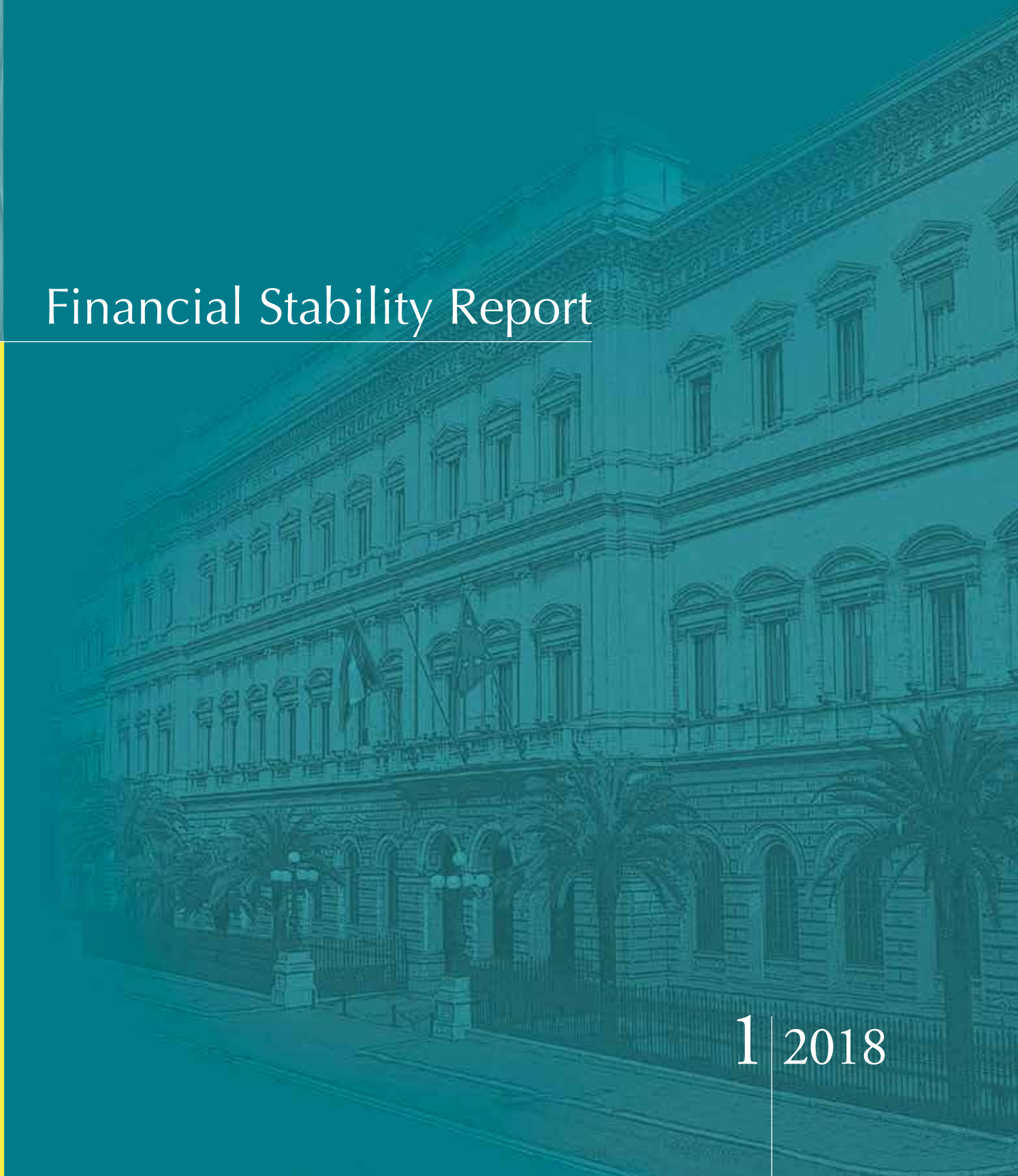
BANCA D'ITALIA
EUROSISTEMA

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

For the abbreviations of the names of European countries used in this publication please refer to the EU's *Interinstitutional Style Guide* (http://publications.europa.eu/code/en/en-000100.htm).

Starting with this issue, the *Financial Stability Report* contains a statistical appendix, which includes some tables previously incorporated in the main text.

OVERVIEW

Robust global economic growth is lessening the risks to financial stability. The stock and bond markets, however, seem very exposed to unexpected economic and geopolitical events, which could trigger potentially large fluctuations in securities prices like those recently experienced.

The Eurozone banking sector continues to strengthen despite large differences between individual institutions. The risks attached to the United Kingdom's exit from the European Union have abated since the understanding on the transition period was reached, although ratification of a full agreement is still a source of uncertainty, as are the future arrangements for access to the financial infrastructure and markets.

In Italy the impact of a possible rise in interest rates on the average cost of government securities would be mitigated by the latter's high average residual maturity. Nevertheless, Italy's large public debt makes the economy vulnerable to severe tensions on the financial markets and to any downward revisions of projected growth.

Italian households are financially sound. Their debt is low, and rising disposable income and low interest rates are helping to ensure its sustainability. Their financial vulnerability would remain limited even with an unfavourable trend in income and a sharp rise in interest rates. The economic recovery is supporting corporate profitability and making businesses less vulnerable. Nevertheless, fragilities persist among small firms and in the construction sector, which has a high level of debt and a persistently low level of activity.

The quality of bank credit is steadily improving. Flows of new non-performing loans are back to pre-crisis levels. The proportion of NPLs in banks' balance sheets is falling sharply, especially among the banks that have made large-scale disposals, though it is still substantial for many institutions. The completion of several capital increases has narrowed the gap in capital strength with respect to the average for the other European countries.

Bank profitability is improving, but it is still very poor for many small and medium-sized banks. The need to increase revenue and reduce running costs has become more pressing in view of the upcoming introduction of the MREL, which could significantly raise funding costs.

The solvency ratios for Italian insurance companies have increased. The phase of low interest rates had less impact on them than on insurers in other countries. They are proceeding with the diversification of their financial investments, but are still susceptible to the risks associated with a potential worsening of tensions on the sovereign debt markets.

The steady growth in assets under management entails limited risk for financial stability: the asset and liability liquidity matching of investment funds is good and the highly leveraged funds tend to be small in size.

1 MACROECONOMIC RISKS AND RISKS BY SECTOR

1.1 MACROECONOMIC RISKS

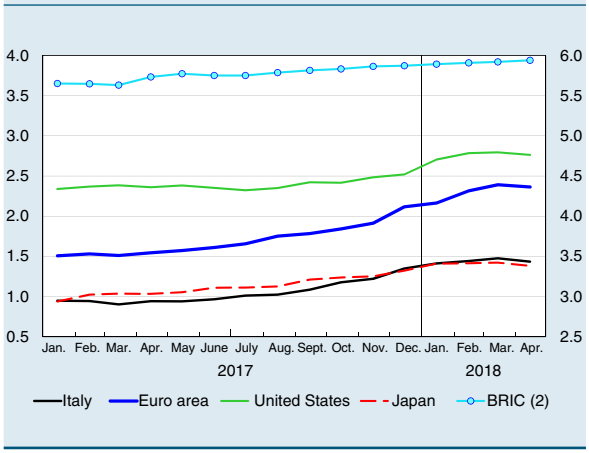
Global and Eurozone risks

The improved outlook for growth (Figure 1.1) is mitigating the risks to global financial stability. Although market volatility has increased (Figure 1.2.a), liquidity is abundant and risk premiums low, partly because so far the rise in long-term interest rates has been gradual. However, the prices of financial assets remain subject to the risk of sizeable fluctuations.

Risk premiums on corporate bonds are well below their long-term average values (Figure 1.2.b). In several of the advanced and emerging countries, low interest rates have paved the way for an increase in borrowing by non-financial companies, especially those with a fairly mediocre credit rating.[1] If long-term interest rates were to rise at a faster pace, this could make refinancing more difficult for the most heavily indebted firms, with repercussions for both investors and financial intermediaries.

Figure 1.1

GDP growth forecasts for 2018 (1)
(monthly data; per cent)



Source: Based on Consensus Economics data.
(1) Forecasts made in the month 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 2016 at purchasing power parity.

On the stock markets, risk premiums are close to their long-term averages in the United States, but in Europe they are considerably higher (Figure 1.2.c). There are no evident signs of share price overvaluation, but unexpected macroeconomic events might unleash sudden price drops and volatility increases similar to those recorded in the US in February (see the box 'Increased volatility in the financial markets', *Economic Bulletin*, 2, 2018). Heightened geopolitical and commercial tensions could weaken investor confidence.

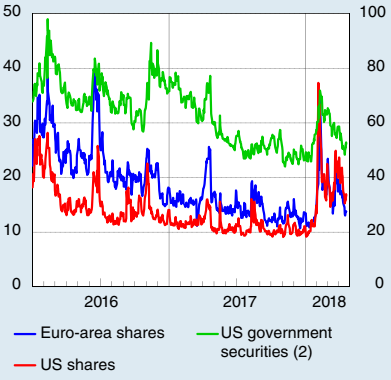
The volatility of crypto-assets has increased considerably. Their value reached about €660 billion at the beginning of 2018 (just under 1 per cent of total world-wide stock market capitalization), later falling to half that figure in a matter of weeks. The volume of transactions involving them, however, is not large enough to trigger major risks to financial stability, which may nonetheless increase as the market develops (see the box 'The spread of crypto-assets and the implications for financial stability').

[1] IMF, *World Economic Outlook*, April 2018 and IMF, *Global Financial Stability Report*, April 2018.

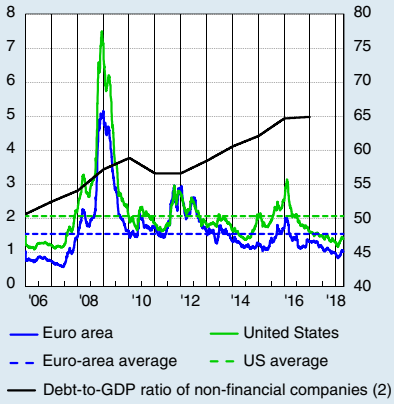
Figure 1.2

Stock and bond market indicators
(daily data)

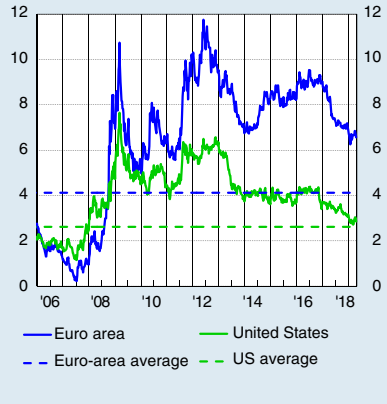
(a) Volatility implied by stock index and government security options (1)
(indices and basis points)



(b) Bond spreads (3)
(percentage points per cent)



(c) Estimates of share risk premiums (4)
(percentage points)



Sources: ICE Bank of America Merrill Lynch, IMF and Thomson Reuters Datastream.
(1) VIX for US stocks, VSTOXX for euro-area stocks and MOVE for US government securities. – (2) Right-hand scale. – (3) Spreads are on BBB rated bonds issued by non-financial companies. The dashed lines indicate the averages of spreads from 2000 to 2018. The debt-to-GDP ratio of non-financial companies relates to the group of G20 countries. – (4) For S&P 500 (US) and Datastream EMU Total Market (Eurozone), ratio of the 10-year moving average of earnings per share to the value of the stock index (both at constant prices). We deduct from the resulting ratio, which is an estimate of the expected real return on the shares, the real return on inflation-indexed 10-year government bonds to obtain an estimate of the share risk premium. The dashed lines indicate the averages of the risk premiums from 1993 to 2018.

THE SPREAD OF CRYPTO-ASSETS AND THE IMPLICATIONS FOR FINANCIAL STABILITY

The term crypto-assets indicates digital assets that are transferred using cryptography and distributed ledger technology.[1] Some of them, such as Bitcoin, are commonly known as virtual currencies, even though they do not perform the same economic functions that money does (see the boxes 'The opportunities and risks of blockchain technology', *Financial Stability Report*, 2, 2016 and 'The diffusion and risks of virtual currencies: the case of Bitcoin', *Financial Stability Report*, 1, 2014).

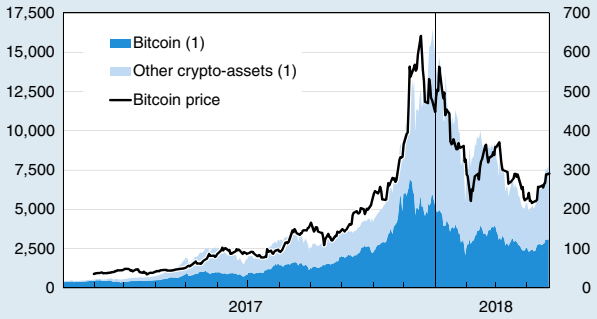
The global market for crypto-assets is very small, although it has grown considerably over the last few years. It is estimated that the number of crypto-assets has more than tripled since the beginning of 2017, rising from around 500 to over 1,600; their market value has more than doubled, to around €310 billion, though this is less than 0.5 per cent of global stock market capitalization. Bitcoin accounts for nearly half of the total value of crypto-assets (see panel (a) of the figure). Various online platforms for buying and selling these assets have been set up to operate in Italy too.

Technological limitations currently make the use of crypto-assets inefficient as a means of payment. Their use for wholesale payments is hindered by uncertainty over the cost of individual transactions and over the time they take to be settled. Far fewer retail payments can be made with these assets than those using other payment systems. Bitcoincash is a crypto-asset created specifically to allow a high number of transactions, around 60 per second, while a traditional payment card scheme can normally handle

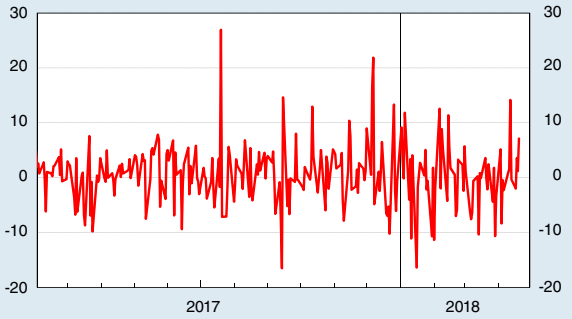
[1] Distributed ledger technology is used to store and share information in a way generally considered secure, such as the transfer of a good or asset between several parties. The best-known distributed ledger technology is the block chain, in which data is stored in 'chains of blocks'.

The crypto-assets market

(a) Value of the crypto-assets market
(euros and billions of euros)



(b) Daily changes in the price of Bitcoin
(per cent)



Sources: Based on Bank of Italy and CoinMarketcap data.
(1) Right-hand scale.

2,000 payments per second and can exceed over 50,000 payments per second. The extreme volatility of their prices (see panel (b) of the figure) makes it impractical to use these assets, even as a store of value or a unit of account.

Crypto-assets confer no economic rights (such as the payment of coupons and dividends) and do not constitute a liability. For these reasons, crypto-asset purchases are predominantly driven by expectations of price increases, a mechanism typical of speculative bubbles.[2] The fact that holders of crypto-assets are guaranteed anonymity also means they are used for illegal purposes, including money laundering and the financing of terrorism.[3]

Although distributed ledger technology can provide benefits to the economy (e.g. if applied to clearing and settlement of financial asset purchases), crypto-assets carry several risks, especially for investors, who may incur substantial losses.[4] These risks could have implications for financial stability if the crypto-asset market became significant in size or if banks were to become exposed to such assets, which would also expose them to reputational risk.

In light of the market's rapid growth, the Financial Stability Board (FSB) has recently underlined that the risks for financial stability stemming from crypto-assets, although they currently seem limited, could increase very suddenly. In order to avert the potential systemic consequences of an excessive growth in the value or the use of these assets, the FSB has launched a risk analysis and monitoring plan as a precautionary measure, in cooperation with the national authorities of member countries.[5]

The Bank of Italy discourages banks from purchasing, selling or holding virtual currencies.[6] It has also published information to clarify the main risks to consumers and small investors stemming from their

[2] E.T. Chean and J. Fry, 'Speculative bubbles in Bitcoin markets? An empirical investigation into the fundamental value of Bitcoin', *Economics Letters*, 130, 2015, pp. 32-36.

[3] FATF, 'Virtual Currencies: Key Definitions and Potential AML/CFT Risks', June 2014.

[4] N. Gandal, J.T. Hamrick, T. Moore and T. Oberman, 'Price manipulation in the Bitcoin ecosystem', *Journal of Monetary Economics*, forthcoming; A. Cheung, E. Roca and J. Su, 'Crypto-currency bubbles: an application of the Phillips–Shi–Yu (2013) methodology on Mt. Gox bitcoin prices', *Applied Economics*, 47, 23, 2015, pp. 2348-2358.

[5] FSB, '[FSB Chair's letter] to G20 Finance Ministers and Central Bank Governors', 13 March 2018.

[6] Banca d'Italia, Comunicazione del 30 gennaio 2015. Valute virtuali, Bollettino di Vigilanza, 1, 2015.

use, as have the three European financial authorities (the European Banking Authority, the European Securities and Markets Authority and the European Insurance and Occupational Pensions Authority).[7]

[7] Banca d'Italia, 'Avvertenza sull'utilizzo delle cosiddette "valute virtuali"', 30 January 2015 and Banca d'Italia, 'Avvertenza per i consumatori sui rischi delle valute virtuali da parte delle Autorità europee', 19 March 2018.

In Europe, agreement on some aspects of the UK's withdrawal from the EU has for the time being alleviated uncertainties about the outcome of the negotiations. The understanding provides, among other things, for a transition period lasting until December 2020, during which the UK will continue to be part of the single market. However, there is still some uncertainty about the ratification of the agreement, as well as about the conditions for reciprocal access to the financial infrastructure and markets, which is yet to be decided.

The profitability and capital strength of Europe's banking sector are improving, although some areas of vulnerability remain. Bad loans weigh less heavily on banks' balance sheets, although their level is still high in the countries that experienced the worst recessionary phases. Some banks are subject to significant market risk.

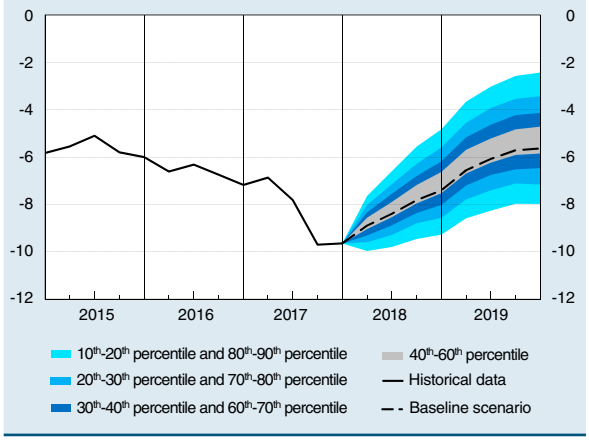
Macrofinancial conditions in Italy

The financial situation of households and firms continues to strengthen in Italy (see Section 1.2) and the risks for the banking sector are diminishing (see Section 2.2). The debt sustainability indicators point to generally sound and improving conditions (see Table A1 in *Selected Statistics,*). Private sector debt is one of the lowest in the Eurozone; Italy's net international investment position has improved significantly in the last three years, going from -25 to around -7 per cent of GDP.

Bank lending is increasing at a moderate pace and firms are turning more to the bond market, although the financial cycle is still weak. The credit-to-GDP gap remains markedly negative, by about 14 percentage points when calculated using the methodology recommended by the Basel Committee and 10 points according to the Bank of Italy's model, which factors in the specific nature of the country's financial cycle.[2] Our projections are consistent with the latest macroeconomic developments and with the forecasts published in January's Economic Bulletin; they indicate that bank lending to the non-financial sector will increase in the current year and then stabilize in 2019. The credit-to-GDP gap is nevertheless expected to stay negative, even if credit growth were to accelerate much faster than forecast (Figure 1.3).

Figure 1.3

Credit-to-GDP gap in Italy (1)
(quarterly data; percentage points)



Sources: Based on Bank of Italy and Istat data.
(1) The projections do not take account of any securitizations that could make the gap more negative. The probability distribution of the projections, shown here by percentile classes, makes it possible to assess the size of the risks that characterize the baseline scenario. The distribution takes account of asymmetric shocks to the main risk factors, using the procedure described in C. Miani and S. Siviero, 'A non-parametric model-based approach to uncertainty and risk analysis of macroeconomic forecasts', Banca d'Italia, Temi di Discussione (Working Papers), 758, 2010.

[2] For the methodology see P. Alessandri, P. Bologna, R. Fiori and E. Sette, 'A note on the implementation of a countercyclical capital buffer in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 278, 2015.

The public finances continued to strengthen in 2017 as the ratio of general government net borrowing to GDP narrowed. The decrease in the debt-to-GDP ratio, to 131.8 per cent, was nevertheless only marginal (see *Economic Bulletin*, 2, 2018) and the ratio continues to be high by international standards as well as compared with the past. Because of the high average residual maturity of government securities, any increases in interest rates would have less impact on their average cost: the public finances would not be affected as long as the rate increase was in line with the improvement in growth and the commitment to strengthening the budget was respected.[3] The high level of debt makes the Italian economy vulnerable to financial market tensions or downward revisions of projected growth.

