

Financial Stability Report





Financial Stability Report

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SYMBOLS AND CONVENTIONS

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

Risks linked to world growth remain elevated

Global macroeconomic developments continue to pose significant risks to financial stability: the stronger growth

expected in the emerging economies is being offset by persistent uncertainty about the outlook for the advanced countries. In the euro area inflation expectations are low for the whole of 2017.

Financial market tensions are increasing but are mitigated by the Eurosystem's action

In the euro area and in Italy expansionary monetary conditions are helping to support the liquidity of financial markets, reduce risk premiums on

and limit tensions on corporate bonds, government securities. Since the US elections bond yields have risen in all the leading economies and the spread on Italian government securities has widened. The prospect of continued modest growth in Europe and uncertainty about political developments in the main advanced countries could fuel sharp swings in financial asset prices in the coming months. Market indicators point to an increase of expected volatility in Italian equities in the first week of December, when the referendum on constitutional reform will be held.

The macrofinancial cycle in Italy is weak

In Italy the financial cycle is still weak and is likely to remain so in the near

future. Lending to the private sector is very gradually benefiting from the moderate economic recovery. According to our projections, which are consistent with the latest macroeconomic scenarios, the bankcredit-to-GDP ratio is expected to remain below its long-term trend for the next two years. The Bank of Italy has confirmed the countercyclical capital buffer rate for banks at zero per cent.

The improvement in the real estate market attenuates the risks for banks

Risks for banks associated with the real estate market are diminishing as property transactions increase and prices show signs of stabil-

izing. New bad loans connected with lending to businesses active in this sector and to households for house purchase are expected to continue to decline over the coming quarters.

The financial vulnerability of households declines ...

Market tensions have reduced the net financial wealth of households, whose financial position never-

theless remains solid thanks to low levels of indebtedness. Higher disposable income and low interest rates are facilitating debt service. The share of financially vulnerable households has fallen and is expected to remain small in 2017, even in an unfavourable scenario of a reduction in disposable income and an increase in interest rates.

... as does that of firms

The financial situation of firms is also improving, thanks both to the recovery

of profitability and to lower interest expenses. Liquid assets have reached historically high levels. Lending dynamics are very uneven, largely in relation to the soundness of firms' balance sheets. The proportion of debt held by financially vulnerable companies should continue to decline in the coming quarters.

The quality of bank credit is improving ...

Italy's banks are continuing to repair their balance sheets. The default rate has

fallen to its lowest level since 2008 and is expected to continue to decline next year as economic growth proceeds. The stock of non-performing loans is also diminishing, in part thanks to some bad-debt sales, while further disposals have been announced. The NPL coverage ratio has increased and is now slightly above the average for the main European banks. ... and liquidity reserves remain ample remain am

Capital ratios continue
to increase ...At the end of June the
CET1 ratio had risen to
12.4 per cent. The leverage
ratio, which measures capital adequacy relative to
non-risk-weighted assets, is higher than the
European average.

The EBA stress test results confirmed that the main groups could withstand adverse scenarios, with the exception of Banca Monte dei Paschi di Siena, which upon the publication of the results announced a plan to recapitalize and sell its entire portfolio of bad debts.

... but profitability falls and dents share prices In the first half of 2016 banks' profitability declined. Looking forward, the weak economic cycle and over-

capacity will continue to exert downward pressure. Investors' concerns about low profitability and persistently high levels of NPLs have dented share prices, which have fallen since the start of the year. Low share prices may make it more difficult to implement scheduled capital increases and those that may prove necessary, including for mergers and acquisitions. Banks are still exposed to market and growth shocks Overall, banks remain vulnerable to both domestic and international shocks that may affect capital

markets and economic growth. Uncertainty also stems from a number of regulatory initiatives currently being finalized at international level; when implementing them, account must be taken not only of the anticipated benefits but also of the short-term costs.

Expectations as to insurance companies' profits diminish Financial market uncertainty and slower economic growth have adversely affected the expectations re-

garding the profits of Italian insurance companies. In the first half of the year earnings nonetheless remained at 2015 levels. In Italy insurance companies' profitability is less exposed to persistently low interest rates than in other countries. Solvency margins and capital quality are high overall.

The financial tensions of real estate investment funds are abating

Net subscriptions of Italian investment funds have diminished slightly, though they are still positive. The risk that high

levels of requests for redemptions could lead to the rapid unwinding of portfolios is limited, thanks to the prudent regulatory framework. Solvency conditions remain difficult for some real estate investment funds but financial flows point to a gradual attenuation of system-wide tensions.

MACROECONOMIC RISKS

1.1 GLOBAL RISKS AND EURO-AREA RISKS

Risks persist in connection with world growth ... The risks to financial stability posed by the evolution of global macroeconomic conditions remain high.

Expectations for the growth of the world economy in 2017 reflect the persistent weakness of aggregate demand (Figure 1.1). The improvement in the growth of the emerging economies contrasts with rising uncertainty about the outlook for the advanced economies. In Europe, the increase in volatility on the financial markets following the outcome of the referendum on the United Kingdom's remaining in the EU was temporary, but uncertainty about the negotiations on the UK's exit and the medium-term economic impact remains strong.

... and have an impact on the profitability of euro-area banks In the euro area, weak growth has also affected inflation expectations, which remain low for all of 2017



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 2015 at purchasing power parity.

(see *Economic Bulletin*, No. 4, 2016). For the banks, the pressure on profitability deriving from sluggish growth and low interest rates are added to that exerted, to varying extents across countries and from

bank to bank, by excess capacity, high levels of non-performing loans, the share of assets whose valuation is most difficult in banks' balance sheets and regulatory uncertainty. The prices of bank shares, which have factored in a reduction in profits and an increase in their uncertainty, are particularly vulnerable to both sector-specific and macroeconomic shocks. Low nominal interest rates are negative for a large set of financial assets. In many European countries they are squeezing the profit margins of insurance companies and pension funds, characterized by liabilities whose maturity far exceeds that of assets.

Share prices are consistent with fundamentals

Share prices in the United States, the United Kingdom and the emerging economies have risen since February,



Source: I/B/E/S.

(1) Ratio of stock market capitalization of the general index to expected earnings over the next 12 months.

buoyed by expansionary monetary policies, despite the decline in the projections for world growth. In the euro area, stock markets have been affected by the slump in bank share prices. The price to expected earnings ratio for the general stock market indices in the US and the UK is slightly above the long-term average, while in the euro area it is approximately 1 percentage point below it (Figure 1.2).

Monetary policy curbs emerging tensions in financial markets

The abundant liquidity in the markets has helped push down the risk premiums on corporate bonds (Figure 1.3.a). In the euro area the decline has been accentuated by the Eurosystem's purchase programme (see Section 3), which has also mitigated the tensions on sovereign securities. Since August, however, the spreads between

ten-year government bonds and the corresponding German Bund have widened to a limited extent in Italy and more markedly in Portugal, in part in response to the announcement by a rating agency of a possible downgrade in the credit rating of the two countries (Figure 1.3.b). Following the US elections, there was a general increase in sovereign spreads and bond yields. The countries that are considered most vulnerable continue to be exposed to the risk that a resurgence of financial or political tensions could translate into a further widening of sovereign spreads.



Sources: Based on Bloomberg and Merrill Lynch data.

(1) Investment grade bonds are those issued by companies with a credit rating not lower than BBB- or Baa3. High-yield bonds are those issued by companies rated below BBB- or Baa3. – (2) Fixed rate bonds with a residual maturity of not less than 1 year issued on the Euromarket. The spreads are calculated with reference to French and German government securities. – (3) Fixed rate bonds denominated in dollars with a residual maturity of not less than 1 year issued on the US domestic market. The spreads are calculated with reference to US government securities. – (4) Right-hand scale. – (5) Yield spreads between the ten-year government securities of the countries indicated and the corresponding German Bund.

1.2 MACROFINANCIAL CONDITIONS IN ITALY

Economic recovery mitigates the risks for financial stability In Italy, the economic recovery is bolstering financial stability: the increase in employment is sustaining households' disposable income, firms' financial vulnerability is diminishing and credit quality is improving. Nevertheless growth is expected to remain weak in 2017, as the uncertainty surrounding economic and political developments at home and abroad continues to act as a brake on investment.

The Government forecasts that the ratio of public debt to GDP will start to fall in 2017 The Government estimates that the debt-to-GDP ratio will rise by about 0.5 percentage points this year; it should begin to come down, if only marginally, next year (2017 Draft Budgetary Plan). The high public debt may represent an element of financial fragility. One of the factors contributing to the soundness

of Italy's public finances is the extremely low growth of social expenditure planned for the decades to come, as shown by the sustainability indicator S2 calculated by the European Commission (Table 1.1).

Table 1.1

	Financial sustainabilty indicators (per cent of GDP, unless otherwise specified)											
	GDP (annual growth rate) (1)		С	haracte	ristics of pu	blic debt	Primary Surplus (2)	S2 sustainability indicator (4)	Private financia	e sector debt (5)	Extern stati	al position stics (6)
			Le (evel 2)	Average residual life of govt. securities (years) (3)	Non- residents' share (% of public debt) (3)	-		House- holds	Non- financial firms	Current account balance	Net international investment position
	2016	2017	2016	2017	2016	2015	2016	2015	2016	2016	2016	2016
Italy	0.7	0.9	133.0	133.1	6.5	37.6	1.6	-0.9	41.8	76.8	2.3	-19.4
Germany	1.9	1.5	68.1	65.7	6.1	58.7	2.0	1.7	53.2	53.1	9.0	50.1
France	1.3	1.4	96.4	96.8	7.1	61.9	-1.5	0.6	56.6	127.6	-0.9	-19.7
Spain	3.2	2.3	99.5	99.9	6.5	50.4	-1.8	0.1	66.7	102.3	1.8	-88.5
Netherlands	1.7	1.7	63.0	61.3	6.5	54.3	0.3	4.5	111.3	123.5	7.8	76.6
Belgium	1.2	1.3	107.0	107.1	8.5	60.5	-0.5	2.5	59.7	171.6	1.0	56.3
Austria	1.5	1.6	83.5	81.1	7.7	80.4	0.7	2.7	51.6	92.1	2.1	1.7
Finland	0.8	0.8	65.4	67.1	6.1	81.7	-1.2	3.9	66.9	112.5	-0.4	1.9
Greece	-0.3	2.7	181.6	179.1			0.8		61.2	63.3	0.7	-133.3
Portugal	0.9	1.2	130.3	129.5	6.7	70.0	1.7	0.7	75.7	116.4	0.2	-105.6
Ireland	4.1	3.6	75.4	73.6	11.7	69.5	1.5	1.0	57.8	263.9	10.8	-190.3
Euro area	1.7	1.5	91.6	90.6			0.4	1.7	58.8	105.1	3.0	-8.3
United Kingdom	1.9	1.0	89.2	88.9	14.4	30.9	-1.0	3.2	87.5	73.5	-5.7	-3.0
United States	1.6	2.2	108.2	108.4	5.8	33.2	-2.1		78.8	72.4	-2.7	-44.0
Japan	0.5	0.6	250.4	253.0	7.4	9.8	-5.2		63.2	98.7	3.8	65.9
Canada	1.2	1.9	92.1	90.5	5.5	22.0	-2.0		100.1	115.7	-3.4	7.5

Sources: IMF, Eurostat, ECB, European Commission, national financial accounts and balance of payments data. (1) For the European countries: European Commission, *European Economic Forecast, Autumn 2016*, November 2016; for the non-European countries: IMF, World Economic Outlook, October 2016. - (2) For the European countries: European Commission, European Economic Forecast, Autum 2016, November 2016, for the non-European countries: IMF, Fiscal Monitor, October 2016. - (3) IMF, Fiscal Monitor, October 2016. - (4) European Commission, Fiscal Sustainability Report 2015, January 2016. S2 is a sustainability indicator defined as the immediate and permanent increase in the structural primary surplus that is necessary in order to meet the general government inter temporal budget constraint. - (5) Loans and securities. End of Q2 2016; data for the European countries are from ECB, Statistical Data Warehouse; data for the non-European countries and the United Kingdom are from national sources; the data used are compiled according to the new European System of Accounts (ESA 2010). - (6) End of Q2 2016. Data for the individual euro-area countries and for the area as a whole are from Eurostat, Statistics Database and ECB, Statistical Data Warehouse; data for the non-European countries and the United Kingdom are from national sources. The data used are compiled according to the new international accounting standards (see the box 'The new international accounting standards for external transactions and investment position', *Economic Bulletin*, No 4, 2014).

Capital flows reflect the shift of households' portfolios

The current account surplus is still high, standing at €42 billion in the twelve months to August 2016 (2.5 per cent of GDP), although the Bank of Italy's TARGET2 debit position has increased by around €100 billion since the start of the year, reaching €355 billion at the end of October. The increase chiefly reflects the shift of households' portfolios towards investment funds and foreign securities, both directly and through asset management products, and the reduction in Italian banks' funding abroad. There was no significant disinvestment in Italian government securities on the part of non-residents (Figure 1.4; also, see Section 3).

