



BANCA D'ITALIA
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Financial Stability Report

November 2018

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Number 2 / 2018
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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>).

OVERVIEW

The risks to financial stability posed by developments in the world economy are increasing. Protracted trade tensions are escalating uncertainty and could have negative repercussions on growth. The ending of monetary stimulus in the United States has tightened global financial conditions, with the risk that episodes of tension could lead to a generalized increase in yields.

In Europe, the results of the EBA's stress tests show that the major banks are solid, although some vulnerabilities remain. There is still deep uncertainty about the outcome of the negotiations for the United Kingdom's withdrawal from the European Union (Brexit).

In Italy, the main risks to financial stability stem from low growth and high public debt. Uncertainty about the economic and fiscal policy stance has caused yields on public sector securities to rise sharply, also due to investors' fears of a hypothetical redenomination of the debt in a currency other than the euro. Liquidity conditions in the secondary market for government securities are tighter than they were in the early months of the year and the intraday volatility of prices has increased.

Several factors are mitigating the repercussions of the financial turbulence on the economy. Private sector debt is among the lowest in the euro area, the trade surplus is ample and the net international debt position has decreased to almost nil. The high average residual maturity of the public debt slows down the transmission of an increase in government securities yields to the average cost of the debt.

Large and lasting increases in risk premiums on government securities hinder the reduction in the debt-to-GDP ratio, affect the value of household wealth, curb lending to the private sector and make borrowing more costly, and worsen the liquidity

and capital positions of banks and insurance companies.

Households' financial conditions remain solid, though the fall in security prices has already led to a decline in the value of their wealth. The capital structure of firms has strengthened in recent years, even if the cyclical slowdown is denting earnings growth.

In the banking sector credit quality has continued to improve as has profitability. The stock of NPLs is still diminishing at a fast pace. The results of the EBA's stress tests of the four Italian banks included in the sample are in line with the average results for the other European banks. The strengthening of banks' balance sheets is being adversely affected by the tensions in the sovereign debt market, which have led to a deterioration in liquidity and capital adequacy indicators and to an increase in market risks. The capital of the less significant banks would be more affected by any further falls in the value of government securities than would that of the significant banking groups.

The insurance sector is especially exposed to sovereign risk, given the investments needed to cover liabilities towards customers and the high share of government securities in these companies' portfolios. On average, solvency ratios are well above the minimum requirements; they have, however, recorded a significant reduction. Further large drops in the prices of government securities could have significant effects on the solvency position of insurers.

Financial market turbulence has been accompanied by outflows of capital from Italian bond funds. For Italian open-end investment funds the risk of increased requests for redemptions leading to a rapid unwinding of portfolios and greater market volatility is nonetheless limited.

1 MACROECONOMIC RISKS AND RISKS BY SECTOR

1.1 MACROECONOMIC RISKS

Global risks and euro-area risks

World growth forecasts for 2019, while still favourable, have begun to show greater heterogeneity between geographical areas. The protracted trade tensions between countries are increasing the level of uncertainty among operators, with possible repercussions on economic activity and the markets.¹ Since the start of the year, purchasing managers' opinions about export orders for firms have greatly worsened in Italy and in the euro area (Figure 1.1).

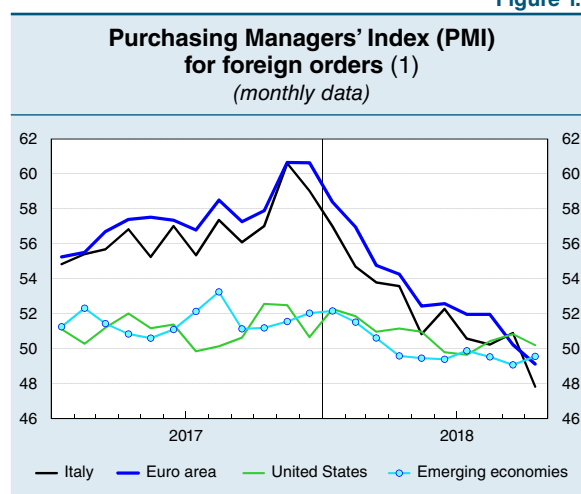
Expectations of monetary stimulus coming to an end in the United States have aggravated global financial conditions,² to which emerging countries with a high level of dollar-denominated debt are particularly exposed (see *Financial Stability Report*, 1, 2018). In recent months Argentina and Turkey have suffered strong fluctuations in their exchange rates, requiring their monetary authorities to intervene in order to stabilize the situation. Since then the tensions have only partially eased and there is a greater risk that other vulnerable emerging economies, in particular Brazil and South Africa, could be hit by large capital outflows. These four countries pose only a limited direct risk to the Italian financial system as they account for about 0.7 per cent of Italian bank lending (see Table A4 in the *Selected Statistics* section). Indirect risks stem from the possible spread of tensions to other emerging economies that could lead to a generalized increase in the risk premiums demanded by investors.

In Europe, there is still deep uncertainty about the outcome of the negotiations for the United Kingdom's withdrawal from the European Union (Brexit), despite the draft withdrawal text recently agreed by the negotiators. Without a ratified agreement, financial intermediaries and their customers would face an interruption of contracts with operators resident in the UK which, from 30 March 2019 will be a third country in relation to the EU (see the box 'The financial risks connected with the withdrawal of the United Kingdom from the European Union').

¹ IMF, *World Economic Outlook*, October 2018 and IMF, *Global Financial Stability Report*, October 2018.

² The Bloomberg Financial Conditions Index summarizes the information contained in numerous financial variables (M.R. Rosenberg, *Financial conditions watch. Global financial market trends & policy*, Bloomberg, 11 September 2009). The index has worsened considerably for both the United States and Europe.

Figure 1.1



THE FINANCIAL RISKS CONNECTED WITH THE WITHDRAWAL OF THE UNITED KINGDOM FROM THE EUROPEAN UNION

The completion of the Brexit process requires an agreement to be concluded and ratified by 29 March 2019, establishing the terms of the UK's withdrawal from the European Union (see the box 'Developments in the Brexit negotiations' in Chapter 1 of the Bank of Italy's *Annual Report for 2017*). A draft withdrawal agreement was defined on 14 November allowing the UK to participate in the single market until the end of the transition period (31 December 2020). The draft was approved by the Cabinet of the British government yet its ratification by the Parliament is still uncertain. If the agreement were not to be ratified, bilateral EU-UK relations would be broken off (cliff edge). This would, among other things, bring an end to the current regime of mutual recognition of authorizations and the supervisory system in the financial sector (the 'single passport').

For the finance industry, a cliff-edge Brexit carries several risks – to liquidity first and foremost, but there are also legal, operational and compliance risks – which could be significant in areas such as financial contracts (including derivatives), which are cleared through a British central counterparty (CCP). London is by far the most important centre in Europe for clearing derivatives (predominantly OTCs): according to the European Central Bank, about 90 per cent of EU firms' interest rate swaps are settled in the UK. The Bank of England recently estimated that the notional value of outstanding contracts managed by British CCPs amounts to around £69 trillion, a large portion of which (£41 trillion) will mature after 29 March 2019. On 13 November the European Commission announced¹ that, if it proved necessary to avoid any risks to financial stability, it would adopt a temporary and conditional equivalence decision for UK central clearing rules to allow British CCPs to be recognized by the European Securities and Markets Authority (ESMA), and, therefore, to continue their activities in the EU.

Further risks are connected with OTC derivatives contracts stipulated between European counterparties and British operators but not cleared through a CCP. The capacity of financial intermediaries to perform their primary task of margin trading would not be affected since they would simply be carrying out an obligation that arose before Brexit, although they could encounter difficulties in carrying out some activities related to the lifecycle events of these contracts (netting, renewal, and portfolio compression). The loss of the single passport would prevent UK intermediaries from continuing to carry out such activities if the latter were subject to authorizations provided for in the national rules of member states.

If no deal is reached, the almost 2,700 intermediaries headquartered in the UK that today do business in Italy using the single passport (banks, investment firms, asset management companies, payment and e-money institutions, insurance companies), 117 of which operate through branch offices, will only be able to continue operations on the basis of a new authorization granted by the Italian supervisory authorities.

Numerous British insurance companies operate in Italy, mainly in the fields of general civil liability, especially medical liability, and suretyship. If there is a cliff-edge exit, outstanding insurance contracts would still be valid from a civil law point of view, even if no longer subject to supervision in accordance with EU legislation.²

¹ European Commission, '*Preparing for the withdrawal of the United Kingdom from the European Union on 30 March 2019: a Contingency Action Plan*', COM(2018) 880 final, 2018.

² The impact of closing OTC derivatives contracts is very low for insurance companies: at the end of the first half of this year, their active and passive positions vis-à-vis British counterparties came to 0.02 and 0.06 per cent of total investments.

Numerous initiatives have been taken to deal with the risks deriving from the cliff-edge scenario in the financial services sector, including the establishment of a joint ECB-Bank of England working group.

Last June, the European Banking Authority (EBA) requested the banks in the UK that provide services in the rest of the EU and those established in the EU that interact with counterparties or clients headquartered in the UK to identify the possible risks of a cliff-edge scenario and to make contingency plans.³ More specifically, the request regards: (a) exposure to counterparties in the UK; (b) dependence on sources of funding in the UK, for example for instruments that can be bailed-in under the minimum requirement for own funds and eligible liabilities (MREL); (c) continuity of contracts, particularly derivatives; and (d) personal data management. The EBA has also requested compliance with obligations towards the customer base and disclosure of timely information to customers whose contracts or services could be affected if no deal is reached. The ECB has published on its website a section containing indications for the banks that will be set up in the euro area after Brexit.⁴ The Bank of Italy has asked the banks under its direct supervision for their opinions on the possible direct and indirect effects of a no-deal scenario, explicitly calling their attention to the risk profiles identified by EBA. In relation to liabilities that are eligible under MREL and governed by UK law, the Single Resolution Board (SRB) has announced⁵ that it will take a case-by-case approach when looking at the situation of individual banks under its responsibility, possibly granting an extension period for MREL compliance to banks that might not have sufficient eligible instruments after Brexit.

The European Insurance and Occupational Pensions Authority (EIOPA) published four opinions between July 2017 and June 2018⁶ with the aim of: (a) ensuring supervisory convergence among authorities in the member states where British companies intend to transfer their contracts in order to continue doing business in Europe; (b) encouraging the insurance market to prepare for this scenario, through contingency plans drawn up by insurance companies and through the definition of the supervisors' role in evaluating these plans; (c) analysing the impact on the solvency position of insurance and reinsurance companies; and (d) ensuring that present and future insurance customers receive sufficient information about the impact of Brexit. The Insurance Supervisory Authority (IVASS) has published on its website a list of FAQs⁷ on the subject and a letter addressed to companies that do business in Italy from the UK, inviting them to inform their customers of the possible consequences of Brexit for their contracts and about the measures adopted to guarantee their execution and service continuity.⁸

³ EBA, *Opinion of the European Banking Authority on preparations for the withdrawal of the United Kingdom from the European Union*, 25 June 2018.

⁴ See the ECB's website, *Relocating to the euro area*, last updated on 2 August 2018.

⁵ SRB, *Single Resolution Board expectations to ensure resolvability of banks in the context of Brexit*, 15 November 2018.

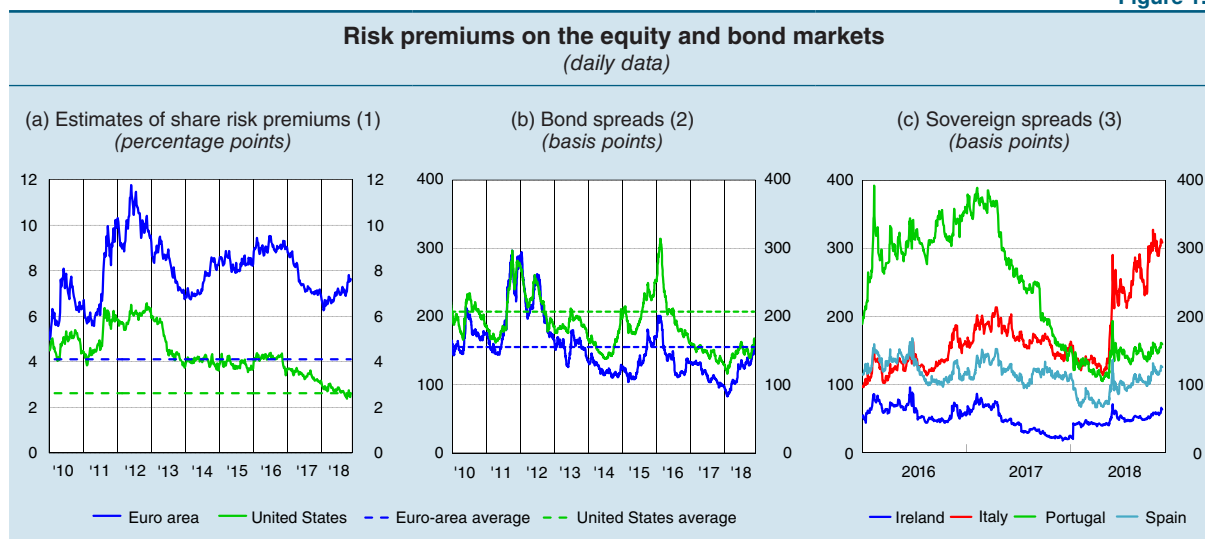
⁶ EIOPA, *Opinion on supervisory convergence in light of the United Kingdom withdrawing from the European Union*, 11 July 2017; EIOPA, *Opinion on service continuity in insurance in light of the withdrawal of the United Kingdom from the European Union*, 21 December 2017; EIOPA, *Opinion on the solvency position of insurance and reinsurance undertakings in light of the withdrawal of the United Kingdom from the European Union*, 18 May 2018; EIOPA, *Opinion on disclosure of information to customers about the impact of the withdrawal of the United Kingdom from the European Union*, 28 June 2018.

⁷ IVASS, *Brexit Information for policyholders, Consumer FAQs*, 4 October 2018.

⁸ IVASS, *Informativa agli assicurati italiani sull'impatto della Brexit*, 3 October 2018.

In the euro area, tighter international financial conditions have led to an increase in risk premiums on equity and bonds (Figures 1.2.a and 1.2.b), above all those issued by banks. The bank sector is solid overall, as emerges from the results of the European Banking Authority's stress test on the main banking groups (see Section 2.2) and from the improved credit ratings of numerous European banks in the

Figure 1.2



Sources: Bloomberg, ICE Bank of America Merrill Lynch, and Thomson Reuters Datastream.

(1) For S&P 500 (US) and Datastream EMU Total Market (euro area), ratio of the 10-year moving average of earnings per share to the value of the stock index (both at current 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. – (2) Spreads are on BBB-rated bonds issued by non-financial companies. The dashed lines indicate the averages of spreads from 1993 to 2018. – (3) Differences between the yields on the benchmark 10-year government bonds of the four countries in the key and those of the corresponding German Bund.

second half of the year. Nevertheless, some countries still have high levels of non-performing loans on their balance sheets, and in others there is a high level of Level 2 and Level 3 assets.³ The sharp increase in risk premiums on Italian government bonds (Figure 1.2.c), including for redenomination risk (see Section 2.1), has had little impact on the spreads in the other euro-area countries.

Macrofinancial conditions in Italy

Low growth and the high debt-to-GDP ratio continue to pose the main risks to the financial stability of Italy. Our country's ability to handle adverse financial shocks is nonetheless supported by a variety of positive factors: private sector debt is among the lowest in the euro area; the net international debt position has continued to improve, benefiting from the ample trade surplus; the high average residual maturity of the public debt attenuates the transmission of an increase in government securities yields to the cost of the debt (see Table A1 in *Selected Statistics*).

In the third quarter of this year GDP stagnated, interrupting almost four years of recovery. The professional forecasters surveyed in October by Consensus Economics revised downwards the growth outlook for 2019. The financial cycle remains weak: lending to firms is increasing at a modest pace, while that to households is being driven by consumer credit, which is decelerating as growth weakens (see Section 1.2).

The credit-to-GDP gap is markedly negative. Our projections, which are consistent with the latest macroeconomic developments, indicate that bank lending to the non-financial private sector will

³ For the definition of Level 2 and Level 3 assets, see the box 'The composition of assets measured at fair value in banks' balance sheets' in *Financial Stability Report*, 1, 2017; for a discussion of the inherent risks of these assets, see R. Roca and F. Potente (eds.), *Risks and challenges of complex financial instruments: an analysis of SSM banks*, Questioni di Economia e Finanza (Occasional Papers), 417, 2017.

remain lacklustre over the next two years and that the credit-to-GDP gap will continue to be negative (Figure 1.3). Weak financial conditions are squeezing intermediaries' activities and profitability, particularly banks, and are diminishing their ability to bolster capital reserves through self-financing.

In its Update to the 2018 Economic and Financial Document, the Government raised its net borrowing objective for 2019 to 2.4 per cent of GDP, compared with 1.2 per cent under the current legislation scenario. In the two years thereafter, the deficit is projected to decrease, reaching in 2021 the same level expected for this year (1.8 per cent). The debt-to-GDP ratio will fall from 130.9 per cent in 2018 to 126.7 per cent in 2021, about 2 percentage points above the level estimated under the current legislation scenario. According to the official estimates, the budget will produce greater growth, by about 0.6 percentage points in 2019, than under the current-legislation scenario: this assumes rather high budget multipliers. The actual impact on growth and therefore on the debt-to-GDP ratio will depend on the specific measures adopted and on maintaining investor confidence. The rise in interest rates on the public debt registered since May risks thwarting the expansionary stimulus expected from fiscal policy.⁴

The increase in net borrowing, the high debt-to-GDP ratio and the risks to growth were among the reasons cited in the second half of October by rating agency Moody's for its decision to downgrade Italy's credit rating and by Standard & Poor's for cutting its outlook from 'stable' to 'negative'. Regulations and existing contracts in all the industrialized countries place heavy emphasis on rating agency assessments; further downgrades of Italy's rating could therefore have a variety of effects on the financial system (see the box 'The effects of changes in the ratings of Italian government securities').