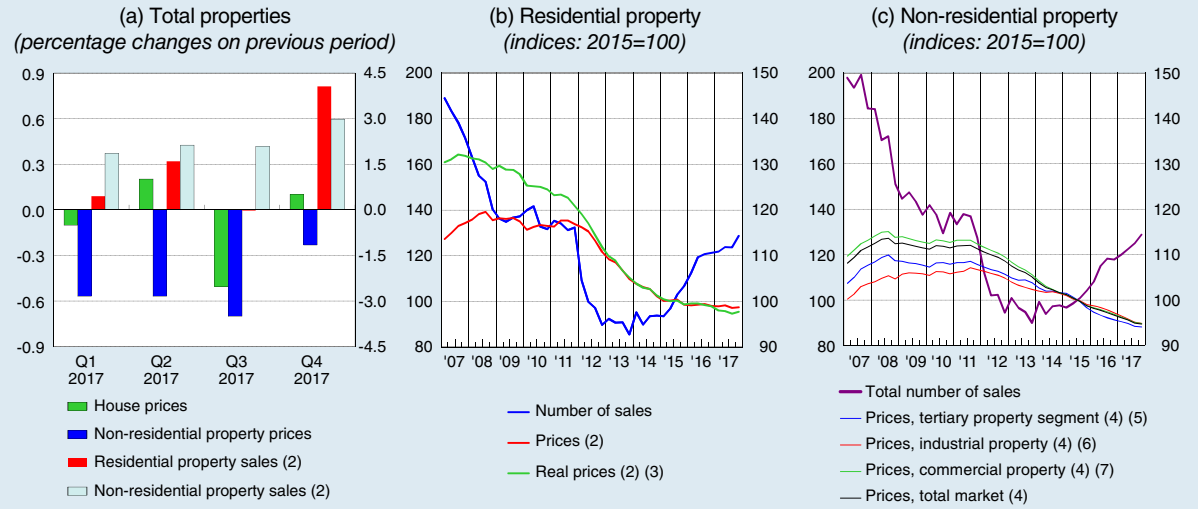
Real estate markets

House prices are still rising in almost all the main European countries, with area-wide values now above those recorded before the crisis. The non-residential market, too, is enjoying a phase of rapidly rising prices. To keep the potential risks to financial stability in check, new macroprudential measures have been introduced in Denmark, Finland, Ireland, Portugal, Slovakia and Sweden, and Belgium has also announced it will take action.[4]

In Italy, the real estate cycle still remains weak. House and non-residential property prices fell again in 2017 (Figure 1.4). The large stock of unsold homes is diminishing slowly, despite the increase in the number of sales. We project that house prices will pick up only slightly in 2018, despite robust demand. Construction companies expect to increase their investment this year (see 'Survey on inflation and growth expectations', Banca d'Italia, Statistics Series, 9 April 2018).

Figure 1.4

The property market in Italy (1)
(quarterly data)



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. The index was developed by the Bank of Italy and 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.

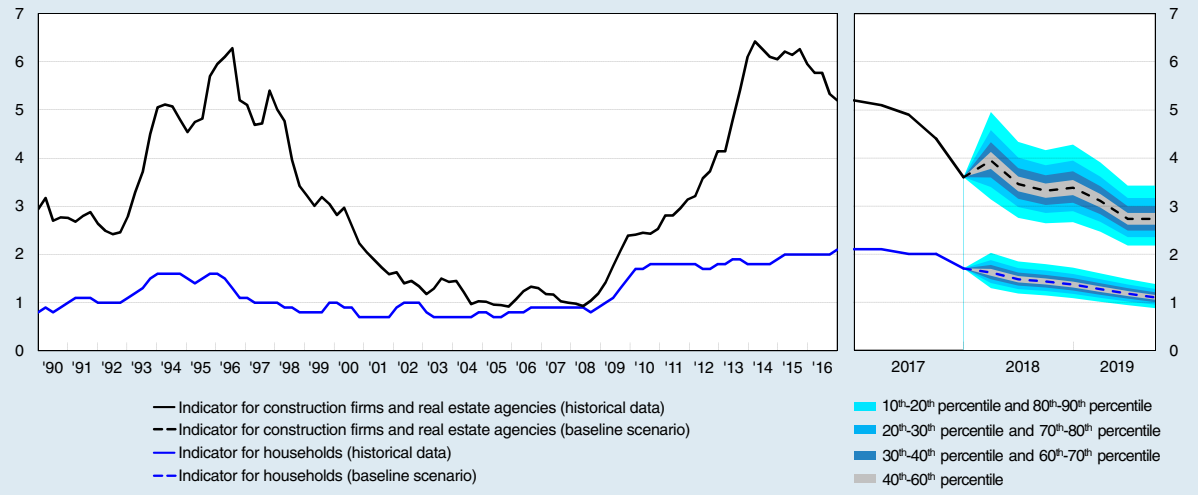
[3] Speech by the Governor of the Bank of Italy Ignazio Visco, at the 24th Assiom-Forex Congress, Verona, 10 February 2018; see also 'La politica monetaria nell'area dell'euro: passato, presente e futuro prossimo', Speech by the Deputy Governor of the Bank of Italy Fabio Panetta, Conference in memory of Giacomo Vaciago, Milan, 6 April 2018 (English forthcoming).

[4] For details of all the measures, see the ESRB website, National measures of macroprudential interest in EU/EEA.

The risks for banks stemming from the real estate market are gradually abating. Over 2017 the flow of new loans classified as bad debts decreased for households as well as for construction companies and real estate agencies. We forecast that the vulnerability indicators will continue to decrease over the coming quarters (Figure 1.5).

Figure 1.5

Indicators of banks' vulnerability stemming from the real estate market (1)
(quarterly data; per cent)



(1) Banks' vulnerability is measured by the ratio of the flow of new bad debts in the last 4 quarters to the average of the 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 median forecast (baseline scenario). 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), 323, 2016.

1.2 HOUSEHOLDS AND FIRMS

Households

The financial situation of households remains sound. Debt continues to be stable in relation to disposable income and is very low by international standards (Figure 1.6.a). The share of debt held by the most vulnerable households remains lower than in the past.

Loans for house purchase are increasing in response to the recovery in real estate market transactions and the favourable credit conditions offered by banks. Interest rates on mortgages continue to fall (Figure 1.6b). Households are also benefiting from this by renegotiating the terms of outstanding loans: in 2017 they either refinanced or renegotiated about 6 per cent of loans. The share of fixed rate mortgages has risen by more than 10 percentage points over the last three years, to 37 per cent of the stock, lessening the exposure to the risk of future increases in interest rates.

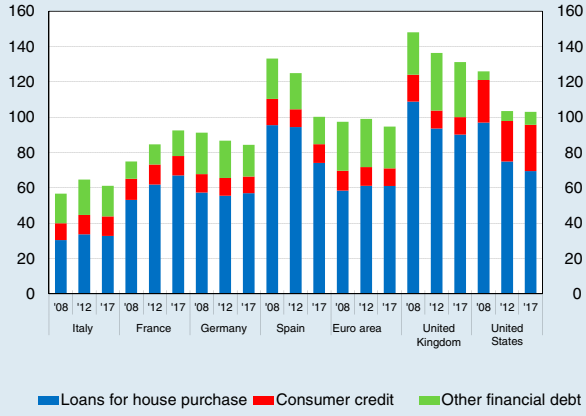
Consumer credit continues to grow, following a trend under way since the end of 2015. The increase is greater for loans for durable goods and services, with a lower probability of default than other forms of loans.[5] In addition, consumer credit is more common among households with an income greater than the median which held around two thirds of this debt in 2016, more than 10 percentage points higher than in 2008.

[5] According to the private central credit register Crif SpA, the average new non-performing loan rate for earmarked loans has been 1.5 per cent over the last five years, against 3.5 per cent for personal loans (Osservatorio sul credito al dettaglio, December 2017).

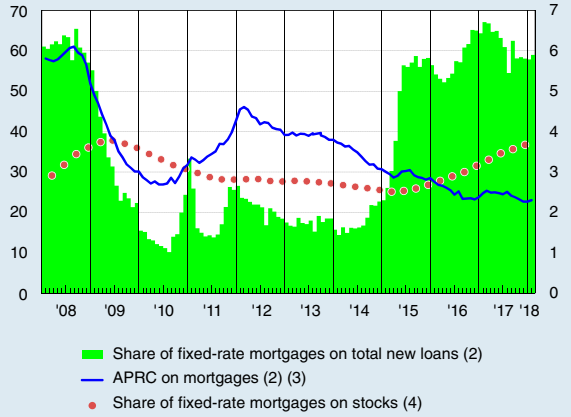
Figure 1.6

Indicators of household indebtedness

(a) Financial debt (1)
(per cent of gross disposable income)



(b) Interest rates, disbursement and stock of fixed-rate mortgage loans
(monthly and quarterly data; per cent)



Sources: Bank of Italy and Istat for Italy, ECB for euro-area countries, Office for National Statistics and Bank of England for the United Kingdom, Federal Reserve System - Board of Governors and Bureau of Economic Analysis for the United States.
(1) Data relate to consumer and producer households and include bad loans; for the United States the figure relates to consumer households only. End-of-year data; the data for 2017 relate to Q3. – (2) Consumer and producer households and non-profit institutions serving households; data relate to new mortgage loans. – (3) Right-hand scale. Annual percentage rate of charge. – (4) Data relate to consumer households only.

Low interest rates and the growth in disposable income are reducing debt repayment difficulties. The default rate is stable at the minimum level that has been observed for over ten years, both for consumer loans (1.7 per cent on an annual basis)[6] and for those for a larger sum (1.2 per cent). The ratio of non-performing loans to total loans has declined to 8.7 per cent.

The projections of the Bank of Italy's microsimulation model[7] indicate that at the end of 2018, with a scenario consistent with the latest macroeconomic forecasts,[8] the share of vulnerable households and the ratio of their debt to the total would be 1.8 and 11.4 per cent respectively, similar to the figures estimated for 2017 and far lower than those recorded in 2008 (3.1 and 24.2 per cent).

Financial vulnerability is expected to remain limited even with a significant hike in interest rates and poor performance of income. If interest rates were 100 basis points[9] over the consensus scenario, the share of debt held by vulnerable households would increase to 12.4 per cent. In a particularly adverse scenario, characterized by a rise in interest rates of 200 basis points and a decline of 4 percentage

6 Assofin, CRIF SpA and Prometeia, Osservatorio sul credito al dettaglio, December 2017.

7 The microsimulation model is based on the Survey on Household Income and Wealth (SHIW) and on the Bank of Italy's forecasts for the macroeconomic variables. For details on the microsimulation model, 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, also published by the Bank of Italy, Questioni di Economia e Finanza (Occasional Papers), 225, 2014. Compared with the projections published in the last Financial Stability Report, the actual data for 2016 taken from the latest Survey on Household Income and Wealth indicate a sharp drop in the share of debt held by vulnerable households. Households are considered vulnerable when their debt-service ratio is above 30 per cent and their disposable income is below the median of the distribution.

8 The baseline scenario is characterized by virtually unchanged interest rates and by a growth in households' disposable income and debt for house purchase.

9 The difference between the baseline scenario and the stress scenario is equal to one standard deviation of the annual change in the interest rate.

points in the growth rate of nominal income,[10] the share of vulnerable households' debt would go up to 13.4 per cent. The households with the greatest difficulties in stress scenarios are primarly those in southern Italy and younger households paying a mortgage.

The soundness of household budgets strengthens due to the holding of low-risk financial assets that are easy to liquidate. In 2017, per capita gross financial wealth exceeded €70,000, a figure slightly lower than the pre-crisis peak.[11] Households continue to rebalance their portfolios: deposits and asset management products (mainly units of mutual funds) are increasing and the large volumes of maturing bank bonds are still not being renewed.

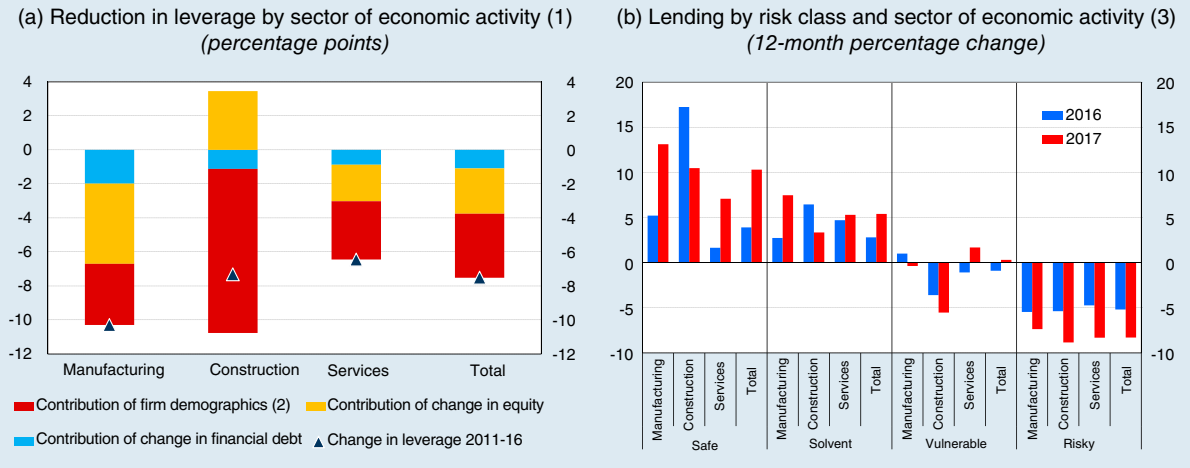
Firms

The consolidation of the recovery in economic activity is supporting firms' profitability and attenuating their vulnerability. Low interest rates and a reduction in debt are helping to bring down the ratio of net interest expense to gross operating income, which reached a twenty-year low. Areas of fragility persist among small firms and those operating in construction.

Profitability, which is rising moderately, is driving the accumulation of liquid assets and contributing to capital strengthening. Leverage decreased to 40 per cent, about 2 percentage points above the euro-area average and higher than in France and Germany (32 and 37 per cent respectively). After peaking in 2011, leverage contracted the most among manufacturing firms, which allocated a significant portion of their profits to equity (Figure 1.7.a). In the construction sector the losses incurred during the crisis eroded shareholders' equity considerably, and the reduction in indebtedness was almost exclusively

Figure 1.7

Indicators of firms' financial situation



Sources: Bank of Italy and Cerved.
(1) Based on annual samples of over 550,000 limited companies on average. Leverage is calculated as the ratio of financial debt to the sum of financial debt and shareholders' equity, at book values. – (2) Net contribution of firms entering and exiting the sample in the reference period. – (3) The data refer to a sample of over 400,000 limited companies. Loans include those granted by financial companies and are adjusted for securitizations. Allocation into the risk groups is based on Cerved's CeBi-Score4 indicator.

[10] The differences compared with the baseline scenario correspond to variations in excess of those recorded in the past and are equal to two standard deviations of the annual changes in the interest rate and in income.

[11] Data deflated using the harmonized index of consumer prices (indices: 2017=100).

the result of the most fragile firms' exit from the market; about 36 per cent of construction firms still have a leverage higher than 75 per cent, a larger share than that of manufacturing and service firms (27 and 32 per cent respectively).

Following two years of basic stability, business lending by banks and financial companies turned upward again. The expansion in credit is connected to the acceleration in investment underway since the second half of last year (see *Economic Bulletin*, 2, 2018). Already in 2016, the firms that had increased their recourse to bank debt made it a priority to allocate new funds to fixed capital investment (Figure 1.8).

The heterogeneity of lending by risk class and sector of economic activity is increasing (Figure 1.7.b). Lending is accelerating only for firms in sound condition operating in manufacturing and services; it is decreasing more sharply than in the past for riskier firms.

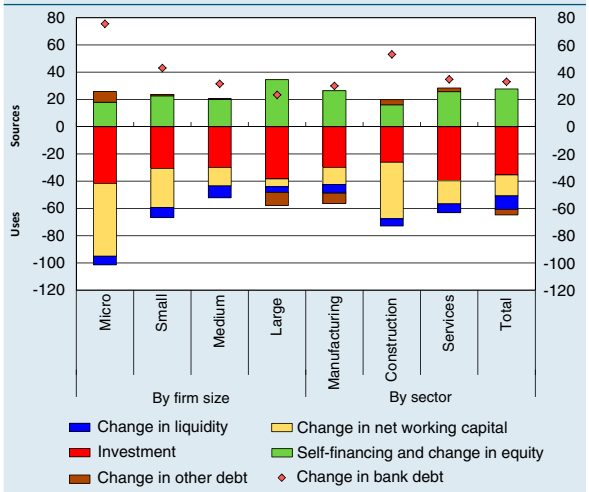
The sources of financing are increasingly diversified. In 2017 the net issues of corporate bonds carried out in Italy or abroad by Italian companies and groups exceeded €20 billion, compared with an average of just over €6 billion in the previous three years.[12] The number of first-time corporate bond issuers in 2017 was higher than in previous years. Most of them were medium-sized and large companies with a moderate risk profile. The volume of new issues also rose, as did recourse to the stock market (28 new listings, against 18 on average in the last three years).

The improvement in firms' financial situation has lessened debt repayment difficulties. According to the Bank of Italy's In-house Credit Assessment System (ICAS), between 2015 and 2017 the default probability decreased in all size groups. It remains highest for micro-firms (Figure 1.9). The number of bankruptcy proceedings fell for the third consecutive year.[13] The average yearly non-performing loan rate decreased to 3.2 per cent, from 4.1 per cent in 2016. The share of debt held by financially fragile firms dropped sharply compared with the pre-crisis period (see the box 'Financially vulnerable firms after the crisis').

Figure 1.8

Sources and uses of funds of firms that increased their bank debt in 2016 (1)

(annual flows as a percentage of value added)

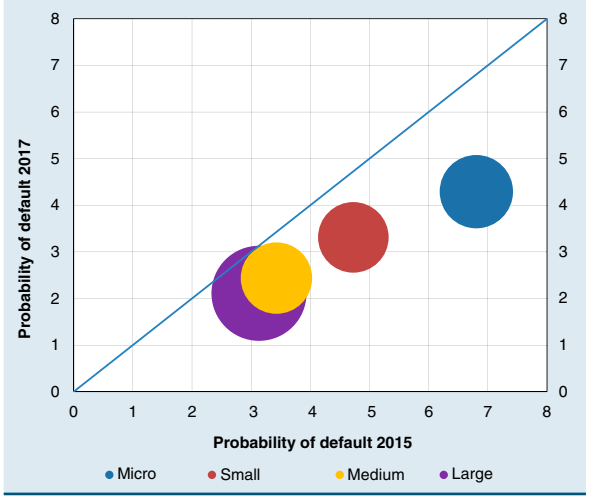


Source: Cerved.
(1) Data taken from the annual financial statements of a sample of more than 105,000 companies that increased their bank debt in 2016.

Figure 1.9

Firms' probability of default by firm size (1)

(weighted average; per cent)



Sources: Bank of Italy and Cerved.
(1) The size of the circle corresponds to the amount of loans issued to firms in each size class.

[12] The data on net issues are estimated on the basis of the original maturity of the securities.

[13] In 2017 there were about 12,000 bankruptcy proceedings, down by 11 per cent on 2016 (Cerved, 'Fallimenti, procedure e chiusure di imprese', 33, February 2018, only available in Italian).

FINANCIALLY VULNERABLE FIRMS AFTER THE CRISIS

According to the Bank of Italy's microsimulation model, financially vulnerable firms are those with negative gross operating income or whose ratio of net interest expense to gross operating income exceeds 50 per cent.[1] In 2007, on the eve of the prolonged recession that struck the Italian economy, around one third of the firms included in the sample analysed were classified as vulnerable; these firms' share of financial debts came to 44 per cent (see the table). At that time, financial vulnerability was growing as the average firm size was decreasing. The construction and real-estate services sectors were especially vulnerable, where the share of these firms' debts was greater than 60 per cent. The main factor of vulnerability was indebtedness, which was apparent in the high ratio of net interest expense to gross operating income: the debts of vulnerable firms for which this ratio exceeded 50 per cent accounted for around one third of total debts and over 70 per cent of those of all vulnerable firms.

Main indicators of vulnerable firms

	2007					2016				
	% of financial debt held by vulnerable firms	*of which:*		Leverage (1)	Profitability (2)	% of financial debt held by vulnerable firms	*of which:*		Leverage (1)	Profitability (2)
		Firms with gross operating income <0	Firms with net interest expense to gross operating income >50%				Firms with gross operating income <0	Firms with net interest expense to gross operating income >50%		
Size										
Micro	58.7	20.0	38.7	76.7	-1.6	44.8	23.8	21.0	65.6	-3.3
Small	52.6	12.0	40.6	75.3	0.2	34.5	15.7	18.8	61.8	-2.6
Medium	46.7	12.7	34.0	68.7	-0.3	29.0	13.9	15.1	62.2	-2.8
Large	33.3	8.5	24.8	52.0	0.1	26.2	9.2	17.0	50.8	-0.8
Sector										
Construction	63.4	11.4	52.0	77.9	1.5	57.6	24.0	33.6	70.5	-1.0
Real estate	66.9	13.9	52.9	70.8	1.5	40.1	15.1	25.0	61.7	-0.6
Manufacturing	39.0	11.5	27.5	67.7	-0.1	23.9	13.2	10.7	49.2	-2.6
Services	38.5	12.5	26.0	54.8	-1.7	22.8	11.7	11.1	61.0	-3.6
Other	20.4	10.5	9.9	62.0	-0.7	41.1	9.4	31.7	49.4	0.0
Total	**43.8**	**12.1**	**31.7**	**64.3**	**-0.3**	**30.6**	**13.1**	**17.5**	**56.8**	**-2.0**

Source: Based on Cerved data.
(1) Leverage is calculated as the ratio of financial debt to the sum of financial debt and shareholders' equity at book values. – (2) Ratio of gross operating income to total assets.