Credit growth remains weak ...

The growth of credit to the private sector is very gradually following the

economic recovery. The credit-to-GDP gap, i.e. the deviation of the ratio of bank lending to GDP from its long-term trend, is negative by about 9 percentage points if calculated using the internationally harmonized criteria proposed by the Basel Committee and by 7 points according to the model developed by the Bank of Italy.¹ The countercyclical capital buffer rate has been confirmed at zero per cent (see the box 'Macroprudential measures recently adopted in Italy').



(1) Using the accounting identity of the balance of payments, an improvement in the Bank of Italy's debit position vis-à-vis the ECB on the TARGET2 balance may reflect investment in Italy by non-residents (higher liabilities), disinvestment in foreign assets by residents (lower assets) or a surplus in the current and capital account. Non-resident capital flows are cumulative from July 2011. – (2) Including funding intermediated by resident central counterparties. – (3) Foreign direct investments, derivatives, other investment, errors and omissions.

MACROPRUDENTIAL MEASURES RECENTLY ADOPTED IN ITALY

Based on European rules, since¹ January 2016 the national authorities must set the countercyclical capital buffer (CCyB) rate to be applied to domestic exposures at quarterly intervals; see the box 'Macroprudential policy in Italy and the European Union', *Financial Stability Report*, No. 1, 2106.¹ The Bank of Italy maintained its CCyB rate at zero per cent for the third and the fourth quarters of 2016.²

To ensure the full effectiveness of their own decisions, the authorities of EU countries that intervene with macroprudential measures can ask the European Systemic Risk Board to recommend to the other national authorities, on the basis of the principle of reciprocity, that they adopt similar measures with regard to the exposures of their own banks towards the country that has taken the initiative. Recently the Bank of Italy considered a request for reciprocity in relation to 1) a measure adopted by the central bank of Belgium to reduce the risks connected with bank exposures collateralized by residential housing situated in that country; and 2) a decision by the central bank of Estonia to impose a systemic risk buffer (SRB) on its own credit institutions. There are no branches of Italian banks in Belgium or in Estonia and any cross-border exposures are of limited amounts, so the Bank of Italy did not take measures. This decision could be reviewed in the future if there were a significant increase in Italian banks' exposures to those countries.

¹ Directive EU/2013/36 (Capital Requirements Directive, CRD IV).

² See the Bank of Italy's website: Macroprudential policy decisions of the Bank of Italy.

¹ For information on the methodology used to estimate the credit-to-GDP gap, see *Financial Stability Report*, No. 2, 2015.

Since 1 January 2016 the national authorities must also identify their other systemically important institutions (O-SIIs) and may impose additional capital buffers on them. Last January the Bank of Italy named as O-SIIs the three main Italian banking groups (UniCredit, Intesa Sanpaolo and Banca Monte dei Paschi di Siena), setting the O-SII buffer rate at zero per cent for 2016; see the box 'Macroprudential policy in Italy and the European Union', *Financial Stability Report*, No. 1, 2106. At the end of November the banking groups identified as O-SIIs will be notified of the buffer rate for 2017 and the capital buffers applicable to them will be communicated.

... even in the near future

Our projections, which are consistent with the latest macroeconomic develop-

ments and with the forecasts of Consensus Economics, indicate that bank lending to the non financial private sector will grow moderately over the next two years; this is expected to bring about a slight improvement in the credit-to-GDP gap in 2017 and virtual stability in 2018 (Figure 1.5). The indicator will remain negative even if credit growth is notably faster than that posited in the baseline scenario.

Macroprudential policy Reforms of the regulatory framework for macroprudential policy have

begun in Italy and in the European Únion. A committee will be set up in Italy to coordinate the work of the supervisory authorities on macroprudential policies, in compliance with the recommendations of the European Systemic Risk



Sources: Based on Bank of Italy and Istat data. (1) The credit-to-GDP gap is the deviation of the ratio of bank lending (to the non-financial private sector) to GDP from its long-term trend. The probability distribution of the projections, shown in the graph by percentile classes, makes it possible to assess the size of the risks that characterize the baseline scenario.

Board (ESRB). At EU level, the review of the current regulatory framework for macroprudential policy is under way with the aim of making it more effective and simplifying procedures (see the box 'Recent developments in the institutional framework for macroprudential policies in Italy and in Europe').

RECENT DEVELOPMENTS IN THE INSTITUTIONAL FRAMEWORK FOR MACROPRUDENTIAL POLICIES IN ITALY AND IN EUROPE

The Bank of Italy is the national authority designated to activate the macroprudential instruments provided for in the European rules on the prudential supervision of credit institutions and investment firms. As such, it pursues the intermediate objectives of macroprudential policy as defined by the European Systemic Risk Board (ESRB),¹ periodically assessing their appropriateness with respect to structural developments in the Italian financial system and the emergence of new types of systemic risks. The capability of the macroprudential instruments available to the Bank of Italy to pursue these objectives effectively is reviewed regularly.

¹ In line with the provisions of Recommendation ESRB/2013/1 on the intermediate objectives and instruments of macroprudential policy, the intermediate objectives pursued by the Bank of Italy are to: (a) mitigate and prevent excessive credit growth and leverage; (b) mitigate and prevent excessive maturity mismatch and market illiquidity; (c) limit direct and indirect exposure concentrations; (d) limit the systemic impact of misaligned incentives with a view to reducing moral hazard; and (e) strengthen the resilience of financial infrastructures. On the basis of our assessments, it is not deemed necessary at the moment to pursue any further intermediate objectives.

Under the Italian system, a number of authorities besides the Bank of Italy have responsibilities relating to financial stability, but none of them acts as general coordinator. To bring the Italian system into line with the ESRB provisions,² a Macroprudential Policy Committee will be set up, composed of the Bank of Italy, Consob (the Companies and Stock Exchange Commission), IVASS (the Insurance Supervisory Authority) and Covip (the Pension Fund Supervisory Authority). The Ministry of Economy and Finance and the Competition Authority will participate as observers.³

The Committee will be an independent authority with the tasks of identifying, assessing and controlling risks to financial stability and recommending macroprudential policies to prevent and reduce them. Following the ESRB's indications, the Bank of Italy will have a leading role, chairing the Committee and managing its secretariat. The Committee will be able to send communications to the Parliament and the Government and make recommendations to the other member supervisory authorities, which will have to provide reasons if they do not implement them. The Committee will also be able to acquire data and information from its member authorities and from private and public entities via these authorities, and, in the case of non-supervised entities, via the Bank of Italy. The Committee will present an annual report on its activities to the Parliament and to the Government.

The European Commission's public consultation on the review of the EU macroprudential policy framework was concluded in October.⁴ The Commission should make its first legislative proposal next spring.

The Bank of Italy hopes the review will permit a clearer distinction between micro- and macroprudential instruments and provide for mechanisms to allow closer coordination between the authorities.⁵ It is also desirable to reduce the complexity of the current regulatory framework by eliminating overlaps and duplications of the macroprudential instruments available to the authorities. In particular, the Bank considers it necessary to specify the scope of application of the systemic risk buffer, for which no ceiling has been set, in order to prevent its being used – as has happened in some cases – in lieu of the additional capital buffer requirements imposed on other systemically important institutions (O-SIIs), on which there is a ceiling of 2 per cent of risk-weighted assets. To discourage protectionist measures, it is considered useful to retain a ceiling on the O-SII buffer in the future as well, although at a higher level than the current one.

The imposition of limits on the amount of credit intermediaries may extend in proportion to the collateral provided or the borrower's income (loan-to-value, loan-to-income, and debt-service-to-income ratios) should remain a matter of exclusive national competence, given the great diversity of laws and practices in the various countries.

Lastly, in a context of expanding market finance and the related potential systemic risks, the Bank of Italy supports further analyses at the national and international level on the risks in the non-bank financial sector and on the identification of the best macroprudential instruments to prevent or mitigate them. At the moment, however, it would appear premature to introduce macroprudential instruments for the non-bank financial sector into EU legislation.

- ² Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities.
- ³ See Law 170/2016, Article 10, which delegates the Government to incorporate Recommendation ESRB/2011/3 into national legislation.
- ⁴ Directive 2013/36/EU (Capital Requirements Directive, CRD4) and Regulation (EU) No. 575/2013 (Capital Requirements Regulation, CRR); Regulation (EU) No. 1092/2010 (ESRB Regulation); Regulation (EU) No. 1024/2013 (SSM Regulation).
- ⁵ In particular, the possibility of using the second pillar requirements and changes in the parameters for risk-weighting and for loss given defaults in the property sector (Articles 124 and 164 of the CRR) for macroprudential purposes should be precluded. See the Bank of Italy's website: The Bank of Italy's response to the European Commission's consultation document on the review of the EU macroprudential policy framework.

1.3 REAL ESTATE MARKETS

In Europe risks are limited general tensions regarding financial stability. In some countries with high and growing levels of household debt or where house prices have risen sharply, macroprudential measures have been adopted to address situations of vulnerability.²

The improvement in Italy's real estate sector continues ... The number of sales continues to increase in Italy, both for residential and non-residential

property (Figure 1.7.a), but remains well below the levels recorded in the years preceding the global financial crisis. In the first half of the year house prices showed a modest decline (Figure 1.7.b), while the fall in the prices of nonresidential properties virtually came to a halt (Figure 1.7.c).



Sources: Based on national sources and ECB data.

⁽¹⁾ ECB estimates based on the average of the indices for each country, weighted by their GDP.



Sources: Based on data from the Bank of Italy, Istat, Osservatorio del Mercato Immobiliare (OMI), Nomisma and Scenari Immobiliari. (1) Data adjusted for seasonal and calendar effects. – (2) Right-hand scale. – (3) Data deflated using the change in consumer prices. – (4) Right-hand scale. This experimental price indicator uses data drawn from transactions actually concluded on the market. – (5) The tertiary segment comprises office buildings and banks. – (6) Industrial property consists of buildings for industrial use. – (7) Commercial property comprises shops, shopping centres and hotels.

² This year Finland has set a minimum level of 10 per cent for the risk weights on mortgage loans for banks using internal ratings to calculate credit risk. Sweden has adopted an amortization requirement for new mortgages that exceed 50 per cent of the value of the residential property.





(1) Banks' vulnerability is measured by the ratio of the flow of new bad debts in the last four quarters to the average of banks' capital and reserves in the same period. The probability distribution of the projections, shown in the graph by percentile classes, makes it possible to assess the size of the risks characterizing the baseline forecast. For the methodology, see F. Ciocchetta, W. Cornacchia, R. Felici and M. Loberto, 'Assessing financial stability risks arising from the real estate market in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), No. 323, 2016.

... and risks for the banking system decrease

The improvement in the real estate market reduces the vulnerability of banks. In the first half of 2016 the

flow of new bad debts continued to decline for firms operating in this sector (construction and real estate firms) and remained low for home mortgages, including in relation to banks' capital (Figure 1.8, solid lines). Early warning indicators point to a significant fall over the next few quarters in the risks for banks attributable to the real estate sector as regards loans both to households and to firms (Figure 1.8, dotted lines).

The outlook is favourable

The recovery in the real estate market is expected to continue in the coming

months. According to our estimates house prices will stabilize at the end of this year, bringing the average decrease for 2016 to just over 1 per cent, compared with 2.6 per cent in 2015. The most recent estate agents' expectations are more positive



Sources: Based on data from the Bank of Italy, Osservatorio del Mercato Immobiliare (OMI) and Tecnoborsa. (1) Data from the survey conducted by the Bank of Italy, OMI and

Tecnoborsa. Balances between the percentages of responses indicating a situation that is improving or worsening. Short-term expectations refer to the quarter following that indicated; medium-term expectations refer to a 2-year horizon.

than they were in the same period of last year (Figure 1.9) and construction firms' confidence is improving.

2 RISKS BY SECTOR

2.1 HOUSEHOLDS

Households' financial situation remains solid

The household sector's financial situation remains solid thanks to the low level of debt, although tensions in the financial markets in the first half of 2016 caused a 2.8 per cent fall in the nominal value of financial wealth. The increase

in disposable income (2.6 per cent on an annual basis in the first half of 2016) and low interest rates contribute to the sustainability of debt. The heightened uncertainty regarding the economic outlook has led to an increase in the propensity to save and in investments in liquid assets. Households continued to replace their holdings of government securities and bank bonds with investment fund shares and insurance policies that offer guaranteed minimum returns.

Debt increases but is still limited

Household debt, up slightly in the first half, is still very low by international

standards (Figure 2.1). New loans for house purchase amounted to $\notin 29$ billion in the first nine months of 2016, the highest level recorded since 2011 (Figure 2.2.a). The increase in demand corresponds to favourable supply conditions on the part of banks, with an increase in the loan-to-value ratio. There was also robust expansion in consumer credit.