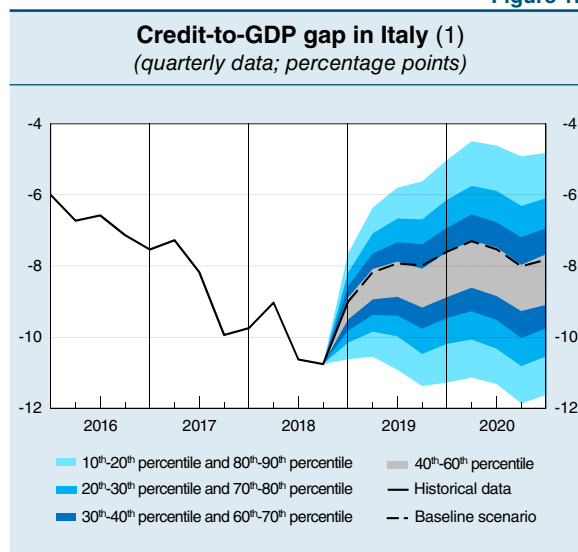
THE EFFECTS OF CHANGES IN THE RATINGS OF ITALIAN GOVERNMENT SECURITIES

Credit rating agencies are firms that assign a rating to economic operators – typically private companies and government bodies, including sovereign states – according to their ability to repay debts.¹ These ratings are used by investors to assess debtors' credit risk and to make

¹ For an analysis of the credit rating agency sector, see European Commission, *Study on the State of the Credit Rating Market. Final Report*, 2016.

⁴ 'Preliminary Hearing on the Update to the 2018 Economic and Financial Document', testimony of the Deputy Governor of the Bank of Italy, Luigi Federico Signorini, before the Chamber of Deputies in Rome on 9 October 2018, and 'Preliminary Hearing on the 2019-21 Budgetary Provisions', testimony of the Deputy Governor of the Bank of Italy, Luigi Federico Signorini, before the Chamber of Deputies in Rome on 9 November 2018.

Figure 1.3



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.

their investments. Rating agencies in the European Union are subject to supervision by the European Securities and Markets Authority (ESMA), which examines their methodologies and organizational integrity.

The agencies assign a rating using their own assessment scale, which is divided into two broad adjacent categories: investment grade, for issuers of high quality, and sub-investment grade, or high yield, for debtors of a lower quality. The ratings assigned to the Italian Republic by the main international agencies are currently of the investment grade category, higher by between one and three levels than the high yield category (see the table). Downgrades of credit ratings could have various effects on the financial system.

Ratings on the Italian Republic's long-term debt				
	DBRS	Fitch Ratings	Moody's	S&P
Rating (1)	BBBH (BBB+)	BBB	Baa3 (BBB-)	BBB
Outlook	stable	negative	stable	negative
Latest review	13 July 2018	31 August 2018	19 October 2018	26 October 2018
Next review	date to be decided by the end of 2018	Q1 2019	date to be decided by the end of 2018	date to be decided by the end of 2018
Downgrading levels that would lead to the assignment in the high yield category	3	2	1	2

(1) The rating corresponding to the assessment scale used by Fitch Ratings and S&P is shown in brackets.

Financial institutions' investment policies. – Downgrading the sovereign rating could cause investors to review their own credit rating assessments and perhaps to reduce the amount of government securities in their portfolios. To mitigate these effects, the regulation requires financial institutions to adopt internal credit rating assessment processes that do not rely solely or mechanically on the ratings given by credit rating agencies.² The effects on investment choices may be amplified by the fact that the mandates for institutions that manage assets on behalf of customers (such as insurance policies and investment funds) may contain clauses on minimum ratings for portfolio securities or refer to market indices that only include securities with investment grade rating. In most cases, market indices use the average or median rating assigned to an issuer by the various agencies in order to establish its category and therefore its possible inclusion in the benchmark basket.

Eligibility criteria for securities used in Eurosystem refinancing operations. – The Eurosystem's regulatory framework for monetary policy implementation requires the best of the ratings issued by the four main agencies³ to be applied, according to the 'first best' rule. Only in the extreme event of all four agency ratings going below investment grade level would banks no longer be able to

² See Regulation (EU) No 462/2013. As regards Italian legislation, see the Bank of Italy's Communication of 30 December 2008 on the assessment of creditworthiness by the banking sector; the letter to the market from IVASS of 22 July 2013 for insurance companies; the Bank of Italy's communication of 22 July 2013 and that of Consob, 62557/2013, for asset fund managers; and Covip's Circulars 5089/2013 and 496/2014 for pension funds and firms that have established open pension funds and individual pension plans (IPPs).

³ DBRS, Fitch Ratings, Moody's and Standard & Poor's (S&P).

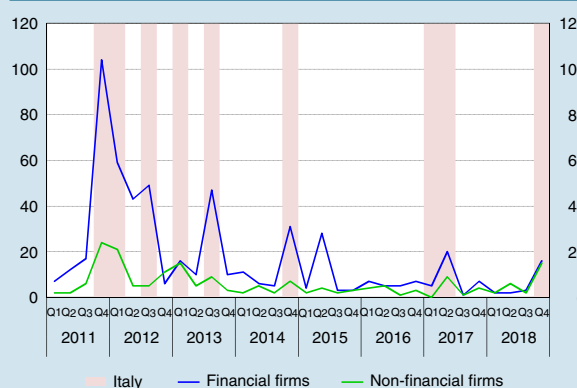
use Italian government bonds as collateral for refinancing operations and the Eurosystem cease purchasing such bonds as part of the expanded asset purchase programme (APP).⁴

Central counterparties' margins and haircuts. – Central counterparties (organizations that operate in financial markets to guarantee the successful completion of transactions) take account of the agencies' credit ratings, though less so than in the past, both to decide on the margins required to guarantee securities operations that are subject to assessments, and to define the haircuts applied when these securities are used as collateral. An increase in margins or haircuts on securities means higher liquidity costs for market operators holding such securities. The sovereign risk assessment model used by the Italian central counterparty (Cassa di compensazione e garanzia SpA) considers Fitch Ratings, Moody's and S&P's ratings together with other parameters, such as five-year credit default swaps (CDS) and the five-year spread compared with the German Bund.

The impact of the sovereign rating on Italian firms. – The sovereign rating is also a reference point for assessing the credit rating of private operators. Following a downgrading of the public debt, agencies typically downgrade the ratings of resident banks and firms as well (see the figure). This contributes to an increase in the risk premiums required by investors and thus in the financing cost. In October, the yield spread between bonds in the BBB sub-category (the lowest in the investment grade category) issued on the international markets by private firms and the corresponding bonds in the next sub-category up (A)⁵ averaged around 70 basis points.

Weights for calculating banks' capital requirements. – A downgrading of Italy's rating would not have a direct impact on banks' and insurance companies' capital requirements with regard to sovereign exposures, given that the prudential regulation envisages special treatment for them.⁶ However, a downgrading could mean a worse treatment of exposures to other issuers and counterparties if their ratings were lowered too. The standard method for calculating credit risk establishes that the weighting increases when the rating goes below certain thresholds.⁷

Downgrading of Italian firms' ratings by the main agencies (1)
(quarterly data; units)



Source: Bloomberg.
(1) Number of rating downgrades, net of upgrades, assigned by DBRS, Fitch Ratings, Moody's and S&P; the shaded areas indicate the quarters in which the rating of the Italian Republic has been downgraded.

⁴ Guideline ECB/2014/31. The ECB's Governing Council can decide to suspend the application of the Eurosystem's credit quality thresholds if the State is receiving financial assistance through a European Union, International Monetary Fund or ECB programme and complies with its conditions.

⁵ Sub-category BBB comprises BBB+, BBB and BBB- ratings; sub-category A comprises A+, A and A- ratings.

⁶ The standard methods used for credit risk in the banking sector and for spread risk in the insurance sector do not envisage capital requirements for exposures to a European state that are denominated and funded in domestic currency. Vice versa, for Italian banks that use their own models to assess credit risk, a downgrading leads to an increase in capital requirements, except when - as is usually the case in Italy - the banks are authorized to apply the standard method for calculating the requirements for such exposures.

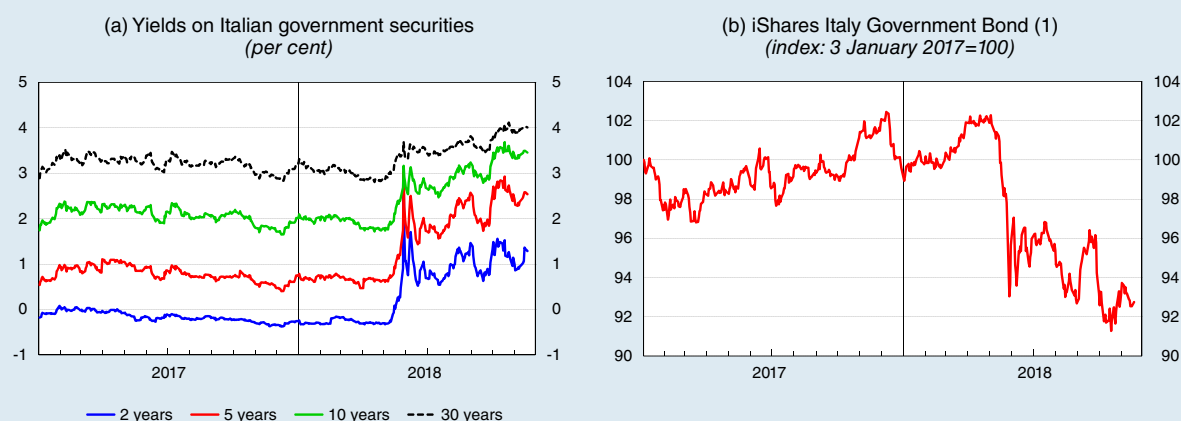
⁷ Specifically, in the case of the banking sector, the risk weights for local government, public sector entities and banks would increase if their ratings were downgraded to the high yield category. Similar effects would occur with regard to exposures to corporate counterparties.

The rise in risk premiums on government securities, should it persist, would have negative repercussions on the financial system and would heighten the risks to stability. Among its most significant effects are the drop in households' financial wealth, the increase in borrowing costs for the private sector, and the erosion of the liquidity and capital positions of banks and insurance companies (see the box 'The implications for the Italian economy of an increase in the yields on government securities').

THE IMPLICATIONS FOR THE ITALIAN ECONOMY OF AN INCREASE IN THE YIELDS ON GOVERNMENT SECURITIES

Since May, the yields on Italian government securities have recorded a marked and persistent rise (panel (a) of the figure) and the average market value of outstanding securities has fallen by around 9 per cent (panel (b) of the figure). The increase reflects the sharp rise in risk premiums stemming from uncertainty about the economic and fiscal policy stance (see *Economic Bulletin*, 4, 2018). Foreign investors have heavily disinvested and the liquidity of the secondary market has deteriorated; the prices of Italian government securities have incorporated a significant debt redenomination risk, which is not present in other euro-area countries (see Section 2.1).

Yields and market value of Italian government securities



Sources: Bloomberg and Thomson Reuters Datastream.

(1) iShares Italy Government Bond is an exchange traded fund (ETF) that seeks to track changes in the overall value of Italian government securities. It replicates performance based on a subset of securities that are highly liquid and therefore suitable for trading in large volumes by the fund. The portfolio includes 70 different Italian government securities, none of which have a share larger than 3 per cent of the total.

The increase in yields has been accompanied by a marked increase in their variability, which has more than doubled compared with the first quarter of this year. High volatility weakens demand and can therefore exert additional upward pressure on yields. In fact it discourages market participation by the most risk-averse investors and by those subject to limits on portfolio variability, such as low volatility net asset value funds; in addition, it increases the costs of owning securities for intermediaries subject to regulatory requirements commensurate with the riskiness of the investments.

The performance of public sector securities yields has significant implications for all sectors of the economy. For the public finances, higher rates increase the cost of the debt and make it more difficult to reduce the debt-to-GDP ratio. Over the last six months, the rise in the yields at issue of government securities has generated an increase in interest expense that is almost €1.5 billion higher than what it would have been at the rates that the markets expected in April; if the rates remain consistent with current market expectations, it will cost more than €5 billion in 2019

and around €9 billion in 2020. A pronounced and persistent rise in yields, given equal nominal economic growth rates, increases the risk that the debt will follow a rising trajectory.

For banks, tensions in the government securities market have various negative consequences (see Section 2.2). One effect is the increase in funding costs; analyses conducted in 2010-11 indicate that a 100 basis point increase in the spread on ten-year bonds may cause interest rates on fixed-term deposits and repos to rise by about 40 basis points while the yields on new bond issues could rise by around 100 basis points.¹ A second effect is the reduction in the value of eligible collateral for Eurosystem refinancing operations, which translates into a drop in liquidity. Another effect is connected with the impact on capital of changes in the prices of government securities valued at fair value, which at the end of June amounted on average to 5.7 per cent of total assets,² with a higher percentage for the less significant banks (11.3 per cent, compared with 4.7 per cent for the significant banks). Our simulations, based on banks' balance sheets and on the duration of the individual portfolio securities at 30 June 2018, indicate that an upward shift of 100 basis points in the government yield curve would reduce the CET1 ratio by 50 basis points (40 points for the significant banks and 90 points for the less significant banks).³

Insurance companies (see Section 2.3) are particularly exposed to changes in the value of Italian government securities, in which 34 per cent of their assets are invested, because the prudential rules require them to calculate their capital positions using a balance sheet whose items are valued at market prices. Our simulations⁴ indicate that an upward shift of 100 basis points in the government yield curve would reduce the value of insurance companies' own funds by an average of 28 per cent; this effect, would likely be lessened by the volatility adjustment.⁵

Rising government securities yields have direct, significant implications for households and firms as well. The depreciation of securities reduces the value of investments in financial assets, including those made via intermediaries, such as investment funds, insurance companies and pension funds (see Section 1.2). The negative effects of rising yields could also lead banks to restrict the supply of loans to the private sector. During the period of heightened tension in the markets in 2010-11, an increase of 100 basis points in the spread resulted, over the course of one quarter, in interest rates rising by about 70 basis points for loans to non-financial companies and by 30 basis points for mortgage loans to households; the fragility of the balance sheets of the leading Italian banking groups and firms during that phase amplified the transmission of the increase in the spread.⁶ The rise in the yields on government securities has also been associated in the past with a significant decline in the

¹ U. Albertazzi, T. Ropele, G. Sene and F.M. Signoretti, 'The impact of the sovereign debt crisis on the activity of Italian banks', *Journal of Banking & Finance*, 46 (2014), 387-402. The impact of the yields on borrowing costs could be reduced by the full allotment policy currently followed by the Eurosystem, which, since it was not introduced until October 2011, is only partly reflected in the estimates obtained for 2010-11.

² Government securities valued at amortized cost, for which changes in price have no effect on capital, equal 3.9 per cent of assets.

³ On the one hand, the estimates do not consider government securities held by foreign subsidiaries and by insurance companies that are part of Italian banking groups, the amount of which in some cases is significant; on the other, they do not take account of factors that could mitigate the impact, such as hedging and taxes.

⁴ The simulations are based on the yield curve and the duration of portfolio securities at 30 June 2018.

⁵ An increase in the yields on government securities of this size would most likely trigger the country specific component of the volatility adjustment (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). The volatility adjustment would reduce the value of insurers' liabilities, thereby significantly mitigating the impact of the increase in yields on own funds.

⁶ U. Albertazzi, T. Ropele, G. Sene and F.M. Signoretti, 2014, op. cit.

growth rate of business lending by Italian banks.⁷ The average cost of new loans to the private sector remained stable in the third quarter of this year; nonetheless, signs of a tightening of credit access conditions found by business surveys (see *Economic Bulletin*, 4, 2018) indicate that this transmission mechanism could be reactivated if yields remain at high levels. The higher country risk perceived by investors is also reflected in trends in the corporate bond market, where yields have also risen for firms with investment grade bonds (see Section 2.1).

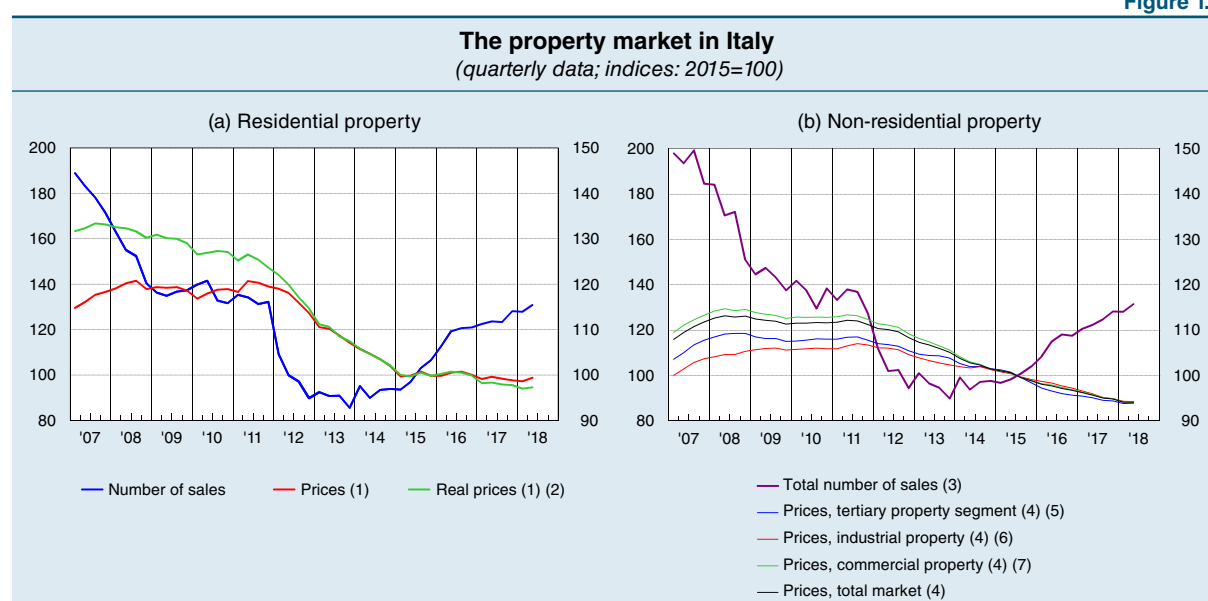
⁷ M. Bofondi, L. Carpinelli and E. Sette, 'Credit supply during a sovereign debt crisis', *Journal of the European Economic Association*, 16:3 (June 2018), 696-729; also published in Banca d'Italia, Temi di Discussione (Working Papers), 909, 2013.