In 2016, the last year for which balance-sheet data are available, the share of vulnerable firms fell to 25 per cent of the total and the share of debts attributable to them decreased to 31 per cent. Vulnerable firms continue to account for a large proportion of micro- and construction firms, in sectors that are struggling to return to pre-crisis levels of activity.

Low interest rates and a marked reduction in leverage (more than 7 percentage points on average) have made indebtedness a less important determinant of vulnerability: the debts of firms whose ratio of net interest expense to gross operating income exceeded 50 per cent fell to 18 per cent of the total

[1] For both years considered (2007 and 2016), the sample includes more than 650,000 limited companies not classified as being in default by banks and for which balance-sheet data are available.

and to 57 per cent of the debts attributable to vulnerable firms. Low profitability, which has mainly affected micro-firms and the services sector, has instead become a more important factor. The debts of firms classified as vulnerable owing to negative gross operating income expanded to 13 per cent of total debts and to 43 per cent of those of all vulnerable firms.

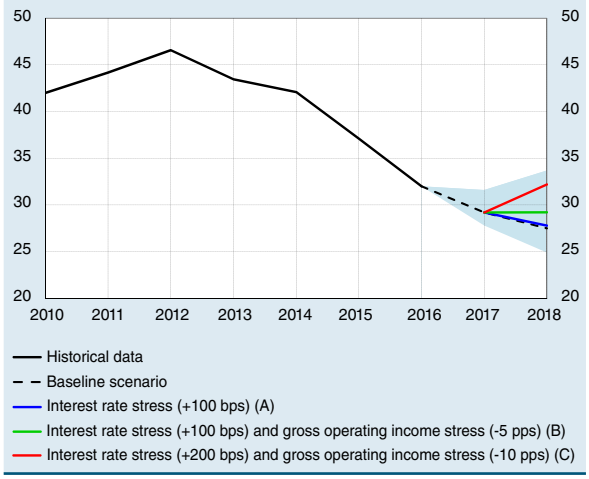
The risks to financial stability stemming from firms are now more broadly attributable to a slowdown in the economic recovery than to imbalances in their financial structure, which nonetheless persist for some categories.

The projections of the Bank of Italy's micro-simulation model indicate that, in a scenario consistent with the latest macroeconomic forecasts, the share of debt held by vulnerable firms will decrease to 28 per cent at the end of 2018 (Figure 1.10).[14] The less pronounced improvement than in previous years mainly reflects slower profitability growth. The share of debt at risk is projected to remain very high in construction (59 per cent).

At aggregate level, the share of debt owed by vulnerable firms would increase only in the case of a significant hike in interest rates and a sharp drop in profitability. If the interest rate were 100 basis points[15] higher than in the consensus scenario, the share of debt at risk would still decrease compared with the estimates for 2017; it would instead climb to 32 per cent in an especially unfavourable scenario in which interest rates rose by 200 basis points and the rate of growth of nominal gross operating income fell by 10 percentage points.[16] Medium-sized firms and those operating in the manufacturing sector would be the most exposed.

Figure 1.10

Share of debt held by vulnerable firms (1)
(yearly data; per cent)



Source: Based on Cerved data.
(1) Vulnerable firms are those whose gross operating income is negative or whose ratio of net interest expense to gross operating income exceeds 50 per cent. The latest available annual financial statements refer to 2016. The shaded area indicates a confidence interval of 95 per cent around the baseline scenario. The assumptions underlying the stress scenarios are that, compared with the baseline scenario, in 2018: (A) the interest rate will be higher by 100 basis points; (B) the interest rate will be higher by 100 basis points and the growth rate of nominal gross operating income will be lower by 5 percentage points (becoming negative compared with 2017); and (C) the interest rate will be higher by 200 basis points and the growth rate of nominal gross operating income will be lower by 10 percentage points.

[14] For further details on the microsimulation model, see A. De Socio and V. Michelangeli, 'A model to assess the financial vulnerability of Italian firms', Journal of Policy Modeling, 39, 2017, 147-168, also published as 'Modelling Italian firms' financial vulnerability', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 293, 2015.

[15] An increase in the cost of debt equal to 100 basis points corresponds to just over one standard deviation of its annual change and exceeds the increases observed in 2007 and 2011.

[16] These differences compared with the baseline scenario correspond to variations above those recorded in the past. Namely, they are equal to just over two standard deviations of the annual change in the interest rate and in gross operating income.

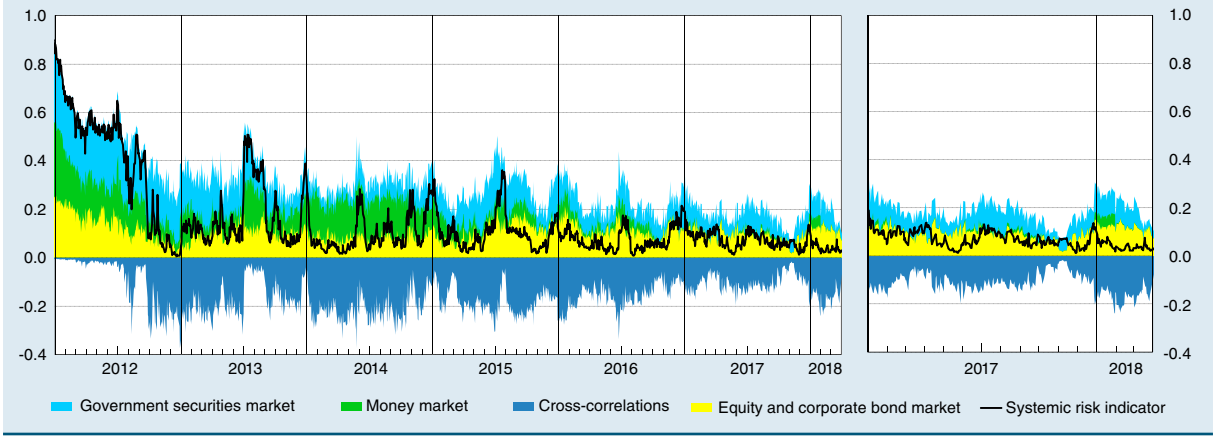
2 FINANCIAL SYSTEM RISKS

2.1 THE MONEY AND FINANCIAL MARKETS

There has been increased volatility on the international financial markets since the beginning of February. In Italy and the euro area, this has affected the stock markets but has not been transmitted to the money and government securities markets. The indicator of systemic liquidity risk in Italy's financial markets, which takes account of their interconnections, is still at low levels (Figure 2.1). Progress made in the Brexit negotiations has mitigated the risk of the UK's departure from the European Union (EU) having negative effects on contract continuity and derivatives clearing.[1]

Figure 2.1

Indicator of systemic liquidity risk in the Italian financial markets and contributions by segment (1)
(daily data; index range from 0 to 1)



Sources: Based on data from Thomson Reuters Datastream, Bloomberg, Moody's KMV, MTS SpA, and e-MID SIM SpA, and the Bank of Italy.
(1) The indicator measures the combined 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 the correlations between them. For the methodology used in constructing the indicator, see *Financial Stability Report*, 1, 2014.

The value of repo market transactions has remained high. However, the regulatory requirements for the leverage ratio have reduced banks' capacity to hold liquidity at the end of every quarter, causing marked fluctuations in the short-term rates. Italian banks' abundant liquidity curtails the need for them to raise funds from foreign counterparts: the net debtor position on the MTS repo market in the early months of 2018 was about one quarter lower than the 2017 average (Figure 2.2). The fall mainly reflects the reduction in long-term contracts: at the end of March more than 80 per cent of

[1] In the event of the UK exiting the EU without a withdrawal agreement or any transitional arrangements, the British central counterparties LCH and ICE Clear Europe would be considered as belonging to a third country. Pending their recognition as required under EU regulations, banks' exposures to these two counterparties would be subject to higher captial requirements than the current ones.

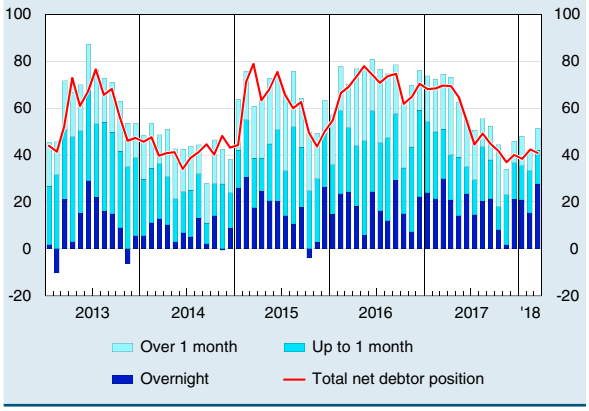
their exposure was in relation to contracts with a residual maturity of less than one month.

The share of central counterparty (CCP) transactions on the MTS repo market is large, partly because of the benefits for banks in terms of prudential requirements.[2] The concentration of transactions at CCPs reduces direct credit exposures and therefore the interconnections between investors, lowering the risk that shocks involving individual operators will spread. For systemic risks to be effectively reduced, CCPs must however be able to absorb the losses stemming from large-scale unfavourable events. The results of the stress test coordinated by the European Securities and Markets Authority (ESMA) in 2017 indicate that the EU's CCPs are currently able to cope with very high credit and liquidity risks (see the box 'The results of ESMA's second EU-wide CCP stress test').

Figure 2.2

Net foreign debtor position of the Italian banking system (1)

(monthly data; billions of euros)



Source: Based on MTS SpA data.
(1) Calculated on the basis of the cash value of the outstanding contracts. For the total net position, monthly average of daily data; for the breakdown by maturity, end-of-period data.

THE RESULTS OF ESMA'S SECOND EU-WIDE CCP STRESS TEST

Last February the European Securities and Markets Authority (ESMA) published the results of the stress test it conducted in conjunction with the national competent authorities in 2017, involving 16 central counterparties (CCPs) authorized in Europe.[1] The second exercise since 2016, it examined both the adequacy of the collateral held by CCPs against clearing members' exposure to credit risk and, for the first time, liquidity risks. ESMA utilized three scenarios in both cases, with shocks originating in the credit default swap (CDS), foreign exchange (FX) and money markets.[2] The different scenarios take account of the heterogeneity of business models in Europe's CCPs, also with a view to ensuring the test was uniformly severe for all participants.

CCPs' resilience to credit risk was assessed by comparing the collateral they held – margins and default fund contributions – with the losses stemming from (a) the simultaneous default of the two clearing members with the greatest exposures to each CCP and (b) the default of the two groups with the greatest exposures at European level. Liquidity risk was assessed by examining the capacity of CCPs to execute transactions regularly in the event of the default of the two operators with the largest net debt positions.[3] The results for credit risk show that the most adverse scenario would result in a slight shortfall in the financial resources available for just two central counterparties; no shortfalls emerged for the others, including Italy's Cassa di

[1] ESMA, *Report: EU-wide CCP Stress Test 2017*, February 2018.
[2] The scenarios envisage, respectively: (a) an increase in six iTraxx indices comprising CDS on European sovereigns and financial and non-financial corporations; (b) the depreciation of the euro vis-à-vis the renminbi, yen, sterling, Australian dollar, Canadian dollar and US dollar; and (c) an increase in money market and euro-denominated swap rates.
[3] In addition to the clearing members, other categories of operators were also considered, such as issuers, custodian banks, settlement banks and repo counterparties.

[2] Involving a CCP enables the banks to only take account of their net exposure when they calculate their own leverage ratio, thereby reducing the absorption of regulatory capital.

Compensazione e Garanzia S.p.A. (CC&G).[4] All the CCPs appear able to meet their liquidity requirements under the various scenarios.

ESMA's report also describes the degree of concentration of clearing activities within a CCP and across CCPs: greater concentration actually increases the likelihood that the default of the largest clearing members could impact other members.[5] The degree of concentration of margins and default fund contributions among the approximately 900 members of Europe's CCPs, as measured by the Herfindahl-Hirschmann Index (HHI), is rather low:[6] on a scale of 0 to 10,000, it is around 150 if calculated at the level of individual clearing members and 290 at group level. Concentration among clearing members within individual CCPs instead averages 1,350. For CC&G the average level of the HHI for the four sectors of activity is around 1,000; given a high concentration in sectors with low activity rates (derivatives on energy and grain), there is a low concentration in the two sectors in which the central counterparty is more active (equities and bonds).

4 As part of its own internal assessments to identify the extreme market conditions in which to test the resilience of the collateral system, CC&G refers to shocks that in most cases are more restrictive than those provided by ESMA.

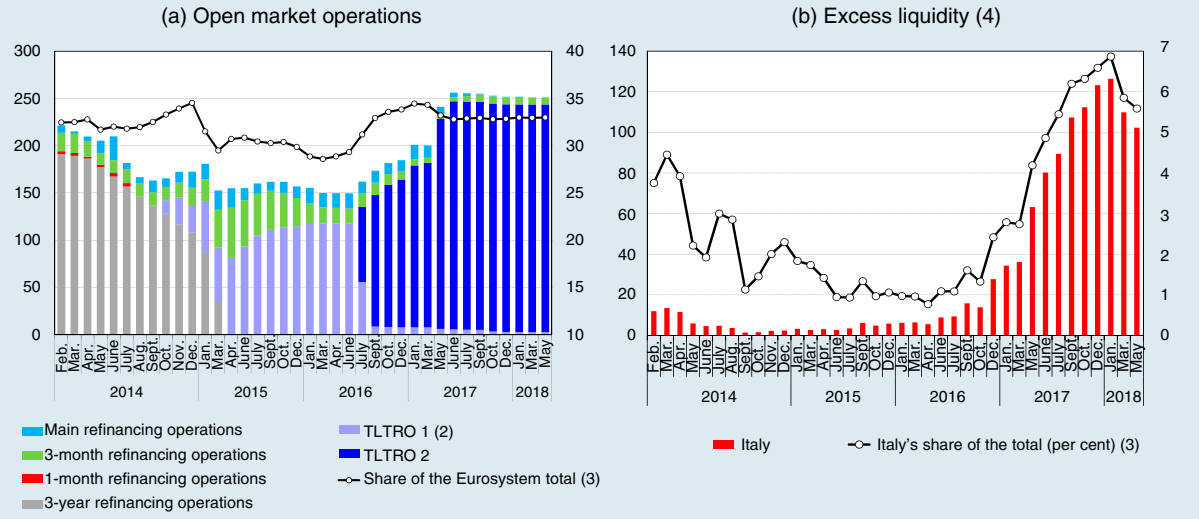
5 In this case other clearing members could be called on to provide additional resources to cover the losses caused by the default of one of the clearing members of the CCP.

6 To measure market concentration, ESMA refers to the HHI thresholds adopted by the European Commission for the purposes of antitrust legislation: from 0 – 1,000, no significant concentration; 1,000 - 2,000, small concentration observed; above 2,000, significant concentration.

Recourse to Eurosystem refinancing on the part of counterparties operating in Italy has remained at the levels reached in March 2017 after the last of the targeted longer-term refinancing operations (€251 billion at 20 April 2018; see Figure 2.3.a). Italian banks have high excess liquidity (Figure 2.3.b), partly because of the low yields that make it less worthwhile to invest it in the money markets.

Figure 2.3

Recourse to Eurosystem refinancing by counterparties operating in Italy and excess liquidity in Italy (1)
(billions of euros and per cent)



Sources: Based on ECB and Bank of Italy data.
(1) The horizontal axis gives the month in which each maintenance period ends, with the exception of the data for May 2018 for which the cut-off date was 20 April 2018. Starting in January 2015 the length of each maintenance period was extended from 4 to 6 weeks. – (2) Targeted longer-term refinancing operations (TLTROs). – (3) Right-hand scale. – (4) Excess liquidity is calculated as the sum of banks' average reserve balances, net of the reserve requirement, of average recourse to the deposit facility and of average recourse to liquidity-absorbing operations introduced following the launch of the Securities Markets Programme (active until June 2014).

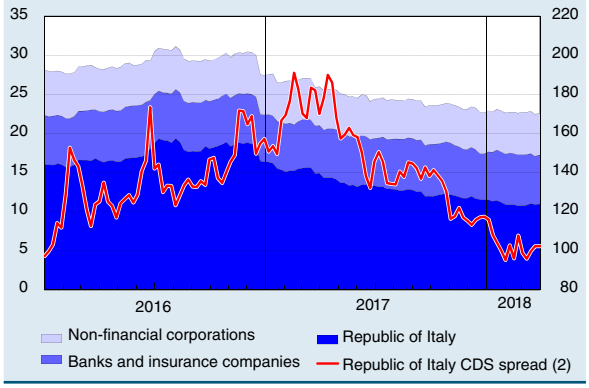
In mid-March Moody's and Fitch both confirmed the credit ratings of Italian government securities. Investors' demand for protection against Italy's country risk has continued to decline; net notional values outstanding for CDS contracts and their spreads on Italian government securities decreased (Figure 2.4). In the last six months the spread between Italian and German government securities diminished to around 120 basis points, wider than the equivalent spreads recorded by Spain and Portugal, which narrowed more.

The average residual maturity of government securities, stable at 6.8 years,[3] helps to limit the risk of an interest rate rise immediately impacting the debt burden. The average cost of securities outstanding has reached a minimum of 2.7 per cent (Figure 2.5) because of the low yields at issue and the maturing of securities with relatively high interest rates. The high public debt nevertheless makes Italy vulnerable to tensions on the financial markets and to downward revisions of growth prospects. Between April and December 2018 medium- and long-term securities amounting to €134 billion will reach maturity with an additional €201 billion maturing in 2019. Their renewal at low interest rates will depend on the continuation of both favourable market conditions and investors having confidence in the sustainability of Italian public debt.

Since the start of 2018 trading volumes in the secondary market in Italian government securities have been higher than in 2017 (Figure 2.6.a). The market functioned regularly even on the days with the highest volatility. Trading volumes increased as did the open positions on futures on ten-year BTPs, where high-frequency trading tends to concentrate. Rapid variations in these positions could lead to flares in the volatility of spot prices. Market resilience is still strong nevertheless and large orders should have a limited impact on the prices quoted for the BTP benchmark (Figure 2.6.b).

Figure 2.4

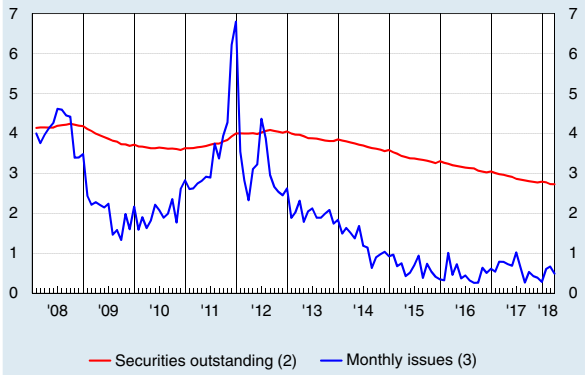
CDS: net notional values and spread (1)
(weekly data; billions of euros and basis points)



Sources: Based on data from Bloomberg, Depository Trust & Clearing Corporation (DTCC).
(1) Net notional values are measured according to the DTCC definition. – (2) Five-year maturity. ISDA 2014 Credit Derivatives Definitions; notional values in dollars; right-hand scale.

Figure 2.5

Average cost of government securities and average yield at issue (1)
(monthly data; per cent)



Sources: Based on Ministry of Economy and Finance and Bank of Italy data at 31 March 2018.
(1) Domestic placements of non-indexed government securities. – (2) Weighted average of the yields at issue of government securities outstanding at month-end. – (3) Weighted average of the yields of government securities placed during the month, by settlement date.

In 2017 the amount of Italian government securities held by the Bank of Italy rose by about 5 percentage points following Eurosystem purchases, reaching 19.1 per cent; the share held by banks fell from 17.8 to 15.3 per cent, while the shares of households and foreign investors remained virtually stable (at 5.4 per cent and 33.2 per cent respectively).

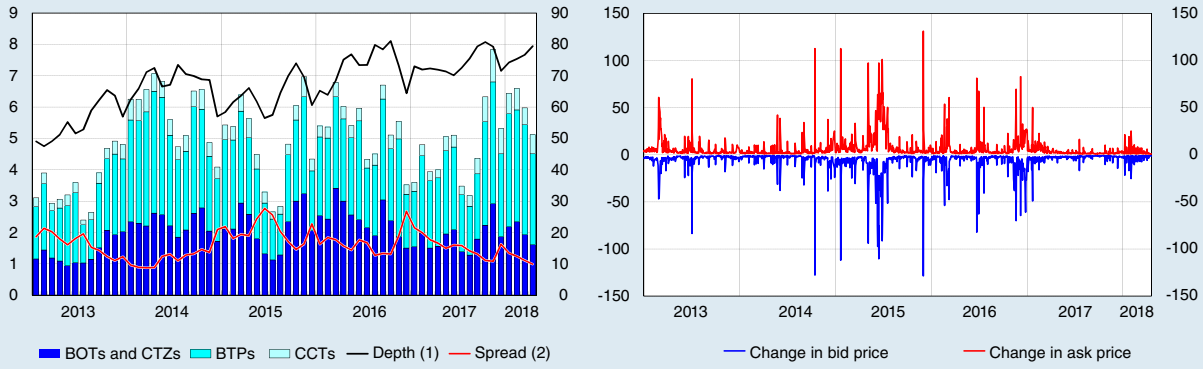
[3] Excluding issues in international markets.