Households protect themselves from the risk of higher interest rates About 60 per cent of new mortgage loans contemplated a fixed rate for at least ten years (Figure 2.2.b). The reduction in interest

rates has encouraged the renegotiation of existing contracts: in 2016, 6 per cent of mortgages outstanding at the end of 2015 were the object of renegotiation, subrogation or substitution.



Sources: Bank of Italy and Istat for Italy; the ECB and Bank of England for the European countries; Federal Reserve System - Board of Governors for the United States.

(1) The data include bad debts and refer to consumer and producer households, except for the United States, for which they refer only to consumer households. End of year data; the data for 2016 refer to the second quarter and are provisional.

Debt repayment capacity improves

For the first time, the new non-performing loan rate for loans to households returned to levels recorded before the financial crisis (1.7 per cent); the ratio of non-performing loans to total loans came down to 10.7 per cent (see Table 2.1)

and the fall in forward-looking vulnerability indicators continues (see the box 'Indicators of financial vulnerability for households'). The projections of the Bank of Italy's microsimulation model, consistent with the latest macroeconomic scenarios, indicate that in 2017 the share of vulnerable households and their share of total debt will remain substantially stable with respect to the level

estimated for 2016, at around 2 and 14 per cent, respectively.¹ In an adverse scenario, characterized in 2017 by a decrease of 3.0 per cent in nominal income and an increase of 1 percentage point in Euribor, the share of vulnerable households would rise to 2.2 per cent and their share of debt to 15 per cent.



Source: Regional Bank Lending Survey and supervisory reports.

(1) The data refer to consumer households only. – (2) Right-hand scale. – (3) For the demand index, values above (below) zero indicate expansion (contraction); for the supply index, values above (below) zero indicate tightening (easing). – (4) The data refer to new mortgage loans to consumer and producer households and non-profit institutions serving households. – (5) Variable rate or rate renegotiable before the end of the year.

INDICATORS OF FINANCIAL VULNERABILITY FOR HOUSEHOLDS

The risks to financial stability posed by indebted households can be analysed using a number of models. The indicator based on debt service (DS) used by the Bank of Italy's micro-simulation model defines vulnerable households as those whose ratio of instalments (principal plus interest) to disposable income is above 30 per cent and whose disposable income is below the median (see the box 'The effects of the stagnation of income on the vulnerability of indebted households', *Financial Stability Report*, No. 2, 2014). An alternative indicator, which also takes account of households' basic living costs and capacity to repay debt, is constructed around the financial margin (FM)¹ that defines as financially vulnerable those households with insufficient disposable income and financial assets to cover debt repayments and minimum consumption outlays for at least four months.

While providing similar information on the proportion of households deemed vulnerable (see panel (a) of the figure), the two indicators capture different aspects of the sector's financial situation.² In particular, households classified as vulnerable according to the FM have lower average income, hold fewer liquid assets, and are on average three times less indebted (see panel (b) of the figure).

- ² V. Michelangeli and C. Rampazzi, 'Indicators of financial vulnerability: a household level study', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), forthcoming.
- ¹ Households are considered vulnerable when their debt-service ratio is above 30 per cent and their disposable income is below the median. See V. Michelangeli and M. Pietrunti, 'A microsimulation model to evaluate Italian households' financial vulnerability', *International Journal of Microsimulation*, 7, 3, 2014, pp. 53-79.

¹ M. Ampudia, H. van Vlokhoven and D. Żochowski, 'Financial fragility of euro area households', European Central Bank, Working Paper Series, 1737, 2014.



Source: Based on data from the Survey on Household Income and Wealth.

(1) Right-hand scale. - (2) The quartiles refer to all the households in the sample. - (3) The quartiles refer to indebted households only.

These households' share of total indebtedness is, in fact, around six percentage points lower than the proportion calculated using the DS model.

Compared with the DS indicator, the FM model shows a closer correlation with a deterioration in credit quality: according to this model, vulnerable households are more likely (by six percentage points) to miss loan repayments than those captured by the DS model (19 and 13 per cent, respectively).

However, the DS indicator presents a number of advantages. In the first place, it requires less discretionality in quantifying the parameters underpinning the calculation: in the case of the FM indicator, in fact, the value of essential expenditure and the number of months in which liquid assets are sufficient to cover shortfalls in income must be specified, making it difficult to use in international comparisons.³ Moreover, the DS indicator is better able to capture the vulnerabilities of households with higher levels of debt – a crucial aspect of the analysis of the risks to financial stability posed by the sector.

³ Ampudia, van Vlokhoven and Żochowski (see 1 above), for example, identify an interval of months that varies from a minimum of zero for Spain and Cyprus to a maximum of 25.9 for Austria.

2.2 FIRMS

The financial situation of firms is improving firms is improving A mathematical situation of firms is improving down net interest expense to 15.5 per cent of GOI, its lowest level since 2006.

According to the Bank of Italy's autumn business outlook survey, the share of firms expecting to close this year with a profit was more than 5 percentage points higher than in 2015.

Firms continue
to rebalance
their financial
structureFinancial debt continued to diminish and in June reached 77 per cent of GDP,
more than 6 percentage points down on 2012. Analyses of balance sheet data for
a broad sample of firms indicate that leverage² came down by over 5 percentage
points between 2012 and 2015; about half of the reduction was due to firm

² Leverage is measured as the ratio of financial debt to the sum of financial debt and book value net equity.

demographics, notably the exit from the market of highly indebted firms. Among still active firms, leverage diminished above all for large companies (Figure 2.3.a) as their higher profitability made it easier not only to repay debt but also to strengthen capital. A broad cross-section of firms increased their equity using the tax incentives introduced in 2011 (see the box 'The effects of the allowance for corporate equity on firms' debt').



Sources: Based on Bank of Italy and Cerved data.

(1) Calculated on the basis of annual closed samples that include on average about 400,000 companies. Data for 2015 are provisional. – (2) Data for a sample of industrial and service companies with 20 or more employees included in the Bank of Italy's business outlook survey. Percentage balances between firms reporting an increase (improvement) and those reporting a decrease (deterioration) in credit demand (supply). Data for the second half of 2016 are forecasts made by the firms interviewed. – (3) Data from the financial statements of a sample of about 400,000 firms. Data for 2015 are provisional. The sources are conventionally shown with a negative sign.

THE EFFECTS OF THE ALLOWANCE FOR CORPORATE EQUITY ON FIRMS' DEBT

Under the allowance for corporate equity (ACE) measure introduced in 2011 a notional return on new equity and on reinvested profit is deductible from corporate income tax. The gradual increase in the notional return set by the Ministry of Economy and Finance from 3 per cent in 2011 to 4.75 per cent in 2016 has greatly reduced the fiscal distortion between the cost of equity and the cost of debt, which is traditionally lower because of the deductibility of interest expense.

Istat estimates that in 2016 some 36 per cent of firms will benefit from ACE relief and that their actual corporate income tax (IRES) bill will diminish, under unchanged legislation, to 22.2 per cent, from 28.5 per cent in 2011.¹ The largest share of beneficiaries is expected to be found among SMEs, manufacturing and service companies, exporting firms and businesses located in the northeast of the country.

According to a statistical analysis of a broad sample of manufacturing companies, applying the ACE reduced financial leverage by 7 percentage points between 2011 and 2013 (from an average of 50 per cent for the sample in the period studied).² Strengthening firms' equity has a positive effect on

¹ Istat, 'Gli effetti dei provvedimenti fiscali sulle imprese', *Microsimulazioni imprese*, 6 March 2014 and 27 April 2016.

² N. Branzoli and A. Caiumi, 'Tax incentives and financial stability', Temi di Discussione (Working Papers), Banca d'Italia, forthcoming.

financial stability because it improves the capacity to repay debts:³ it is estimated that the allowance lowered the new bad debt rate of the firms using it by 0.5 percentage points in the period 2011-13. These estimates of the effects of the ACE are conservative as business owners have limited knowledge of its availability: in the Bank of Italy's surveys about 30 per cent of firms with 20 or more employees reported they were previously unaware of its existence.

Its effectiveness will also depend on the difference between the notional return on equity and the interest rate on debt. If the notional return is too low it will penalize SMEs, which pay more to borrow than the industry-wide average.

³ E. Bonaccorsi di Patti, A. D'Ignazio, M. Gallo and G. Micucci, 'The role of leverage in firm solvency: evidence from bank loans', *Italian Economic Journal*, 1(2), 2015, 253-286.

Credit growth is still very uneven vary widely according to firms' characteristics (see the box 'Firms' financial vulnerability and the allocation of credit'). According to the balance sheets of the firms that increased their bank debt in

2015, compared with the previous three years the growth was more generally associated with purchases of tangible fixed assets and financial assets; instead, the borrowing requirement for working capital diminished. The findings of the business survey confirm that in the first half of 2016 investment was again the main reason for taking out loans.

FIRMS' FINANCIAL VULNERABILITY AND THE ALLOCATION OF CREDIT

The sharp contraction in lending to firms following the sovereign debt crisis gradually eased and had virtually ceased by the end of 2015. However, in 2014 there were already signs of a recovery in lending, limited to specific categories of firms.

The share of firms that increased their borrowing from banks rose to 40 per cent in the twelve months to June 2016, compared with 36 per cent in 2013. The flow of new loans to these firms reached \in 62 billion, against \in 52 billion in 2013. The recovery was most evident among medium-sized and large firms and among manufacturing and service companies, which benefited from the more favourable economic situation. Credit conditions were also very uneven: interest rates fell by a larger margin for big companies.

The shift in credit flows reflected to a significant extent lenders' assessment of firms' financial vulnerability. For the companies with the soundest balance sheets, the contraction in lending had already halted in 2014,¹ with the sole exception of micro-firms (see panel (a) of the figure). The more selective approach of banks is illustrated by the fact that credit diminished for newly-established firms and first time borrowers owing to the lack of information about their ability to repay, falling from 12 per cent of the flow of new lending in 2013 to 9 per cent in the twelve months to June this year.² Overall, the annual flow of loans to risky firms was reduced to $\in 12$

¹ Risk classes are assigned on the basis of a point system calculated by Cerved (z-score) using a logistic model to estimate a firm's one-year probability of default according to several balance sheet indicators. The z-score takes discrete values, from 1 to 9: 'sound' firms have a score from 1 to 4, 'vulnerable' firms have a score of 5 or 6, and 'risky' firms have higher scores.

² This group includes firms whose credit during the year exceeded the minimum threshold for reporting to the Central Credit Register (€30,000).



Sources: Based on Bank of Italy and Cerved data

(1) The data refer to a sample of about 400,000 companies in each year. Loans include those granted by financial companies and are adjusted for securitizations. - (2) Interest rates are calculated on total bank debt and include fees.

billion in June 2016, equal to 20 per cent of the total flow (against \in 15 billion and 29 per cent in 2013). In terms of stock, loans to risky firms fell from 34 to 28 per cent.

Balance sheet conditions influence the cost of credit too: there continues to be a large spread between the average rates applied to vulnerable firms and those offered to sound firms. Among the less risky firms, large companies saw interest rates fall by more than micro-firms (panel (b) of the figure).

Econometric estimates confirm that, even considering the same firm characteristics typically correlated with loan demand (profitability, liquidity, trend of gross sales, investment spending, sector of activity and geographical area) in 2015 most credit went to the less risky ones.³ The greater financial vulnerability of micro-firms, particularly their high level of debt, accounts for most of the difference in the credit growth with respect to the other size classes: more than 70 per cent in the case of large firms and about 40 per cent in that of SMEs. However, part of the difference between the size classes cannot be put down to the corporate characteristics considered in the study: it could be the result of banks' reduced willingness to finance small firms owing to the higher proportion of fixed managements costs in small value loans.

E. Bonaccorsi di Patti and P. Finaldi Russo, 'Fragilità finanziaria delle imprese e allocazione del credito', Questioni di Economia e Finanza (Occasional Papers), Banca d'Italia, forthcoming.

Bond issuance increases among SMEs Recourse to the bond market was modest at the beginning of the year but then gradually picked up, partly in response to the launch of the Eurosystem's corporate sector purchases programme (see Section 3). Gross issues amounted to \notin 22 billion in the first nine months, \notin 3 billion less than in the same period

in 2015. However, among small and medium enterprises both the number of issuers and the amounts involved increased.

Ample liquidity
reflects uncertainty
and low interest ratesFirms' liquidity, measured as the sum of cash and deposits, reached unprecedentedly
high levels and in June this year stood at 18.4 per cent of GDP, some 5 percentage
points higher than in the pre-crisis period. Based on the balance sheets of a broad

sample of companies, from 2012 to 2015 about two thirds of the growth in liquid assets occurred among large firms. Companies that increase their liquid reserves have high levels of self-financing and spend less on investment and working capital (Figure 2.3.c). The business outlook survey indicates that the increase in liquidity over the last year was mainly due to uncertainty regarding future cash flows and to low interest rates.