Real estate markets

Real estate prices continue to increase in Europe, both in the housing market, where the rise in prices has extended to nearly every country, and in the non-residential market. To keep the associated risks in check, several countries have enacted macroprudential measures (see Chapter 3, 'Macroprudential measures').

In Italy, instead, the real estate cycle is struggling to strengthen. Despite the recovery in sales, prices have continued to fall on an annual basis in the non-residential market and, to a lesser extent, in the residential market (Figure 1.4) where the stock of unsold homes remains large. According to our estimates, house price dynamics, despite turning positive, will remain weak in 2019.

Figure 1.4

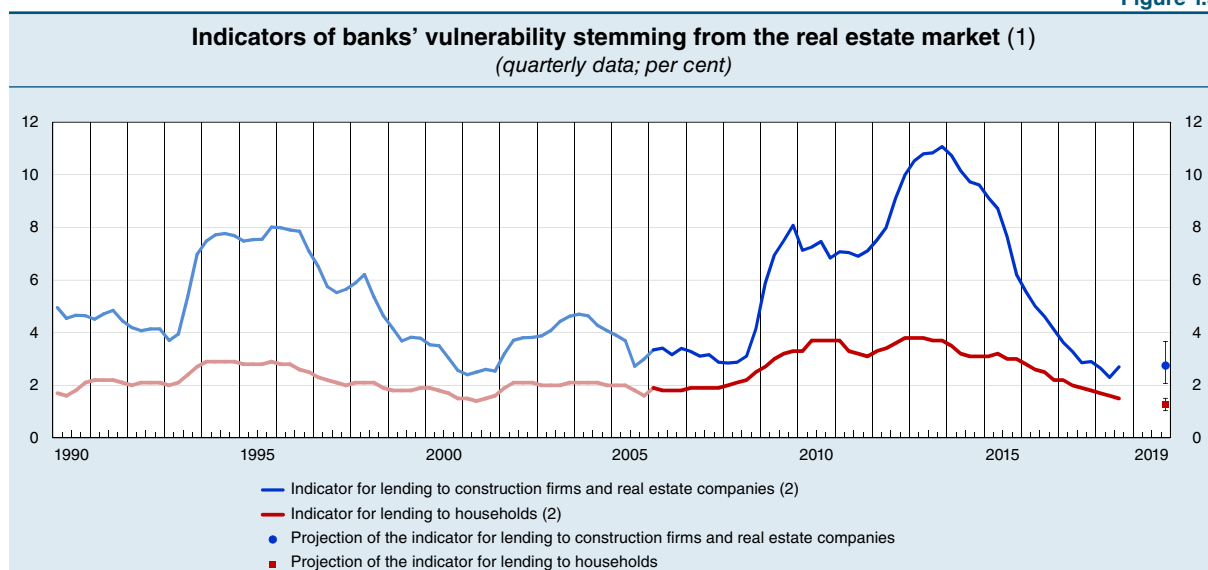


Sources: Based on data from the Bank of Italy, Istat, Osservatorio del Mercato Immobiliare (OMI), Nomisma and Scenari Immobiliari.

(1) Right-hand scale. – (2) Data deflated using the change in consumer prices. – (3) Data adjusted for seasonal and calendar effects. (4) Right-hand scale. The indicator uses data drawn from transactions actually concluded on the market. – (5) The tertiary segment comprises office buildings and banks. – (6) Industrial property consists of buildings for industrial use. – (7) Commercial property comprises shops, shopping centres and hotels.

The risks for banks stemming from the real estate market are limited, partly thanks to the generally prudent lending conditions for mortgage loans to households (see the box 'Indicators of the risks for banks stemming from mortgage loans'). In the third quarter of 2018, the vulnerability indicator relating to mortgage loans to households reached its lowest level since 2002, while the indicator relating to loans

Figure 1.5



(1) Banks' vulnerability is measured by the ratio of the flow of new non-performing loans in the last 4 quarters to the average of the banks' capital and reserves in the same period. The projection for the 4th quarter of 2019 is shown in the graph by the median value and from the 10th to the 90th percentile. 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, and F. Ciocchetta and W. Cornacchia, 'Assessing financial stability risks arising from the real estate market in Italy: an update', Banca d'Italia, Notes on Financial Stability and Supervision, forthcoming. – (2) The vulnerability indicators for the period 1990-2005 were reconstructed using econometric techniques.

to construction firms and real estate companies is at very low levels (Figure 1.5). Based on projections for the end of 2019, the indicator is expected to record another small decline for households and to remain unchanged for construction firms and real estate companies. A more robust recovery in the real estate sector would benefit credit intermediation and bank profitability, in addition to the recovery of collateral securing bad loans and the reduction in the stock of NPLs.

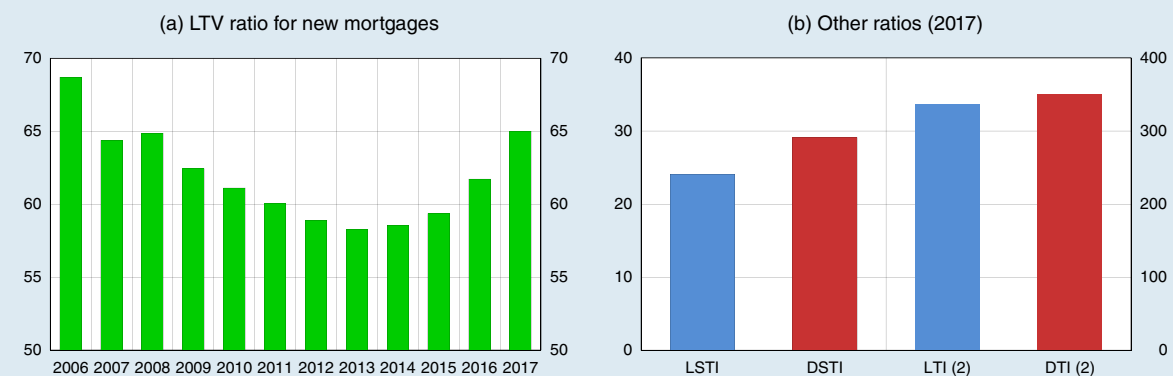
INDICATORS OF THE RISKS FOR BANKS STEMMING FROM MORTGAGE LOANS

In the Regional Bank Lending Survey (RBLs) the Bank of Italy gathers data useful for assessing the risks for banks arising from mortgage loans to households.

The data relate to: (a) loan-to-value ratios (LTV), which offer indications on the risk of losses for banks in the event of foreclosures; (b) a variety of ratios that compare loan amounts to household income, such as the loan-to-income ratio (LTI), the debt-to-income ratio (DTI), the loan-service-to-income ratio (LSTI) and the debt-service-to-income ratio (DSTI), which are useful for assessing the risks stemming from mortgage holders' excessive indebtedness in relation to their earning capacity; (c) the share of new mortgage loans that exceed certain thresholds for the ratios referenced above, and therefore pose a higher degree of risk.

Based on the results of the last RBLs, the LTV ratio on mortgage loans issued in 2017 averaged 65 per cent, close to the levels recorded in the two years 2007-08 (see panel (a) of the figure). The LTV ratio for outstanding mortgage loans, used to assess changes in the value of the collateral compared with the residual debt, was 55 per cent in 2017. Last year saw an increase in the number of mortgage loans with an LTV ratio above 80 per cent, both in terms of the number of banks that offered this type of mortgage loan and in terms of their share of total lending (about 10 per cent of new mortgage loans in 2017). For households that took out a mortgage loan last

Indicators relating to mortgage loans (1) (per cent)



Source: Regional Bank Lending Survey, various editions; see *'La domanda e l'offerta di credito a livello territoriale'*, Banca d'Italia, Regional Economies, 21, 2018 (only in Italian).

(1) Ratios in relation to mortgage loans to households issued each year; average values weighted by mortgage loans to consumer households outstanding at the end of each year. – (2) Right-hand scale.

year, the LTI ratio and the DTI ratio stood at about 340 and 350 per cent respectively (see panel (b) of the figure).

For the new mortgage loans stipulated in 2017 the LSTI ratio was just below 25 per cent. The ratio declined compared with previous years, reflecting both the low interest rates and the drop in house prices, while household income rose. Taking into account the other debts held by households that took out a mortgage loan in 2017, the debt-service-to-income ratio came to just under 30 per cent.

Recent homogenous data at international level is not available. However, a number of indications are nonetheless inferable from the analyses carried out by the individual national authorities. In Portugal, the LTV ratio for mortgage loans issued in 2015 was 78 per cent. In 2016 in France the DSTI and LTI ratios stood at 29.6 per cent and nearly 470 per cent respectively. In 2017 in Spain more than 20 per cent of mortgage loans to households had an LTV ratio higher than 80 per cent. Again in 2017, in the Czech Republic, more than half of new mortgage loans had an LTV ratio between 70 and 90 per cent; in Slovakia the LTV ratio was close to 70 per cent for new mortgage loans issued the previous year; in Ireland, the LTV and LTI ratios were about 74 and 280 per cent respectively; in Sweden the LTV and DTI ratios were around 63 and 410 per cent respectively.¹

The DSTI ratio for outstanding loans in Italy is in line with the ratios recorded in Europe. Based on the latest edition of the Household Finance and Consumption Survey,² in 2014 the ratio stood at 13.3 per cent in Italy and 13.5 per cent in Europe.

Overall, the risks for banks arising from mortgage loans to households are contained; the ratios are in line with those of the main European economies and significantly lower than those of countries that enacted macroprudential measures to limit the risks stemming from the changes in the real estate market.

¹ For a historical comparison of the LTV ratio at international level, see the box 'The loan-to-value ratio for residential mortgage loans in the euro-area countries', in *Financial Stability Report*, 5, 2013.

² ECB, *'The Household Finance and Consumption Survey: results from the second wave'*, *Statistics Paper Series*, 18, 2016.

1.2 HOUSEHOLDS AND FIRMS

Households

The fall in asset prices has led to a reduction in the financial wealth of households, which was 2 per cent lower (just under €85 billion) at the end of June compared with the end of 2017, despite significant net investment (over €24 billion). In the last few months, the drop in share and bond prices may have led to a further loss of wealth of around 1.5 per cent. In fact, half of all financial savings are invested in assets exposed to market tensions (public and private sector bonds, shares, mutual funds, pension funds and some insurance products; Table 1.1). Households with incomes above the median have more investments in these assets; however, such investments also account for a significant proportion (about 25 per cent) of the wealth of low-income households.

Table 1.1

Households' portfolio (1) (millions of euros and per cent)						
	2008		2012		2018 (2)	
Deposits and cash	1,098,897	28.9	1,185,225	31.3	1,371,629	32.0
Bonds	802,103	21.1	728,171	19.2	297,064	6.9
<i>of which:</i> Italian government bonds	274,237	4.7	209,612	5.0	120,427	2.8
<i>of which:</i> Italian bank bonds	356,635	9.4	370,802	9.8	76,020	1.8
Investment fund units	230,663	6.1	288,163	7.6	515,803	12.0
Shares and participating interests	923,457	24.3	744,047	19.6	957,745	22.3
<i>of which:</i> listed shares	76,192	2.0	73,814	1.9	80,406	1.9
Pension funds (3)	42,129	1.1	69,653	1.8	103,482	2.4
Insurance policies	416,590	11.0	500,912	13.2	743,296	17.3
<i>of which:</i> life insurance reserves (3)	378,656	10.0	460,314	12.1	716,452	16.7
Other assets (4)	290,496	7.6	272,502	7.2	298,731	7.0
Total	3,804,336	100.0	3,788,673	100.0	4,287,749	100.0

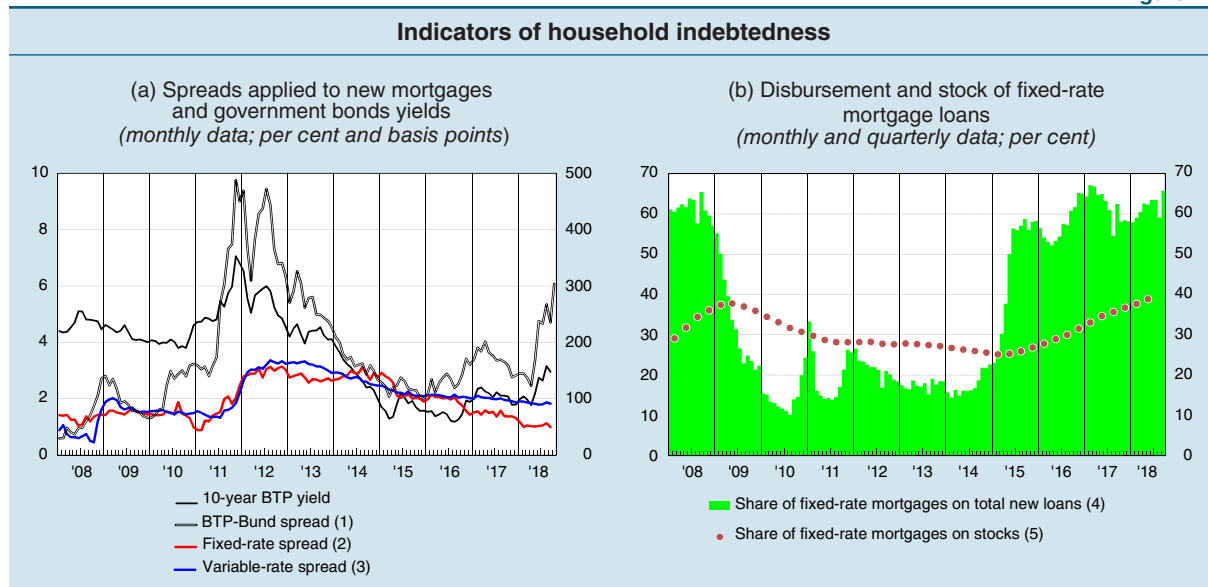
Source: Bank of Italy, Financial accounts.

(1) Data are at market value and refer to consumer and producer households and non-profit institutions serving households. Rounding of decimal points may cause discrepancies in totals. – (2) Data for June. – (3) A significant part of the life insurance reserves is represented by capital-guaranteed products not subject to price changes (about two thirds at end 2017). – (4) Includes commercial loans, severance pay and other minor items.

Italian households remain financially sound. Their level of wealth is high by international standards; their degree of indebtedness is one of the lowest in the euro area and is concentrated among households that are better able to bear the cost.

Mortgage loans continue to grow at a moderate pace. The demand for new mortgages is encouraged by low property prices and favourable supply conditions. In 2017, the loan-to-value ratio grew by 3 percentage points, to 65 per cent, a figure close to the average for the two years 2007–08, though still low by international standards (see the box ‘Indicators of the risks for banks stemming from mortgage loans’).

Figure 1.6



Sources: Bank of Italy and Thomson Reuters Datastream.

(1) Right-hand scale. – (2) Spread between the interest rate on new mortgages with a fixed rate of at least ten years and 10-year interest rate swaps (IRS). – (3) Spread between the interest rate on new mortgages with a variable rate up to one year and the 3-month Euribor. – (4) Consumer and producer households and non-profit institutions serving households; data refer to new mortgage loans. – (5) Data refer to consumer households only.

The cost of new mortgage loans has remained virtually unchanged. However, if the yield on Italian government bonds stayed at current levels, the margins applied by banks to the benchmark rates could increase (typically 10-year interest rate swaps for fixed-rate mortgages and the 3-month Euribor interest rate for variable-rate mortgages), as has happened in the past (Figure 1.6.a). Instead, the risk of a rise in interest rates leading to an increase in the cost of debt is limited for outstanding loans: around 40 per cent of the stock of mortgages have a fixed rate for at least 10 years (Figure 1.6.b) and those with a variable rate are indexed to the Euribor, which is not directly affected by an increase in sovereign risk.

Consumer loans are increasing at a swift pace, especially in personal loans and loans secured by a pledge of one-fifth of a salary; however, there were signs of a deceleration in the last quarter. The growth in consumer credit is closely linked to the trend in durable goods purchases and could shrink considerably if the latter were to slow (see the box ‘The expansion of consumer credit in the main euro-area countries: drivers and risks’).