Figure 2.6

Liquidity indicators on Italian government securities

(a) Trading volumes, depth and bid-ask spread on MTS
(monthly averages of daily data; billions of euros and basis points)

(b) Impact of large orders on the prices quoted on MTS (3)
(daily averages of high-frequency data; basis points)



Source: Based on MTS SpA data.
(1) Depth is calculated as the average of the quantities of bid and ask orders for BTPs. – (2) Right-hand scale. 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. – (3) The analysis refers to the 10-year benchmark BTP and is based on data recorded at 5-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.

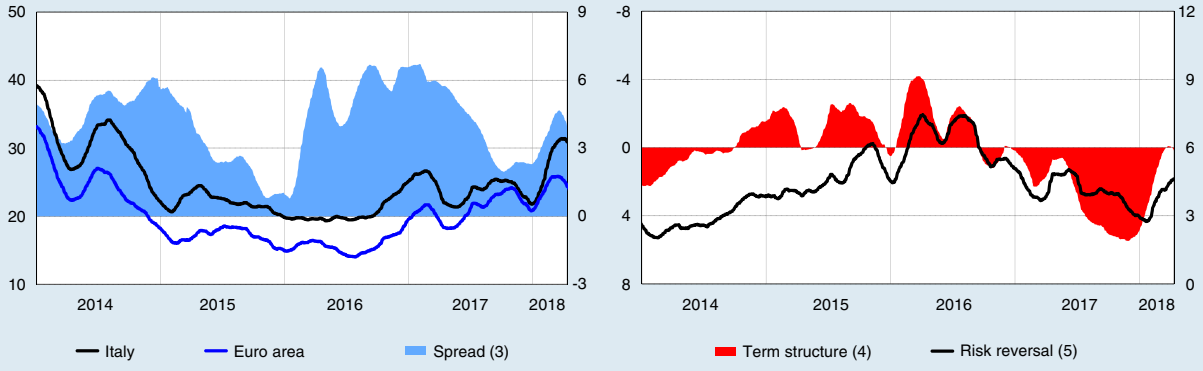
On the stock markets, the sharp drop in prices at the beginning of February was accompanied by an increase in the implied volatility of equity prices, which was more marked in Italy than in the euro area (Figure 2.7.a). The rise in the prices of options with the shortest maturities confirms investors' heightened uncertainty (Figure 2.7.b); there has also been a rise in the risk reversal index, which measures the relative price of options that hedge against a fall in the share index compared with those that profit from a rise.

Figure 2.7

Equity market indicators (1)
(daily data)

(a) Implied volatility (2)
(percentage points)

(b) Volatility indices
(per cent)



Source: Based on Bloomberg data.
(1) 60-day moving averages. – (2) Volatility implied by the prices of 2-month options on the Italian FTSE MIB index and, for the euro area, the Euro Stoxx 50 index. – (3) Right-hand scale. Spread between the volatility implied by the prices of 2-month options on the Italian and euro-area stock market indices. – (4) Right-hand scale. Spread between the implied volatility on 12- and 2-month options on the Italian FTSE MIB index. – (5) Difference between the implied volatilities of put and call options on the Italian stock market index with the same delta (0.25) and the same maturity (2 months).

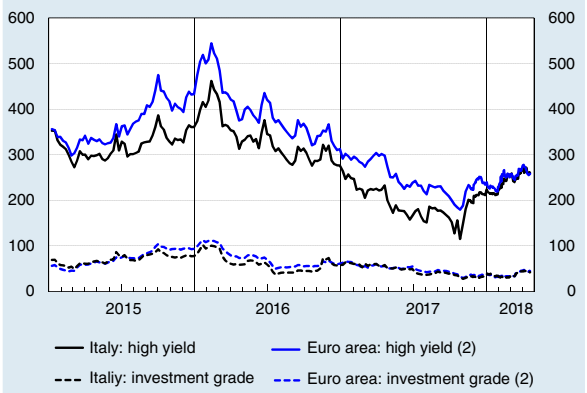
While remaining at historically low levels, since November the spread between high-yield private sector bonds and swap rates has returned to growth (Figure 2.8). This increase can be seen globally and in Italy has been greater than in the rest of the euro area.

2.2 BANKS

Systemic risks in the Italian banking sector continue to decline. The ratio of new non-performing loans to total loans has returned to pre-crisis levels. The sale of bad loans by several financial intermediaries has improved their asset quality. The financing needs of Italian banks continue to be largely satisfied by the expansion in deposits. Equity continues to grow and capital ratios are approaching those of other European banks.

Figure 2.8

Asset swap spreads (1)
(weekly data; basis points)

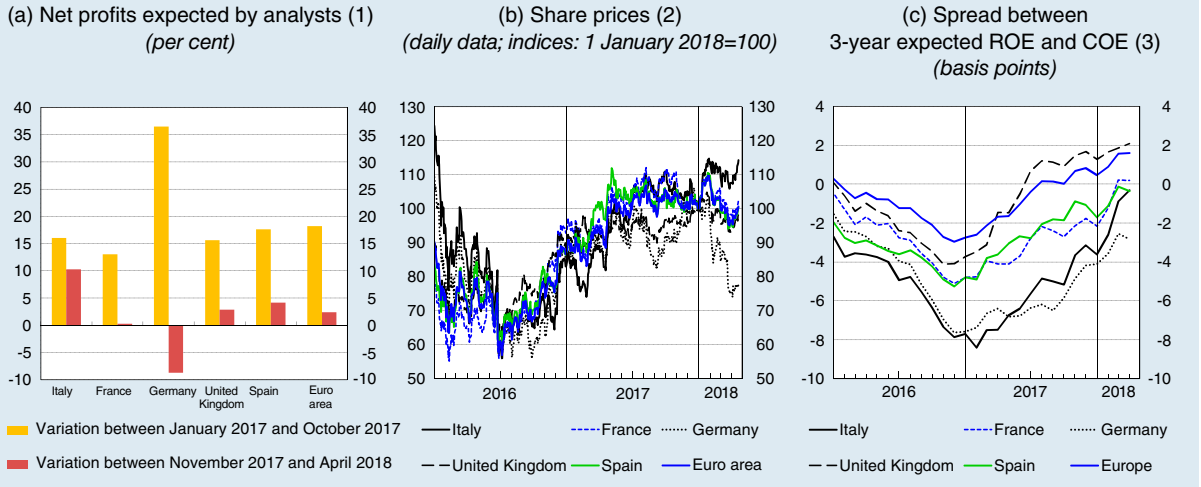


Source: Based on data from ICE Bank of America Merrill Lynch.
(1) Asset swap spreads weighted for the market capitalization of individual securities. There is no perfect correspondence between the securities included in the Bank of America Merrill Lynch index, used here, and their eligibility for the Eurosystem's asset purchase programme. – (2) The ICE Bank of America Merrill Lynch indices for the euro area have been recalculated to exclude Italy.

The improvement in the condition of Italian banks is reflected in the market indicators: in the last six months the significant upward revision of analysts' earnings expectations (Figure 2.9.a) has translated into an increase in share prices (Figure 2.9.b). Insolvency risk, measured by the premium on credit default swaps, has fallen to the levels recorded by other European banks. The average cost of equity fell

Figure 2.9

Italian listed banks: an international comparison



Sources: Based on data from Bloomberg and Thomson Reuters Datastream.
(1) Estimates of net profits for the next 12 months expressed in euros. The data relate to banks listed in FTSE Italy Banks, FTSE Germany Banks, FTSE France Banks, FTSE Spain Banks, FTSE UK Banks and Euro Stoxx Banks. – (2) Data relating to the indices referenced in note (1) are in euros. – (3) Return on equity (ROE) and cost of equity (COE). The data relate to the 34 European listed banks participating in the 2018 stress test of the European Banking Authority: for Italy, UniCredit SpA, Intesa Sanpaolo SpA, UBI Banca SpA, Banco BPM SpA; for Austria, Erste Group Bank AG, Raiffeisen Bank International AG; for Belgium, KBC Group NV; for Germany, Deutsche Bank AG, Commerzbank AG; for Denmark, Danske Bank AS, Jyske Bank AS; for Spain, Banco Santander SA, Banco Bilbao Vizcaya Argentaria SA, Banco de Sabadell SA, Caixabank SA; for France, BNP Paribas SA, Société Générale SA, Crédit Agricole SA; for the United Kingdom, Lloyds Banking Group Plc, HSBC Holdings Plc, The Royal Bank of Scotland Group Plc, Barclays Plc; for Hungary, OtP Bank Nyrt; for Ireland, Allied Irish Banks Plc, Bank of Ireland; for the Netherlands, ABN AMRO Groep NV, ING Groep NV; for Norway, DNB ASA; for Poland, Bank Pekao SA, Powszechna Kasa Oszczednosci Bank Polski SA; for Sweden, Swedbank AB, Nordea Bank AB, Skandinaviska Enskilda Banken, Svenska Handelsbanken AB. The CAPM analytical model was used to calculate the COE level. The data relate to April 2018; averages weighted by market capitalization.

by more than 2 percentage points to about 9 per cent, narrowing the gap with the other main European banks to just over 1 point (it was more than 4 points at the start of 2017; see the box 'The cost of equity for Europe's banks', *Financial Stability Report*, 2, 2017); expected profitability is still lower than the cost of equity (Figure 2.9.c).

However, the progress made thus far in managing non-performing loans and in strengthening capital is uneven and areas of weakness remain, especially for smaller banks.

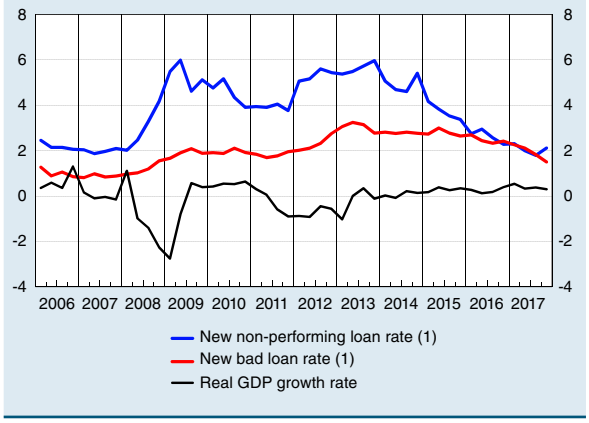
The ratio of bank assets to the overall economy continues to diminish and net interest income is still very low. Profitability is newly positive, following the drop in loan loss provisions and the improvement in operational efficiency, yet its low level remains the main risk factor. The need to increase revenue and improve efficiency is highlighted by the imminent introduction of the minimum requirement for own funds and liabilities eligible for bail-in (MREL), which might make it necessary for several banks to place new large bond issues on the wholesale market with negative effects on the average cost of funding.

Asset risks

The flow of new non-performing loans in proportion to total performing loans stabilized near the levels recorded in the mid-2000s (Figure 2.10). In the second half of 2017 numerous banks sold a significant amount of their bad loans (€26.5 billion compared with €5.7 billion in the first semester), nearly two thirds of which through securitizations, and in many cases with recourse to the state guarantee scheme. Over the course of the year, banks sold about €2 billion worth of non-performing loans not classified as bad loans. The sales helped to reduce the stock of non-performing loans considerably, by €40 billion gross of provisions and by €16 billion net of provisions, and to lower the ratio of NPLs to total loans to 14.5 per cent and to 7.5 per cent respectively (Table 2.1 and Figure 2.11.a). The dispersion of the credit quality indicator diminished, but several banks still have high NPL ratios (Figure 2.11.b).

Figure 2.10

Credit quality indicators and GDP growth
(quarterly data; per cent)



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

In 2017, the significant Italian banks with high levels of non-performing loans achieved results in line with the reduction objectives set out in the three-year plans they presented to the supervisory authority. In March 2018, the banks submitted their updated plans for the three years 2018-2020 which call for an overall reduction of 38 per cent in non-performing exposures. By the end of 2018 even the less significant banks with high NPL levels will be required to arrange strategies and operational plans that are consistent with the guidelines issued by the Bank of Italy in January.[4]

In March of this year, the European Commission published a legislative proposal that requires all banks to cover in full, for prudential purposes (Pillar 1), their non-performing secured loans within

[4] Banca d'Italia, Guidance on the management of non-performing loans for Italy's 'less significant institutions', January 2018.

Table 2.1

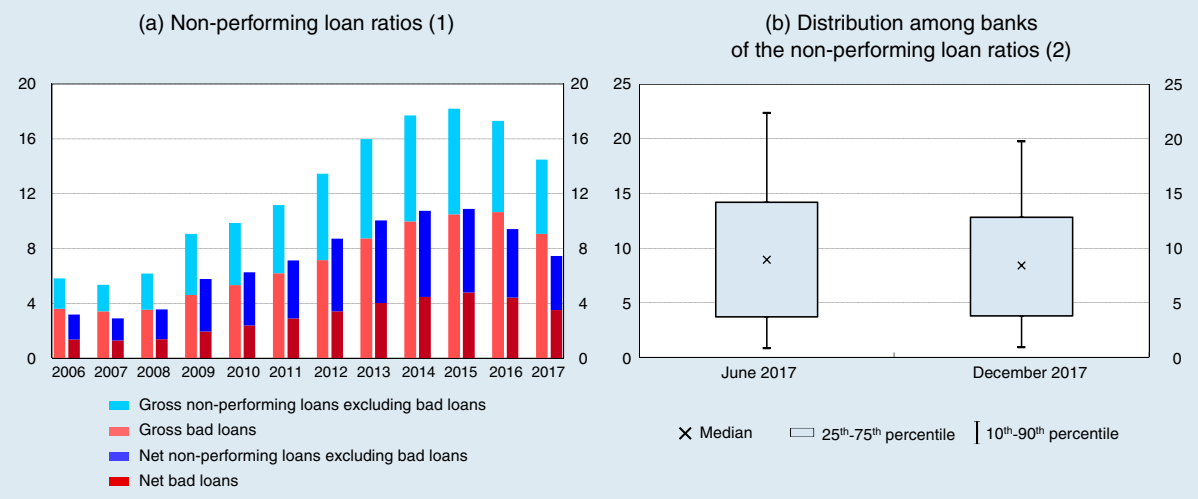
Credit quality: amounts and shares of non-performing loans and coverage ratios (1)
(billions of euros and per cent; December 2017)

	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 (3)	**1,463**	**1,343**	**100.0**	**100.0**	**8.2**	**308**	**280**	**100.0**	**100.0**	**9.0**	**1,965**	**1,807**	**100.0**	**100.0**	**8.1**
Performing	1,251	1,245	85.5	92.7	0.5	254	252	82.5	90.1	0.6	1,681	1,672	85.5	92.5	0.5
Non-performing (4)	212	98	14.5	7.3	53.8	54	28	17.5	9.9	48.5	285	135	14.5	7.5	52.7
Bad loans	133	46	9.1	3.4	65.3	33	13	10.7	4.5	61.3	178	63	9.1	3.5	64.4
Unlikely to pay (It. definition)	76	49	5.2	3.7	34.7	19	13	6.1	4.7	31.0	101	67	5.1	3.7	33.9
Past-due (It. definition)	3	2	0.2	0.2	28.3	2	2	0.7	0.7	9.8	6	5	0.3	0.3	21.4

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 performing loans. Rounding may cause discrepancies in the totals. Provisional data. – (2) Significant banks are those supervised directly by the ECB; less significant banks are those supervised 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 10 per cent of total gross customer loans. Excludes branches of foreign banks. – (3) Includes 'non-current assets and groups of assets held for sale'. – (4) The non-performing loan sub-categories reflect the Bank of Italy's unharmonized definition, which flanks the harmonized one used at European level. The definition adopted by Bank of Italy allows for a distinction between exposures, in descending order of risk: bad loans, unlikely to pay, and non-performing past-due and/or overdrawn exposures, consistent with the definitions used in the past.

Figure 2.11

Non-performing loans
(per cent)



Source: Supervisory reports, on a consolidated basis for banking groups and on an individual basis for stand-alone banks.
(1) Customer loans. Includes banking groups and subsidiaries of foreign banks; excludes branches of foreign banks. Amounts are calculated net and gross of provisions. – (2) Net of provisions. Cooperative banks were conventionally grouped into the three groups which will soon merge following the reform of the sector.

eight years and their non-performing unsecured loans within two years. For non-performing loans that are less than 90 days past due, a minimum coverage requirement of 80 per cent would be applied: in Italy about 15 per cent of NPLs would be subject to this lower coverage requirement. Also

in March, the ECB published an addendum to its guidance to banks on non-performing loans.[5] The two measures are very similar to those submitted for public consultation in November.[6] For those EU countries whose NPL recovery times are significantly higher than average, like Italy, these measures could have undesirable effects on credit supply.

In Italy, various measures have recently been launched or are currently being developed to facilitate the recovery of credit (see the box 'Italian measures to facilitate the recovery of non-performing loans secured by real property').

ITALIAN MEASURES TO FACILITATE THE RECOVERY OF NON-PERFORMING LOANS SECURED BY REAL PROPERTY

The supervisory instructions on investments in real property that were submitted for public consultation by the Bank of Italy in March are currently being amended. On the one hand, the new measures confirm the limit on the value of real properties that banks may hold in order to avoid the risk of an excessive immobilization of assets; on the other hand, they eliminate or amend the rules (e.g. additional capital requirements and the imposition of a ready disposal) which may discourage the recovery of loans by foreclosing on real property used as collateral or accelerate the disposal of foreclosed property, with possible repercussions on the amount recovered.

The rules governing the operation of the register of foreclosure procedures, insolvency procedures and crisis management tools to be set up at the Ministry of Justice are in the final stages of the drafting process. The trial phase for the online register began in January. The register will allow banks to access real-time information on the status of foreclosures, providing them with another tool for deciding whether they should manage the recovery process themselves, transfer it (in whole or in part) to a third party, or sell the position in the market. If the recovery process is outsourced, the register will allow banks to oversee the activity of the servicers and verify their effectiveness. By increasing the transparency of the judicial procedures, this tool could attract new operators to the credit recovery sector and encourage the development of the secondary market.

In February, it became obligatory to publish auction notices for foreclosed real property on the public sales portal, a key development in the process of digitalizing judicial auctions. The portal, managed by the Ministry of Justice, enables users to find, in a single website, all the documents relating to the real property being auctioned and information on how to participate in an auction. This will facilitate access to auctions and will increase the range of possible purchasers.

Banks are increasing their NPL coverage ratios. The block sale by UniCredit of a heavily impaired portfolio of bad loans had the effect of lowering the aggregate ratio to 52.7 per cent from 53.5 per cent in June 2017; without this sale the aggregate coverage ratio would have increased by more than 1 percentage point.

[5] The ECB's measure calls for the coverage of secured positions in seven years and the coverage of unsecured positions in two years. In addition, the measure would apply to exposures, including those already outstanding, that become non-performing after 1 April 2018. Instead, the European Commission's measure would only apply to non-performing exposures attributable to loans issued after the publication of the proposal (14 March 2018).

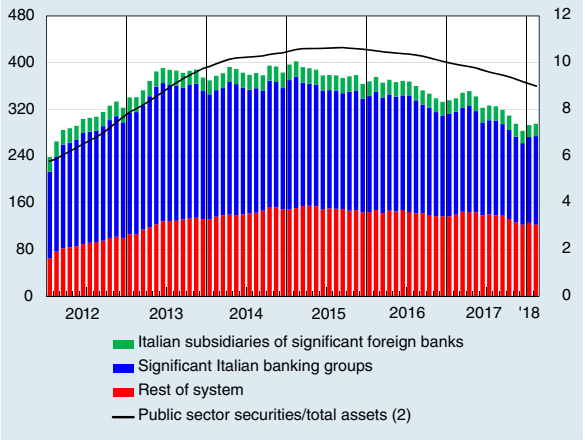
[6] See the box 'The recent proposals of the ECB and the European Commission on NPL provisioning', *Financial Stability Report*, 2, 2017 and the Bank of Italy's response to the European Commission's consultation document.

The Texas ratio[7] for banks classified as significant for supervisory purposes fell by 10 percentage points to 86 per cent; the gap with the main European banks narrowed.

Italian banks continue to reduce their exposure to the Italian public sector at a rapid pace. In the twelve months ending in February the volume of Italian public sector securities in bank portfolios fell by €44 billion, to €295 billion (Figure 2.12), and their share of total assets dropped from 9.6 per cent to 8.5 per cent.

Figure 2.12

Banks' investment in Italian public sector securities (1)
(monthly data; billions of euros and per cent)



Source: Supervisory reports.
(1) All public sector securities, including those issued by local authorities. Excludes Cassa Depositi e Prestiti SpA. – (2) Right-hand scale. Twelve-month moving average ending in the month indicated.

Refinancing risk and liquidity risk

The financing needs of Italian banks continue to be satisfied by the large expansion in deposits (Table 2.2). Recourse to the Eurosystem has remained virtually stable since March 2017 after the last TLTRO II.

Bond volumes diminished further, falling to €267 billion at the end of February;[8] subordinated instruments amounted to €39 billion, of which €15 billion held by households (see Table A5 in *Selected Statistics*). About half of the bonds will mature by 2020. If the requirements for liabilities eligible for bail-in, which are currently being negotiated at European level, make it necessary for banks to issue new large volumes of bonds on the wholesale market, the yields demanded by investors could increase significantly with negative effects on the cost and availability of credit (see the box 'The new rules on the MREL requirement and the effects on bank funding').