Firms' ability to service debt improves

The decline in financial debt and in its cost improved firms' capacity to repay loans. According to

Cerved data on joint stock companies, the number of bankruptcies and instances of composition with creditors in the first half of 2016 were down more than 10 per cent compared with the yearearlier period. Punctuality in commercial payments also improved: invoice settlement times were shortened further and the number of firms with non-payment claims continued to fall rapidly. The non-performing loan rate fell from 4.9 per cent in the fourth quarter of 2015 to 4.1 per cent in the third quarter of this year. The ratio to total business loans remains high, however, but has begun to fall for the first time since the onset of the crisis in 2007 (Table 2.1).

... and they are becoming less and less vulnerable

According to projections based on the Bank of Italy's microsimulation model,³ consistent with

the latest macroeconomic scenarios, in 2017 the portion of corporate debt held by vulnerable firms should decrease to about 31 per cent, compared with an estimate of 34 per cent for 2016. The improvement, which is chiefly due to the further increase in income flows, is expected be more marked among small firms to (Figure 2.4). The share of corporate debt held by vulnerable firms is instead forecast to rise to 35 per cent in 2017 in a counterfactual scenario in which GOI falls by 5 per cent and the cost of borrowing rises by 1 percentage point compared with 2016. Large firms appear better able to cope with a similar deterioration in the macroeconomic framework.

Loans to consumer households and firms (1) (millions of euros and percentage composition)									
	March	March 2016 Septemb							
	с	onsumer h	ouseholds						
Total	551,000	100.0	554,486	100.0					
Performing	490,385	89.0	494,884	89.3					
Non-performing (2)	60,615	11.0	59,603	10.7					
Bad debts	39,449	7.2	39,116	7.1					
Past-due	4,752	0.9	3,944	0.7					
Other	16,414	3.0	16,542	3.0					
		Firr	ns						
Total	953,804	100.0	947,607	100.0					
Performing	671,953	70.4	669,209	70.6					
Non-performing (2)	281,851	29.6	278,398	29.4					
Bad debts	167,453	17.6	170,902	18.0					
Past-due	7,719	0.8	6,820	0.7					

Table 2.1

Source: Unconsolidated supervisory reports of banks and financial companies.

11.2

100.676

10.6

106.679

Other

(1) Loans include repos and are not adjusted for securitizations. Firm data refer to non-financial corporations and producer households. – (2) From the first quarter of 2015, reports of non-performing exposures are based on the new definition introduced by the European Banking Authority, which divides them into bad debts, past-due debts or breaches of credit line, and other non-performing loans.



Source: Based on Cerved data.

(1) Vulnerable firms are those with negative GOI or with a ratio of borrowing costs to GOI in excess of 50 per cent. The latest available balance sheets for the whole sample of firms are for 2014. The dotted lines indicate a confidence interval of 95 per cent around the baseline scenario.

³ A. De Socio and V. Michelangeli, 'A model to assess the financial vulnerability of Italian firms', *Journal of Policy Modeling*, forthcoming.

3 THE MONEY AND FINANCIAL MARKETS

The strongly expansive monetary policy has buoyed financial market liquidity and has lessened the risk of tensions being propagated through different market segments (Figure 3.1). The prospect of persistent weak economic growth and rising uncertainty, owing in part to upcoming political events in the main European countries, could, however, fuel bouts of high volatility in the next few months, as happened in connection with the UK referendum in June.

3.1 THE MONEY MARKET AND MONETARY POLICY OPERATIONS

Repo market trading volumes remain high, but the maturity of contracts is declining Trading on the repo market operated by MTS has remained high (Figure 3.2.a). In the last few months trades



Sources: Based on data from Thomson Reuters Datastream, Bloomberg, Moody's KMV, MTS SpA, e-MID SIM SpA, and Bank of Italy. (1) The systemic risk indicator measures the joint risk in the money market, the secondary market for government securities, and the equity and corporate bond markets. The index range is from 0 (minimum risk) to 1 (maximum risk). The graph also shows the contributions to the systemic risk indicator of the individual markets and of the correlations between them. For the methodology used in constructing the indicator, see *Financial Stability Report*, No. 1, 2014.



Source: Based on MTS SpA data.

(1) The net debtor position is calculated on the cash value of the outstanding contracts. For total net position, monthly average of daily data; for the breakdown by maturity, end-of-month data. – (2) Right-hand scale.

in contracts with longer maturities have declined, increasing the refinancing risk. The net foreign debtor position of Italian banks on the repo market continues to be large (Figure 3.2.b), in part due to more favourable borrowing terms compared with other forms of funding.

The repo rates	The	abui	ndant	liqu	uidity
on Italian government	cont	ribute	d to	red	ucing
securities fall	the	repo	rates	on	Ital-

ian government securities, which have fallen below the negative deposit facility rate (Figure 3.3). The repo rates on German and French government securities have fallen more markedly, reflecting in part the relative scarcity of these securities that, with the development of the Eurosystem purchase programme, have become progressively more costly for use as collateral on the secured money market. In Italy, the rates on unsecured trades on the e-MID market and on the over-the-counter market (OTC) continue to be in line with those prevailing in the euro area.



Sources: Based on ECB and RepoFundsRate data.

(1) The repo rates by country are calculated based on one-day government securities repo trades concluded on the electronic platforms managed by MTS SpA and ICAP and guaranteed by the central counterparty.

Italian banks increase recourse to Eurosystem refinancing

The very favourable terms

of the Eurosystem's new targeted longer-term refinancing operations (TLTRO2) have spurred Italian banks, whose access to bond markets has become relatively more costly (see Section 4), to make ample use of this programme (Figure 3.4.a). Their share of total Eurosystem refinancing operations has risen to 34 per cent (Figure 3.4.b).



Sources: Based on ECB and Bank of Italy data.

(1) The figures for the second and third quarters of 2016 refer to net funding, equal to the difference between funding from counterparties under TLTRO1 and TLTRO2 and amounts repaid under TLTRO1 at the same dates. – (2) Averages of daily data in the reserve maintenance period. The horizontal axis gives the month in which each maintenance period ends. – (3) Right-hand scale.

3.2 THE GOVERNMENT SECURITIES MARKET

The average cost of the debt continues to decrease

Borrowing conditions for the Italian Treasury remain favourable. The average yield at issue of new placements reached an all-time low of 0.3 per cent in September; the average weighted cost of the stock of securities outstanding fell below 3 per cent (Figure 3.5.a). Looking ahead, the cost of new issues could be affected by the

widespread increase in yields in the secondary market following the US elections. The average maturity at issue continued to rise (Figure 3.5.b); in October for the first time the Treasury placed a fifty-year BTP, with a yield of 2.85 per cent. The average maturity of the stock of securities outstanding lengthened further, but it is still below the peak reached in 2010. A substantial volume of redemptions will have to be faced in the medium term (Figure 3.6).



Sources: Based on Ministry of Economy and Finance and Bank of Italy data.

(1) Domestic placements of non-indexed government securities. – (2) Weighted average of the yields at issue of government securities outstanding at end of month. Does not include exchange and buy-back operations. – (3) Weighted average of the yields of government securities placed during the month, by settlement date. – (4) Domestic placements. End-of-year data. The figure for 2016 refers to the end of October. – (5) End-of-period data, weighted by the stock outstanding. Does not include exchange and buy-back operations. – (6) Average term to maturity of issues during the period by settlement date, weighted by amounts issued.

Liquidity conditions in the secondary market remain good

Following the decline recorded in the third quarter, trading in Italian government securities began to grow

again both in the secondary market (Figure 3.7.a) and in the securities lending market, where cost conditions remained in line with those prevailing in the general collateral segment. The market's ability to absorb large orders with no significant effect on prices diminished only temporarily in the days following the Brexit referendum (Figure 3.7.b). The purchases of Italian government securities made as part of the Public Sector Purchase Programme (PSPP) spanned all the maturities allowed by the programme, to avoid distortions between the securities. The lending of securities purchased by the Bank of Italy increased in terms of both the number of requesting banks and of securities used.



Sources: Based on Ministry of Economy and Finance and Bank of Italy data. (1) Includes government securities placed on international markets. The redemptions of index-linked BTPs are not revalued for inflation.

Figure 3.7





Source: Based on MTS SpA data.

(1) Depth is calculated as the average of the quantities of bid and ask orders for BTPs. – (2) The spread is measured as the simple average of the bid-ask spreads observed during the entire trading day for the BTPs listed on MTS. Right-hand scale. – (3) The analysis refers to the ten-year benchmark BTP and is based on data recorded in five-minute intervals. The blue and red lines show the estimated impact on bid and ask prices of entering a hypothetical €50 million buy or sell order in the MTS book.

Trading in Italian sovereign debt derivatives grows

CDS spreads on Italian government securities grew during periods of heightened tension in the euro-area financial markets, particularly in January and June (Figure 3.8). The total amount of open positions (net notional values), while higher than at the beginning of 2016, remained below the peaks of the previous years; daily trading volumes were modest. Since June, net notional values for



Sources: Based on Depository Trust & Clearing Corporation (DTCC) and Bloomberg data.

(1) Both trading volumes (market risk transaction activity) and net notional values are measured according to the DTCC definition (see http://www.dtcc. com/repository-otc-data). – (2) Right-hand scale.



Source: Financial accounts.

(1) Percentage shares calculated at market prices net of securities held by Italian general government entities. The data refer to a subset of holders. – (2) Securities held by foreign investors net of those held by the Eurosystem (excluding the Bank of Italy) and of those held by foreign individually managed portfolios and investment funds but attributable to Italian investors. CDS on securities issued by the Italian private financial and non-financial sector have decreased, keeping the overall demand for protection vis-à-vis Italian issuers unchanged. Most of the demand for protection against Italy's country risk goes through the market in CDS on Italian government securities. This contrasts with what happens in the other major euro-area economies, where the protection is more evenly divided between sovereign CDS and those on bank bonds.

The share of Italian government securities held by foreign investors, banks and households decreases In the twelve months ending in June the share of Italian government securities held by foreign investors decreased (from 30.0 per cent to 28.4 per cent), as did the portion held by banks and households. Meanwhile, the share held by the Bank of Italy increased, owing to purchases on behalf of the Eurosystem (Figure 3.9). Between July and September, there were net redemptions of Italian securities held by non-residents and banks, some of which can be explained by the seasonal reduction in the Treasury's net issues.

3.3 EQUITY AND CORPORATE BOND MARKETS

Italian markets are exposed to financial and political uncertainties The Italian stock exchange general index continues to be affected by the weakness of the banking sector, whose earnings prospects remain unfavourable according to investors (see Section 4). The differential between the implied volatility of the Italian and euro-area markets is high (Figure 3.10.a); the indicators show a sharp increase in the expected volatility of the Italian market around the first week of December, in connection with the referendum on constitutional reform (Figure 3.10.b).



Source: Based on Bloomberg data.

(1) Difference between the implied volatilities of options on the Italian and euro-area stock market indices with a maturity of 2 months. Right-hand scale – (2) Difference between the implied volatilities of options on the Italian stock market index with a maturity of 3 months and 10 days; the most recent data incorporate the volatility differential quoted for dates before and after the Italian referendum on constitutional reform.

The ECB's purchases have had a positive effect on the corporate bond market

Non-financial firms have increasingly turned to the bond market in 2016, both in Italy and in the euro area (see *Economic Bulletin*, No. 4, 2016). After a weak start to the year, between March and October the Eurosystem's Corporate Sector Purchase Programme (CSPP) assisted the increase in bond issuance by Italian non-financial corporations and an extension in the average maturity of the new

issues from 5.2 to 6.7 years compared with the corresponding period of 2015. Yield spreads with respect to swap rates have progressively declined (Figure 3.11). The programme has encouraged a shift of

portfolios towards riskier assets, leading to a fall in spreads also for Italian corporate bonds not purchased under the programme.

3.4 MARKET INFRASTRUCTURES

CC&G's margin	Cassa Compensazione e
requirements	Garanzia SpA (CC&G)
for Italian	kept its margin require-
government	ments on positions in
securities	Italian government secu-
remain stable	rities unchanged during
	the episodes of tension in

the financial markets in the days following the Brexit referendum (Figure 3.12.a). In keeping with the provisions of the European Market Infrastructure Regulation (EMIR), this avoided procyclical effects on the Italian government securities market. The margins applied to the main Italian shares were instead revised upward in July, to cope with the surge in volatility (Figure 3.12.b).



Figure 3.11

(1) Asset swap spreads weighted by the market capitalizations of individual securities. There is no perfect correspondence between the securities included in the Bank of America Merrill Lynch indices, used in the graph, and their eligibility for the CSPP - (2) The Bank of America Merrill Lynch indices for the euro area have been recalculated to exclude Italy



Sources: Based on Bloomberg and Cassa di Compensazione e Garanzia SpA data.

(1) Volatility is measured by the variation in the price of the benchmark 10-year BTP over a 5-day horizon and by the 3-day variation in FTSE MIB Index futures. The value-at-risk indicator (VaR) is calculated with reference to a period of 3 months and of 2 years with a confidence interval of 99 per cent. The margins for BTPs are those for the 7-10 year duration bucket; the broken line, which is the mirror image of the margins, highlights the adequacy of the margin requirements to cope with the negative price fluctuations actually registered in the market. – (2) Following an interoperability agreement, the central counterparty service for the government securities market is provided by CC&G and LCH SA. For the FTSE-MIB Index futures market, this service is provided only by CC&G.