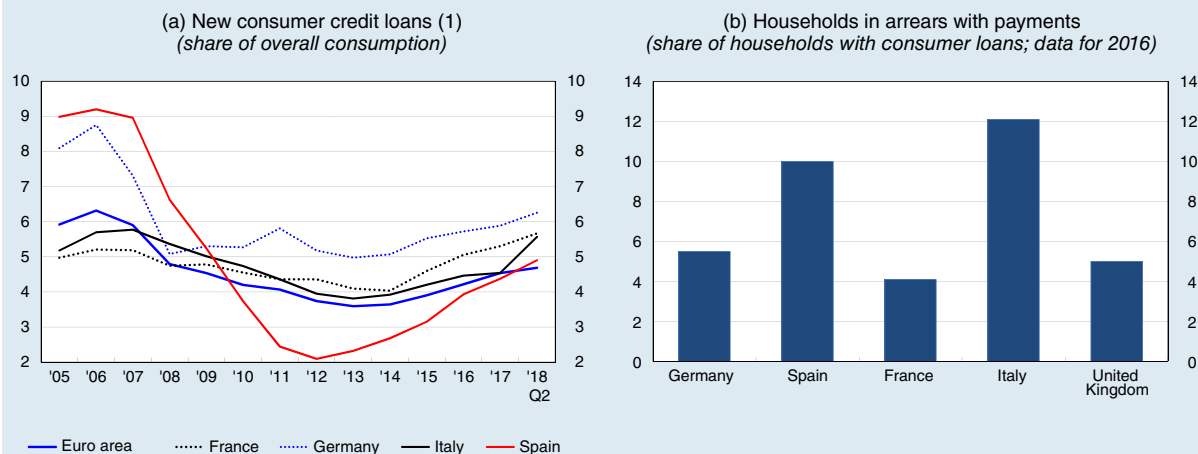
THE EXPANSION OF CONSUMER CREDIT IN THE MAIN EURO-AREA COUNTRIES: DRIVERS AND RISKS

Since the end of 2015, consumer loans have grown at a fast pace in the main euro-area countries. Growth has been boosted everywhere by demand, driven especially by durable goods purchases and by favourable expectations for economic recovery; the improvement in supply conditions has contributed to the increase in Italy and Spain, countries where credit tightening had been more pronounced during the crisis.

The procyclicality of consumer credit, which fluctuates more noticeably than consumption or income in the various phases of the economic cycle, is mainly due to the marked variability in spending on durable goods.¹ The ratio between consumer credit and overall household spending, in sharp decline since 2007, rose again during the years of recovery; in Italy it is now close to

¹ T. Crossley, H. Low and C. O’Dea, ‘Household consumption through recent recessions’, IFS Working Paper, W11/18, 2012.

Consumer credit in Italy and in the main European countries (per cent)



Sources: Eurostat, EU-SILC and ECB, Statistical Data Warehouse.
(1) The figure for 2018 refers to flows in the first 6 months of the year.

pre-crisis levels (see panel (a) of the figure). Growth in this ratio will probably tend to weaken if there is a slowdown in purchases of durable goods.²

The risks for financial stability stemming from the strong growth in consumer credit are mitigated by the low impact of these loans on households' disposable income (just over 10 per cent in the euro area and 11.5 per cent in Italy). In the last few years, European households have also reduced their exposure to interest rate risk by taking out more fixed-rate loans, the number of which has reached its highest value by historical standards (60 per cent in Italy and 45 per cent in the euro area). However, the riskiness of this type of loan varies greatly across countries: the results of the *Indagine su reddito e condizioni di vita* carried out by Istat as part of Eurostat's broader European Union statistics on income and living conditions (EU-SILC) project indicate that in 2016, the share of households in arrears with payments was higher in Italy than elsewhere (12 per cent, compared with 4 per cent in France and over 5 per cent in Germany; see panel (b) of the figure).³

In recent years, however, the riskiness has declined significantly in Italy: the non-performing loan rate has gone down by 1 point since 2014, to 1.7 per cent,⁴ lower than the figure observed in the years preceding the financial crisis. The decrease has been driven by the broader diffusion of consumer credit among households with incomes above the median, whose loans in 2016 amounted to 65 per cent of the total, against 54 per cent in 2008.

² M. Dossche and L. Saiz, 'Consumption of durable goods in the ongoing economic expansion', in ECB, *Economic Bulletin*, 1, 2018, 25-28.

³ The EU-SILC survey takes account of all arrears, including those less than 90 days past due.

⁴ Assofin, Crif and Prometeia, *Osservatorio credito al dettaglio*, 44, 2018.

Debt repayment capacity is boosted by the growth in disposable income and by low interest rates. The new non-performing loan rate on credit granted by banks to households is stable at 1.1 per cent, the lowest level in over ten years. The share of NPLs as a percentage of total loans to households,

gross of write-downs, has fallen to 7.7 per cent, around 3 percentage points lower than the peak recorded in 2015.

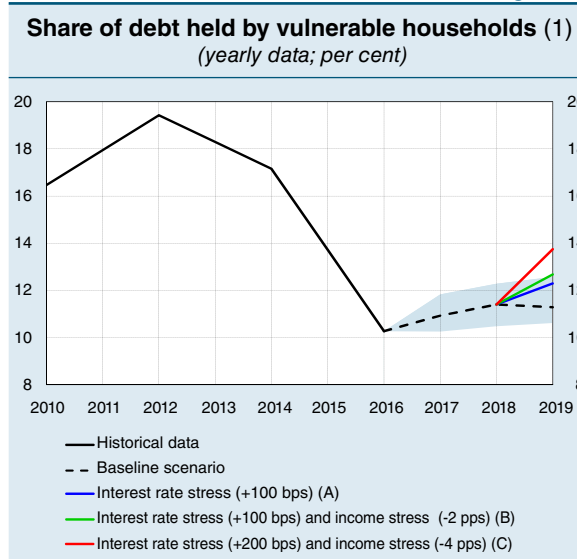
The projections of the Bank of Italy's microsimulation model indicate that at the end of 2019, in the baseline scenario, and consistent with the latest macroeconomic forecasts,⁵ the share of vulnerable households and the ratio of their debts to the total are expected to remain essentially stable, at 1.8 and 11.3 per cent respectively (Figure 1.7). If the 3-month Euribor were higher by 100 points compared with the baseline scenario in 2019,⁶ the share of debt held by vulnerable households would increase to 12.3 per cent. In a particularly adverse scenario, characterized by greater changes in interest rates and in disposable income than in the past,⁷ the share of vulnerable households would rise to 2.1 per cent and their share of debt to 13.7 per cent.

Vulnerable households have a limited amount of financial assets available to deal with adverse events. Their deposits are on average sufficient to pay about ten monthly instalments compared with the thirty instalments that other households with mortgages could pay. The share of their financial wealth invested in government securities, bonds and mutual funds is limited (to just over 10 per cent) and is currently exposed to market tensions. The impact on financial intermediaries of any insolvencies would be softened by the low average level of the outstanding debt-to-value ratio of just over 40 per cent; only 10 per cent of vulnerable households have a ratio of over 80 per cent.

Firms

The cyclical slowdown is curbing the recovery in profitability and the strengthening of firms' financial situation under way since 2012. Firms' current and future assessments of the general economic situation and of their own operating conditions remain less favourable following the abrupt worsening observed

Figure 1.7



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

(1) Households are considered vulnerable when their debt-service ratio is above 30 per cent and their disposable income, which takes family size into account, is below the median of the distribution. The latest SHIW data available refer to 2016. The shaded area represents the interval included between the 10th and the 90th percentiles of the probability distribution in the simulations. Compared with the baseline scenario, the assumptions underlying the stress scenarios for 2019 are that: (A) the 3-month Euribor will increase by 100 basis points; (B) the 3-month Euribor will increase by 100 basis points and the growth rate of nominal income will decrease by 2 percentage points; and (C) the 3-month Euribor will increase by 200 basis points and the growth rate of nominal income will decrease by 4 percentage points.

⁵ The baseline scenario for 2019 assumes a rise of 0.9 per cent in real GDP, in line with the forecasts of Consensus Economics, an increase of about 20 basis points in the Euribor, inferred from the futures rates, and a growth in disposable income and in mortgages. 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.

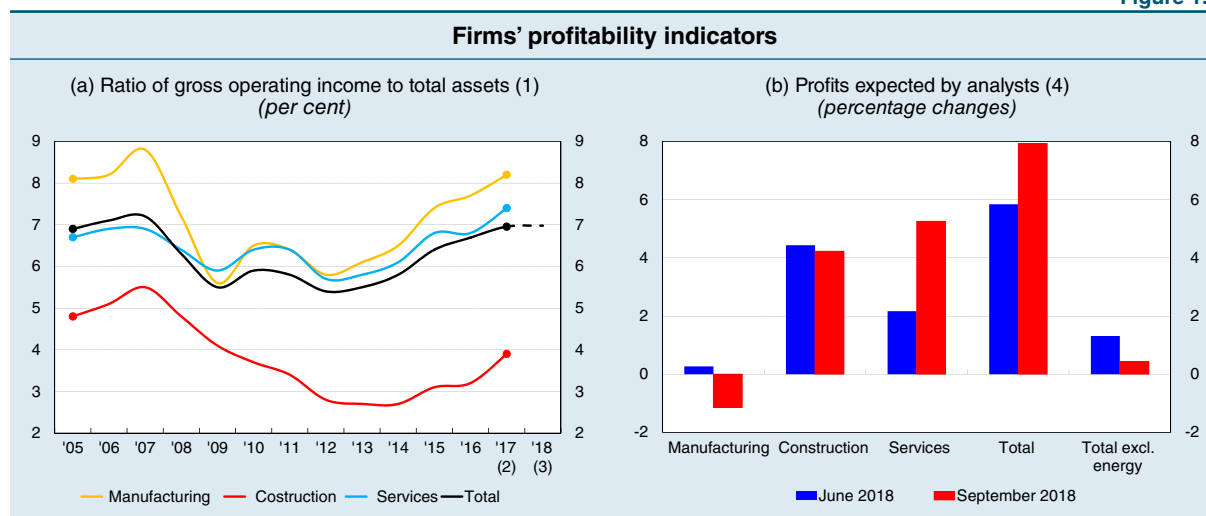
⁶ An increase in the 3-month Euribor leads to more severe stress compared with an increase in the spreads applied by banks on a stable Euribor. In the first case, all households with a variable-rate mortgage are affected by such an increase, but in the second case only those households taking out new mortgages.

⁷ Compared with the baseline scenario, the particularly adverse scenario assumes a drop of 4 percentage points in the growth rate of nominal income (equal to two standard deviations of the changes recorded in the period 2003-17), compatible with a recession, and an increase of 200 basis points in the 3-month Euribor.

in the second quarter. The impact of the weaker cyclical conditions on firms' ability to repay their debts was mitigated by the rebalancing of capital structure carried out in recent years and by still low interest rate levels.

Firms' gross operating income stabilized at around 7 per cent of total assets (Figure 1.8.a), close to pre-crisis levels. Only for construction firms is the indicator still well below the levels observed in the three years 2005-07. According to the Bank of Italy's recent business outlook survey, the share of firms that expects to post profits this year remains high at more than 75 per cent. However, the weakening in the global economy is affecting analysts' earnings expectations for listed manufacturing companies, which fell sharply in the third quarter (Figure 1.8.b).

Figure 1.8



Sources: Based on data from the Bank of Italy, Cerved, Istat and Bloomberg.

(1) For the period 2005-17 the ratio of gross operating income to total assets was obtained from Cerved balance sheet data. The indicator has been updated to Q2 2018 using an estimate based on aggregate data on gross operating income (source: Istat) and on financial liabilities (source: Financial accounts). To take account of market prices, financial liabilities are calculated by summing the end-2017 stocks and the flows for the first half of this year. – (2) The data refer to a preliminary sample of over 550,000 companies. – (3) The ratio refers to the 12 months ending in June 2018. – (4) Net profit estimates for 2019. Based on a closed sample of 95 listed companies as at December 2017, representing 90 per cent of the market capitalization of non-financial corporations.

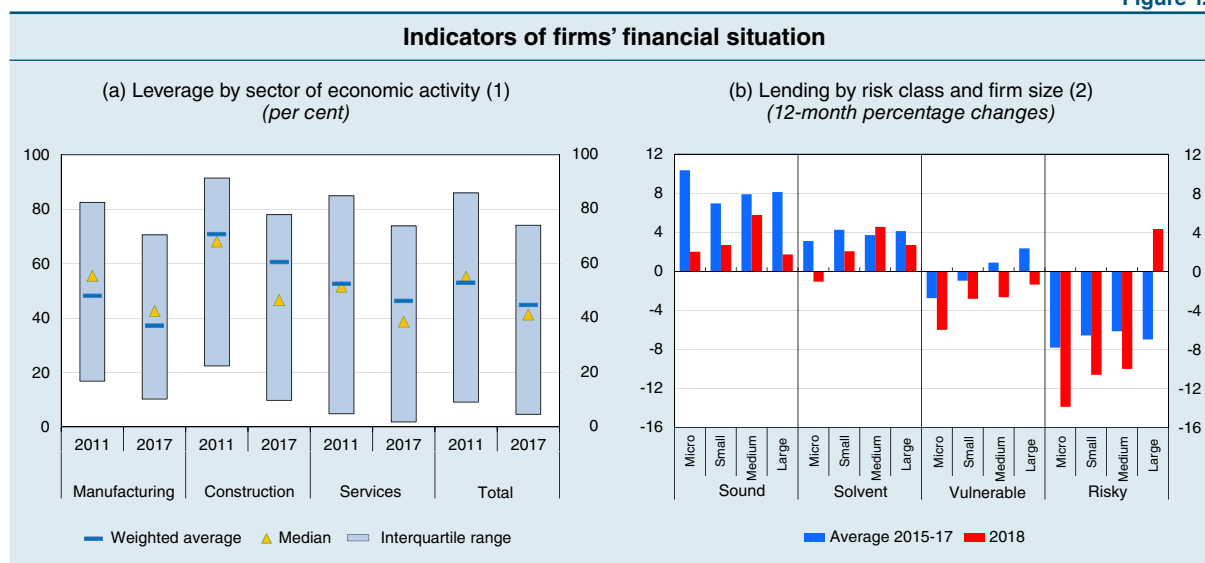
Firms' ability to deal with possible contractions in self-financing is boosted by the accumulation of liquid assets, which by now have surpassed 20 per cent of GDP, the highest level in the last twenty years. According to September's Bank of Italy-*Il Sole 24 Ore* joint survey, the share of industrial and service firms that deems its liquidity for the next three months to be insufficient has reached its lowest level since 2011.

At 40 per cent, leverage is still more than 2 percentage points above the euro-area average. Compared with the peak reached in 2011, it has fallen by 10 percentage points, of which 2 points are attributable to the reduction in debts and 8 points to the increase in net equity. The indicator fell across all sectors of economic activity (Figure 1.9.a). A significant contribution to the contraction in borrowing came from the incentives offered by the allowance for corporate equity (ACE), which greatly reduced the tax advantages of debt over equity financing.⁸

Four years of economic growth and historically very low interest rates have led to a strong improvement in solvency ratios. The ratio of net interest expense to gross operating income, already at a twenty-year low, decreased further. According to the Bank of Italy's In-house Credit Assessment System (ICAS),

⁸ N. Branzoli and A. Caiumi, 'How effective is an incremental ACE in addressing the debt bias? Evidence from corporate tax returns', European Commission, Taxation Papers, 72, 2018.

Figure 1.9



Sources: Bank of Italy and Cerved.

(1) Based on annual samples that include on average over 450,000 limited companies. Leverage is calculated as the ratio of financial debt to the sum of financial debt and net equity. The data are at book value. The weighted average is calculated using as a weight the denominator of each ratio. – (2) The data refer to a sample of about 470,000 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.

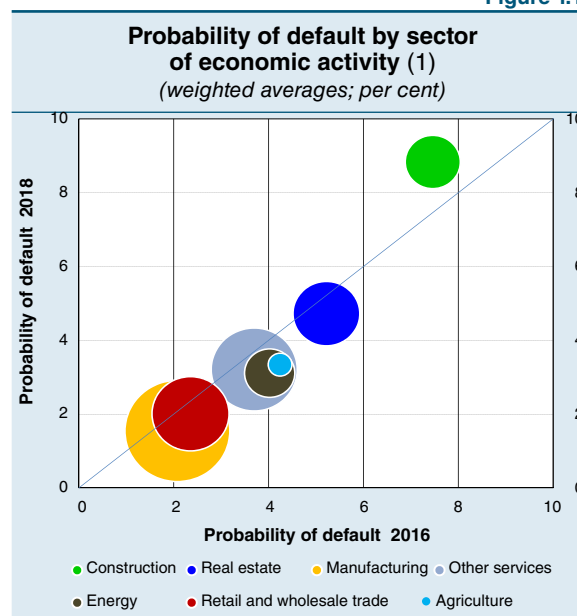
between 2016 and 2018 non-financial firms' probability of default has decreased in all economic sectors except construction (Figure 1.10). In the first half of 2018 the number of bankruptcy proceedings continued to fall, reaching the lowest level in the last seven years, and business-to-business payment delays decreased further. The non-performing loan rate, equal to 2.8 per cent on an annual basis in the third quarter, is now near pre-crisis levels.

Borrowing from banks and financial companies is increasing slightly, with significant differences between firms in terms of risk and size class. The expansion in lending is limited to the soundest firms and to the largest ones (Figure 1.9.b).

The cost of borrowing remains very moderate: however, since the summer months, with the heightening of tensions on the financial markets, the spreads applied to new fixed-rate loans have increased (Figure 1.11). The reduction in the average cost of outstanding loans all but halted. Going forward, should the increase in Italian government bond yields prove not to be transitory, the overall cost of the debt could rise especially owing to the large short-term component, which accounts for one third of the total.

The rise in volatility on the financial markets was reflected in the widening of the spread between the bonds issued by Italian firms and swap rates,

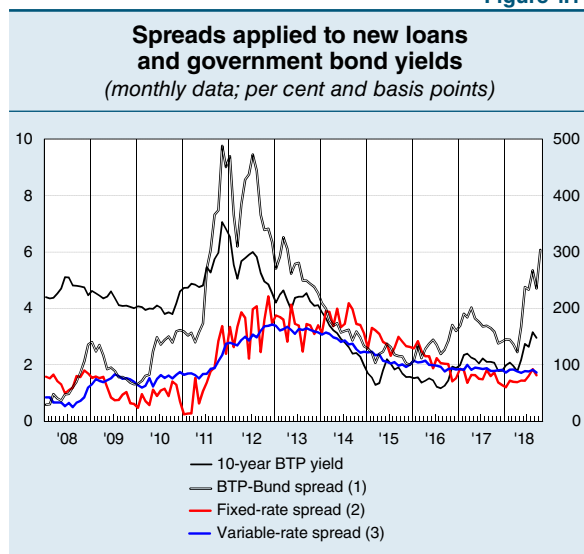
Figure 1.10



Sources: Bank of Italy and Cerved.