Table 2.2

Italian banks' funding (1)
(billions of euros and percentage change)

	February 2018	Share of total	12-month percentage changes (2)		
			February 2018	August 2017	February 2017
Deposits of residents in Italy (3)	1,480	63.4	4.0	4.1	2.9
of which: households	1,055	45.2	3.2	2.8	3.4
firms	263	11.3	13.1	11.4	72
Deposits of non-residents	299	12.8	0.3	-1.6	-6.8
Bonds	267	11.5	-19.0	-14.7	-14.6
of which: held by households	99	4.2	-34.9	-29.5	-23.0
Net liabilities vis-à-vis central counterparties (4)	36	1.6	-46.8	-18.4	-8.1
Liabilities vis-à-vis the Eurosystem (5)	251	10.8	25.9	46.1	31.7
Total funding	**2,334**	**100.0**	**0.6**	**3.0**	**0.2**

Source: Individual supervisory reports; includes Cassa Depositi e Prestiti SpA.
(1) Excludes liabilities to other banks resident in Italy. The data for February 2018 are provisional. – (2) Adjusted for reclassifications, value adjustments and exchange rate variations. – (3) Excludes transactions with central counterparties. – (4). Repurchase agreements only, representing foreign funding via central counterparties. – (5) Includes transactions with the Eurosystem for monetary policy operations, see Statistics, 'Banks and Money: National Data', Tables 3.3a and 3.3b.

[7] The Texas ratio is the ratio of gross NPLs to the sum of common equity tier 1 capital and loan loss provisions.
[8] Excludes bonds held by banks belonging to the issuer's group and by other resident banks.

THE NEW RULES ON THE MREL REQUIREMENT AND THE EFFECTS ON BANK FUNDING

Directive 2014/59/EU, the Bank Recovery and Resolution Directive (BRRD), sets a minimum requirement for own funds and eligible liabilities (MREL)[1] for bail-in to ensure that, in the event of resolution, every bank will have sufficient own funds and other liabilities to absorb losses and reconstitute capital. The aim of the MREL is to safeguard financial stability by establishing an orderly and efficient crisis management system. At the same time, however, its introduction could substantially raise the cost of funding for banks and reduce the bank credit available to the economy, as detailed in the Report on the implementation and design of the MREL framework published by the European Banking Authority (EBA) at the end of 2016.[2]

Estimates of the cost of the MREL are highly uncertain. In the EBA's calculations the impact is generally limited, but differs considerably between banks (according to their rating and ability to access the market to place new liabilities) and between the countries of the European Union. When the requirement is fully implemented, its impact on the GDP of some EU countries could be close to nil, while elsewhere it could, in the long term, involve a reduction of up to 2 percentage points of GDP;[3] the effects might be even greater during the transition period. A key assumption in the EBA's analysis is a deep and liquid bond market with a capacity to absorb all the new securities issued by banks. The study acknowledges that this assumption is not entirely realistic, particularly in the case of banks that have not so far had regular access to the international markets.

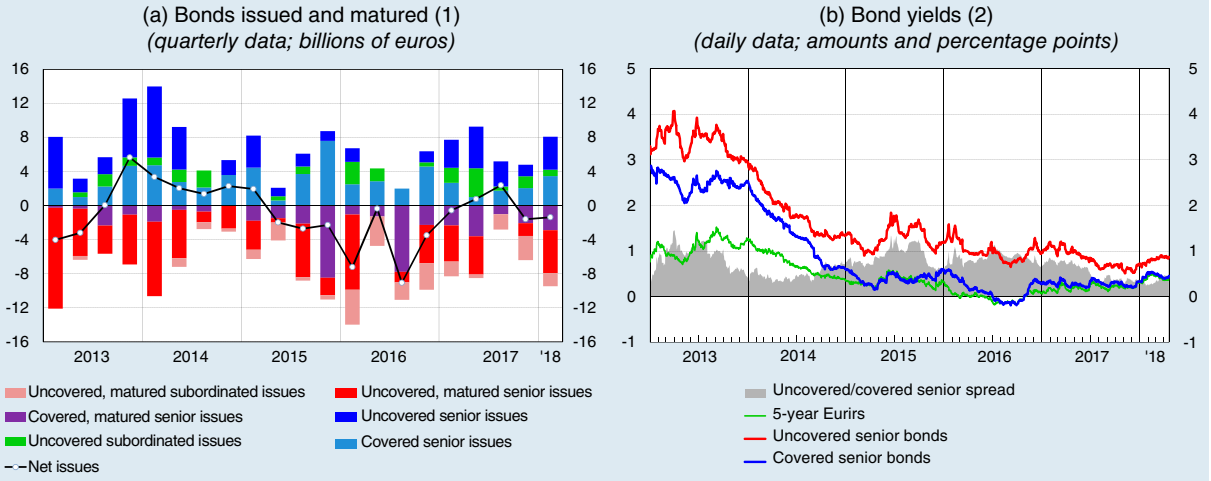
We estimate – based on the recasting of the BRRD proposed by the European Commission at the end of 2016[4] – that for Italian significant banks (whose requirement will be fixed by the Single Resolution Board) the aggregate shortfall of eligible liabilities at the end of the transition period (theoretically, three years) may range from €30 to €60 billion depending on the extent of subordination of debt instruments required, which is still under discussion. Our estimates tally with the conclusions of the EBA report concerning the widely varying effects on funding costs according to a bank's risk rating and ability to access the market. In the present situation of extremely low risk premiums, the increase in average funding costs[5] caused by a change in the composition of liabilities would be minimal for banking groups that already issue bonds on a regular basis. In the case of the other banks, the estimated impact is more varied: the average cost of funding, which was around 70 basis points in June 2017, could increase by between 10 and 30 points. Assuming other conditions to be unchanged, this would reduce operating income by 2 to 8 per cent. Some banks might also find it less onerous to meet the requirement by restructuring or reducing some of their assets in order to downsize the risk-weighted component (RWA).

The increase in funding costs and the measures taken regarding RWAs will leave less credit available to the economy. The effects will increase in proportion to the amount of MREL to be met through subordinated liabilities. The adverse effects could be alleviated by reviewing the MREL rules so that the amount and quality of funds are proportionate to the actual demands of the resolution and the transition period is long enough to allow the banks to build up the requirement gradually.

1 See the box 'Minimum requirement for own funds and eligible liabilities', *Financial Stability Report*, 2, 2016.
2 EBA, Final report on MREL. Report on the implementation and design of the MREL framework, December 2016.
3 The EBA has also quantified the benefits of the MREL in terms of reduced GDP loss. The theory is that the prospect of orderly resolution will reduce excessive risk-taking (moral hazard), encourage greater market discipline, and entail lower costs for the public finances in the event of a crisis. These effects would reduce the likelihood of crises and their cost. Although extremely difficult to quantify, the EBA has reached the conclusion that the MREL would bring net positive benefits to the economy.
4 The Commission proposes a different system for global systemically important banks (G-SIBs) regarding both the volume of funds required and the type of eligible liabilities: (a) for G-SIBs, there will be a harmonized MREL that is equivalent to the minimum agreed internationally within the Financial Stability Board (FSB) for total loss absorbency capacity (TLAC), to be met with subordinated liabilities; and (b) for other banks, the MREL will be fixed case by case by the resolution authority according to clear principles to be set out in the new BRRD and may be met with unsubordinated liabilities. For a detailed description of the MREL rules for the two categories of banks see the European Commission's proposal for a directive of 23 November 2016.
5 For total funds raised, excluding central bank financing.

Figure 2.13

Italian bank bonds



Sources: Dealogic and Bloomberg.
(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 securitization operations. – (2) Yields at maturity of Italian banks' bonds with residual maturity of 5 years.

Italian banks' recourse to funding on international bond markets remains modest; in the last three years the total value of gross issues amounted to €65 billion for significant banks and €15 billion for less significant banks, equal to 2.6 per cent of average total assets for both categories of banks (Figure 2.13.a). At the start of 2018, the first MREL eligible subordinated instruments reserved for qualified investors were placed, following their recent introduction under European Directive (EU) 2017/2399 as senior non-preferred bonds;[9] two Italian banks have placed €2 billion of bonds (€15 billion in total have been issued by other European banks). The average yield on senior secured five-year bonds issued on international markets in the first few months of 2018 by Italian banks was 0.46 per cent (Figure 2.13.b), which is similar to the figure for Spanish banks and roughly double the one for German and French banks. The yield spread on unsecured bonds stands at about 35 basis points.

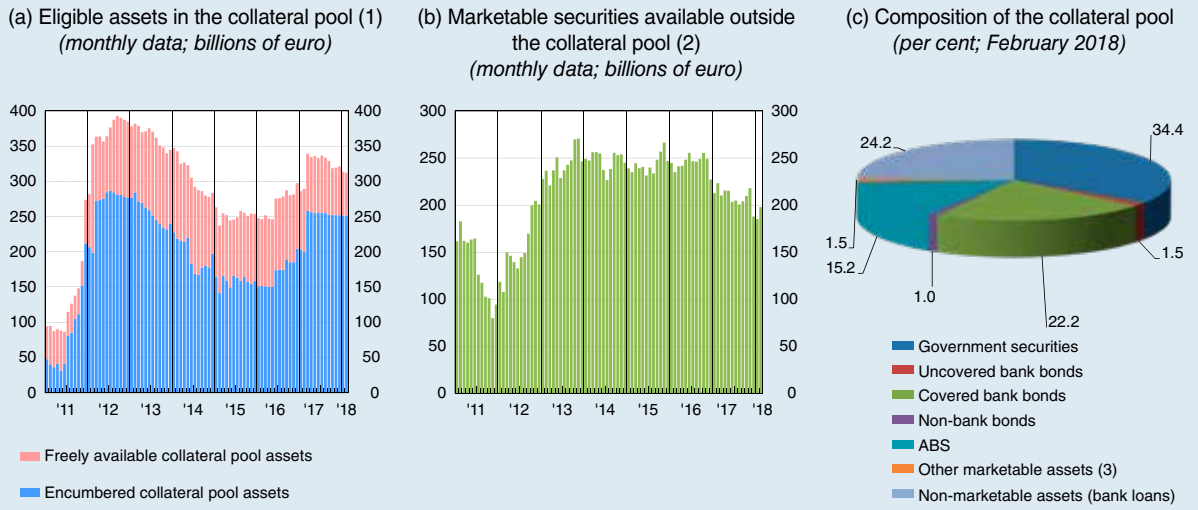
The volume of assets eligible for use as collateral for Eurosystem refinancing operations remains high, despite having fallen since September 2017 following the reduction in bank portfolios of government securities. The assets deposited at the Bank of Italy (the collateral pool; Figure 2.14.a) and the marketable securities available outside the collateral pool both decreased (Figure 2.14.b). The share of government securities in the collateral pool fell while that of bank loans and asset-backed securities rose (Figure 2.14.c, see Table A6 in *Selected Statistics*). Since recourse to the Eurosystem was largely unchanged, the share of assets used as collateral, i.e. asset encumbrance, was stable for Italian significant banks at just under 30 per cent, close to the value recorded by the main European banks (28 per cent). For less significant banks, it rose to 24 per cent from 22 per cent in September 2017 owing to their increased recourse to funding on the repo market.

Italian banks' access to refinancing operations will not be hindered by changes to the haircuts applied to assets eligible for use as collateral in monetary policy operations, which entered into effect in April following the Eurosystem's amendment of its risk control measures.[10] These measures will result in an

[9] European Directive (EU) 2017/2399 of 12 December 2017, transposed into Italian law by Law 205/2017.
[10] ECB, ECB amends guidelines relating to the Eurosystem's monetary policy implementation, press release of 8 February 2018.

Figure 2.14

Eligible assets of the Italian banking system



Sources: Based on Eurosystem data and supervisory reports.
(1) End-of-period data for the monetary policy counterparties of the Bank of Italy. The volume of encumbered Eurosystem collateral pool assets includes the part covering accrued interest and refinancing in dollars. The collateral pool is valued at the prices taken from the Common Eurosystem Pricing Hub, net of haircuts. – (2) End-of-period data for the entire banking system, not including Cassa Depositi e Prestiti SpA and Poste Italiane SpA. Securities eligible as collateral for the Eurosystem are deemed to be marketable. Amounts at market values as reported by the banks, net of the haircuts applied by the Eurosystem. – (3) Includes local and regional government securities and bank bonds backed by the state guarantee scheme.

overall reduction of about 1 per cent (€3 billion) in the value after haircuts of the assets currently pledged. The effects will be minimal for assets outside the collateral pool. In February the ECB's Governing Council decided to extend the additional credit claims framework until the maturity date of the final TLTRO II in March 2021;[11] the use of these loans by Italian banks amounts to €32 billion.

The reduction of government securities in banks' assets did not change the net liquidity position of the significant banks, which remained at 14 per cent, but it did alter the composition (see Table A7 in *Selected Statistics*): the decrease in holdings of freely available assets eligible for use as collateral for Eurosystem refinancing operations (counterbalancing capacity) was offset by higher cumulative expected net cash

Table 2.3

Liquidity coverage ratio (LCR) of Italian banks (1)
(per cent)

	LCR *(at 30 June 2017)*	LCR *(at 31 December 2017)*	Level 1 assets as a percentage of total buffer (2) *(at 31 December 2017)*
Top 5 groups (3)	202	160	97
Other significant banks (3)	153	137	97
Less significant banks (4)	203	247	100
Total banking system	**197**	**171**	**97**

Sources: Consolidated supervisory reports for banking groups; individual supervisory reports for banks not belonging to a group.
(1) The ratio between total high quality liquid assets and the total net cash outflows over the next 30 calendar days. See Basil Committee, Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools, BIS, January 2013. – (2) Commission Delegated Regulation (EU) 2015/61, Article 10. – (3) Banks directly supervised by the ECB; only includes banks in existence on both dates. – (4) Banks supervised by the Bank of Italy in cooperation with the ECB.

[11] ECB, Decisions taken by the Governing Council of the ECB (in addition to decisions setting interest rates), press release of 23 February 2018.

flows over the next 30 days, which became positive as a result of the high liquidity reserve deposited with the central bank (see Section 2.1). The indicator for less significant banks was stable at around 17 per cent.

The liquidity coverage ratio (LCR) stood at 171 per cent at the end of 2017 (Table 2.3);[12] the ratio is expected to remain well above the regulatory minimum of 100 per cent even if the value of the assets making up the numerator were to decrease in the event of a sharp increase in risk-free interest rates (see the box 'The effects of an interest rate rise on liquidity indicators').

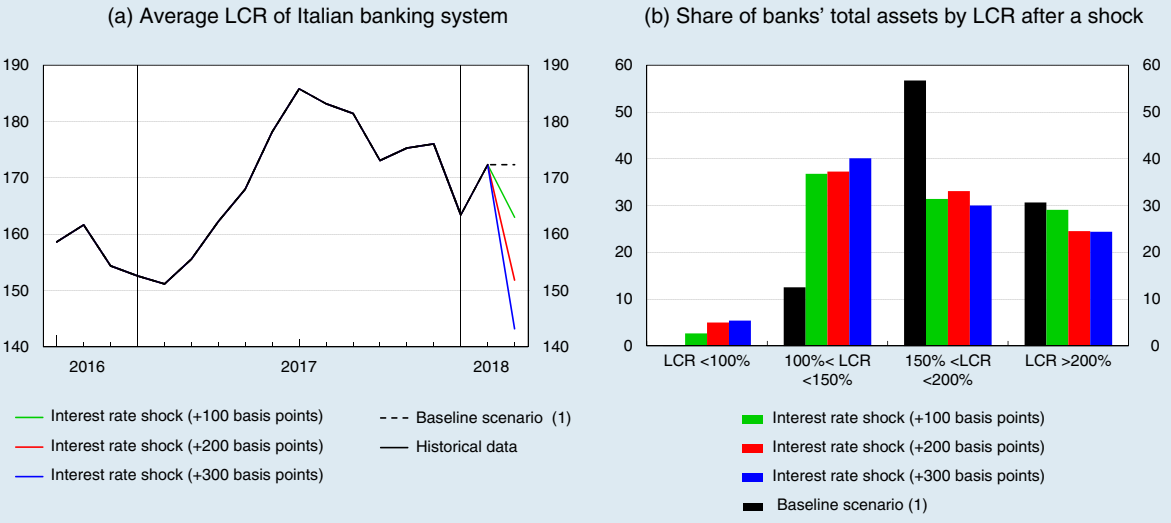
THE EFFECTS OF AN INTEREST RATE RISE ON LIQUIDITY INDICATORS

A risk-free interest rate hike would have a negative impact on the banks' liquidity coverage ratio (LCR) owing to the decrease in the value of the assets making up the numerator. Moreover, this decrease in the value of the securities pledged as collateral for loans would oblige the banks to top up that collateral with new securities, other conditions remaining unchanged. Such securities could therefore no longer be computed in the numerator as unencumbered assets, further reducing the LCR.

The effect on banks has been assessed by examining three scenarios in which risk-free interest rates rise by 100, 200 and 300 basis points over the entire yield curve, assuming constant risk premiums, compared with a baseline scenario in which interest rates stay at the same level as at the end of January 2018.

The results show that even in the worst case scenario, where the system's average LCR[1] decreases from 172 to 143 per cent, it would still be well above the regulatory minimum of 100 per cent (see panel (a) of the figure). In the scenario assuming a 100 basis point rise in risk-free interest rates, 2.6 per cent

Liquidity Coverage Ratio stress test
(monthly data; per cent)



Sources: Based on European harmonized supervisory reports, consolidated for banking groups and individual for non-group banks. The LCR complies with Commission Delegated Regulation (EU) 2015/61.
(1) The baseline scenario refers to the interest rates levels and liquidity coverage ratio recorded at the end of January 2018.

[1] Weighted according to the size of each bank.

[12] The reduction compared with the June 2017 figure is caused by a change in one bank's reporting procedures.

of banks would fall below the threshold, representing 2.7 per cent of total assets (see panel (b) of the figure). These figures would rise to 4.3 and 5.0 per cent respectively in the middle scenario and to 4.6 and 5.4 per cent in the worst case scenario.

Overall, Italy's banking system has satisfactory levels of liquid assets to weather even very large increases in risk-free interest rates.

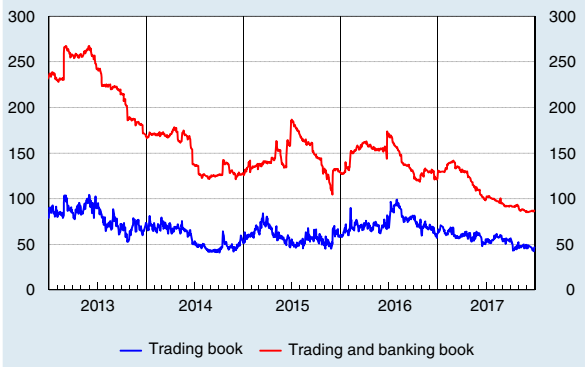
Interest rate risk and market risk

Italian banks have little exposure to interest rate risk, measured by the change in the net economic value of the balance sheet (assets minus liabilities in the banking book) that can result from shifts in the risk-free yield curve. Based on the latest data, relating to the end of 2017, an upward shift of 200 basis points of the entire risk-free yield curve would result in an average increase in the economic value equal to 2.9 per cent of own funds for the 11 significant Italian banking groups.[13] For two of these, the effect of the shift would be small but negative (on average 1.7 per cent).

Market risk is continuing to decline, both for all the portfolios at fair value (both trading and banking books) and for the trading book alone (Figure 2.15). This decline is due to the low volatility observed in most financial markets until the end of 2017 and to the shortening of the average duration of the bonds held.

Figure 2.15

VaR for a sample of banks (1)
(daily data; indices: 1 January 2011=100)



Source: Data for a sample of the five 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 of value on a portfolio that over a given time horizon (10 days) 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) entered in the balance sheet at fair value (red line) and for the trading book alone (blue line). A decline indicates a reduction in risk.

Capital and profitability

Italian banks' capital continues to grow. At the end of 2017, common equity tier 1 (CET1) was equal to 13.8 per cent of risk-weighted assets, up by around 130 basis points compared with June 2017; for the significant banks it was 13.3 per cent, with an increase of 150 basis points. The gap between the capital ratios of Italy's significant banks and the average for the main European banks narrowed further, reaching 150 basis points at the end of 2017. The leverage ratio, which measures capital adequacy relative to non-risk-weighted assets, is still higher for Italian banks (6.0 per cent) than for European banks (5.5 per cent).

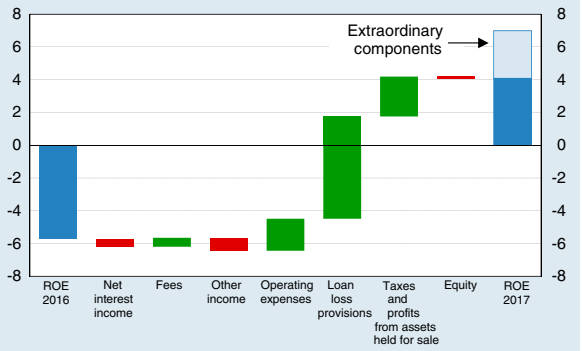
[13] The exposure to interest rate risk for supervisory purposes is calculated by the banks based on EBA guidelines (EBA, *Final report. Guidelines on the management of the interest rate risk arising from non-trading activities*, May 2015). The exposure is calculated by estimating the effect of a shift in the yield curve on the banking book, taking account of the maturity or expected financial duration of all balance sheet items (see the box 'The methodologies for measuring interest rate risk', in *Financial Stability Report*, 1, 2010).