The liquidity risk in securities and cash settlement systems remains modest

The migration of central securities depositories to the TARGET2-Securities settlement platform (T2S) is proceeding. The platform permits centralized securities settlement in central bank money (see the box 'TARGET2-Securities and financial stability', in Financial Stability Report, No. 2, 2015). Italian banks' intraday liquidity risk stemming from participation in the TARGET2 payment system remains extremely low.

BANCA D'ITALIA

Source: Based on Bank of America Merrill Lynch data.

The importance of cyber security rises in Italy as well

Looking ahead, some recent technological innovations could change the way in which financial market participants trade, settle and record financial assets (see the box 'The opportunities and risks of blockchain technology'). As trading becomes more digitized, more measures are being taken to prevent cyber risk. In

cooperation with the Italian Banking Association, the Bank of Italy has promoted the creation of a computer emergency response team for the financial sector (CERTFin) in order to strengthen cyber security in the Italian financial system. This undertaking is in line with the strategy pursued by the G7 countries for the global financial system.¹

THE OPPORTUNITIES AND RISKS OF BLOCKCHAIN TECHNOLOGY

Blockchain technology, the mechanism behind the transfer of the world's best known virtual currencies (see the box 'The diffusion and risks of virtual currencies: the case of Bitcoin', *Financial Stability Report*, No. 1, 2014), could represent a break with the way in which financial markets have traditionally worked, generally based on a model in which information is centralized at a single trusted entity. In fact, blockchain technology avails of a decentralized model that enables operators to exchange messages directly and record a chain of transactions in one online register (distributed ledger), which is shared by all users.¹

It can be used in all areas requiring interaction between a large number of users and where a single ledger favours a more efficient alignment of information between participants, as in the case of cross-border or real-time payments, or when it comes to managing financial instruments that entail complex post-trading activities. The sharing of information can improve traceability, transparency and the reliability of transactions; the rapid settlement of operations, which involves the recording of entries in the distributed ledger, and their immediate reconciliation increases the efficiency of the trading process and mitigates counterparty risk. A decentralized model is also more resistant to cyber-attacks or operational incidents, since it can continue to function even if one or more of the nodes ceases to function.

Widespread use of this technology can, however, increase exposure to new risks. The disintermediation of the current market infrastructures, which are subject to specific supervisory requirements, together with faster transaction times, augment the complexity of financial system interconnections and the speed with which contagion spreads. The possibility of traditional operators performing new functions or of new entities outside of the regulatory sphere emerging in the market could require a reassessment both of the adequacy of the current models for safeguarding against risks in banks and of the very frame of reference of financial supervision. The Bank of Italy plays an active part in the initiatives promoted in the international sphere to assess and mitigate the risks that the spread of this new technology could pose to the functioning of the markets and payments systems.²

¹ The most open-access conceptual model of this technology permits anyone to participate and operate in the blockchain without prior authorization (unpermissioned ledger); there are also closed-access models, subject to the users meeting certain requirements (permissioned ledger), which appear best suited to the highly regulated nature of the current payments and financial markets system.

² See on the Bank of Italy's website the proceedings of the conference 'La tecnologia blockchain: nuove prospettive per i mercati finanziari' held in Rome on 21 June 2016; ECB, 'Distributed ledger technology', *In Focus*, 1, 2016; ESMA, The distributed ledger technology applied to securities markets, Discussion Paper, 773, 2016.

¹ See the Bank of Italy's website: 'G7 Fundamental elements of cybersecurity for the financial sector'.



Italy's banks are continuing to repair their balance sheets. Both the flow of non-performing exposures and their share in the total stock of loans are declining. Capital strengthening is proceeding, albeit gradually, and liquidity conditions are favourable overall. Like the other European banks, profitability remains low owing to structural factors and short-term economic developments. The latter weigh more heavily in Italy, where growth is weaker.

The EU-wide stress test results published on 29 July revealed that four of the five leading Italian banking groups could withstand the losses stemming from a sharp deterioration in macroeconomic conditions.¹ Banca Monte dei Paschi di Siena is expected to maintain amply sufficient capital in the baseline scenario but in the adverse scenario its capital stock would fall below the regulatory minimum. On the publication of the results Monte dei Paschi announced a plan to sell off its bad debts, bolster loss provisions against other non-performing loans and undertake a sizeable capital increase. The competent authorities are working to overcome the difficulties of a small number of banks and complete the sale of the bridge banks established following the resolution of four banks at the end of last year. The completion of the first merger of two former cooperative *(popolari)* banks, which will lead to the creation of Italy's third largest banking group, could provide a blueprint for further consolidations in the future, raising efficiency and profitability.

Nevertheless, banks remain vulnerable to both domestic and international shocks that may affect capital markets and economic growth (see Section 1). Uncertainty surrounds a number of important international regulatory initiatives currently being finalized, such as the reform of prudential requirements (Basel III), the introduction of the minimum requirement for own funds and eligible liabilities (MREL), and the entry into force in 2018 of new financial reporting standards for assessing financial instruments (IFRS 9). When implementing these measures – as with the supervisory interventions to reduce the proportion of non-performing assets – account must be taken not only of the anticipated long-term benefits but also of the short-term costs.

4.1 MARKET INDICATORS

Banks' share prices are highly volatile wore than for the main euro-area banks, as they had during episodes of turbulence at the start of the year (see the box 'Recent developments in banks' share prices in the euro area', *Financial Stability Report*, No. 1, 2016). Notwithstanding the improvement observed in recent months, the share prices and CDS spreads of Italy's leading banks have not regained the levels recorded in early 2016.

¹ A summary of the stress test results is published by the EBA, 2016 EU-Wide Stress Test Results, 29 July 2016.



Sources: Based on data from Bloomberg and Thomson Reuters Datastream.

(1) Panel (a) refers to the following sample of banks: for Italy, UniCredit, Intesa Sanpaolo and Banca Monte dei Paschi di Siena; for Europe, BNP Paribas, Société Générale, Crédit Agricole, Deutsche Bank, Commerzbank, ING, Santander, Banco Bilbao Vizcaya Argentaria, HSBC, Barclays, Royal Bank of Scotland, Lloyds, UBS, Credit Suisse; for the United States, Citigroup, JPMorgan Chase, Bank of America, Goldman Sachs, Morgan Stanley and Wells Fargo. Panel (b) refers the following sample of banks: for Italy, UniCredit, Intesa Sanpaolo and Banca Monte dei Paschi di Siena; for France, BNP Paribas, Société Générale, Crédit Agricole; for Germany, Deutsche Bank, Commerzbank; for the UK, Barclays, Royal Bank of Scotland, HSBC, Lloyds; for Spain, Santander, Banco Bilbao Vizcaya Argentaria. - (2) Five-year CDS spreads.

Price-to-book ratios are historically low

Euro-area banks' price-to-book (PTB) ratios have fallen to their lowest level since 2008 (Figure 4.2.a). At the beginning of November they were below 0.7 on average, compared with 1.9 for non-financial corporations. Banks, especially those in Germany and Italy (Figures 4.2.b and 4.2.c), were affected by both the increase in risk premiums

and the sharp decline in profitability expectations (see the box ' The low level of banks' share prices in the euro area', Financial Stability Report, No. 2, 2015). Risk premiums are currently at levels comparable with those prevailing in the most acute phases of the financial and sovereign debt crises, and are more homogenous among the main euro-area banks. Earnings expectations persistently below banks' cost of





Sources: Based on I/B/E/S and Thomson Reuters Datastream data.

(1) The sample includes all the euro-area listed banks in the FTSE Italia All-Share Banks, FTSE Germany Banks, FTSE France Banks, FTSE Spain Banks, FTSE Netherlands Banks, FTSE Greece Banks, FTSE Austria Banks, FTSE Portugal Banks, FTSE Ireland Banks and FTSE Belgium Banks at September 2016. The medians are calculated based on the data of the banks in the sample. - (2) Ratio of market price of shares to book value of equity. - (3) Ratio of market price of shares to expected earnings per share one year ahead. - (4) Expected earnings one year ahead as a percentage of the book value of equity per share (the indicator is obtained as the price-to-book ratio in panel (a) to the forward price-to-earnings ratio in panel (b)).

equity make it more difficult to implement scheduled capital increases and any others that may prove necessary, including for mergers and acquisitions.

4.2 ASSET RISKS

Credit

Credit quality continues to improve

Italian banks' credit supply policies remain prudent: new lending is limited to

households and firms with better risk indicators (see Section 2). This, together with the economic recovery, is reflected in the credit quality indicators. In the third quarter of 2016 the flow of new non-performing loans in proportion to total loans fell to 2.6 per cent (Figure 4.3). According to our projections, which are consistent with the latest macroeconomic scenarios, the rate of new bad debts will gradually decline in the coming months (Figure 4.4). At the end of 2017, the indicator is expected to fall to 1.2 per cent for loans to households, only slightly higher than the level recorded before the financial crisis, and to 3.1 per cent for loans to firms.



Source: Central Credit Register and Istat.

(1) Annualized quarterly flows of adjusted NPLs and adjusted bad debts in relation to the stock of loans at the end of the previous quarter net of adjusted NPLs and adjusted bad debts; data seasonally adjusted where necessary.

Figure 4.4



(1) Quarterly flow of adjusted bad debts in relation to the stock of loans at the end of the previous quarter, net of adjusted bad debts; data seasonally adjusted, where necessary. The probability distribution of the projections, graphed by percentile groups, allows estimation of the size of the risks to the baseline projection.

In the first six months of 2016 the stock of gross non-performing loans fell by \notin 4 billion, to \notin 356 billion (Table 4.1); net of provisions, the reduction was more pronounced, falling by \notin 6 billion to \notin 191 billion. This decrease is wholly ascribable to the significant banking groups (directly supervised by the ECB). Since the end of 2015, the coverage ratio (loan loss provisions

Table 4.1

Credit quality: amounts and shares of non-performing loans and coverage ratios (1) (billions of euros and per cent; June 2016)

				•				-	,						
	Significant banks (2)				Less-significant banks (2)				Total (2)						
	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio
Customer loans:	1,517	1,383	100.0	100.0	8.8	314	285	100.0	100.0	9.3	2,016	1,840	100.0	100.0	8.7
Performing	1,246	1,239	82.1	89.5	0.6	251	249	79.8	87.5	0.7	1,659	1,649	82.3	89.6	0.6
Non-performing	271	145	17.9	10.5	46.6	63	36	20.2	12.5	43.6	356	191	17.7	10.4	46.4
Bad debts (3)	163	67	10.8	4.9	58.8	37	16	11.8	5.5	57.6	214	88	10.6	4.8	59.0
Loans likely to default	101	72	6.6	5.2	28.5	23	17	7.3	5.9	26.3	131	94	6.5	5.1	28.3
Past due	7	6	0.5	0.4	21.6	4	3	1.1	1.1	9.1	11	9	0.6	0.5	17.7

Source: Supervisory reports, on a consolidated basis for banking groups and individually for the rest of the system.

(1) The coverage ratio is the amount of loan loss provisions in relation to the corresponding gross exposure. In the case of performing loans, it is calculated as the ratio of generic provisions to the loans. Rounding may cause discrepancies in the totals. The percentage composition is calculated on the basis of the amounts expressed in millions of euros. Provisional data. – (2) Significant banks are those directly supervised by the ECB; less-significant banks are those subervised by the Bank of Italy in close cooperation with the ECB. The total includes subsidiaries of foreign banks that are not classified as either significant or less-significant Italian banks and account for about 9 per cent of total gross customer loans. Excludes branches of foreign banks. – (3) This non-harmonized Italian subcategory distinguishes the exposures with the worst credit quality from other non-performing exposures.

in relation to the amount of gross exposures) has increased by 1 percentage point to 46.4 per cent, slightly higher than the average for the main EU banks. In June 2016, the ratio of NPLs to total customer loans net of provisions was 10.4 per cent (17.7 gross of provisions), about 0.4 percentage points lower than in December 2015 (Figure 4.5). The Texas ratio² for Italian banks fell by 3 percentage points over the same period, to 101 per cent, but remains high by international comparison. The amount of collateral backing NPLs is large (Table 4.2).

Sales of bad debtsIn theincrease2016,

In the first nine months of 2016, banks sold or wrote off about €6 billion worth

of gross bad debts from their balance sheets, compared with just over $\notin 1.7$ billion in the same period in 2015.³ Some big banks have subsequently completed or are finalizing the



Sources: Supervisory reports, on a consolidated basis for banking groups and individually for the rest of the system.

(1) Customer loans. Includes banking groups and subsidiaries of foreign banks; excludes branches of foreign banks. Amounts are calculated net and gross of adjustments. The data for June 2016 are provisional.

² The Texas ratio is the ratio of gross NPLs to the sum of common equity tier 1 capital and loan loss provisions.