(1) The size of the circle corresponds to the amount of loans granted to firms in each sector. The data for 2018 are as at August.

Figure 1.11



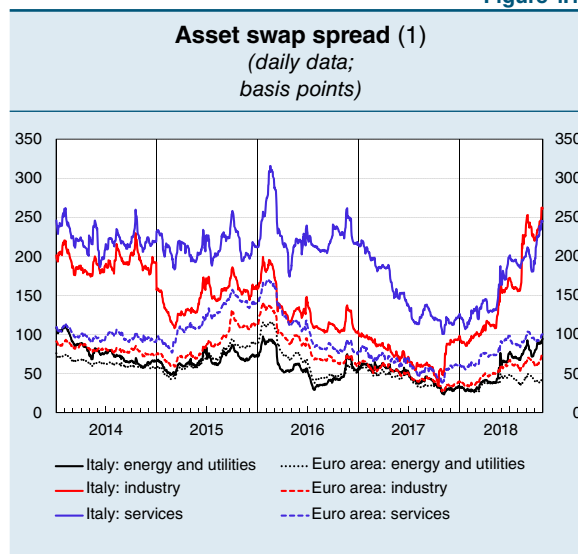
Sources: Bank of Italy and Thomson Reuters Datastream.
 (1) Right-hand scale. – (2) Spread between the interest rate on new loans with a fixed rate for at least 1 year and the 5-year interest rate swap. – (3) Spread between the interest rate on new variable-rate loans up to 1 year and the 3-month Euribor.

which approximate risk-free rates (asset swap spreads). The spread widened in all sectors of economic activity, more markedly for industrial and service firms (Figure 1.12). Moody's downgrading of Italy's rating at the end of October led to a rapid deterioration in the rating of 13 issuing companies, the highest number recorded in the last five years.

The deterioration in financial market condition translated into an increase in the cost of new bond issues and limited placements for first-time corporate bond issuers. The average yield on fixed-rate bonds issued in the third quarter rose to 3.5 per cent, from 1.8 per cent in the first quarter, attaining the highest level since 2014. In the last two quarters, the placements of first-time issuers halved year-on-year, to €1.4 billion. Share prices were also affected by the recent tensions; since the autumn they have dropped sharply in the industrial sector. A fall in share prices increases the cost of raising funds on the stock market and discourages new listings.

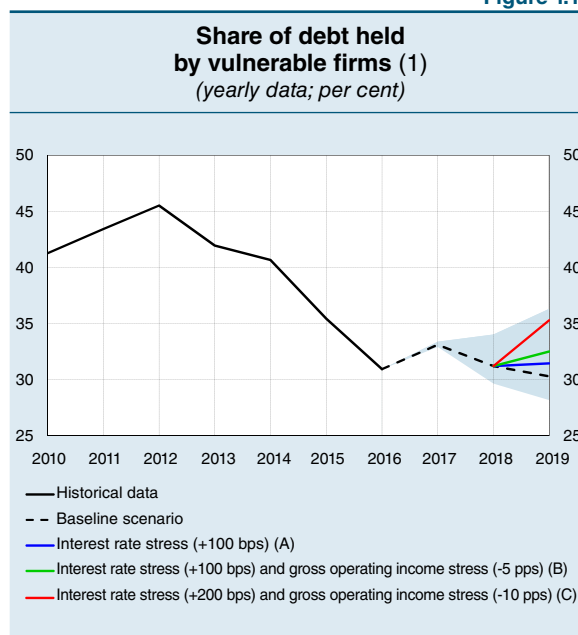
The projections of the Bank of Italy's microsimulation model indicate that, in a baseline scenario consistent with the latest macroeconomic forecasts, the share of debt held by vulnerable firms will decrease slightly

Figure 1.12



Source: Based on ICE Bank of America Merrill Lynch data.
 (1) Weighted by the market capitalization of individual securities.

Figure 1.13



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. Excludes firms with bad loans. The latest available annual financial statements for the whole sample of firms 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 2019: (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 gross operating income will be lower by 5 percentage points (remaining slightly positive compared with 2018); and (C) the interest rate will be higher by 200 basis points and the growth rate of gross operating income will be lower by 10 percentage points.

to 30 per cent at the end of 2019 (Figure 1.13),⁹ 15 percentage points below the peak recorded in 2012. The share held by vulnerable firms will remain particularly high in the construction sector (58 per cent).

If the interest rate were 100 basis points higher than in the consensus scenario,¹⁰ the share of debt at risk would increase to 31 per cent; it would rise to 35 per cent in the event of variations in interest rates and profitability that were especially unfavourable and higher than those historically recorded.¹¹ Medium-sized firms and those operating in the construction sector would be the most exposed in this second scenario.

⁹ The baseline scenario for 2019 projects real GDP growth of 0.9 per cent, consistent with the latest forecasts of Consensus Economics, an expansion in gross operating income, stable financial debts, and an increase in the cost of debt of slightly less than 1 percentage point, in line with market expectations of the performance of EONIA and of developments in the spread between Italian and German government securities. 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.

¹⁰ This increase corresponds to just over one standard deviation of the annual change in the interest rate and exceeds the increases observed in 2007 and 2011.

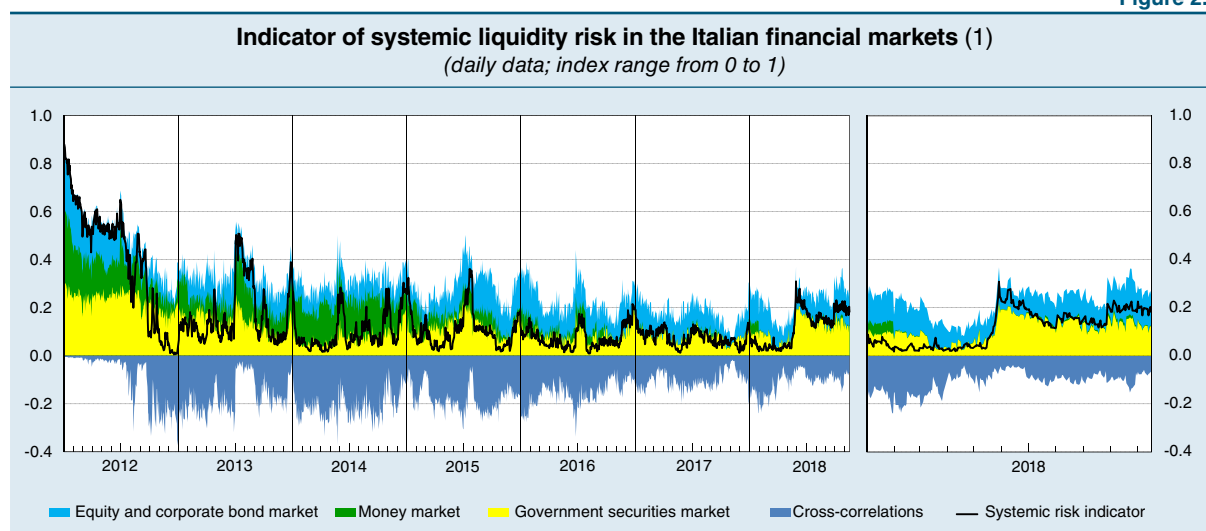
¹¹ Compared with the baseline scenario, the severely adverse scenario assumes a reduction of 10 percentage points in the growth rate of nominal gross operating income (equal to two standard deviations of its annual change), which is compatible with a recession, and a rise of 200 basis points in interest rates.

2 FINANCIAL SYSTEM RISKS

2.1 THE MONEY AND FINANCIAL MARKETS

Liquidity conditions in the secondary market in Italian government securities have worsened considerably since May, with repercussions on corporate bonds and shares. The indicator that measures systemic liquidity risk in the Italian financial markets is high (Figure 2.1).

Figure 2.1



Sources: Based on data from Thomson Reuters Datastream, Bloomberg, Moody's KMV, MTS SpA, e-MID SIM SpA, and the Bank of Italy.

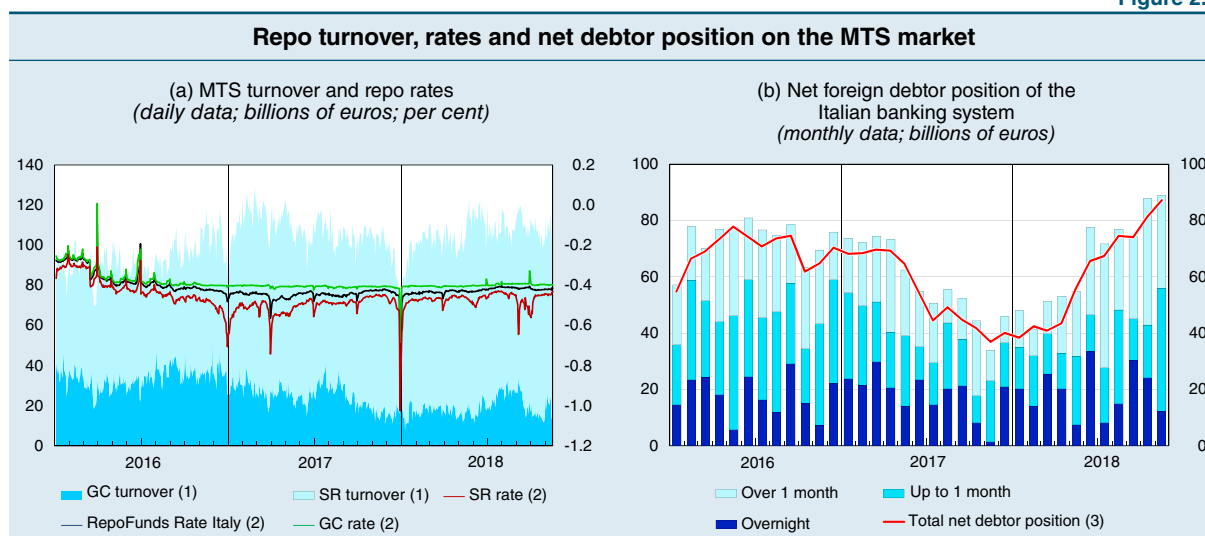
(1) The indicator measures the combined risk in the money market, the secondary market for government securities, and the equity and corporate bond markets. The index range is from 0 (minimum risk) to 1 (maximum risk). The graph also shows the contributions to the systemic risk indicator of the individual markets and the cross-correlations. For the methodology used in constructing the indicator, see [Financial Stability Report](#), 1, 2014.

The Eurosystem's strongly expansionary monetary policy has prevented the transmission of tensions to the money market. Turnover on the repo market has stayed close to its all-time high (Figure 2.2.a). The repo rate in the general collateral segment has increased slightly, with greater variations only at the end of each quarter when the banks issue their periodical reports (window dressing). Italian banks have greatly increased their foreign net debtor position on the MTS repo market in order to finance purchases of government bonds at low rates (Figure 2.2.b).

The large share of transactions on the MTS repo market intermediated by the two central counterparties has helped to reduce counterparty risk and keep funding conditions relaxed.¹ The high price volatility of Italian government bonds at the end of May was addressed by Italy's CC&G by calling for wider intraday margins. The intraday margin requested has diminished since the start of July, returning to the average levels recorded in the first quarter. Instead, the level of the initial margins rose only in the month of

¹ The central counterparties operating on the MTS repo market are Italy's Cassa di Compensazione e Garanzia SpA (CC&G) and France's LCH SA, linked by an interoperability agreement.

Figure 2.2



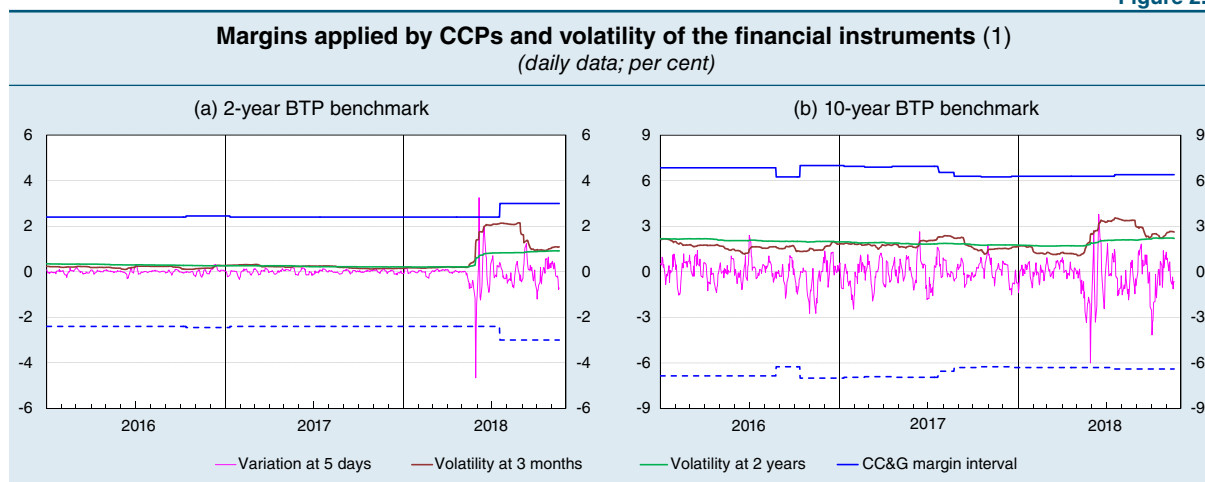
Sources: Based on MTS SpA data and RepoFunds Rate.

(1) Daily turnover on general collateral (GC) and special repos (SR) of the MTS market by contract settlement date. – (2) Calculated in reference to daily contracts for Italian government securities made on electronic trading platforms (MTS for GC and SR rates; MTS and BrokerTec for the RepoFunds Rate). Right-hand scale. – (3) Calculated on the basis of the cash value of the outstanding contracts on the MTS repo market. For the total net position, monthly average of daily data; for the breakdown by maturity, end-of-period data.

July (Figure 2.3), in particular for indexed securities and those with maturities of less than three years. The timing and the size of the purchases have helped to contain the risks connected with procyclical margin adjustments. Despite the recent reduction in volatility, the initial margins level has remained unchanged to safeguard the capacity of CCPs to address high price variability.

On the primary market for Italian government bonds, the cover ratio has remained on average at the levels recorded at the start of the year, even during the periods of greatest tension. The variability in bid prices – a measure of dealers' uncertainty – increased sharply at the end of May;

Figure 2.3

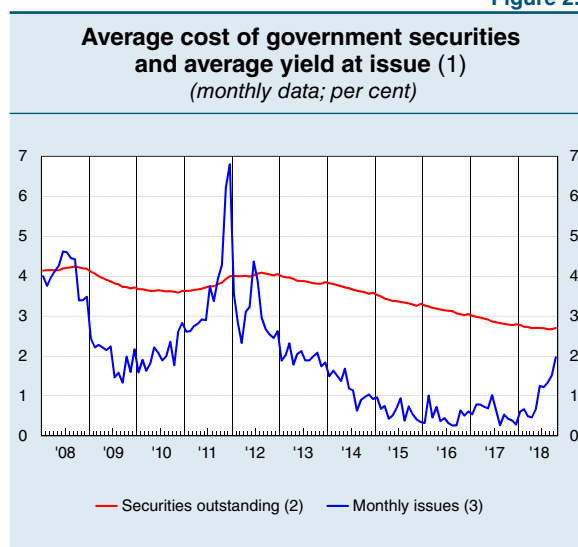


Sources: Based on data from Bloomberg and CC&G.

(1) Variations in the price of the 2-year and 10-year BTP benchmarks over a 5-day horizon and volatility indicators based on VaR methodology and calculated with reference to a period of 3 months and of 2 years with a confidence interval of 99 per cent. The margins for BTPs are those for the related duration class. The broken line is the mirror image of the margins, highlighting the adequacy of the margin requirements to cope with the negative price fluctuations actually registered in the market.

it then declined, nevertheless remaining at a higher level than at the start of the year. The average yield at issue has risen considerably, reaching 1.97 per cent in October; the fall in the average cost of the stock of outstanding securities came to a halt at 2.70 per cent (Figure 2.4). The long average residual maturity of outstanding securities (6.7 years)² slows down the transmission of yield increases to the cost of the debt: with no changes in the composition of the stock of securities, a permanent increase of 1 percentage point in yields at issue would lead to an increase in the average cost of debt of about 0.1 percentage points after one year, 0.2 points after two years, and 0.4 points after three years.³ Medium- and long-term securities (more than 12 months) maturing in 2019 amount to about €200 billion; taking account of securities with shorter residual maturities and of the need to cover the general government deficit as well, next year's gross issues will amount to about €400 billion.

Figure 2.4



Sources: Based on Ministry of Economy and Finance and Bank of Italy data at 31 October 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.

Liquidity conditions in the Italian secondary government bond market have worsened considerably during the phases of greatest tension in recent months: market turnover on both electronic platforms and OTC trades have declined and price volatility has increased (see the box ‘The liquidity of the secondary market for Italian government securities’).