Capital strengthening was achieved mainly as a result of some of the large banks' completing their capital increases. In the second half of 2017 the Monte dei Paschi di Siena, Banca Carige and UBI Banca groups concluded transactions for a total of more than €9 billion. In March 2018, Credito Valtellinese also completed a capital increase of €700 million. Risk-weighted assets fell by 3 per cent compared with last June, mainly owing to reallocation towards less risky assets.

Italian banks' profitability rose in 2017, mainly thanks to fewer loan-loss provisions and to greater operating efficiency (Figure 2.16). Operating income remained more or less unchanged from 2016, at -0.3 per cent. Against the decline in net interest income (-0.9 per cent) there was an increase of 6.3 per cent in fees earned from asset management, following the robust expansion of the flow of savings into investment funds (see Section 2.3).

Figure 2.16

Breakdown of changes in ROE from 2016 to 2017 (1)
(percentage points)



Source: Consolidated supervisory reports for banking groups and individual supervisory reports for stand-alone banks.
(1) Changes are expressed in relation to own funds and reserves. A green/red bar indicates a positive/negative contribution to ROE starting in 2016, giving a final value for ROE in 2017. Data for 2017 are provisional.

Operating costs fell by 5.5 per cent, following reductions of 3.8 per cent in staff costs and of 7.8 per cent in other administrative costs. The cost/income ratio declined by more than four percentage points to 69 per cent. Loan loss provisions were down by almost 40 per cent, accounting for 77 per cent of operating profits. In 2016 the ratio was 155 per cent, mainly due to the Unicredit group making a hefty increase in its provisions on the bad loans to be sold.

In 2017 the return on equity (ROE) was 7.0 per cent, buoyed mainly by extraordinary components linked to mergers carried out during the year. Excluding these components, ROE would have been 4.1 per cent, in any case a sharp increase on the previous year's figure of -5.7 per cent. The median ROE stands at 2.5 per cent and for one quarter of banks was less than 1 per cent.

Forecasts based on the most recent macroeconomic scenario suggest that in the two-year period 2018-19 revenues will increase, benefiting from an increase in the interest rate income due to both the favourable cyclical conditions and the interest rate rise; value adjustments on loans will fall further. Were operating expenses to remain unchanged from 2017, at the end of 2019 the ratio of operating profit to assets, on an unconsolidated basis, would rise by 0.1 per cent to 0.7 per cent, though this would still be lower than it was in the mid-2000s (1.0 per cent). The ratio of loan loss provisions to operating profit would fall by more than 30 per cent compared with 2017.

2.3 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

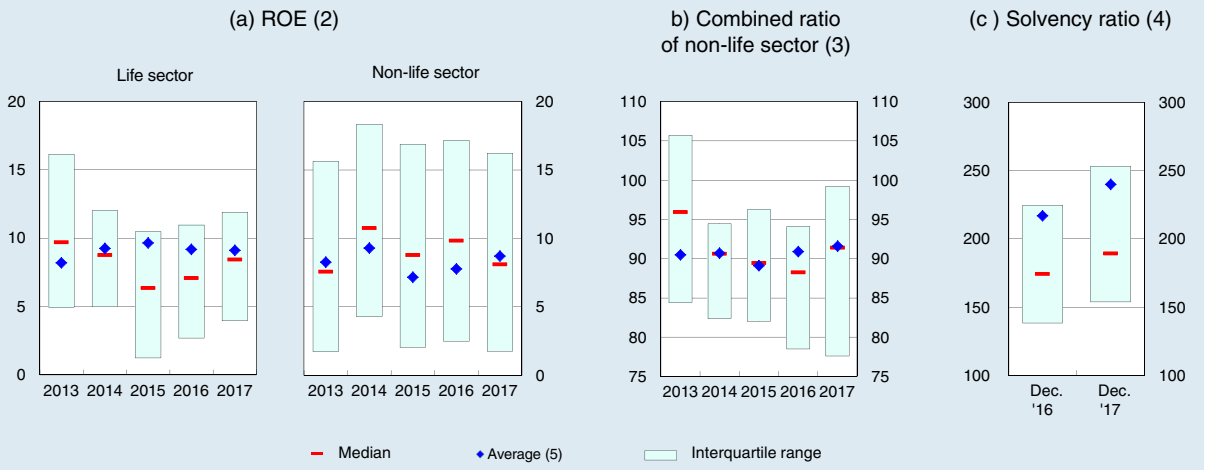
Insurance

The solvency ratios[14] of Italian insurance companies are rising: in 2017 they reached 240 per cent on average, in line with the figure for European insurance companies and well above the minimum requirement of 100 per cent (Figure 2.17.c). Tier 1 capital accounts for a 91 per cent share of total own

[14] For the definition of the solvency ratio, see note 4 to Figure 2.17.

Figure 2.17

Main balance sheet indicators for Italian insurance companies (1)
(per cent)



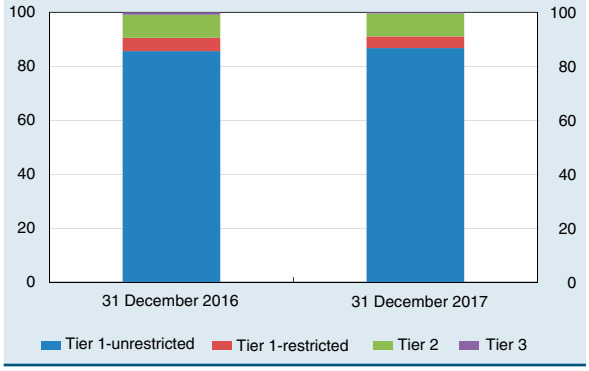
Source: IVASS.
(1) Preliminary data. (2) Return on equity. – (3) Ratio of incurred losses plus operating expenses to premium income for the period. – (4) The solvency ratio is calculated as the ratio of own funds held for coverage to the solvency capital requirement calculated as required by the Solvency II Directive (2009/138/EC). The own funds eligible to cover the capital requirement mainly include ordinary share capital, reserves and, with specific limitations, preference shares and subordinated liabilities. – (5) Weighted average with the weights equal to the denominator of each ratio.

funds eligible to satisfy the capital requirement, compared with a minimum requirement of one third indicated by Solvency II (Figure 2.18).[15]

The rise in the solvency ratios is mainly attributable to an increase in the value of own funds, which have been favourably affected by the narrowing of spreads on Italian public securities and the upward shift in the risk-free interest rate curve, while capital requirements were basically unchanged. The insurance companies' capital resources benefitted from stable, high profitability (Figures 2.17.a and 2.17.b). Expectations that the leading insurance companies' earnings will increase this year translated into higher share prices (Figure 2.19).

Figure 2.18

Composition of own funds for coverage of the capital requirement (1)
(per cent)



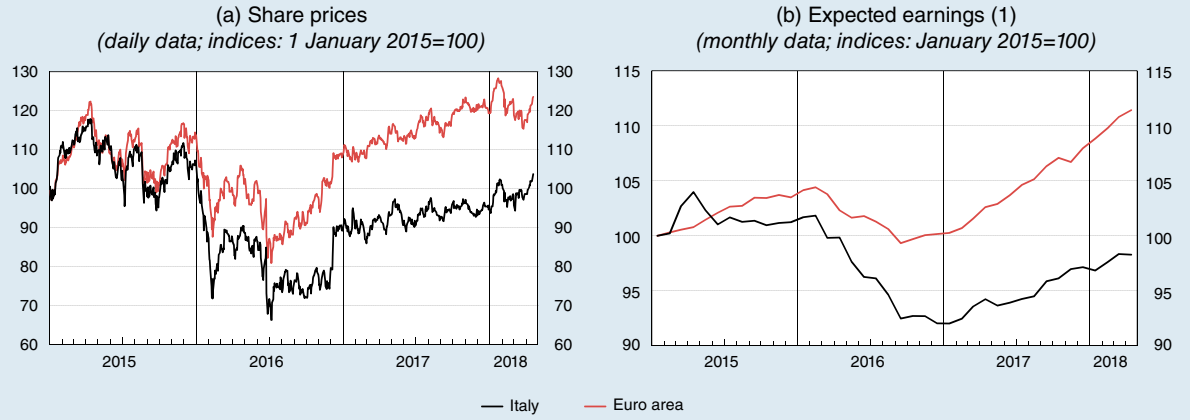
Source: IVASS.
(1) Own funds are classified as Tier 1, Tier 2 and Tier 3 based on the extent to which they can be used to absorb losses, taking account of their degree of subordination and duration. Unrestricted Tier 1 funds mainly include ordinary share capital and reserves; restricted Tier 1 funds are composed of preference shares and subordinated liabilities.

Insurers are continuing to diversify their financial investments (Figure 2.20): in 2017 the share invested in public and private bonds decreased and that in equity and investment funds increased; Italian government securities remain, however, the primary investment (43 per cent of the total). Almost all the corporate bonds have a credit rating of BBB or higher.

[15] Solvency II Directive (2009/138/EC).

Figure 2.19

Market indicators for insurance companies



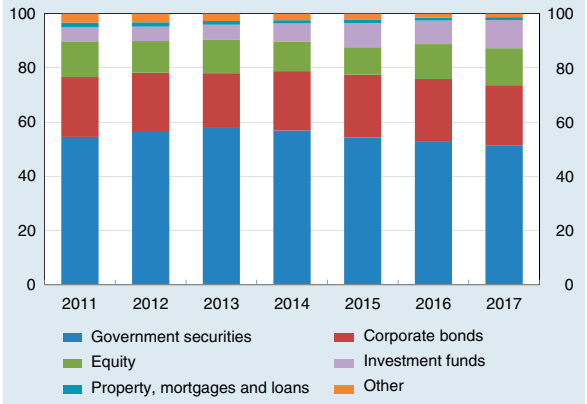
Source: Based on Thomson Reuters Datastream data.
(1) Average, weighted by the number of shares in circulation, of expected earnings per share in the 12 months following the reference date of a sample of the main Italian and euro-area insurance companies. For Italy the data refer to Assicurazioni Generali, Mediolanum Assicurazioni, Società Cattolica Assicurazioni, UnipolSai and Vittoria Assicurazioni. For the euro area the data refer to the main companies included in the Datastream euro-area insurance sector index.

The impact of the prolonged period of low interest rates on the solvency of Italian insurance companies has been less pronounced than in other countries; it should remain so even if interest rates stay at current levels over the long term. This is due to the good matching of the durations of balance-sheet assets and liabilities and to the fact that insurers have progressively reduced the minimum guaranteed returns from life insurance policies. In 2017 the share of mathematical provisions for life insurance policies with a guaranteed return of 1 per cent or lower rose to 55 per cent of the total (47 per cent in 2016 and 23 per cent in 2013).

Italian insurance companies benefit to a very small extent from long-term guarantees designed to stabilize the value of the solvency ratio (see the box 'The impact of long-term guarantees under Solvency II').

Figure 2.20

Investments of Italian insurance companies
(per cent)



Source: IVASS.

THE IMPACT OF LONG-TERM GUARANTEES UNDER SOLVENCY II

The Solvency II regulatory framework makes provision for long-term guarantees (LTG) to counter the procyclical effects that excessive volatility in market prices has on the solvency indicators (see the box 'The measures envisaged by Solvency II. The impact of the volatility adjustment for Italian and European insurance companies', in *Financial Stability Report*, 1, 2017).[1] Some of these measures may be activated at the discretion of individual undertakings, while others apply to the entire system.

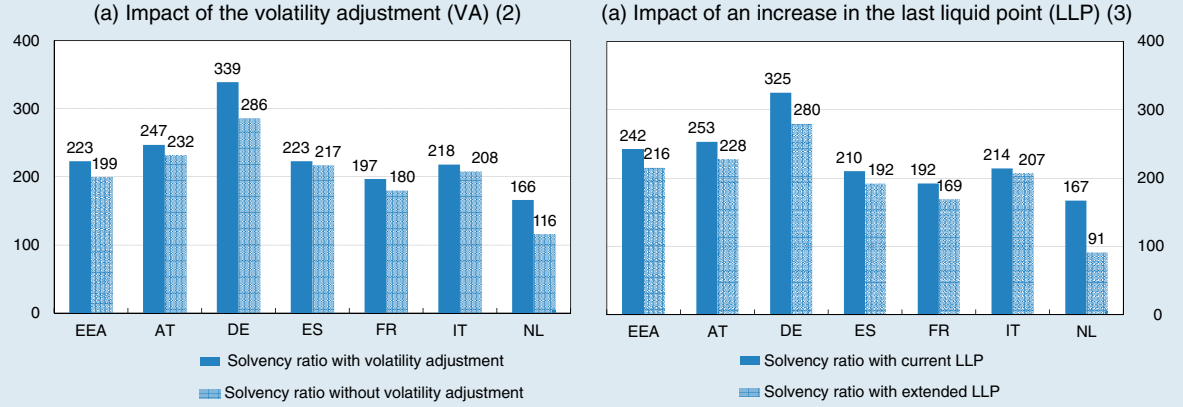
[1] The LTG measures are defined in Directive 2014/51/EU and comprise the volatility adjustment, the matching adjustment (i.e. the adjustment to the corresponding term structure of risk-free interest rates), transitional measures on technical provisions, (discretionary) transitional measures on interest rates, and the (mandatory) procedure to extrapolate risk-free interest rates.

The second report on LTG measures published by the European Insurance and Occupational Pensions Authority (EIOPA), based on data as at December 2016, confirms the high degree of heterogeneity of EU undertakings in terms of both the type and number of measures used and the impact they had on the solvency position.[2]

The most frequently used optional measure is the volatility adjustment (VA),[3] the only one that Italian undertakings have activated. Without the positive effects stemming from the application of the VA, the average solvency ratio would decline by 9 percentage points for Italian insurance undertakings, against an average fall of 24 points in the EU index (see panel (a) of the figure). The most significant effects would be on Danish, German and Dutch undertakings, for which the reduction in the average solvency ratio would be equal to 80, 53 and 49 percentage points respectively.

Solvency ratios of insurance undertakings (1)

(December 2016; per cent)



Source: EIOPA.
(1) The data reported in the two panels of the figure refer to different samples of insurance undertakings. Country codes: EEA=European Economic Area; AT=Austria; DE=Germany; ES=Spain; FR=France; IT=Italy; NL=Netherlands. The EEA is composed of EU member states together with Liechtenstein, Norway and Iceland. – (2) This panel shows the solvency ratio of EU insurance undertakings with and without the VA. – (3) The LLP is the maturity beyond which the interest rate estimation procedure must be used. This panel shows the solvency ratio of the sampled undertakings, with and without the extension of the LLP from 20 to 30 years.

The regulatory framework sets out a procedure for estimating the long-term interest rates used by undertakings to compute their insurance-related liabilities (technical provisions). This procedure is applied to maturities for which there are no sufficiently representative market rates. The EIOPA report highlights how extending from 20 to 30 years the maturity past which the estimation procedure applies (known as the 'last liquid point', LLP) would determine a significant downward shift in the curve for the longer maturities, penalizing undertakings whose liabilities have very long durations. The average solvency ratios would fall by 7 percentage points for Italian undertakings and by 23, 45 and 76 points for French, German and Dutch undertakings respectively (see panel (b) of the figure).[4]

[2] The analysis was conducted on 2,945 undertakings, of which 107 Italian. The estimation of risk-free interest rates is based on a smaller sample of 569 undertakings (of which 21 Italian). See EIOPA, *Report on long-term guarantees measures and measures on equity risk 2017*, 20 December 2017.

[3] The VA consists in raising in parallel the term structure of interest rates used to compute the value of balance sheet liabilities in the event of changes in bond spreads. It reduces the value of the liabilities, offsetting the devaluation of assets that occurs when the spreads on portfolio securities widen. The EU undertakings that reported using the VA are 730, accounting for a 66 per cent market share in terms of technical provisions.

[4] A summary of the various scenarios and the corresponding results is provided in the EIOPA report (see footnote 2).

Overall, the results show that the LGT measures designed to address severe tensions in the financial markets produce lasting positive effects on the solvency position of some EU undertakings even in situations of low market volatility. Moreover, should the spreads of individual euro-area countries widen significantly, the current setup of some measures (e.g. the VA) could have limited positive effects for the undertakings with the highest exposure. EIOPA is conducting impact assessments to consider whether a revision of the rules is warranted.

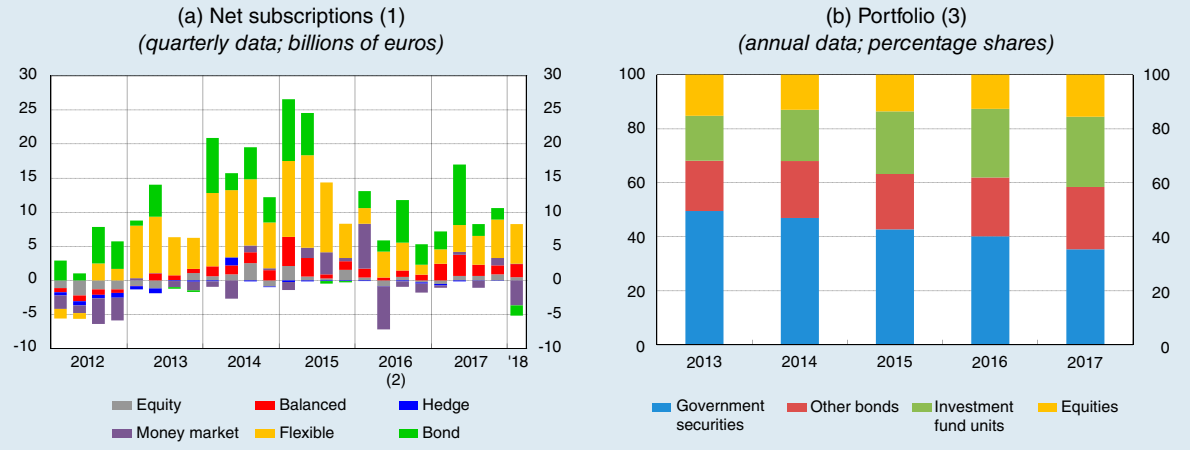
The balance between the financial durations of assets and liabilities also mitigates the risks associated with an upward shift in the term structure of interest rates; however, those connected with any widening in the spread on Italian government securities remain high.[16] Recently IVASS (the Insurance Supervisory Authority) introduced measures to facilitate the management of the latter risk as it relates to the securities held in segregated funds linked to traditional life insurance policies with a guaranteed return.[17] In particular, IVASS's order regulates the establishment of a fund to redistribute over time the net profit generated by the sale of securities.

The asset management industry

Robust growth in the assets managed by open-end investment funds, under way for five years (Figure 2.21.a), has not increased the risks to financial stability. The segments that rely heavily on leverage are still limited in size and liquidity mismatches of funds' assets and liabilities is curbed through regulatory action. Greater investment in corporate sector securities by open-end funds is increasing the sector's overall diversification (Figure 2.21.b); the share of illiquid assets in portfolio remains low on the whole.

Figure 2.21

Main indicators for open-end Italian investment funds



Sources: Assogestioni and supervisory reports.
(1) Data on funds based in Italy and abroad, managed by asset management companies belonging to Italian groups. – (2) Data on the money market segment for the first two quarters of 2016 and for the first quarter of 2018 comprise several large transactions by institutional investors. – (3) End-of-period data referring to Italian funds only.

[16] This is confirmed in the annual own risk and solvency assessment (ORSA) performed by insurance companies; see the letter to the market of 12 January 2018 on IVASS's website (*Results of the comparative analysis of the Reports on the own risk and solvency assessment (ORSA)*).

[17] See IVASS's website: *Order no. 68 of 14 February 2018* (order amending ISVAP Regulations No. 14/2008, No. 22/2008 and No. 38/2011 on segregated funds).

The popularity of long-term individual savings plans (*piani individuali di risparmio* or PIR) has contributed to the growth of the investments funds segment (see the box 'Individual savings plans' in *Financial Stability Report*, 2, 2017). In 2017 net subscriptions of investment funds meeting the requirements for classification as PIRs equalled nearly €10 billion, more than 50 per cent of the total raised by Italian open-end funds; substantial flows were also observed in the early months of this year.

If the funds meeting the PIR classification requirements were to continue expanding at a fast pace, greater risks could stem from investment policies that, to take advantage of tax benefits, allocate a significant portion of the funds' portfolio to securities characterized by low liquidity, even though they are traded on regulated markets (see the box 'Investments of open-end Italian investment funds that comply with the rules on individual savings plans (PIR)'). Episodes of stock price volatility could prove to be particularly severe in these market segments, with negative effects on the returns of the PIRs and on the reputation of the banks that sell them.

INVESTMENTS OF OPEN-END ITALIAN INVESTMENT FUNDS THAT COMPLY WITH THE RULES ON INDIVIDUAL SAVINGS PLANS (PIR)

The introduction of long-term individual savings plans (*piani individuali di risparmio* or PIR) has encouraged the launch of investment funds with a strong focus on the Italian share and bond markets. At the end of 2017, that is, one year after the introduction of PIRs,[1] some 64 Italian and foreign investment funds complied with the rules governing such savings plans, most of them equity or balanced funds. The total assets of the 44 PIR-compliant Italian investment funds amounted to €12.4 billion,[2] of which more than 56 per cent was invested in securities of resident non-financial corporations (compared with less than 3 per cent on average for the other non-PIR-compliant funds; see the table).