³ Including the sale of bad debts of the banks put into resolution in November 2015 and finalized in the first few months of 2016, the total amount of bad debts sold is about €14 billion.

(billions of euros and per cent; June 2016) Gross exposures Net exposures Collateral Personal guarantee Coverage ratio for unsecured loans Firms Non-performing customer loans 247 131 120 48 59.8 of which: bad debts 75.2 148 59 64 36 **Consumer households** Non-performing customer loans 32 36 2 65.4 54 of which: bad debts 35 17 23 75.4 1 Total (2) Non-performing customer loans 315 171 161 51 59.8 of which: bad debts 188 78 89 37 75.2

Non-performing loans and guarantees by counterparty sector (1)

Source: Individual supervisory reports.

(1) The data are from non-consolidated balance sheets that do not include loans granted by financial corporations belonging to a banking group or by foreign subsidiaries of Italian groups. The amount of the collateral does not necessarily correspond to its fair value but to the amount of collateralized credit. For example, for loans secured by collateral whose fair value exceeds the amount of the loan, the amount reported is that of the loan. Provisional data. - (2) Includes general government, financial and insurance corporations, non-profit institutions serving households, and non-classifiable and unclassified entities.

sale of significant amounts; if these transactions go through by the end of the year, the value of the bad debts sold in 2016 will exceed the amount recorded in 2015 (about €8 billion). Among the transfers underway is the first securitization of bad debts under the state guarantee scheme (GACS).

Exposures to sovereign risk and foreign assets

Exposure to Italian public sector securities decreases In the 12 months ending in September, resident banks' holdings of Italian public sector securities

fell by €21 billion, from 10.5 to 9.9 per cent of total assets (Figure 4.6). This decline reflected the reduction of the risk-adjusted yield spread between loans and securities. Investment in government securities of other euro-area countries remained stable at €37 billion. In the same period, the other euroarea banks reduced their exposure to their respective home-country government securities by €71 billion overall.

With the lessening of uncertainty regarding the growth of emerging economies, Italian banks' exposure to these countries began to grow again, particularly towards those that export energy commodities (Table 4.3).



Source: Supervisory reports.

(1) All public sector securities, including those issued by local authorities. Excludes Cassa Depositi e Prestiti SpA. - (2) Right-hand scale.

Table 4.3

(billions of euros and per cent; June 2016)										
	Public sector	Banks	Financial corporations	Households and firms	Total	Percentage change in total from 6 months earlier	Per cent of total exposures reported to the BIS (2)	Per cent of total exposures to residents and non-residents (3)		
Euro area	111.8	62.1	49.9	185.3	409.1	0.5	1.9	14.8		
Other industrialized countries	20.6	20.1	28.6	26.9	96.2	-0.1	0.7	3.5		
Emerging and developing countries	46.6	16.8	4.3	108.4	176.1	4.7	4.4	6.2		
Europe	42.5	9.3	3.5	97.2	152.5	1.8	15.9	5.4		
of which: Russia	1.9	1.8	0.3	12.7	16.6	7.1	17.5	0.6		
Africa and the Middle East	3.0	1.4	0.4	6.1	10.9	22.4	2.3	0.3		
Asia and Pacific	0.6	2.4	0.4	3.0	6.4	-3.5	0.4	0.2		
Central and South America	0.6	3.7	0.0	2.1	6.4	22.6	0.7	0.2		
Offshore centres	0.3	0.4	1.4	5.0	7.1	-0.4	0.3	0.3		
Total	179.3	99.4	84.3	325.6	688.6	1.1	3.2	24.8		
Memorandum item:										
Energy-exporting emerging and developing countries	2.1	2.9	0.6	16.2	21.9	17.9	5.0	0.7		

acures of Italian groups and hanks to foreign residents

Sources: Consolidated supervisory reports for banking groups, individual supervisory reports for banks not belonging to a group, and BIS. (1) Exposure to 'ultimate borrowers', gross of bad debts and net of provisions. Does not include BancoPosta and Cassa Depositi e Prestiti SpA. – (2) As a percentage of the total foreign exposures to each country in March 2016 reported to the BIS by a large set of international banks. – (3) Total exposures to residents and non-residents. The numerator and denominator refer to 31 December 2015 for consistency with the publication of the data by BIS.

4.3 REFINANCING RISK AND LIQUIDITY RISK

The launch of the new programme of targeted longer-term refinancing operations (TLTRO2; see Section 3) has mitigated the risk of refinancing and reduced funding costs. Recourse to these operations has enabled Italy's banks to not roll

over most of the bonds placed on wholesale markets that have reached maturity. More than three quarters of the new bond issues made in the six months ending in September involved covered bonds (Figure 4.7a) whose yields turned negative in part owing to the Eurosystem's asset purchase programme (Figure 4.7b). Wholesale funding was nevertheless affected by lower deposits from abroad, over half of which was attributable to the reduction in funds transferred from parent banks to a number of branches and subsidiaries of foreign banks following changes in liquidity management within the groups and sales of business divisions (Table 4.4). The volume of bonds placed with customers continue to decline while households' and firms' deposits continue to rise.

Italian banks' asset La encumbrance is above en the European average his

TLTRO2 reduces

refinancing risk

Last June the share of assets used by Italy's banks to secure financing (asset encumbrance) came to 27.3 per cent. For the significant banks this proportion is higher than that for the main European banks (29.2 per cent against 25.5 per

Figure 4.7

Table 4.4



Sources: Based on Dealogic and Bloomberg data.

(1) Italian banks' issues larger than €200 million on international markets. Does not include issues retained on issuers' balance sheets, those earmarked for the retail market, or those of Italian banks' foreign subsidiaries. Includes bonds deriving from securitizations. – (2) Yields at maturity of Italian banks' bonds with residual maturity of 5 years.

		End-of-month stocks	6	Change,
	September 2015	March 2016	September 2016	 March 2016 - September 2016 (2)
Retail funding (a)	1,590	1,592	1,567	-25.8
Deposits of residents (3)	1,371	1,399	1,398	-3.0
of which: households and firms	1,182	1,215	1,234	18.7
general government	70	70	50	-19.8
Bonds (4)	219	192	170	-22.8
Wholesale funding (b)	562	575	544	-35.0
Deposits of non-residents	310	320	296	-26.9
Net liabilities to central counterparties (5)	57	69	71	2.7
Bonds	195	186	176	-10.8
Eurosystem refinancing (c) (6)	164	151	186	35.6
Total funding (a+b+c)	2,315	2,318	2,297	-25.2

Sources: Individual supervisory reports; includes Cassa Depositi e Prestiti SpA.

(1) Excludes liabilities to other banks resident in Italy. The data for September 2016 are provisional. – (2) Adjusted for reclassifications, value adjustments and exchange rate variations. – (3) Excludes transactions with central counterparties. – (4) Bonds held by households. – (5) Repurchase agreements only, representing foreign funding via central counterparties. – (6) Includes transactions with the Eurosystem for monetary policy operations; see Monetary and Financial Indicators, Money and Banking, *Supplements to the Statistical Bulletin*, Tables 1.4a and 1.4b.

cent).⁴ Greater recourse to secured funding enables banks to benefit from the favourable price conditions that obtain in this market segment. There is a risk, however, that a high level of asset encumbrance could translate into higher interest rates on unsecured debt, making it more costly to meet the minimum

⁴ The data on asset encumbrance are gathered according to standards harmonized at European level. The sample of banks is established by the European Banking Authority (EBA) and comprises, at December 2015, 195 European banks in respect of which at least one of the following statements is true: (a) it is one of the three largest banks of the member state; (b) its total assets exceed €30 billion; (c) its average total assets in the last four years are greater than 20 per cent of the member state's average GDP in the same period of time.

requirement for own funds and other liabilities eligible for a bail-in as defined by the resolution authority (see the box 'Minimum requirement for own funds and eligible liabilities (MREL)').

MINIMUM REQUIREMENT FOR OWN FUNDS AND ELIGIBLE LIABILITIES (MREL)

The minimum requirement for own funds and other eligible liabilities (MREL) laid down in the Bank Recovery and Resolution Directive (BRRD) serves to ensure that in the event of resolution the bank has sufficient own funds and liabilities to absorb the losses and reconstitute its capital. This requirement is therefore an essential part of the European regulatory framework for managing bank crises. MREL serves the same purpose as the international standard for Total Loss-Absorbing Capacity (TLAC),¹ namely to ensure that global systemically important banks (G-SIBs) have sufficient loss-absorbing capacity for orderly resolution. But it differs from TLAC in three significant respects: MREL applies to all banks and is set by the resolution authorities case by case on the basis of the specific characteristics of each bank; non-subordinated liabilities may also be used to meet the requirements; and it is expressed as a percentage of total liabilities.

The methodology for calculating MREL provides for three components:² the first, for loss absorption, essentially corresponds to the minimum capital requirements and capital buffers;³ the second, designed for recapitalization of the bank after resolution, is equal to the capital requirement necessary for conducting business; the third, intended to restore investor confidence, is equal to the buffer.⁴ This methodology assumes that at the time of resolution the bank has lost its entire capital and requires adequate recapitalization, even beyond the regulatory minimum, in order to regain the market's confidence. The resolution authority, in implementing this methodology, may increase or decrease the loss-absorption component and calibrate the recapitalization component taking account of, say, a possible reduction of the bank's size following resolution. The authority may also establish a transition period for meeting the requirement.

Starting from the current composition of the liabilities of 114 banks, the EBA produced initial estimates of the impact on the European banking system in its July 2016 'Interim Report on MREL'⁵ based on various assumptions for the calibration of the requirement⁶ consistent with the present methodology. The potential requirement for banks depends both on the hypotheses adopted for calibrating their respective requirements and on whether or not subordinated liabilities must be used to satisfy them.

- ¹ FSB, 'Principles on Loss-absorbing and Recapitalisation Capacity of G-SIBs in Resolution: Total Loss-absorbing Capacity (TLAC) Term Sheet', 9 November 2015. For the differences between MREL and TLAC, see also *Relazione sulla gestione e sulle attività della Banca dl'Italia per il 2014* (2015) – in Italian only.
- ² The criteria for determining MREL requirements are set in general by Directive 2014/59/EU (BRRD), while detailed questions of method were established by the EBA and the European Commission in the framework of Commission Delegated Regulation (EU) 2016/1450 (23 May 2016). The Regulation supplements the BRRD with regard to regulatory technical standards specifying the criteria relating to the methodology for setting the minimum requirement for own funds and eligible liabilities.
- ³ The capital conservation buffer, any counter-cyclical capital buffer in place, the global or national systemic importance buffer and the systemic risk buffer.
- ⁴ For banks that can be subjected to compulsory administrative liquidation, the second and third components are nil.
- ⁵ European Banking Authority, 'Interim Report on MREL: Report on Implementation and Design of the MREL Framework,' 19 July 2016.
- ⁶ The EBA examines three assumptions for calibration. The first, which it judges to be highly improbable, is that the resolution authorities consider only the pillar one capital requirements (harmonized for all banks) both for loss absorption and for recapitalization. The second adds the pillar two capital requirements (specific to each bank), both for loss absorption and for recapitalization, while the capital buffers are calculated only for loss-absorption purposes. The third hypothesis, the most stringent, would set MREL at either twice the minimum capital requirements (of the first and of the second pillars) plus capital buffers or 8 per cent of the bank's liabilities, whichever is greater.

In the most stringent scenario,⁷ the additional requirement would be substantial: \in 290 billion if all the liabilities defined as eligible by the BRRD were counted; \in 470 billion if some liabilities were excluded (specifically, deposits with residual maturity of more than one year held by entities other than natural persons and SMEs); and \in 1,260 billion if only subordinated liabilities were eligible. The magnitude of the overall requirement can be gauged against the volume of debt securities issued in recent years. In 2011-2015, annual net issues of senior debt by European banks were negative by about \in 30 billion a year; subordinated debt issues were positive (about \in 15 billion a year).

The appropriate calibration of MREL should reconcile the need for the effective resolution of banks with the need to ensure that the cost of introducing the new requirement can be borne by the banking system without serious macroeconomic repercussions. As to the first need, it is essential to make sure that banks have sufficient immediately available liabilities to absorb the losses and recapitalize in the case of resolution. Further, using subordinated liabilities to fulfil at least part of the requirement would make loss allocation clear and transparent, helping to minimize legal risks.

As to costs, an overly severe calibration would have very significant effects on funding costs, especially if subordination were required. In addition, an assessment must be made of the market's capacity to absorb, within a short time span, the potentially very substantial volume of new instruments that the banks would have to issue in order to comply with the requirement, the placement of such instruments with retail investors being excluded. Investment in MREL liabilities by banks, though not barred, is discouraged by supervisors insofar as it would increase interconnection and heighten the risk of contagion.⁸ The EBA is studying the possible impact of MREL on funding costs and the banks' propensity to lend; these analyses will form part of the report that will be submitted to the European Commission for the revision of the BRRD.