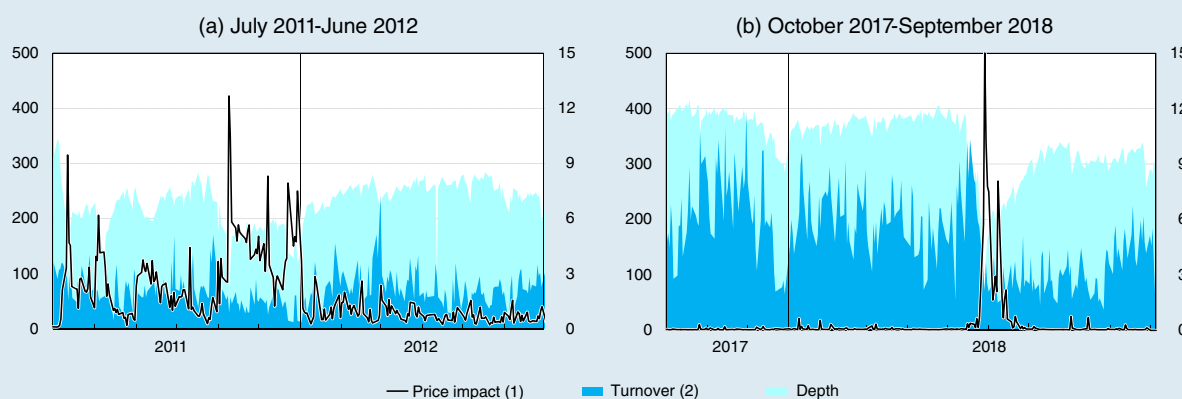
THE LIQUIDITY OF THE SECONDARY MARKET FOR ITALIAN GOVERNMENT SECURITIES

In the second half of May, the risk premium on Italian government bonds rose abruptly across all maturities, especially short-term ones, as happened during the 2011-12 sovereign debt crisis. Towards the end of the same month, liquidity conditions in the secondary market for Italian government securities deteriorated rapidly, both in terms of quoted quantities and the bid-ask spread, partly owing to substantial sales by foreign investors. This deterioration was temporary, but far more sudden than that recorded at the end of 2011 (see the figure). In the last week of May, the daily quantities listed on the MTS market fell to below €2 billion, against an average of almost €11 billion in the early months of the year. The bid-ask spread widened significantly, above all for short-term securities, and the intraday volatility of the prices quoted by the market makers increased tenfold (from 3 to 30 per cent). On some days, the order book was considerably lower; our simulations indicate that the execution of large-value orders had a very significant impact on prices. In the same period, pricing was interrupted for many Italian government bonds, sometimes for the entire day, making it extremely difficult for institutional investors and intermediaries to manage portfolio securities. The situation gradually improved over the summer and there have been no further episodes of the kind.

² Excluding issues on the international markets.

³ Taking account of the size of the public debt, a permanent increase of 1 percentage point in yields at issue would make interest expense rise by 0.15 per cent of GDP in the first year, 0.30 per cent in the second year, and 0.45 per cent in the third year.

**Indicators of liquidity conditions in the Italian government securities market:
impact of orders for large amounts, turnover and depth on the MTS market**
(daily data; basis points and billions of euros)



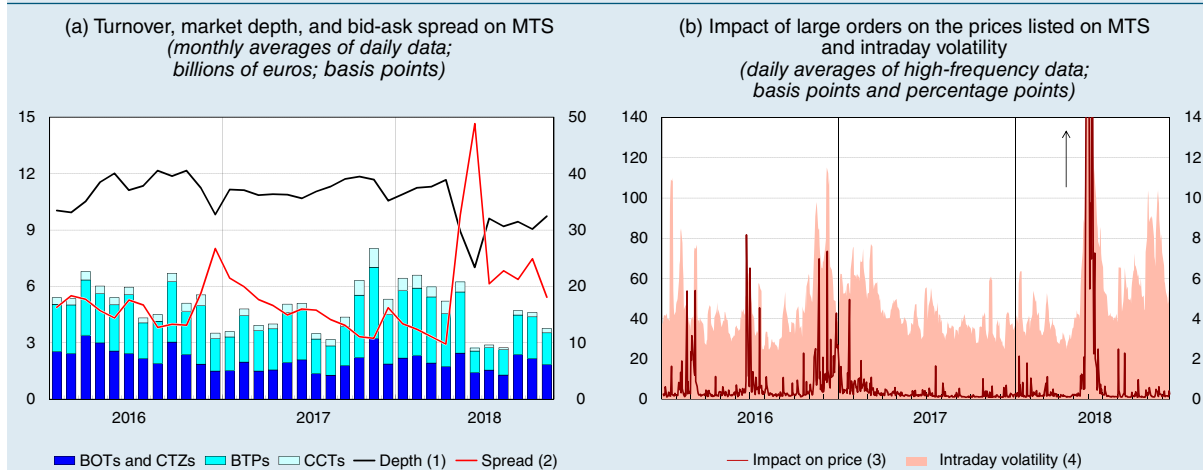
Source: Based on MTS SpA data.

(1) Daily average of the impact on bid and ask prices listed on MTS of a hypothetical €50 million buy or sell order. – (2) Daily turnover and market depth calculated as the average of the quantities of bid and ask orders recorded every 5 minutes. Right-hand scale.

In more recent months, market activity has increased and the capacity of the market to absorb high-value orders has improved significantly (Figure 2.5). Quoted quantities are nevertheless still below those of the first quarter of this year and the bid-ask spreads are still large. Intraday price volatility is high and temporary drops in market liquidity continue to occur, although to a much smaller extent than in May and June.

Figure 2.5

Liquidity indicators on Italian government securities



Source: Based on MTS SpA data.

(1) Market depth is calculated as the average of bid and ask quantities listed. – (2) Measured as the simple average of the bid-ask spreads observed during the entire trading day for the BTPs listed on MTS. Right-hand scale. – (3) The analysis refers to the 10-year benchmark BTP and is based on data recorded at 5-minute intervals. Average daily impact on bid-ask prices listed on MTS of a sale or purchase order of €50 million. – (4) Realized volatility is based on intraday yields calculated at 5-minute intervals; 5-day moving average of annualized values. Right-hand scale.

Trading volumes on the BTP futures market increased sharply during the periods of greatest tension (Figure 2.6). The growing use of derivatives contracts to take positions on the Italian government securities market was, in some cases, reflected in significant increases in the cost of borrowing securities

(*specialness*) for those transactions involving the cheapest to deliver bonds for settling futures. The large volume of securities available in the special repo segment has in any case lessened the impact of the tensions on the average specialness of the market. Indications of tensions regarding government securities have also been observed on the options market for futures contracts on 10-year BTPs. Risk reversal, which measures options prices that protect from a fall in the price of futures on 10-year BTPs relative to those that profit from an increase, is higher than it was at the end of April.

The premium for insolvency risk on Italian government securities, measured by credit default swaps (CDS), is at its highest level of the last five years, albeit well below the peaks reached in the two-year period 2011-12 (Figure 2.7.a). Since the end of May, the gap has widened significantly between the premium on CDS contracts offering protection against debt redenomination in another national currency and that on contracts with no such protection (ISDA basis; Figure 2.7.b).⁴ In contrast to previous episodes of tension, there have been no significant signs of contagion from Italy to the other euro-area countries.

Figure 2.6

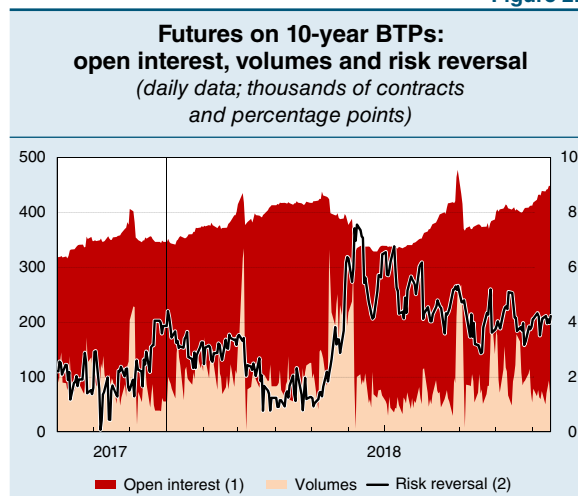
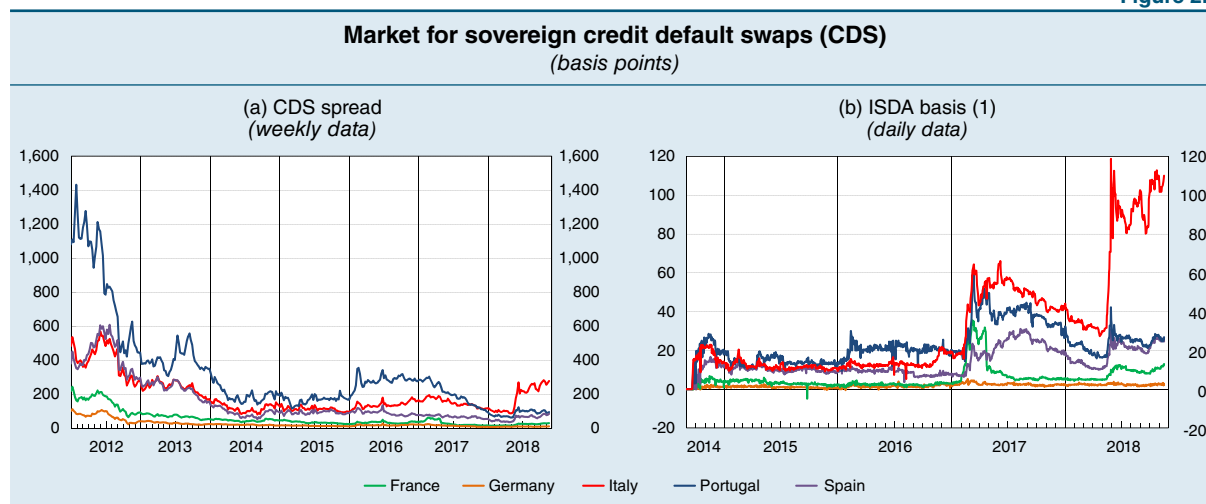
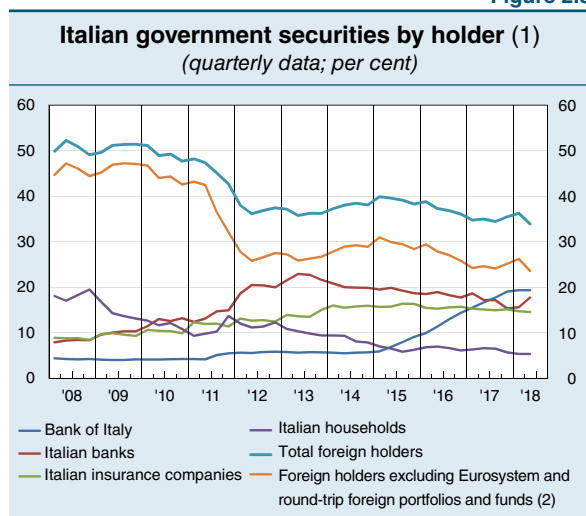


Figure 2.7



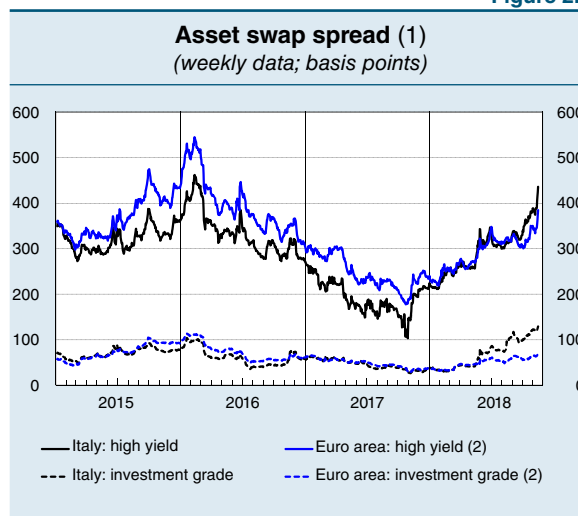
⁴ At present CDS with different contractual conditions are being traded on the market, as defined by the International Swaps and Derivatives Association (ISDA). Contracts that come under the rules introduced in 2014 afford greater protection in the case of redenomination or restructuring of the underlying debt compared with those that come under the rules established in 2003. For further details, see ISDA, *2003 ISDA Credit Derivatives Definitions*, 2003 and ISDA, *2014 ISDA Credit Derivatives Definitions*, 2014.

Figure 2.8



Source: Bank of Italy, Financial Accounts, and estimates based on Assogestione and ECB data.
(1) Shares calculated on data at market prices and net of securities held by Italian general government. Data referring to a subset of holders. – (2) Securities held by foreign investors net of those held by the Eurosystem (excluding the Bank of Italy) and by foreign individually-managed portfolios and investment funds attributable to Italian investors.

Figure 2.9



Source: Based on ICE BofAML data.
(1) Asset swap spreads weighted for the market capitalization of individual securities. – (2) The ICE Bank of America Merrill Lynch indices for the euro area have been recalculated to exclude Italy.

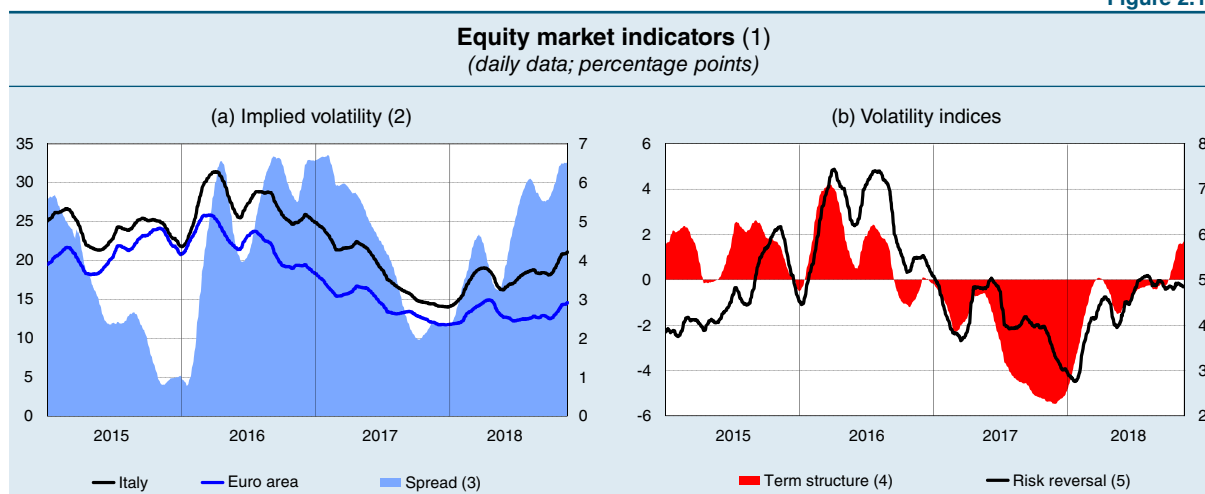
In the second quarter of 2018, the share of Italian government securities held by foreign investors fell by about 3 percentage points to 24 per cent,⁵ the greatest negative change since the second quarter of 2012 (Figure 2.8). In the same period, the share of these securities held by Italian banks began to increase again, rising by around 2 percentage points to 18 per cent. The share held by foreign investors continued to decline in the third quarter, and the share held by banks increased further, though in both cases at a more moderate pace.

Tensions surrounding government securities also affected the Italian corporate bond market: in the period May-October, the monthly value of trading of corporate bonds listed on the MOT (*Mercato Telematico delle Obbligazioni*) fell by about one third compared with the same period a year earlier. The average size of trades has diminished, while the impact on prices of large orders has increased. There has been a widening of the spread with respect to swap rates for both investment grade and high-yield corporates (Figure 2.9).

Since the end of April, the general index of the Italian stock market has fallen by about 20 per cent, compared with a 9 per cent fall in the index for the euro area as a whole. The decline in prices was accompanied by a reduction in market liquidity. Implicit volatility has also increased to historically high levels compared with that of the euro area (Figure 2.10.a). There has also been an increase in the cost of hedging against a marked fall in share prices (risk reversal) and in the prices of options with the shortest maturities (Figure 2.10.b).

⁵ Securities held by foreign investors, net of those of foreign individually-managed portfolios and funds attributable to Italian investors and of those held by the Eurosystem, excluding the Bank of Italy, under the Securities Markets Programme (SMP) and the Public Sector Purchase Programme (PSPP). The share of foreign investors' securities is about 34 per cent if these are included.

Figure 2.10



Source: Based on Bloomberg data.

(1) Sixty-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) Spread between the volatility implied by the prices of 2-month options on the Italian and euro-area stock market indices. Right-hand scale. – (4) Spread between the implied volatility on 2- and 12-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). The index measures the relative price of options that protect from a fall in the stock index compared with those that profit from a rise. Right-hand scale.

2.2 BANKS

The improvement in credit quality and the recovery in profitability gradually continue to gain ground but the process of strengthening bank balance sheets has been slowed by the tensions on the Italian sovereign debt market. The fall in prices for Italian government securities has caused a reduction in capital reserves and liquidity and an increase in the cost of wholesale funding. The sharp decline in bank share prices has resulted in a marked increase in the cost of equity. Should the tensions on the sovereign debt market be protracted, the repercussions for banks could be significant, especially for some small and medium-sized banks.

Market indicators

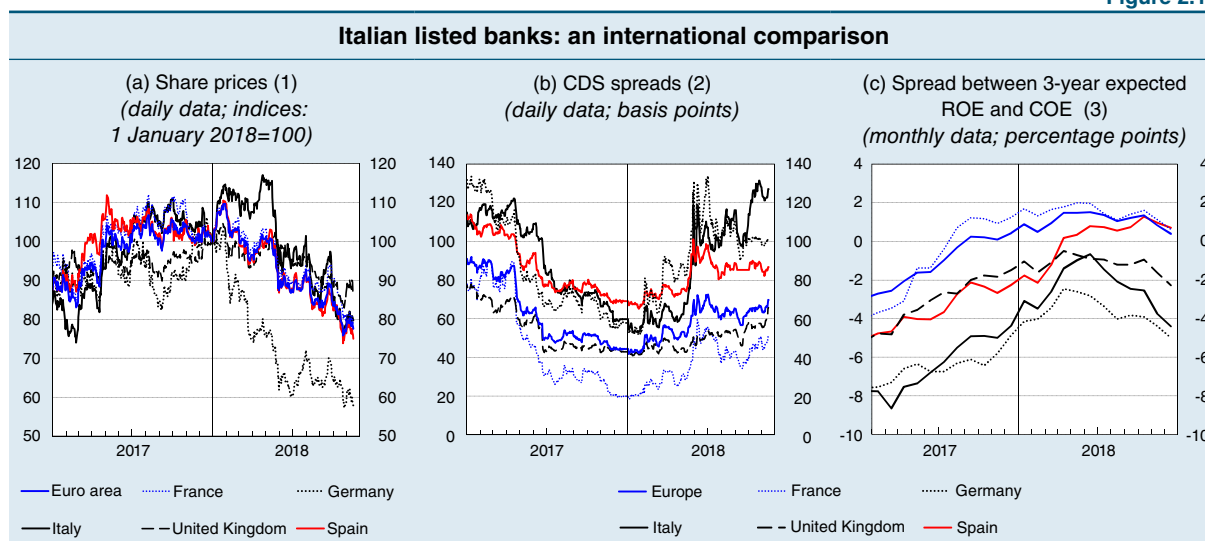
Since May, bank share prices have fallen considerably; CDS spreads have more than doubled, reaching 130 basis points, nearly two times the average for the other European banks. The increase in risk premiums is reflected in the rise in the expected cost of equity; the difference between the expected cost of equity and expected profitability was about 4 percentage points (Figure 2.11) after being close to nil in May. According to analysts' forecasts in November, Italian bank profits will decelerate sharply over the next 12 months.