Investments of Italian investment funds
(December 2017; per cent)

	PIR-compliant funds	Non-PIR-compliant funds
Securities issued by non-residents	12.5	64.2
Securities issued by residents	87.5	35.8
Government securities	2.9	24.8
Investment fund units	0.0	4.2
Financial companies	28.2	4.1
Non-financial corporations	56.4	2.7
Shares	35.8	1.2
FTSE MIB shares	10.7	0.6
Other shares	25.1	0.6
Bonds	20.6	1.5
Issued by companies listed in the FTSE MIB index	9.7	0.9
Other bonds	10.8	0.6
Total	**100.0**	**100.0**
Billions of euros	12.4	230.7

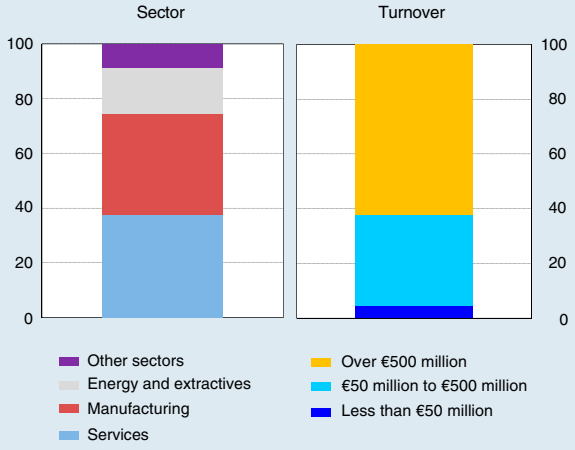
Source: Supervisory reports.

Investments in Italian corporate securities are mostly in those issued by medium-sized and large companies in the manufacturing and service sectors[3] (see panel (a) of the figure). Of these investments, bonds accounted for €2.5 billion, of which 35 per cent were issued in 2017; only 1 per cent was invested in minibonds. Investments in shares amounted to €4.3 billion and were concentrated in a limited number of securities: over 50 per cent of this category was invested in the shares of 24 companies.

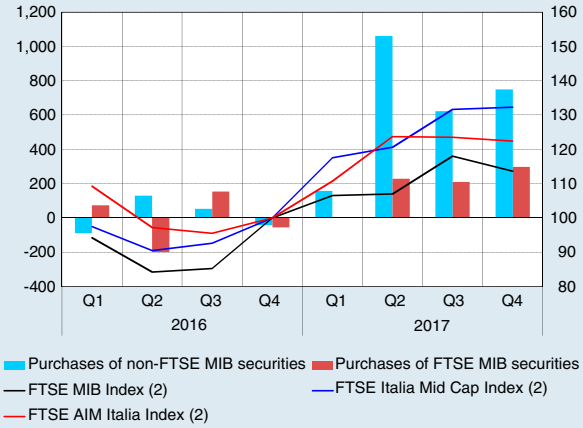
[1] Long-term individual savings plans were introduced by the 2017 budget law (Law 232/2016); see the box 'Individual savings plans', in *Financial Stability Report*, 2, 2017.
[2] At the end of 2017, these were made up of subscriptions, revaluation of assets and the assets of pre-existing funds that have meanwhile become compliant with PIR rules.
[3] The 2018 budget law (Law 205/2017) has included real estate companies among those in which PIR funds can invest in order to qualify for the fiscal incentive.

Investments of open-end Italian investment funds (1)

(a) Investments in Italian corporate securities
(December 2017; per cent)



(b) Net purchases of Italian shares
(millions of euros and indices; December 2016=100)



Sources: Based on data from the Bank of Italy, Thomson Reuters and Cerved.
(1) The data on purchases refer to Italian funds only. Includes only ordinary shares of resident companies. – (2) Right-hand scale. End-of-period data.

In 2017 investments in securities with low or medium capitalization, carried out to comply with the PIR rules, were accompanied by a sharp increase in prices in the corresponding market segments (see panel (b) of the figure). The direct impact on market prices of the purchases made by PIR funds appears limited so far, as prices also increased for securities that were not affected by the activity of the funds. However, should PIR-compliant funds continue to grow at a fast pace, it cannot be ruled out that investments made by these funds will contribute to an overvaluation of prices in the least liquid segments of the market.

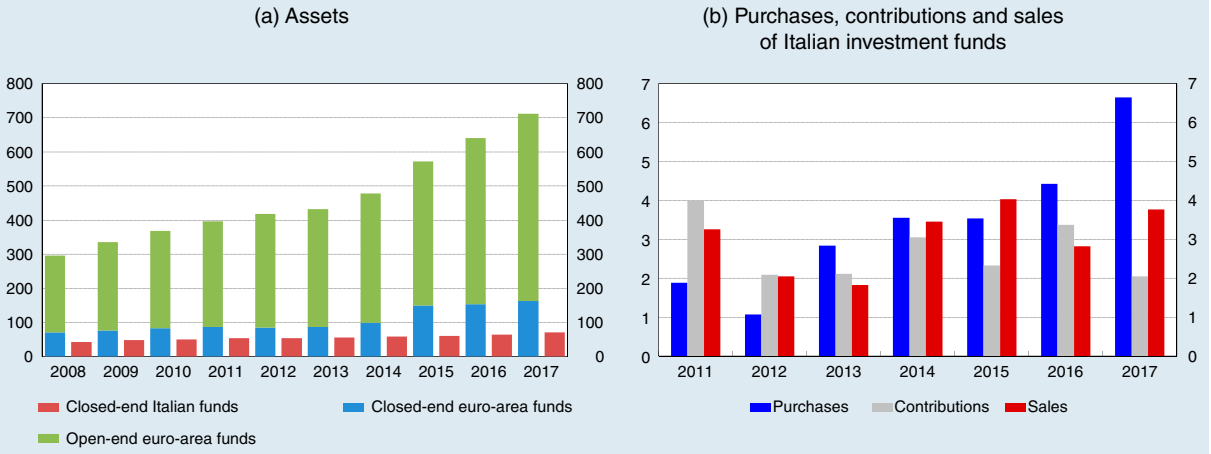
Last December the European Systemic Risk Board (ESRB) issued a recommendation on liquidity and leverage risks in investment funds, addressed to the European Commission and the European Securities and Markets Authority, (ESMA).[18] The recommendation calls for, among other things, the harmonization at European level of the regulatory framework for liquidity risk management, the adoption of specific risk control measures by fund managers with significant investments in less liquid assets, and the development of guidance on the stress testing of liquidity risk. The Italian regulatory system ensures adequate protection for the stability of investment funds and is consistent with the aims of the recommendation (see the box 'The risks to financial stability from the activity of open-end investment funds', in *Financial Stability Report*, 1, 2017).

The assets managed by Italian property funds continue to grow, recording a 10 per cent increase in 2017, the largest since 2010. The value of their real estate transactions exceeded €12 billion (mainly owing to purchases; Figure 2.22). The sector's expansion, which regards solely the segment reserved to professional investors, was attributable in part to new initiatives promoted by foreign intermediaries

[18] ESRB, *Recommendation of the European Systemic Risk Board of 7 December 2017 on liquidity and leverage risks in investment funds* (*ESRB/2017/6*), February 2018. The ESRB's work complements the activity of the Financial Stability Board (FSB), which published its recommendations at the beginning of 2017. Moreover, last February the International Organization of Securities Commissions (IOSCO), at the instruction of the FSB, published recommendations and good practices for liquidity risk management for investment funds (see the box 'The risks to financial stability from the activity of open-end investment funds', in *Financial Stability Report*, 1, 2017).

Figure 2.22

Property funds
(billions of euros)



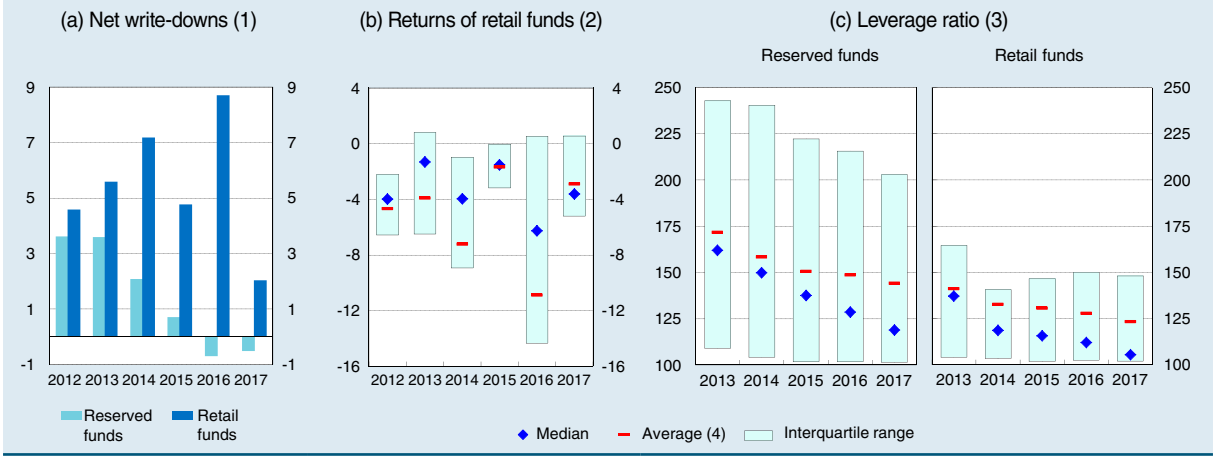
Source: Supervisory reports.

and to the establishment of five fixed-capital investment companies (SICAFs) specializing in real estate management.[19]

The reserved funds segment benefitted from positive net revaluations of portfolio real assets (Figures 2.23.a and 2.23.b); net write-downs have continued to have a negative effect on the profitability of retail funds. Most of the retail funds still operating must be fully divested over the next three years, for an amount of

Figure 2.23

Main indicators for Italian property funds
(annual data; per cent)



Source: Supervisory reports.
(1) Ratio of balance sheet write-downs net of revaluations to average total assets at the end of the reference year and of the previous year. – (2) Ratio of profits to the average of net assets at the end of the reference year and of the previous year. – (3) Ratio of total assets to net wealth. – (4) Weighted average with the weights equal to the denominator of each ratio.

[19] Fixed-capital investment companies, introduced in Italy in 2014, are closed-end collective investment undertakings formed as corporations.

around €3 billion. The overall returns recorded since they commenced operations have been negative for almost one third of the funds.

The reduction in debt under way since 2009 continued (Figure 2.23.c). Although the solvency conditions of some funds remain difficult, the risks to financial stability posed by property funds are very small owing to their limited size and the moderate exposure of banks and other intermediaries to the sector. The effects of any increase in interest rates on funds' interest expense is expected to be small overall, thanks to ample use of hedging.

3 MACROPRUDENTIAL MEASURES

As national designated authority the Bank of Italy, in coordination with the European Central Bank (ECB), is empowered to activate in Italy the macroprudential instruments for banks provided for in European legislation (Table 3.1; see p. 5 of the *Executive Summary* of the Bank of Italy's Report on Operations and Activities for 2016). The Bank's recent macroprudential decisions have regarded setting the countercyclical capital buffer (CCyB), identifying global systemically important institutions (G-SIIs) and, at domestic level, other systemically important institutions (O-SIIs), defining buffer levels for these two groups of banks and responding to a request by the Finnish supervisory authority for reciprocation of a macroprudential measure it had adopted.

Table 3.1

The main macroprudential instruments for the banking sector (1)

Instrument	Purpose
Instruments harmonized at European level (2)	
Countercyclical capital buffer	To reduce the procyclicality of the financial system by building up capital buffers during expansions in the financial cycle for absorbing potential losses during contractions
Capital buffers for global systemically important institutions and other systemically important institutions	To increase the ability of systemically important institutions to absorb losses
Systemic risk buffer	To avert or mitigate long-term structural systemic risks
Higher capital requirements for exposures to the real estate sector	To avert or mitigate systemic risks stemming from exposures to the real estate sector
Instruments not harmonized at European level (3)	
Limits on loan-to-value, loan-to-income, and debt service-to-income ratios	To smooth the credit cycle and to increase the resilience of banks, by reducing risk-taking by borrowers

(1) For a more detailed list of the instruments, see Recommendation ESRB/2013/1, issued by the European Systemic Risk Board (ESRB). – (2) Provided for in Directive 2013/36/ EU (Capital Requirements Directive, CRD IV) on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms; Regulation (EU) No. 575/2013 (Capital Requirements Regulation, CRR) on prudential requirements for credit institutions and investment firms. – (3) Instruments not envisaged under EU legislation but which can be activated in individual member states based on national legislation, where this is permitted.

The CCyB rate was kept at zero per cent for the first two quarters of 2018 (Table 3.2), based on the expected difference between the credit-to-GDP ratio and its long-run trend (credit-to-GDP gap; see Section 1.1) and the absence of significant risks to financial stability inferable from an analysis of the other cyclical indicators:[1] while falling, the unemployment rate remains high; in real terms property prices have stabilized but are still significantly below their average long-term levels; growth in business lending is very moderate.

[1] For more details on the criteria for identifying these indicators, see P. Alessandri, P. Bologna, R. Fiori and E. Sette, 'A note on the implementation of a Countercyclical Capital Buffer in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 278, 2015.

Table 3.2

Recent macroprudential policy decisions of the Bank of Italy (1)

	Decision	Capital requirement for this year *(per cent)*	Fully phased in capital requirement *(per cent)* (2)
	Identification of the UniCredit, Intesa Sanpaolo, Banco BPM and Monte dei Paschi di Siena banking groups as O-SIIs authorized to operate in Italy for 2018 and setting of the corresponding capital requirement ratios		
30 November 2017	UniCredit (3)	0.25	1.00 (2021)
	Intesa Sanpaolo	0.19	0.75 (2021)
	Banco BPM	0.00	0.25 (2022)
	Monte dei Paschi di Siena	0.06	0.25 (2021)
15 December 2017	Identification of the UniCredit Group as a G-SII and setting of the corresponding capital requirement ratio (3)	0.75	1.00 (2019)
22 December 2017	Setting of the CCyB rate for the first quarter of 2018	0.00	–
23 March 2018	Setting of the CCyB rate for the second quarter of 2018	0.00	–
30 March 2018	Decision to not reciprocate a macroprudential measure adopted by Finland concerning bank exposures to its residential real estate market	–	–

(1) The date refers to that on which the decision was published. For a complete list of the macroprudential policy decisions, see the Bank's website. – (2) In brackets, the year of full implementation. – (3) In accordance with European legislation, the UniCredit Group will apply only the higher between the G-SII and the O-SII requirements.

Based on a number of indicators, including its size, complexity, and degree of interconnectedness and internationalization, in 2018 the Bank of Italy again identified UniCredit as a global systemically important institution authorized to operate in Italy.[2] As of 1 January 2018 the UniCredit Group is required to maintain an additional capital buffer equal to 0.75 per cent of its total risk-weighted exposures, an increase of 0.25 percentage points compared with the 2017 requirement. Once fully implemented in 2019, the requirement will rise to 1.00 per cent.

For 2018 the new banking group Banco BPM, created following the merger of Banco Popolare and Banca Popolare di Milano, was identified at national level as a systemically important institution (O-SII) in addition to the three groups already identified last year (UniCredit, Intesa Sanpaolo and Monte dei Paschi di Siena). The identification was made using the indicator envisaged in the Guidelines of the European Banking Authority (EBA), which considers four characteristics: size, importance for the national economy, complexity and interconnectedness with the financial system.[3] Once fully

[2] For more details on the methodology for the identification and classification of G-SIIs, see Commission Delegated Regulation (EU) No. 1222/2014, containing provisions consistent with those set out by the Basel Committee on Banking Supervision (BCBS) and the Financial Stability Board (FSB). The UniCredit Group belongs to the first subcategory of global systemic importance.

[3] EBA, *Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs)*, 16 December 2014.

phased in, the additional capital buffer that Banco BPM will be required to maintain will amount to 0.25 per cent of total risk-weighted exposures. Those of the other three groups will be 1.00, 0.75 and 0.25 per cent respectively. These levels will be attained gradually (Table 3.3). In accordance with European legislation, the UniCredit Group will have to apply only the higher between the G-SII and O-SII requirements.

Table 3.3

Transitional regime applicable to the O-SII buffers
(per cent)

Banking group	From 1 Jan. 2018	From 1 Jan. 2019	From 1 Jan. 2020	From 1 Jan. 2021	From 1 Jan. 2022
UniCredit	0.25	0.50	0.75	1.00	1.00
Intesa Sanpaolo	0.19	0.38	0.56	0.75	0.75
Banco BPM	0.00	0.06	0.13	0.19	0.25
Monte dei Paschi di Siena	0.06	0.13	0.19	0.25	0.25

At the request of the authorities in an EU country that has adopted macroprudential measures, the European Systemic Risk Board (ESRB) can recommend that authorities in other EU countries apply to their own banks comparable measures for exposures to residents in the country where the request originated. The authorities can advance a request for reciprocity if they believe that there is a concrete risk that the measures adopted at national level are not fully effective owing to the behaviour of banks in other states not subject to the measures. The Bank of Italy recently assessed a request for reciprocation of a macroprudential measure adopted in Finland to reduce the risks related to exposures of banks to the country's residential real estate market. Italian banks have no branches in Finland and the exposures of banks and Italian financial companies to the Finnish real estate sector are negligible; the Bank of Italy therefore decided to not extend the measure to its own banks but pledged to review the decision in the future in the event of a significant increase in the exposures of Italian banks to Finland.

In the other EU states the macroprudential measures introduced in recent months mainly related to the CCyB and capital buffers for systemically important institutions; new measures were also introduced to combat the risks stemming from the real estate market and high levels of private sector indebtedness (see the box 'The main macroprudential measures recently adopted in the European Union').[4]

THE MAIN MACROPRUDENTIAL MEASURES RECENTLY ADOPTED IN THE EUROPEAN UNION

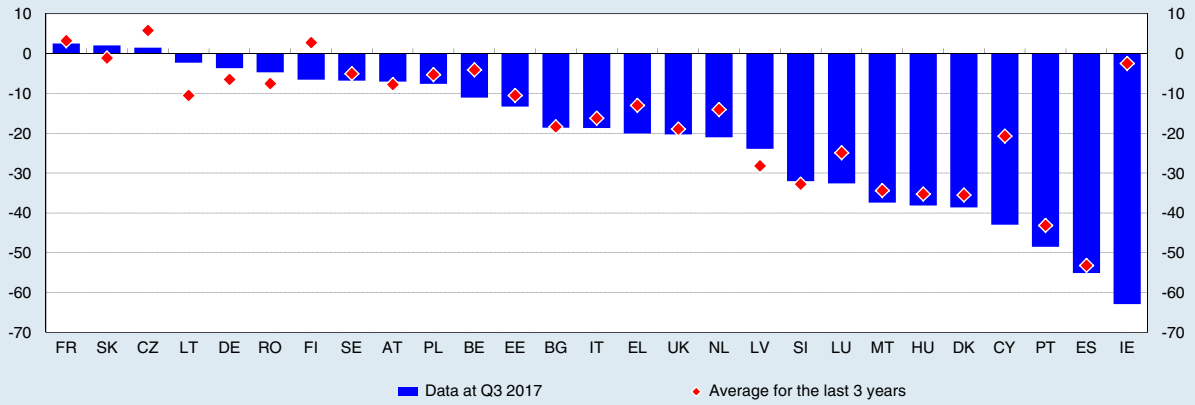
The countercyclical capital buffer (CCyB). – The difference between the credit-to-GDP ratio and its long-run trend (credit-to-GDP gap), which is an indicator of the financial cycle, continues to be negative for the majority of EU countries (Figure A). In some member states, however, the signs of an improvement in the cycle have persuaded macroprudential authorities to announce an increase in the CCyB rate for the current year or in 2019 (see the table).

Capital buffers for global systemically important institutions (G-SIIs) and other systemically important institutions (O-SIIs). – In 2017 some 200 domestic systemically important banks were identified in the EU (see panel (a) of Figure B), a similar number to that for the previous year. Of these, 12 are also G-SIIs and, in addition to Italy, are located in France, Germany, the Netherlands,

[4] For details on the individual measures, see on the ESRB's website 'National measures of macroprudential interest in the EU/EEA'.

Figure A

Credit-to-GDP gap in the EU countries (1)
(percentage points)



Sources: ESRB and ECB (Statistical Data Warehouse).
(1) Calculated with reference to total domestic credit. The data for Croatia are not available. Country codes: FR=France; SK=Slovakia; CZ=Czech Republic; LT=Lithuania; DE=Germany; RO=Romania; FI=Finland; SE=Sweden; AT=Austria; PL=Poland; BE=Belgium; EE=Estonia; BG=Bulgaria; IT=Italy; EL=Greece; UK=United Kingdom; NL=Netherlands; LV=Latvia; SI=Slovenia; LU=Luxembourg; MT=Malta; HU=Hungary; DK=Denmark; CY=Cyprus; PT=Portugal; ES=Spain; IE=Ireland; HR=Croatia.