The BRRD has a review clause empowering the Commission to present, by the end of 2016, a proposal for the amendment of MREL, in order, for one thing, to incorporate the international TLAC standards into European law. In amending the Directive it will also be necessary to consider: (a) whether to extend the TLAC standard's approach of a single minimum requirement to a set of banks broader than European G-SIBs; (b) how to amend the MREL rules for all the other banks; and (c) whether and to what extent the subordination of MREL-eligible instruments should be made obligatory also for banks other than those to which the TLAC standard applies.

In the judgement of the Bank of Italy, a balanced approach to these issues must be taken in calibrating the requirement and introducing a request for subordination, and decisions must be accompanied by robust impact assessments that take due account of the differences in single banks' capability to access the market. The studies should help determine the transitional period best suited to enabling banks to plan how to comply and the market to absorb the new issues. To foster a level playing field between banks and between EU member states, consideration must be given to the possibility of setting an analogous predefined and uniform requirement for the largest banks, other than the G-SIBs, to which the TLAC standard applies. The MREL requirement should be no higher than standard TLAC and should conform to the proportionality principle. All the other banks could remain subject to a requirement laid down case by case by the resolution authorities, according to each bank's characteristics and resolution strategy. In any event it is indispensable to avoid a needlessly high MREL requirement disproportionate to the effective needs of resolution.

⁷ The third scenario set out in footnote 6.

⁸ The Basel Committee has now defined the prudential treatment of banks' investment in TLAC-eligible instruments, providing that they are to be deducted from supervisory capital (see Basel Committee, 'Standard TLAC Holdings: Amendments to the Basel III Standard on the Definition of Capital,' October 2016).

Recourse to Eurosystem financing increases Between March and September, refinancing with the Eurosystem by Italian counterparties rose by €35 billion to €186 billion (see Section 3). Banks kept the value of instruments readily available for further loans practically unchanged, depositing with the Bank of Italy new assets – almost entirely comprising covered

bonds issued by the banks themselves and loans (Figure 4.8a) – in the collateral pool. The volume of marketable securities available outside the collateral pool, the bulk of which were government securities, rose to \notin 249 billion, from \notin 241 billion in March (Figure 4.8b). A negative outcome of the rating review of the Italian Republic announced by DBRS last August would have a limited impact on the ability of Italy's banks to access refinancing with the Eurosystem.



Sources: Based on Eurosystem data and supervisory reports.

(1) End-of-period data for the monetary policy counterparties of the Bank of Italy. The collateral pool is valued at the prices taken from the Common Eurosystem Pricing Hub (CEPH), net of haircuts. – (2) End-of-period data for the entire banking system, excluding Cassa Depositi e Prestiti SpA. Securities eligible as collateral for the Eurosystem are deemed to be marketable. Amounts at market values as reported by banks, net of the haircuts applied by the Eurosystem.

Liquidity reserves are still ample

The net liquidity position of significant banks was equal to 11.9 per cent of assets on average and 17.2 per cent for the less significant banks (Figure 4.9).⁵ A small number of banks recorded a reduction in expected cash flows that was

almost entirely offset by the rise in eligible assets. The liquidity coverage ratio (LCR), which was already above the regulatory minimum in December 2015, increased for significant banks. For the others it declined, though it remains well above the average (Table 4.5).

			Table 4.5					
The liquidity coverage ratio of Italian banks (per cent)								
	LCR (at 31 December 2015)	LCR (at 30 June 2016)	Level 1 assets as per cent of total buffer (1) (at 30 June 2016)					
Top 5 groups (2)	147	158	97					
Other significant banks (2)	113	129	97					
Less significant banks (3)	217	194	99					
Total system	155	162	97					

Sources: Consolidated supervisory reports for banking groups; individual supervisory reports for banks not belonging to a group. (1) Article 10, Commission Delegated Regulation (EU) 2015/61. – (2) Banks under direct supervision by the ECB. – (3) Banks supervised by the Bank of Italy in close cooperation with the ECB.

⁵ For the definition of net liquidity position, see the note to Figure 4.9.



Source: Data transmitted to the Bank of Italy by a sample of 28 banking groups for periodic monitoring of their liquidity positions. (1) Simple averages for 14 significant banks (supervised directly by the ECB) and 14 less significant banks (supervised by the Bank of Italy in close cooperation with the ECB). Compared with the *Financial Stability Report*, No. 1, 2016, the sample of less significant banks was modified to ensure greater homogeneity in terms of size and operations. Monthly averages of weekly observations. The net liquidity position is calculated as the (positive or negative) difference between the holdings of freely available assets eligible for use as collateral for Eurosystem refinancing operations (counterbalancing capacity) and cumulative expected net cash flows over the next 30 days. The second aggregate is calculated as the (positive or negative) difference between outflows and inflows. Outflows include maturing obligations towards institutional counterparties.

4.4 INTEREST RATE, MARKET AND OPERATIONAL RISK

Exposure to interest rate risk continues to fall

Their substantial participation in the TLTRO2 has enabled Italian banks to reduce the gap between the average duration of assets and of liabilities, reducing the exposure to movements in the yield curve. For the 13 main Italian banking groups, an upward shift of 200 basis points of the entire risk-free yield curve would result in

a contraction in their net economic value (assets minus liabilities) equal on average to 2.4 per cent of own funds on the basis of June 2016 data (compared with a decline of 4.1 per cent in December 2015). An inverted scenario – namely a decline in interest rates such as to bring the yield curve down to zero for the maturities that recorded positive rates in June 2016^6 – would result in an average increase in the net economic value of the largest Italian banking groups equal to 0.8 per cent of own funds (compared with 2.9 per cent in December 2015).

Market risk remains
modest ...At the end of the second quarter of 2016 both the value-at-risk (VaR) of all portfolios
at fair value (i.e. trading and banking books) and that of the trading book alone rose
as a result of the increased volatility of the sovereign spread in connection with the

referendum on the UK's continued membership of the EU (Figure 4.10). In the third quarter this risk exposure indicator fell back to about the average for the last two years.

... while operational risk is lower than the European average The stress tests published by the EBA in 2016 measured operational risk for the first time. Banks were asked to estimate, for the 2016-18 period, the impact in terms of the reduction in the ratio between common equity tier 1 capital and

⁶ In the interest rate reduction scenario, the prudential requirements, which are harmonized at the EU level, envisage a floor equal to zero for rates that are currently positive.

risk-weighted assets (CET1 ratio) deriving specifically from conduct risk and other operational risks.⁷ For the Italian banks participating in the exercise, the contribution of operational risk in the adverse scenario is low and amounts to less than one fifth of the total decrease in the CET1 ratio. For European banks on average, operational risk accounted for almost one third of the decline in the CET1 ratio. The better result achieved by Italian banks is attributable not just to their employment of business models with little exposure to this type of risk, but also to their having put adequate safeguards in place.

4.5 BANKS' CAPITAL AND PROFITABILITY

The stress test confirms the soundness of Italy's main banks ...

The results of the European stress test, published by the EBA at the end of July, confirmed the soundness of Italy's main banks, despite the



Source: Data for a sample of 6 banking groups that use internal models to measure market risk.

(1) Averages weighted according to the size of each bank's portfolio. VaR is the loss on a portfolio within a given time horizon (10 days) that will not be exceeded at a given confidence level (99 per cent). The indices reflect the changes in VaR for all positions (securities and derivatives) valued at fair value (red line) and for the trading book alone (blue line). A decline indicates a reduction in risk.

severity of the test and the repeated tensions to which banks have been exposed in recent years. For the set of five Italian banks included in the sample (UniCredit, Intesa Sanpaolo, Banca Monte dei Paschi di Siena, Banco Popolare and UBI Banca), the CET1 ratio would fall by about 4 percentage points, on average, in the adverse scenario, in line with the reduction estimated both for the aggregate of European banks (3.8 percentage points) and for the subset consisting of banks from countries that are part of the Single Supervisory Mechanism, or SSM (3.9 percentage points).

... and the one bank with a negative result has launched a recovery plan

In the adverse scenario, Banca Monte dei Paschi di Siena would see its CET1 ratio fall below the regulatory threshold. This negative result is largely the consequence of some of the methodological assumptions adopted in the test, especially the static balance sheet assumption, which was ill-suited for a bank undergoing a major restructuring.⁸ As the results of the stress test were being published, Banca

Monte dei Paschi di Siena released a plan to dispose of its entire portfolio of bad loans, substantially increase its loan loss provisions on the remaining non-performing loans, and raise up to €5 billion in fresh capital. The bank recently announced that the recapitalization will be carried out in part through a voluntary conversion of subordinated capital instruments into equity. These measures would bring the ratio of non-performing loans to total loans into line with the average for the Italian banking system. The plan is complex and involves many actors; the main execution risks derive from the high volatility that has recently characterized the share markets.

Supervisory intervention is under way at some banks in difficulty Supervisory action is being taken to overcome the crisis situations of a limited number of other banks. The banks involved are carrying out restructuring plans, initiatives to manage their non-performing assets more efficiently, and recapitalizations. The sale of the bridge banks established following the resolution of four banks at the end of 2015 is proceeding: some weeks ago the European Commission agreed to an extension of the deadline for completing the sale.

⁷ The exercise asked banks to estimate these losses in a baseline scenario and an adverse scenario.

⁸ See the Bank of Italy's website: Results of the 2016 European stress test, 29 July 2016.

Capital strengthening is proceeding ...

In the first half of 2016 the Italian banking system's capital ratios improved slightly. With risk-weighted assets practically unchanged, the ratios increased thanks to the completion of some capital injections and a modest amount of

capitalization of retained earnings. The increases more than offset the effects of the gradual phasing out of the transitional system of capital rules. At the end of June, CET1 was equal on average to 12.4 per cent of risk-weighted assets, 10 basis points higher than at the end of 2015. For significant banking groups, the CET1 ratio was 11.7 per cent, about 2 percentage points lower than the average value calculated by the EBA for a sample of large European banks.⁹ The ratio stood at 15.5 per cent for other banks directly supervised by the Bank of Italy within the SSM, for which profitability and asset quality are on par with those of significant banking groups.¹⁰

and the prudential	The prudential leverage ratio, an indicator of capital adequacy measured on non-
leverage ratio remains	risk-weighted assets, ¹¹ is higher than the European average. For the top five
high by international standards	banking groups it was 5.1 per cent at the end of last year, above both the regulatory minimum of 3 per cent ¹² and the average value calculated for a sample of 39 large internationally active European banks in the same period (4.7 per cent).
	internationally active European banks in the same period (4.7 per cent).

The changes called for by Basel III are near completion The Basel Committee is completing its revision of prudential rules with the aim of reducing the variability of the risk-weighted assets calculated by banks (which are the denominator in capital ratios). The changes affect the methods used to calculate capital requirements for credit risk – considering both the standard

and the internal-rating-based (IRB) method – and operational risk, which, when finalized, will flank the new regulatory framework on market risk. Under the agreement reached by the Group of Governors and Heads of Supervision (GHOS) in January and confirmed in September, these changes must not engender a significant increase in overall capital charges. Still, for some banks the impact of adapting to the new calculation methods for capital requirements that will enter into force in the coming years may not be negligible.

ROE decreases in the first half of 2016

In the first half of 2016 the annualized return on equity of Italian banks and banking groups was 2.5 per cent, half as great as in the same period of 2015. Operating profit decreased by about one quarter. Low interest rates, coupled with

substantially stable volumes, pushed net interest income down by 4.6 per cent, while the negative performance of the markets contributed to reducing non-interest income by 11.5 per cent. Non-recurring expenses, such as those connected with early retirement incentive plans and contributions to the Single Resolution Fund, led to an increase in operating expenses (4.4 per cent); without these components, costs would have remained substantially unchanged and operating profit would have decreased by about one fifth. A smaller flow of non-performing loans enabled banks to keep their loan loss provisions basically stable, although they did increase their coverage ratios.

The outlook for profitability remains weak Looking ahead, the sluggishness of economic activity and subpar operational efficiency compared with the average of European credit institutions will continue to squeeze banks' profitability, as has happened in the last ten years (see the box

⁹ EBA, *Risk Dashboard. Data as of Q2 2016.*

¹⁰ See the Bank of Italy's website: 'Italy's *less significant* banks: general overview and supervision', published on 27 October 2016 on the occasion of the Governor's speech on World Savings Day.

¹¹ The leverage ratio is calculated as the ratio of Tier 1 capital to a measure of non-risk-weighted assets. The international comparison exercise presented here uses the definition of Tier 1 capital that will come into force at the end of the transitional period provided for in the Capital Requirement Regulation 2013/575/EU (CRR).

¹² The 3 per cent minimum is a non-binding value set by the Basel Committee on Banking Supervision in 2010 for monitoring purposes only, the goal being to introduce a binding value starting in 2018 once the appropriateness of the minimum value has been assessed.

"The profitability of Italian banks over the last decade"). A return to levels of profitability comparable to those before the financial crisis is hindered by low interest rates, which compress margins. Further pressure on profitability could arise in 2018, when the new international accounting standards for financial instruments (IFRS9) enter into force. Under the new rules, loan loss provisions will be calculated based on expected losses and not on those actually incurred.