Asset risks

The ratio of new non-performing loans to total performing loans stands at 1.7 per cent; in the second quarter of 2018, the ratio reached the lowest level recorded since 2006 (Figure 2.12). The decrease registered in recent years, which extended to loans to households and firms, was driven by economic growth, the low cost of credit and prudent risk-taking by banks.

In the first half of the year, Italian banks reduced their stock of gross NPLs by 13 per cent, to €225 billion (Table 2.1 and Figure 2.13.a). The decrease was largely on account of the disposal of bad loans

Figure 2.11

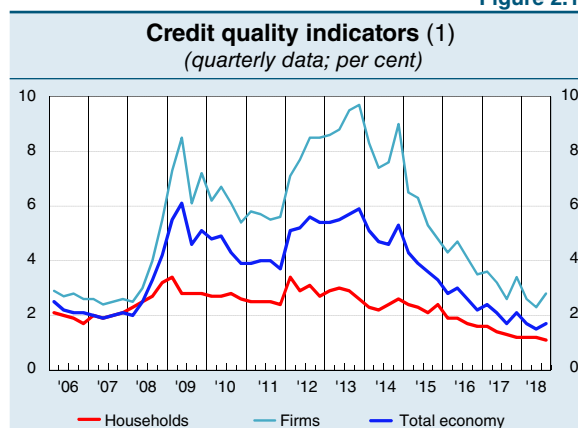


Sources: Based on data from Bloomberg and Thomson Reuters Datastream.

(1) The data relate to the banks listed on the Euro Stoxx Banks, FTSE France Banks, FTSE Germany Banks, FTSE Italy Banks, FTSE UK Banks and FTSE Spain Banks. – (2) Simple average of 5-year CDS spreads. The data relate to the following sample of banks: for Italy, UniCredit SpA, Intesa Sanpaolo SpA; for France, BNP Paribas SA, Société Générale SA, Crédit Agricole SA; for Germany, Deutsche Bank AG, Commerzbank AG; for the United Kingdom, Barclays Plc, The Royal Bank of Scotland Group Plc, HSBC Holdings Plc, Lloyds Banking Group Plc; for Spain, Banco Santander SA, Banco Bilbao Vizcaya Argentaria SA. – (3) Return on equity (ROE) and cost of equity (COE). The data relate to the 34 European listed banks that participated in the stress tests 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 Denmark, Danske Bank AS, Jyske Bank AS; for Finland, Nordea Bank AB; for France, BNP Paribas SA, Société Générale SA, Crédit Agricole SA; for Germany, Deutsche Bank AG, Commerzbank AG; for Ireland, Allied Irish Banks Plc, Bank of Ireland; for Norway, DNB ASA; for the Netherlands, ABN AMRO Groep NV, ING Groep NV; for Poland, Bank Pekao SA, Powszechna Kasa Oszczędności Bank Polski SA; for the United Kingdom, Lloyds Banking Group Plc, HSBC Holdings Plc, The Royal Bank of Scotland Group Plc, Barclays Plc; for Spain, Banco Santander SA, Banco Bilbao Vizcaya Argentaria SA, Banco de Sabadell SA, Caixabank SA; for Sweden, Swedbank AB, Skandinaviska Enskilda Banken AB, Svenska Handelsbanken AB; for Hungary, OTP Bank Nyrt. The CAPM analytical model was used to calculate the COE level (see the box 'The cost of equity for Europe's banks', *Financial Stability Report*, 2, 2017). The data relate to November 2018; averages weighted by market capitalization.

(€20 billion, against €42 billion for 2017 as a whole).⁶ The operations concluded after 30 June and those which should be concluded by year's end amount to about €20 billion. The disposals carried out in the first half of the year are in line with the reduction measures planned by banks for 2018 and communicated to the market, both for significant and less significant banks. The public guarantee on securitization of bad loans, introduced in 2016 and recently extended until the end of March 2019, is facilitating the disposals.⁷ Many smaller banks are resorting to multi-originator securitizations in order to reach amounts that are high enough to access the secondary market. Specifically, most of the disposals by cooperative credit banks (BCCs) are carried out this way, partly on account of the

Figure 2.12



Source: Central Credit Register.

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

⁶ Unlike in the past, disposed loans also include those that in each period are recorded among assets held for sale, even if they have not yet been definitively derecognized. Specifically, in the previous edition of the *Financial Stability Report*, the disposals carried out in 2017 amounted to about €35 billion; from that figure, €17 billion must be subtracted for the assets that were already classified as assets held for sale in 2016 while €24 billion must be added for the assets that were assets held for sale in 2017. These modifications are necessary in order to render the data on disposed loans uniform with the new NPL calculation methods adopted for comparability purposes with the EBA's and ECB's statistics (see footnote 3).

⁷ Since 2016, securitizations covered by the public guarantee have amounted to €42 billion, about half the total amount.

group structure that they are in the process of adopting; the operations that have been or should be concluded by year's end involve about 150 BCCs for an estimated amount of €5 billion, more than half the total amount planned by less significant banks for 2018. A €1.7 billion disposal on the part of 14 intermediaries – mainly small and medium-sized *popolari* banks – should be concluded by the start of 2019.

Table 2.1

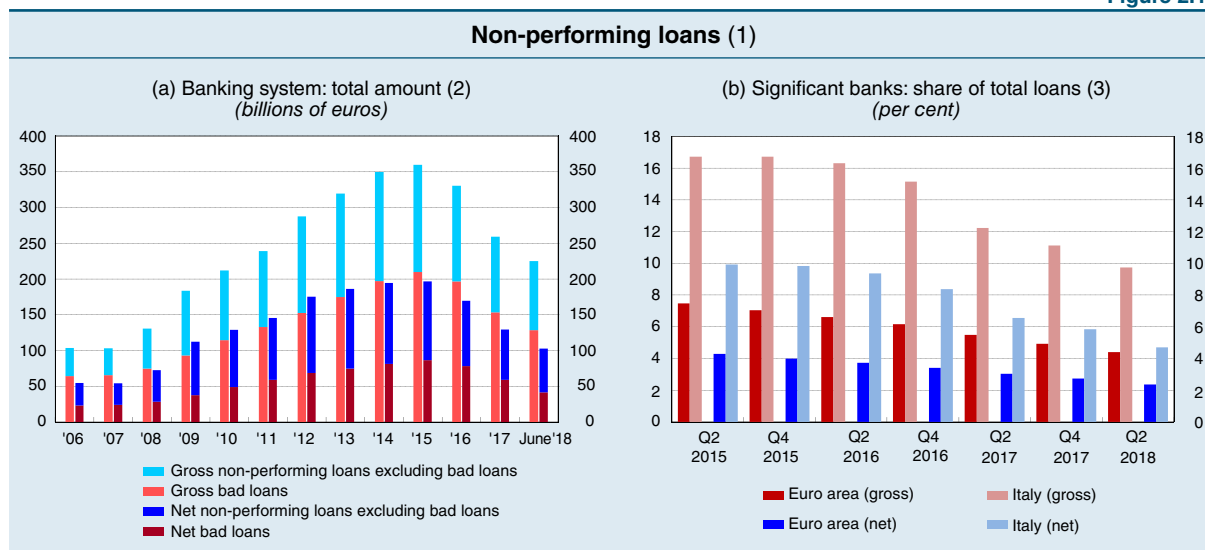
Credit quality: amounts and shares of non-performing loans and coverage ratios (1) (billions of euros and per cent)															
	Significant banks (2)					Less significant banks (2)					Total (2)				
	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio
December 2017															
Loans (3)	1,678	1,577	100.0	100.0	6.0	358	330	100.0	100.0	7.8	2,251	2,112	100.0	100.0	6.2
Performing	1,491	1,485	88.9	94.2	0.4	304	302	84.9	91.5	0.6	1,991	1,983	88.5	93.9	0.4
Non-performing	187	92	11.1	5.9	50.6	54	28	15.1	8.5	48.1	260	129	11.5	6.1	50.2
Bad loans (4)	109	42	6.5	2.6	61.7	33	13	9.2	3.9	61.0	154	59	6.8	2.8	61.6
Unlikely to pay (4)	75	49	4.5	3.1	34.8	19	13	5.3	4.0	30.9	100	66	4.4	3.1	33.9
Past-due (4)	3	2	0.2	0.2	28.4	2	2	0.7	0.7	9.6	6	5	0.3	0.2	21.4
June 2018															
Loans (3)	1,634	1,540	100.0	100.0	5.8	344	317	100.0	100.0	7.9	2,197	2,064	100.0	100.0	6.1
Performing	1,475	1,467	90.3	95.3	0.5	296	294	86.1	92.7	0.8	1,973	1,961	89.8	95.0	0.6
Non-performing	159	72	9.7	4.7	54.4	48	23	13.9	7.3	51.7	225	103	10.2	5.0	54.3
Bad loans (4)	88	28	5.4	1.8	67.7	28	10	8.2	3.0	66.1	128	41	5.8	2.0	67.7
Unlikely to pay (4)	68	42	4.2	2.7	38.6	17	11	5.0	3.6	33.7	90	56	4.1	2.7	37.7
Past-due (4)	3	2	0.2	0.2	28.2	2	2	0.7	0.7	11.7	6	5	0.3	0.2	22.4

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. Rounding may cause discrepancies in the totals. The percentages are calculated using figures expressed in millions of euros. 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 loans. Excludes branches of foreign banks. – (3) Includes loans to customers, credit intermediaries and central banks. The aggregate is in line with that used by the ECB and differs from the one used in previous editions of the Financial Stability Report ('customer loans'). The data in Table A2 in *Selected Statistics* is calculated according to the definition used in the past. – (4) The non-performing loan sub-categories reflect the Bank of Italy's un-harmonized definition, which flanks the harmonized one, used at European level. The definition adopted by the 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.

Since the end of last year, the coverage ratio, measured as the ratio of loan loss provisions to total NPLs, has increased by almost 4 points to 54.3 per cent, higher than the average for the main EU banks. The increase in the ratio was largely on account of the new IFRS 9 accounting standard that entered into force at the start of this year. Among other things, the standard requires intermediaries to make provisions for possible sales, thereby reducing the gap between the balance sheet value of assets that they expect to dispose of and the prevailing market prices.

Figure 2.13



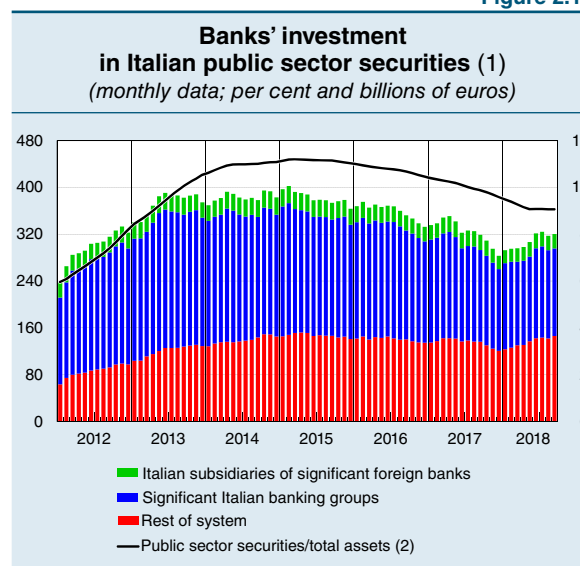
Source: Supervisory reports, on a consolidated basis for banking groups and on an individual basis for stand-alone banks. ECB, Supervisory Banking Statistics for the euro area.

(1) Includes loans to customers, credit intermediaries and central banks. – (2) Includes banking groups and subsidiaries of foreign banks; excludes branches of foreign banks. – (3) Amounts are calculated either net or gross of provisions. The comparison is in relation to significant banks only.

At the end of June, the ratio between NPLs and total loans, calculated net of provisions, was 5.0 per cent (10.2 per cent gross of provisions), about 1 point lower than December 2017.⁸ For significant banks, the gap with the euro-area average narrowed to 2.3 percentage points, from nearly 6 points in 2015 (Figure 2.13.b).

As in previous episodes of rising government bond yields, between May and September Italian banks made substantial net purchases of government securities, amounting to €39 billion. These investments help to stabilize bond prices during periods of high tension and may result in subsequent capital gains in the event that prices recover; however, they expose banks to the risks associated with a further fall in prices. More than two thirds of the securities purchased were booked into the portfolio of assets valued at amortized cost, mitigating the effect of subsequent price fluctuations on the level of capitalization. The ratio of Italian government securities to total bank assets increased by 0.7 percentage points to 9.5 per cent (Figure 2.14), approximately 2 percentage points lower than the peak levels recorded at the start of 2015.

Figure 2.14



Source: Individual 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. The series 'total assets' does not include self-issued bonds that were repurchased.

⁸ In order to harmonize the method for calculating the NPL ratio with that used by the ECB, unlike previous issues of the Financial Stability Report, interbank exposures and central bank exposures are included while non-current assets and assets held for sale are excluded. Using the old method, the ratio would have fallen from 7.5 to 6.0 per cent.

The Italian banks' exposure to emerging economies is limited (€165 billion, equal to approximately 5 per cent of assets) and is mainly concentrated in Turkey and Russia (€38 billion; see Table A4 in *Selected Statistics*). These exposures are held by a limited number of large banks.

Refinancing risk and liquidity risk

The financing needs of Italian banks are largely satisfied by resident deposits, mostly those of households, which continue to grow at annual rates higher than 3 per cent (Table 2.2). The funding gap, i.e. the share of loans not covered by retail funding, stood at 2 per cent in September, remaining at the lowest levels recorded in the last twenty years (Figure 2.15).

Table 2.2

Italian banks' funding (1) (billions of euros and percentage changes)					
	At September 2018	Share of total	12-month percentage changes (2)		
			September 2017	March 2018	September 2018
Deposits of residents in Italy (3)	1,528	63.4	6.2	3.9	3.1
of which: households	1,066	44.3	3.4	3.1	3.1
firms	295	12.3	14.9	14.3	9.9
Deposits of non-residents	325	13.5	1.1	0.8	9.0
Bonds	247	10.4	-14.9	-17.1	-17.4
of which: held by households	81	3.4	-30.2	-34.2	-31.6
Net liabilities vis-à-vis central counterparties (4)	66	2.7	-33.6	-40.0	38.5
Liabilities vis-à-vis the Eurosystem (5)	243	10.1	35.4	-2.9	-3.7
Total funding	2,409	100.0	3.5	-1.4	1.3

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

(1) Excludes liabilities to other banks resident in Italy. The data for September 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.

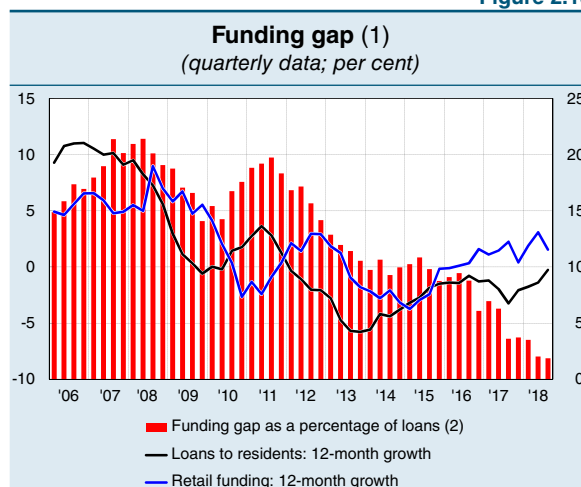
The fall in bond issues continued, declining to €247 billion in the third quarter, two-thirds of which were placed on the wholesale market. In the next two years, bank bonds for a value of €110 billion will mature,⁹ of which 90 per cent are senior instruments (see Table A6 in *Selected Statistics*). The ratio of bonds to funding for Italian banks is 10.2 per cent, compared with 13.7 per cent and 16.4 per cent for German and French banks respectively.

Recourse to funding on international bond markets remains limited. Net issues of senior instruments were negative by €200 million in the third quarter. Net issues of subordinated instruments equalled €1 billion (Figure 2.16.a); in the preceding quarter, they reached their lowest level in five years (-€6.6 billion). In the same period, Italian banks did not place any senior unpreferred bonds (MREL eligible subordinated instruments reserved for qualified investors); other European banks issued a total of €10.6 billion (€2 and €12 billion in the first half of the year for Italian and European banks respectively).

⁹ Refers to the total value of bonds issued by resident banks that are due to expire by 2020, minus the value of the bonds held by banks belonging to the banking group of the issuer.