Table

Countercyclical capital buffers in the EU countries

	Applicable rates *(per cent)*	Application since	Announced rates *(per cent)*	Application since
Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, **Italy**, Latvia, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain	0.00	1 Jan. 2016	–	–
Denmark	0.00	1 Jan. 2016	0.50	31 Mar. 2019
Lithuania	0.00	1 Jan. 2016	0.50	31 Dec. 2018
United Kingdom (1)	0.00	1 Jan. 2016	0.50 1.00	27 June 2018 28 Nov. 2018
Czech Republic	0.50	1 Jan. 2017	1.00 1.25	1 July 2018 1 Jan. 2019
Slovakia	0.50	1 Aug. 2017	1.25	1 Aug. 2018
Sweden	2.00	19 Mar. 2017	–	–

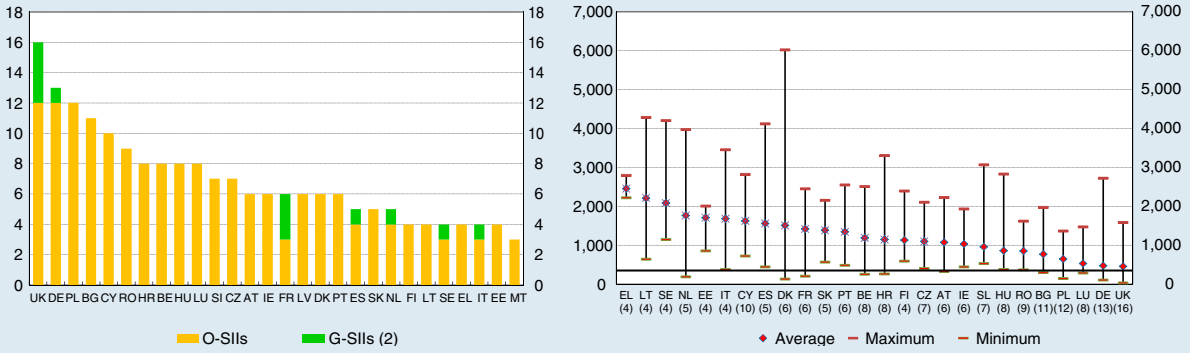
Source: ESRB.
(1) In the United Kingdom the authorities had set the rate at 0.50 per cent in March 2016, to take effect at the end of March 2017; in July 2016 they brought it back to zero, following increased uncertainty about economic prospects after the referendum on Brexit. In 2017 the rate had been put back to 0.50 per cent and then raised to 1 per cent, starting from the end of June 2018 and from the end of November 2018, respectively.

Figure B

Systemically important institutions authorized in EU countries (1)

(a) Number

(b) Systemic importance score of the institutions identified as O-SIIs (3)
(basis points)



Sources: Based on ESRB and national data.
(1) The data refer to the latest available information on the websites of the ESRB and of the national authorities. For Cyprus, the O-SIIs include four investment firms. – (2) All the G-SIIs in the EU have also been identified as O-SIIs. – (3) The numbers in brackets below the countries on the horizontal axis correspond to the number of O-SIIs in each country. The graph shows the countries for which the ESRB or the national authorities have published the scores assigned to individual institutions based on the methodology outlined in the EBA Guidelines. The horizontal line indicates the threshold of 350 basis points set by the EBA for the identification of O-SIIs.

Spain, Sweden and the United Kingdom. Also in 2017, a number of countries identified institutions with a systemic importance score below the EBA threshold as O-SIIs (see panel (b) of Figure B).[1] In most countries the capital reserves for O-SIIs are being built up gradually; in some member states, the buffer will be kept at zero this year. Three countries decided not to apply buffers.[2] In some member states[3] it was decided in 2017 to activate, in addition to or instead of the O-SII requirement, the systemic risk buffer (SRB) to avert and mitigate the systemic risks associated with the structural characteristics of the national financial systems (e.g. size and concentration).[4] The buffer is afforded national discretion under European legislation and Italy opted not to introduce it.

Other macroprudential measures. – Three member states took macroprudential measures to tighten the minimum prudential requirements against risks stemming from the real estate market and high levels of private sector indebtedness, in accordance with the procedures and conditions set out in Article 458 of Regulation (EU) No. 575/2013 (Capital Requirements Regulation, CRR) on prudential requirements for credit institutions and investment firms.[5] In particular, in Finland a macroprudential measure imposes a minimum of 15 per cent on the average of the risk weights

1 The threshold for identifying O-SIIs is 350 basis points; the Guidelines nonetheless make it possible to apply, within certain limits, other thresholds to take account of the specificities of national banking systems.

2 The Czech Republic, Denmark and the United Kingdom.

3 Croatia, the Czech Republic, Denmark, the Netherlands, Slovakia and Sweden.

4 The maximum capital reserve requirement for O-SIIs envisaged by CRD IV amounts to 2 per cent of total risk-weighted exposures. For the SRB, CRD IV envisages a minimum of 1 per cent but no maximum.

5 Article 458 of the CRR regulates the cases in which a national authority, to address a systemic risk, adopts measures that tighten the minimum prudential requirements (own funds, large exposures, public disclosure requirements, the level of the capital conservation buffer, liquidity, real estate sector, intra financial sector exposures), in the belief that this risk cannot be adequately countered with the other instruments provided for by EU legislation on capital rules (CRD IV-CRR). The implementation procedure requires that advance notice be given to the European institutions, an opinion be received from the EBA and ESRB, and approval be given by the Commission.

applied by the banks that use internal models to the exposures secured by housing units located in Finland. Belgium's central bank announced that it intends to raise its risk weightings on exposures to the residential properties of the Belgian banks that use internal models.[6] France's macroprudential authority said it would introduce a measure that sets a limit – equal to 5 per cent of own funds – on the exposures of banks identified as systemically important to large highly-indebted non-financial corporations.

[6] A similar measure, taken in 2013, expired in May 2017.

SELECTED STATISTICS

CONTENTS

Financial sustainability indicators

(per cent of GDP, unless otherwise specified)

	GDP (annual growth rate) (1)		Characteristics of public debt (2)				Primary surplus (2)	S2 sustainability indicator (3)	Private sector financial debt (4)		External position statistics (5)	
			Level		Average residual life of govt. securities (*years*)	Non-residents' share (*% of public debt*)			House-holds	Non-financial firms	Current account balance	Net international investment position
	2018	2019	2018	2019	2018	2017	2018	2016	2017	2017	2017	2017
Italy	1.5	1.1	129.7	127.5	6.9	35.6	1.9	0.6	41.3	72.1	2.8	-6.7
Germany	2.5	2.0	59.8	55.7	5.8	55.5	2.3	1.2	52.9	54.6	8.0	59.1
France	2.1	2.0	96.3	96.2	7.4	60.8	-0.6	1.1	58.7	133.9	-0.8	-20.2
Spain	2.8	2.2	96.7	95.1	7.0	50.3	-0.2	1.2	61.3	96.8	1.9	-80.8
Netherlands	3.2	2.4	53.5	50.9	6.9	51.7	1.1	3.0	105.1	116.0	10.2	69.6
Belgium	1.9	1.7	101.0	99.1	9.4	60.5	0.7	2.7	60.3	156.8	-0.2	55.6
Austria	2.6	1.9	75.4	72.0	8.3	81.2	0.9	2.7	50.1	90.0	1.9	6.0
Finland	2.6	2.0	60.5	59.6	6.2	73.1	-1.3	2.8	67.3	113.5	0.7	5.7
Greece	2.0	1.8	191.3	181.8	....	....	2.9	....	57.0	61.7	-0.8	-140.9
Portugal	2.4	1.8	121.2	117.5	6.2	62.7	2.3	1.0	69.4	106.8	0.5	-105.7
Ireland	4.5	4.0	67.1	64.9	10.7	59.6	1.5	-0.5	47.4	201.4	12.5	-155.8
Euro area	2.4	2.0	84.2	81.7	....	....	1.1	1.3	58.0	102.0	3.5	-1.3
United Kingdom	1.6	1.5	86.3	85.9	14.9	35.2	-0.2	2.1	86.5	77.4	-4.1	-12.6
United States	2.9	2.7	108.0	109.4	5.8	31.3	-3.0	....	78.7	73.5	-2.4	-40.5
Japan	1.2	0.9	236.0	234.2	7.7	10.3	-3.2	....	54.7	103.4	4.0	64.2
Canada	2.1	2.0	86.6	83.8	5.4	25.4	-0.5	....	100.2	114.0	-3.0	18.7

Sources: IMF, Eurostat, ECB, European Commission, national financial accounts and balance of payments data.
(1) IMF, *World Economic Outlook, April 2018*. – *(2)* IMF, *Fiscal Monitor*, April 2018. – (3) European Commission, *Debt Sustainability Monitor 2017*, January 2018. 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. – (4) Loans and securities. End of Q4 2017. Data for the euro area countries are from ECB, Statistical Data Warehouse; data for the non-European countries and the United Kingdom are from national sources. – (5) The data refer to Q4 2017. Data for the European countries and for the euro area as a whole are from Eurostat, *Statistics Database* and ECB, *Statistical Data Warehouse*; data for the non-European countries are from national sources.

Table A2

Italian banks' non-performing loans and guarantees by counterparty sector (1)
(billions of euros; per cent; December 2017)

	Gross exposures	Net exposures	Collateral (2)	Personal guarantees (2)	Coverage ratio for unsecured loans
			Firms		
Non-performing customer loans	198	90	96	38	64.0
of which: bad loans	124	41	56	29	78.2
			Consumer households		
Non-performing customer loans	46	25	31	2	65.2
of which: bad loans	31	14	21	1	72.8
			Total (3)		
Non-performing customer loans	255	120	131	41	63.5
of which: bad loans	159	56	78	30	77.0

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. Provisional data. – (2) The amounts correspond to the gross exposure that is collateralized or backed by personal guarantees. – (3) Includes general government, financial and insurance corporations, non-profit institutions serving households, and non-classifiable and unclassified entities.

Table A3

Exposures of Italian groups and banks to foreign residents by counterparty sector (1)
(billions of euros; per cent; September 2017)

	Public sector	Banks	Financial corporations	Households and firms	Total	Percentage change in total compared with the end of the previous 6 months	Per cent of total exposures reported to the BIS (2)	Per cent of total exposures (3)
Euro area (excluding Italy)	130.1	67.8	45.6	189.1	432.6	3.5	2.4	16.8
Other industrialized countries	20.8	21.5	29.4	26.6	98.4	3.5	0.3	3.8
of which: United Kingdom	1.4	10.7	17.3	6.2	35.6	1.6	0.9	1.4
Emerging and developing countries	43.9	21.1	8.4	87.2	160.6	-0.1	2.3	6.2
Europe	39.5	12.1	6.6	74.8	133	-1.5	9.5	5.2
of which: Russia	3.0	2.0	0.5	16.6	22.1	0.1	23.1	0.9
Africa and the Middle East	3.3	1.8	0.8	5.5	11.4	18.1	2.2	0.4
Asia and Pacific	0.7	4.5	0.8	4.2	10.2	-0.8	0.2	0.4
Central and South America	0.5	2.6	0.2	2.7	6.1	3.5	0.6	0.2
Offshore centres	0.2	1.1	2.6	4.4	8.2	11.3	0.3	0.3
Total	**195**	**111.4**	**85.8**	**307.3**	**699.6**	**2.7**	**1.1**	**27.2**
Memorandum item								
Energy-exporting emerging and developing countries (4)	4.0	3.4	1.4	20.2	28.9	4.8	6.9	1.1

Source: Consolidated supervisory reports for banking groups, individual supervisory reports for the rest of the system.
(1) Exposure to 'ultimate borrowers', gross of bad loans 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 reported to the Bank for International Settlements (BIS) by a large set of international banks. – (3) Total exposures to residents and non-residents. The numerator and denominator refer to 30 September 2017. – (4) Includes: Algeria, Angola, Azerbaijan, Bahrain, Bolivia, Brunei, Chad, Colombia, Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Russia, Saudi Arabia, Sudan, Timor Leste, Trinidad and Tobago, Turkmenistan, United Arab Emirates, Venezuela, Yemen.

Table A4

Investment by Italian and euro-area banks in public sector securities issued in the banks' country of residence (1)

(millions of euros; per cent)

	Italy (2)			Euro area		
	Stocks	Net purchases	Share of total assets	Stocks	Net purchases	Share of total assets
2011	211,680	18,457	5.6	1,009,414	72,378	3.0
2012	322,704	90,138	8.3	1,251,226	213,410	3.8
2013	374,545	45,312	10.1	1,313,179	46,354	4.3
2014 – Q1	381,781	775	10.2	1,355,157	23,132	4.4
Q2	382,685	-3,292	10.4	1,370,453	3,515	4.5
Q3	378,441	-6,145	10.3	1,378,601	-978	4.4
Q4	382,928	4,128	10.5	1,370,727	-18,877	4.4
2015 – Q1	392,330	2,597	10.6	1,380,572	2,841	4.3
Q2	377,992	-2,871	10.5	1,343,751	-11,320	4.3
Q3	373,788	-8,804	10.5	1,337,991	-13,333	4.3
Q4	363,538	-11,924	10.2	1,295,539	-44,385	4.2
2016 – Jan.	367,884	3,717	10.3	1,326,277	29,829	4.2
Feb.	375,248	8,031	10.4	1,341,614	15,603	4.2
Mar.	365,525	-11,185	10.2	1,328,565	-15,163	4.3
Apr.	370,568	7,078	10.4	1,325,852	268	4.2
May	366,602	-4,819	10.3	1,321,028	-8,061	4.2
June	368,642	1,612	10.2	1,325,190	2,101	4.2
July	367,552	-1,531	10.3	1,309,177	-16,994	4.1
Aug.	359,886	-7,927	10.1	1,284,102	-24,869	4.1
Sept.	352,347	-6,893	9.8	1,257,295	-27,856	4.0
Oct.	346,798	-1,323	9.7	1,245,561	-6,416	4.0
Nov.	338,654	-4,105	9.5	1,232,104	-6,628	3.9
Dec.	332,617	-9,219	9.4	1,205,139	-30,423	3.9
2017 – Jan.	335,590	6,591	9.5	1,198,610	1,473	3.8
Feb.	338,789	3,001	9.6	1,201,728	1,928	3.8
Mar.	348,424	10,297	9.7	1,205,432	4,771	3.8
Apr.	351,004	2,506	9.8	1,201,872	-3,941	3.8
May	341,992	-9,755	9.6	1,194,060	-9,045	3.8
June	322,508	-19,651	9.1	1,160,110	-34,125	3.7
July	326,417	3,646	9.2	1,150,277	-10,325	3.7
Aug.	325,152	-1,359	9.2	1,155,089	3,640	3.7
Sept.	318,932	-5,639	9.1	1,144,825	-7,621	3.7
Oct.	309,042	-11,980	8.8	1,120,278	-21,473	3.6
Nov.	295,232	-14,550	8.3	1,108,599	-14,073	3.6
Dec.	283,246	-9,646	8.1	1,074,126	-31,711	3.5
2018 – Jan.	292,860	9,491	8.4	1,095,030	20,305	3.6
Feb.	295,209	2,573	8.5	1,091,100	-3,028	3.5

Sources: Individual supervisory reports and ECB.

(1) The data on net purchases refer to the whole period; the data on stocks and share of total assets refer to the end of the period. Purchase amounts are shown net of variations in market prices; holdings are shown at market value. All public sector securities are counted, including those issued by local government authorities. – (2) Cassa Depositi e Prestiti SpA is excluded.

Table A5

Italian banks' bonds by holder and maturity (1)
(millions of euros; February 2018)

	Maturity					Total
	by 2018	between 2019 and 2020	between 2021 and 2022	between 2023 and 2027	beyond 2027	
Households (2)	26,956	37,100	18,401	15,386	891	98,734
Of which: subordinated bonds	2,213	4,227	3,556	5,125	364	15,485
Banks in the issuer's group (3)	7,629	13,150	11,585	6,387	3,720	42,472
Of which: subordinated bonds	147	361	68	549	21	1,146
Other Italian banks	1,892	7,365	4,002	3,557	420	17,236
Of which: subordinated bonds	122	160	220	641	44	1,186
Other investors	19,039	48,854	34,591	56,268	11,376	170,128
Of which: subordinated bonds	2,152	2,892	2,792	12,524	3,378	23,738
Total	**55,516**	**106,469**	**68,579**	**81,598**	**16,408**	**328,570**
***Of which*: subordinated bonds**	**4,634**	**7,640**	**6,635**	**18,840**	**3,806**	**41,555**

Source: Individual supervisory reports.
(1) Data are indicated at nominal value and refer to bonds entered on the liability side, net of buybacks by the issuer. Rounding may cause discrepancies in the totals. – (2) Consumer and producer households and non-profit institutions serving households. Only resident customers. – (3) Resident banks belonging to the issuer's banking group.

Table A6

Composition of the assets deposited with the Bank of Italy as collateral for Eurosystem credit operations (1)

(billions of euros; end-of-period values)

	2013	2014	2015	2016	2017		2018
					June	December	February
Total	**344.8**	**283.5**	**253.7**	**297.3**	**332.8**	**321.2**	**312.1**
Government securities	101.4	119.8	97.6	88.8	125.4	105.8	107.6
Local and regional government securities	2.6	2.9	2.6	1.7	1.8	1.9	1.8
Uncovered bank bonds	11.5	10.4	5.8	5.3	6.2	5.4	4.8
Government-guaranteed bank bonds	69.8	15.0	0.4	0.3	2.5	1.3	1.0
Covered bonds	61.5	49.8	46.4	76.3	74.9	76.8	69.2
Non-bank bonds	1.6	1.0	2.5	3.0	3.4	3.0	3.0
Asset-backed securities	50.6	40.0	35.5	44.0	45.3	49.9	47.3
Other marketable assets	2.3	0.4	0.6	0.8	2.7	2.8	1.8
Non-negotiable assets (bank loans)	43.5	44.3	62.4	77.1	70.6	74.3	75.6

Source: based on Eurosystem data.
(1) *The collateral* pool is valued at the prices taken from the *Common Eurosystem Pricing Hub*, net of *haircuts*.

Table A7

Italian banks' net liquidity position (1)
(monthly average share of total assets)

	Significant groups			Less significant groups		
	Cumulative cash flow (2)	Counterbalancing capacity	Liquidity indicator (3)	Cumulative cash flow (2)	*Counterbalancing capacity*	Liquidity indicator (3)
2015 – Jan.	-3.1	14.8	11.7	-1.5	16.1	14.6
Feb.	-5.0	16.9	11.9	-3.8	18.6	14.8
Mar.	-5.2	16.7	11.6	-2.3	17.0	14.7
Apr.	-4.8	15.9	11.1	-3.2	17.9	14.6
May	-4.7	15.5	10.8	-4.3	18.5	14.2
June	-4.3	15.2	10.8	-3.4	17.5	14.0
July	-3.5	14.8	11.3	-2.8	16.6	13.8
Aug.	-2.7	14.8	11.9	-7.6	22.1	14.4
Sept.	-3.3	15.1	11.8	-10.5	24.8	14.2
Oct.	-2.5	15.0	12.5	-11.0	25.6	14.6
Nov.	-2.6	15.2	12.5	-9.9	24.5	14.6
Dec.	-3.6	15.1	11.5	-10.5	24.7	14.1
2016 – Jan.	-4.0	15.3	11.2	-12.4	26.0	13.5
Feb.	-4.1	15.0	10.9	-11.0	25.0	14.1
Mar.	-3.8	15.2	11.4	-10.0	24.6	14.6
Apr.	-3.6	15.7	12.1	-8.9	23.5	14.6
May	-3.7	15.8	12.1	-8.1	23.0	14.9
June	-2.9	15.1	12.2	-7.7	22.5	14.8
July	-2.4	15.3	12.9	-7.1	22.2	15.1
Aug.	-2.0	15.4	13.4	-7.1	22.5	15.3
Sept.	-2.1	15.3	13.2	-6.3	21.9	15.6
Oct.	-1.9	15.2	13.3	-4.1	21.1	17.0
Nov.	-2.2	15.3	13.1	-4.3	23.4	19.1
Dec.	-2.6	14.9	12.3	-4.2	20.3	16.1
2017 – Jan.	-2.1	14.2	12.1	-5.1	20.1	15.0
Feb.	-2.4	14.8	12.4	-5.1	20.0	14.9
Mar.	-1.5	13.6	12.1	-2.7	18.3	15.5
Apr.	-0.3	13.0	12.7	-4.7	20.9	16.2
May	-0.4	13.7	13.3	-3.9	19.8	15.8
June	-0.4	14.0	13.6	-3.3	19.1	15.8
July	0.0	13.5	13.5	-3.6	19.1	15.5
Aug.	0.0	13.9	13.9	-3.3	19.2	15.9
Sept.	0.6	13.5	14.1	-2.6	19.1	16.6
Oct.	0.5	13.2	13.7	-1.1	18.4	17.3
Nov.	1.0	13.4	14.4	-0.7	17.7	17.0
Dec.	0.2	13.5	13.7	-0.9	17.2	16.3
2018 – Jan.	0.8	12.1	12.9	-0.5	16.4	15.9
Feb.	0.3	13.2	13.5	-1.0	17.1	16.0
Mar.	0.6	13.5	14.1	-1.8	18.9	17.1

Source: Data transmitted to the Bank of Italy by a sample of 24 banking groups for periodic monitoring of their liquidity positions.
(1) *Monthly averages* based on weekly reports for 11 significant banks (supervised directly by the ECB) and 13 less significant banks (supervised by the Bank of Italy in cooperation with the ECB). On prudential grounds it is assumed there is no rollover of maturing obligations towards institutional counterparties. – (2) Calculated as the (positive or negative) difference between outflows (negative sign) and inflows (positive sign). Outflows include maturing obligations towards institutional clients and bank estimates of expected retail customer outflows. – (3) 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*.