to Italian investors and net of the Eurosystem (excluding the Bank of Italy). – (7) Non-financial corporations, pension funds, and other types of investor.