THE PROFITABILITY OF ITALIAN BANKS OVER THE LAST DECADE

Over the last ten years Italian banks have had a return on equity, net of extraordinary income items, that averaged 3.0 per cent, against 7.5 per cent for other European banks (see the figure, panel a). The profitability gap is explained both by Italy's poorer economic performance and by a business model heavily oriented to traditional lending, producing a limited contribution from other, typically more profitable but riskier activities, such as securities trading (see the figure, panel b). For the period 2005-2015, non-interest income accounted on average for 36 per cent of the total revenue of Italian banks, against 45 per cent for other European banks. Operating costs averaged 1.8 per cent of total



Source: Based on Bankscope Bureau van Dijk data. (1) Based on the consolidated balance sheets of the 50 leading banking groups in the EU and Switzerland. – (2) Net profit (excluding non-recurring items) as a ratio to capital (common equity and reserves). - (3) Each axis shows the effect of the corresponding shock after 10 years. Values expressed in annual terms. - (4) Total regulatory capital, in relation to risk-weighted assets.

assets in Italy, against 1.3 per cent in the other countries, in part reflecting the more traditional business model, which is more labour-intensive. Financial leverage, measured by the ratio of total non-risk-weighted assets to equity, is instead significantly lower than that of other European banks, at 14.4 and 24.6 per cent, respectively, on average over the period. The profitability differential persists, however, even when gauged by an indicator not directly influenced by leverage, namely return on assets, which averaged 0.21 per cent in Italy and 0.35 per cent in the other countries.

The Bank of Italy's quarterly econometric model was used to simulate the performance of Italian banks' main balance sheet items in some counterfactual scenarios with a ten-year horizon.¹ The scenarios were: (a) expansion of real GDP in Italy 1 percentage point greater than that observed in each year, corresponding to the growth differential with the euro area overall in the first three years of the period and therefore excluding the particularly unfavourable trend in Italy during the financial crisis; (b) a tax rate on profits 6 percentage points lower than the actual rate (in line with the taxation of other European banks); (c) growth in operating costs 1 percentage point less than actual growth each year, so as to reduce the cost differential with other European banks by more than one third, at the end of the simulation horizon.

The ratio of gross profits to capital would have been higher by more than 2 percentage points thanks to the reduction in operating costs and by 1.6 points due to greater economic growth (figure, panel c). Faster economic growth would have had a positive influence on the volume of lending and, above all, would have resulted in lower loan losses. By favouring capital accumulation and thereby permitting an expansion of the credit supply, lower taxation would have contributed indirectly to increasing gross profits through a stronger growth in loans.

The three scenarios would have generated overall extra net profits compared with the baseline scenario sufficient to produce an increase of more than 5 percentage points in the total regulatory capital as a ratio to risk-weighted assets (figure, panel d). The contribution of greater economic growth would have been 2.6 percentage points, while the reduction in costs and lower taxation would have contributed about 1.4 points each.

¹ For further details on methodology and results see U. Albertazzi, A. Notarpietro and S. Siviero, 'An inquiry into the determinants of the profitability of Italian banks', Questioni di Economia e Finanza (Occasional Papers), No. 364, Banca d'Italia, 2016.

5 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

5.1 INSURANCE¹

Market assessments worsen... Financial market uncertainty and slower economic growth have adversely affected the share prices and profit expectations of Italian insurance companies (Figure 5.1). Macroeconomic, real and financial risks now weigh more heavily

in investors' evaluations than the typical strengths of Italy's insurance industry: good current profitability, financial solidity, and limited vulnerability to low interest rates.



Source: Based on data from Thomson Reuters Datastream.

(1) Daily data. – (2) Average, weighted by the number of shares in circulation, of expected earnings per share in the 12 months following the reference date of the main Italian and euro-area insurance companies. For Italy the data refer to the following companies: Assicurazioni Generali, Mediolanum Assicurazioni, Società Cattolica Assicurazioni, UGF Assicurazioni and Vittoria Assicurazioni; for the euro area the data refer to the main companies included in the Datastream insurance sector index.

... but profitability is still good ... Balance sheet data for the first half of 2016 indicate that the earnings of Italian insurance companies have remained at last year's level: ROE in the life sector averaged 5.9 per cent (Figure 5.2.a) and was highest for large companies. In the non-life sector, the combined ratio remains low (Figure 5.2.b).

... and their financial position is still sound In June 2016 the solvency margin, which is only available for large groups, was well in excess of the minimum capital requirement (Figure 5.2.c). The small decrease in its average value with respect to the previous half-year was due to the slight drop in the market value of Italian government securities, which form the bulk of insurance

¹ This chapter uses for the first time the new methods of valuation of insurance firms' solvency requirements set out in Directive EC/2009/138 (Solvency II).

Figure 5.2 Main indicators for Italian insurance companies (per cent) (a) ROE (1) (b) Combined ratio of non-life sector (2) (c) Solvency ratio (3) Non-life sector Life sector 20 120 20 120 20 300 300 15 15 15 110 110 250 250 10 10 10 100 100 200 200 ٠ 5 5 5 -٠ 90 90 150 150 0 0 0 80 100 - 5 -5 80 100 2013 2014 2015 2015 2016 2013 2014 2015 2015 2016 2013 2014 2015 2015 2016 Jan. '16 June '16 H1 H1 H1 H1 H1 H1 Interguartile range Mean (4) Median

Source: IVASS.

(1) Ratio of earnings to shareholders' equity. Data for the half-years are not annualized. - (2) Ratio of incurred losses plus operating expenses to premium income for the period. - (3) Ratio of own funds held for coverage to the solvency capital requirement. The data relate only to companies subject to financial stability disclosure requirements, i.e. groups and non-group companies with assets in excess of $\in 12$ billion. - (4) Calculated for the whole system. For the solvency ratio see note (3).

companies' assets. The quality of their capital is generally high: in June, 84 per cent of the total own funds held to cover the capital requirement were tier 1 (Figure 5.3), which is well above the 50 per cent minimum laid down by Solvency II.

The risks associated with low interest rates are limited

Low interest rates for a protracted period of time pose a considerable risk for Europe's insurance industry.²

The impact on the balance sheets of Italian companies has been less marked because of the good matching of yields and maturities between balance sheet assets and liabilities (see the box 'Survey of life insurance companies' exposure to interest rate risk', *Financial Stability Report*, No. 6, 2013). The increase in the percentage of policies with guaranteed return has been offset by a reduction in the guarantees offered on new policies and has not had any significant effect on the interest rate risk of insurance companies. According to the



Source: IVASS.

(1) Own funds are divided into 3 levels (tier 1, tier 2 and tier 3) based on their degree of subordination, i.e. the extent to which they can be used to absorb losses given the obligations to policyholders and insurance and re-insurance contract beneficiaries, as well as on the match between their maturity and that of liabilities.

periodic survey on guaranteed life insurance policies carried out by IVASS, the insurance supervisory authority, the amount of additional provisions needed to cover the risk of failure to honour commitments to policyholders – which is a measure of the risk stemming from low interest rates – is just 0.4 per cent of mathematical provisions. Since 2013 that value has increased by barely 0.1 percentage points while the

Figure 5.3

² IMF, Global Financial Stability Report, October 2016.

risk-free interest rate curve has shifted sharply downwards. The mathematical provisions for policies with a guaranteed return of 1 per cent or less have continued to rise and now amount to 45 per cent (Figure 5.4); those for policies with a guaranteed return of over 2 per cent amount to less than one fifth and are declining.

The credit risk of investments is low

Insurance companies concentrate their investments in liquid and low risk assets (Figure 5.5.a). Government

securities account for about 60 per cent of the total and private sector bonds, virtually all investment grade, for 19 per cent, more than half of which issued by non-financial companies (Figures 5.5.b and 5.5.c). Investments in bonds of unlisted companies (minibonds), purchased either directly or through securitization vehicles or investment funds, amount to less than €300



Source: IVASS.

million. To date no insurance company has lent directly to a firm (see the box 'The new rules on lending to firms by non-bank intermediaries', *Financial Stability Report*, No. 2, 2014). Solvency II requires insurance companies to make internal assessments of their risks and solvency (see the box 'Insurance undertakings' own risk and solvency assessment').



Source: IVASS.

INSURANCE UNDERTAKINGS' OWN RISK AND SOLVENCY ASSESSMENT

The new Solvency II regulatory regime requires that insurance undertakings institute an internal risk management system that includes a procedure for own risk and solvency assessment (ORSA).

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This procedure enables each company to estimate its future overall solvency needs,¹ taking into account its specific risk profile, the risk tolerance limits approved by the board of directors, and the risk mitigation strategy. ORSA also serves as a supervisory tool for determining the undertaking's ability to identify and manage risk factors; it provides supervisors with undertakings' assessment of the most significant risks, most probable stress scenarios and their strategies.

As the sources of insurance risk that may have the greatest impact on profitability and capital requirements, Italian insurers specified: in non-life insurance, the insufficiency of premiums to cover the insurance obligations (non-life premium risk); and in life insurance, lapse risk. The main market risks identified by the undertakings were an increase in government and corporate bond spreads and an upward shift in the risk-free interest rate curve (Table).

Markets risks indicated by insurance undertakings in their assessments									
RISK FACTOR	Scenario range (1)	Most frequent values							
Government bond spread	-25/+200 basis points	+100 basis points							
Risk-free interest rate curve (2)	-100/+200 basis points	-50/100 basis points							
Share prices	-40/+20 per cent	-20/+20 per cent							
Corporate bond spread	+50/+200 basis points	+100 basis points							

(1) For each risk factor, the extreme values of the distribution as provided by the undertakings in the assessment. – (2) The risk-free interest rate curve is used by undertakings to calculate their obligations to policyholders (technical provisions).

The risk mitigation measures that undertakings intend to adopt include a shift to products offering lower guaranteed returns, investment diversification, and reinsurance. The digitization of agency networks is a key priority in combating the strategic risk connected with the spread of new technologies. Compared with previous assessments,² there was greater attention to operational risk, to be managed by contingency and business continuity plans. All the companies reported a solvency ratio target far above the regulatory minimum.

5.2 THE ASSET MANAGEMENT INDUSTRY

Subscriptions of investment funds remain positive	At a time when financial asset prices are fluctuating widely, net subscriptions of investment funds established by Italian groups are still positive, though they have diminished slightly (Figure 5.6).
The risks stemming	The risk that high levels of requests for redemptions could lead to the rapid
from investment	unwinding of portfolios is limited. In fact, Italian law requires funds that

in illiquid assets invest a large proportion of their wealth in illiquid assets to be established as closed-end funds, which means that units cannot be redeemed ahead of maturity. These funds, which represent 6 per cent of total assets under management, are mainly in the property and, to a lesser extent, private equity

are modest

^{&#}x27;Overall solvency needs', a notion introduced by Solvency II, designates the entire set of risk management measures, including capital buffers, that the insurance undertaking deems necessary.

In 2014 and 2015 insurers conducted forward-looking risk analyses similar to ORSA, such as the Forward Looking Assessment of Own Risks (FLAOR).





(1) Funds based in Italy and abroad, managed by asset management companies belonging to Italian groups. – (2) The data on money market funds for the first two quarters of 2016 include a number of operations for large amounts by institutional investors. If these operations are excluded, net total subscriptions in the two quarters came to €6.3 and €5.4 billion respectively.

segments; those that invest in minibonds or are specialized in direct lending continue to account for a very small amount of the industry's total assets.

(1) Italian funds only

The portfolios of open-end funds and of individual management services, which place no restrictions on the redemption of units, mainly comprise securities traded on regulated markets, such as government securities and listed shares (Figure 5.7). The proportion of privately issued bonds, generally characterized by limited liquidity, has stabilized at around 20 per cent. The degree of concentration of the individual exposures is modest overall.



Source: Supervisory reports.

(1) Ratio of profits to the average of net assets at the end of the reference year and of the previous year. The six-monthly data on reserved funds refer to a sample of the main funds. – (2) Ratio of total assets to net asset value. – (3) Calculated for the whole system. For the six-monthly data see note (1).

Source: Assogestioni.

The profitability of real estate investment funds remains low ...

In the property fund segment, the write-downs of the assets of some retail funds following lower than expected realization values continue to weigh on the sector's profitability (Figure 5.8.a). Looking ahead, the disappointing results could have a negative reputational impact on fund managers. The improvement in the forecasts

for the real estate sector (see Section 1.3) has nonetheless stoked the appetite of international investors, which in recent months have submitted public tenders for the purchase of some listed funds.

... but systemic tensions abate ...

The average indebtedness of retail real estate funds has continued to decline, while it is practically unchanged for those reserved to qualified investors, where the riskiest initiatives from an industrial viewpoint are concentrated (Figure 5.8.b).

While solvency conditions remain difficult for some funds, the data on financial inflows and outflows point to a gradual attenuation of financial tensions at systemic level, owing above all to the low leverage of newly-established funds.