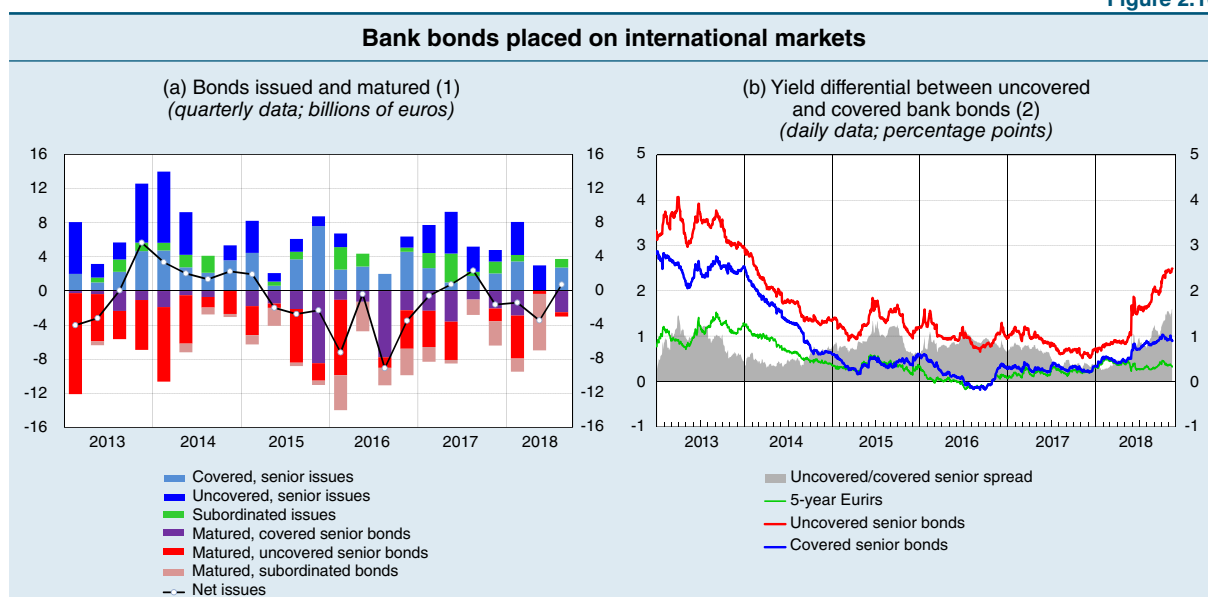
In the medium term, the drop in bond issues on the wholesale market hinders the efficient maturity-matching of assets and liabilities and adequate risk allocation among investors. In 2019, the Single Resolution Board will set a binding MREL target for most of the significant Italian banking groups, providing a transition period for alignment purposes if needed. The imminent revision of the European regulatory framework on this requirement could make additional new issues on the wholesale markets necessary, especially subordinated issues (see the box ‘The new rules on the MREL requirement and the effects on bank funding’, *Financial Stability Report*, 1, 2018). The heightened difficulty in accessing the international wholesale markets following the tensions on the Italian government securities market could amplify the negative effects of the new MREL requirement on the availability of credit for the economy.

Figure 2.15



Source: Supervisory reports; does not include Cassa Depositi e Prestiti SpA and branches of foreign banks in Italy.
(1) Loans to residents net of retail funding (residents' deposits plus bonds placed with households). Percentage changes of loans and funds have not been adjusted to smooth the accounting effect of reclassifications and of variations other than those originating from transactions. – (2) Right-hand scale.

Figure 2.16



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.

Between the end of April and the end of October, the average yield on covered, senior 5-year bonds listed on the international markets doubled to 1.0 per cent; the average yield on uncovered bonds tripled to 2.4 per cent (Figure 2.16.b). Yields in the other main euro-area economies did not change considerably with the exception of Spain.¹⁰

¹⁰ The increase in yields recorded at the end of October for bonds issued by Spanish banks seems to be on account of a decision by the Spanish Supreme Court that requires banks to pay the mortgage stamp duty which was previously paid by clients.

The tensions on the government securities market also translated into an increase in banks' liquidity risks. The drop in the value of freely available assets eligible for use as collateral for Eurosystem refinancing operations contributed to the reduction in the net liquidity position,¹¹ which fell between May and July from 14.2 to 12.5 per cent of total assets for significant banks and from 17.1 to 15.4 per cent for less significant banks. In October the ratio increased slightly, to 13.3 per cent and to 15.5 per cent for significant and less significant banks respectively.

In June the liquidity coverage ratio (LCR) fell to 159 per cent (Table 2.3), significantly higher than the regulatory minimum of 100 per cent. According to our simulations, which utilize bond yields and LCR data recorded at the end of June, an upward shift of the entire sovereign yield curve by 100 basis points would reduce the average LCR to 133 per cent. The ratio would fall from 145 to 120 per cent for significant banks and from 232 to 203 per cent for less significant banks.

Table 2.3

Liquidity coverage ratio (LCR) of Italian banks (per cent)			
	LCR (31 December 2017)	LCR (30 June 2018)	Level 1 assets as a percentage of total buffer (1) (30 June 2018)
Top 5 groups (2)	160	144	94
Other significant banks (2)	137	153	97
Less significant banks (3)	247	232	100
Total banking system	171	159	96

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

(1) Commission Delegated Regulation (EU) 2015/61, Article 10. – (2) Banks directly supervised by the ECB; only includes banks in existence on both dates. – (3) Banks supervised by the Bank of Italy in cooperation with the ECB.

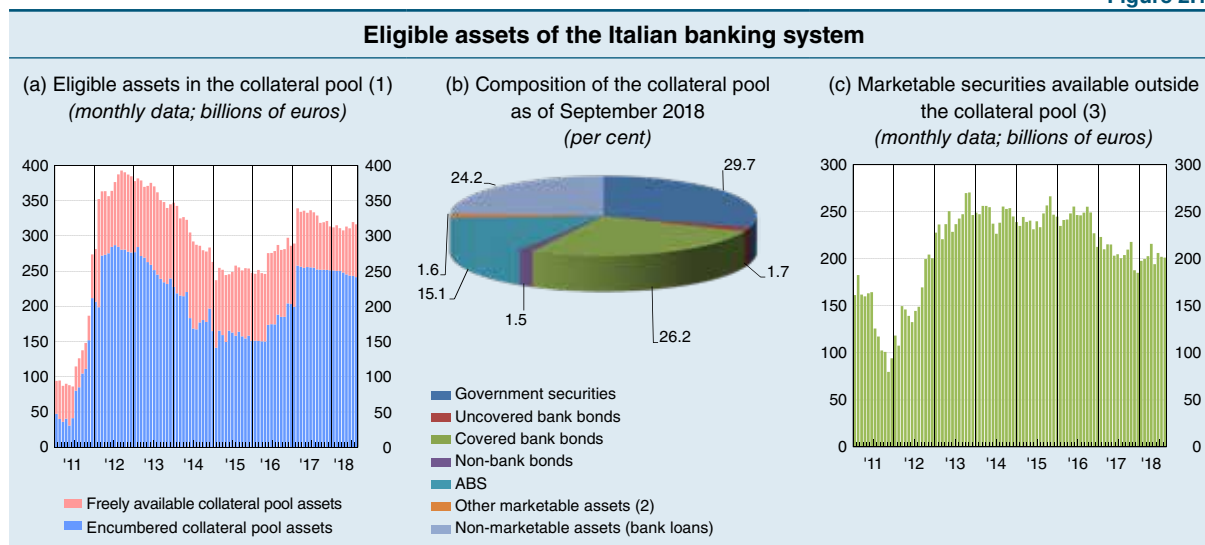
Recourse to Eurosystem refinancing by counterparties operating in Italy held stable at around €240 billion. Starting in June 2020 the targeted longer-term refinancing operations (TLTRO2) will begin to mature, representing nearly all the outstanding refinancing operations. In June and September banks were given the option of terminating or reducing their outstanding amount of TLTROs before maturity; the repayments were limited, in line with those carried out in the rest of the euro area. The ECB announced that it will maintain favourable liquidity conditions for the long term; the main refinancing operations and the longer-term refinancing operations with a three-month maturity will continue to be carried out through a fixed rate full allotment until necessary, and at least until the end of next year.

Between the end of April and the end of September, Italian banks increased the volume of assets eligible for use as collateral for Eurosystem refinancing operations deposited with the Bank of Italy (collateral pool) by 2 per cent to €316 billion (Figure 2.17.a). The drop in government securities prices resulted in a reduction in their share in the collateral pool (from 35 to 30 per cent; Figure 2.17.b). In the event of a further downgrade in Italy's credit rating by the rating agencies recognized by the Eurosystem,¹² the haircuts applied to Italian government securities are not expected to increase, as they are already at the highest level. However, there may be moderate repercussions on securities issued by banks and Italian corporations, whose credit ratings are generally re-examined when an adjustment has been made to the sovereign rating. Only in the event that all the rating agencies downgrade Italy's rating below investment grade would Italian government securities no longer be eligible (see the box 'The effects of changes in the ratings of Italian government securities', in Chapter 1).

¹¹ The net liquidity position is the difference between cumulative expected net cash flows over the next 30 days and the holdings of freely available assets eligible for use as collateral for Eurosystem refinancing operations (counterbalancing capacity) as a percentage of total assets.

¹² The rating agencies recognized by the Eurosystem are Standard & Poor's, Moody's, Fitch Ratings and DBRS.

Figure 2.17



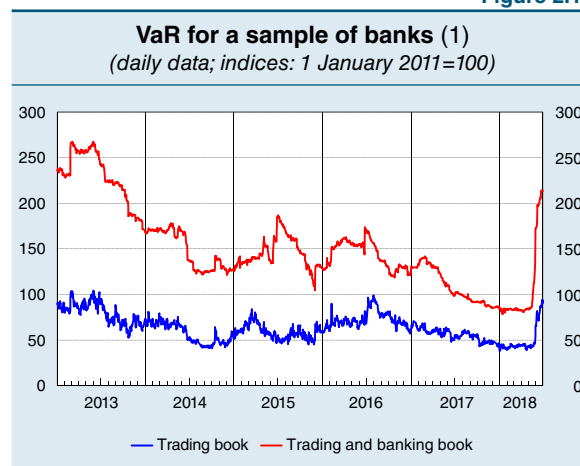
Holdings of freely available assets eligible for use as collateral in the Eurosystem remained substantially unchanged at €200 billion in September (Figure 2.17.c). Net purchases of government securities in that period offset the drop in their value. Greater recourse to the repo market (see Section 2.1) translated into an increase in asset encumbrance (the share of assets used as collateral in relation to total assets). Between March and June, the latest month for which data are available, the share rose from 29 per cent to 32 per cent for the significant banks.

Market risk and interest rate risk

The tensions registered in the Italian sovereign securities market triggered a sharp increase in market risk. Since the end of May, the Value at Risk (VaR) of the portfolios of the five banks that use internal models for prudential purposes to measure market risk has risen significantly (Figure 2.18). All the banks in the sample recorded a deterioration.

There was also an increase in the exposure of Italian banks to interest rate risk, measured by the change in the net economic value of the balance sheet¹³ that can result from shifts in the risk-free yield curve. With reference to the situation in June, an upward shift of 200 basis points in the

Figure 2.18



Source: Data for 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 on a portfolio within a given time horizon (10 days) that will not be exceeded at a given confidence level (99 per cent). The indices reflect the changes in VaR for all positions (securities and derivatives) in the balance sheet (red line) and in the trading book alone (blue line). A decrease indicates a reduction in risk.

¹³ The net economic value of the balance sheet is equal to the value of assets minus the value of liabilities in the banking book.

risk-free rates would result in an average decrease in the economic value equal to 1 per cent of own funds for the significant Italian banking groups (in December of last year, there would instead have been an increase of 2.9 per cent); the net change in the balance sheet is negative for six banks (only one in December of last year). The deterioration compared with the end of 2017 affects almost the entire sample and results from an increase in the average duration of the assets, in part attributable to heavy purchases of government securities with maturities beyond five years carried out in May and June.

Capital and profitability

On 30 June 2018 the common equity tier 1 ratio (CET1) of Italy's banking system stood at 13.2 per cent, about 60 basis points lower than at the end of 2017. In the second quarter of the year the impact of the decline in the price of government securities on the CET1 ratio – approximated by the reduction between March and June in the capital reserve composed of the changes in the value of debt instruments designated at fair value – was equal to around 40 basis points (30 points for significant banks, 75 points for less significant institutions). For the significant banks, the transition to the IFRS 9 accounting standard, which occurred on 1 January 2018, also contributed to the reduction in the CET1 ratio (from 13.3 to 12.7 per cent); this effect is due to the fact that some banks did not take advantage of the option to spread over five years, for prudential purposes, the negative impact of the new accounting rules.¹⁴ For the less significant banks, the decline in the CET1 ratio (from 16.9 to 16.2 per cent) can be almost entirely explained by the drop in government bond prices. Our simulations show that the change in capital following movements in the prices of these securities is greater for less significant banks, since government bonds account for a larger share of their portfolios (see the box 'The implications for the Italian economy of an increase in the yields on Italian government securities' in Chapter 1).

The gap between the capitalization level of the main EU banks and the average for Italy's significant banks, which had narrowed by more than 1 percentage point in 2017, has widened by 30 basis points to 180 points. The leverage ratio, which measures capital adequacy relative to non-risk-weighted assets, is still better for Italian banks (5.7 per cent) than for EU banks (5.3 per cent on average). Based on the results of the European stress tests coordinated by the EBA and published in early November, the Italian banks included in the sample are capable of absorbing the losses that could occur in a hypothetical adverse scenario, with an average impact in line with that observed for EU banks (see the box 'The results of the EU-wide stress tests').

THE RESULTS OF THE EU-WIDE STRESS TESTS

On 2 November, the European Banking Authority (EBA) published the results of the stress test conducted on the 48 largest European banking groups, which include UniCredit, Intesa Sanpaolo, Banco BPM and UBI Banca.¹ The EU-wide stress tests are carried out every two years in collaboration with the ECB and the national supervisory authorities.

¹ For a summary of the stress test results see [2018 EU-wide stress test results](#) on the EBA's website.

¹⁴ During the transitional period introduced by Article 473a of Regulation (EU) No. 575/2013 (Capital Requirements Regulation, CRR) banks are permitted to deduct from CET1 just a portion, rising over time, of the increased loan loss provisions recognized during the first-time application of IFRS 9. For 2018 this portion is equal to 5 per cent; for the four subsequent years it is equal, respectively, to 15, 30, 50 and 75 per cent. In the absence of the transitional regime, the CET1 ratio of Italian significant banks would be about 70 basis points lower. For a description of the changes introduced by IFRS 9, see the box 'The impact of the new IFRS 9 accounting standard' in *Financial Stability Report*, 2, 2017).

In the adverse scenario, the fully loaded common equity tier 1 ratio (CET1 ratio) of Italian banks would diminish on average by 3.9 percentage points at the end of the three years considered (2018-20), a figure only slightly lower than that observed for the other European banks (see the figure). The impact for individual Italian banks would range from 3.2 to 5.3 per cent (from 0.8 to 8.5 per cent for the other banks in the sample).

The four Italian banks are more exposed to the risk of credit losses, given their focus on traditional banking. However, the reduction in credit deterioration rates and the decrease in the stock of NPLs of recent years have lessened the impact in the adverse scenario. Moreover, the higher NPL coverage ratio observed after the adoption for the first time of the IFRS 9 has left scope for the creation of provisions to absorb projected credit losses over the stress test time horizon.

Losses on fair value financial instruments, including sovereign bonds,² and the positive contribution of client revenues are less than for European banks. Reduced exposure to such factors – which in the EBA’s methodology represent market risks because they are potentially highly volatile – is an element of soundness for Italian banks.

² Different shocks were applied to the yields on government securities of the various European countries. For Italian government securities in particular, a hypothetical yield of 3.3 per cent in the adverse scenario for 2018 was used. In addition, complex and less liquid financial instruments (levels 2 and 3), which banks calculate with internal models, were subjected to shocks that take account of the uncertainty of valuation. Italian banks’ reduced exposure to such instruments helped to limit the overall impact of market risk. For an assessment of the susceptibility of Italian banks’ CET1 ratio to changes in government security yields see the box ‘The implications for the Italian economy of an increase in the yields on Italian government securities’ in Chapter 1.

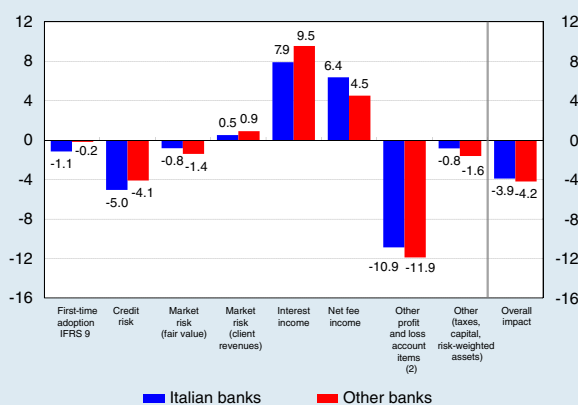
In the first half of 2018 the profitability of Italian intermediaries improved, mainly due to fewer loan loss provisions (Figure 2.19).¹⁵ Compared with the first half of 2017, gross income increased by 1.5 per cent, benefiting from the 3.1 per cent increase in fees earned from asset management and from the growth in interest income (2.9 per cent).

Staff costs fell (-2.6 per cent) but this decline was largely offset by the increase in other administrative costs, especially those associated with additional contributions to the National Resolution Fund (NRF)¹⁶ and, to a lesser extent, with the increase in IT expenditure. Overall operating costs fell by 0.7 per cent and the cost/income ratio declined by 1.4 percentage points to 65.7 per cent.

¹⁵ For the purposes of comparison, in the first half of 2017 the scope of consolidation of the Intesa Sanpaolo group was reconfigured to take account of the impact on profit or loss of the acquisition of Banca Popolare di Vicenza and of Veneto Banca.

¹⁶ As permitted under current regulations, additional contributions were called up to finance the additional costs associated with resolution actions undertaken by the NRF in 2015.

Overall impact on capital in the adverse scenario: fully loaded CET1 ratio (1)
(percentage points)



Source: EBA.

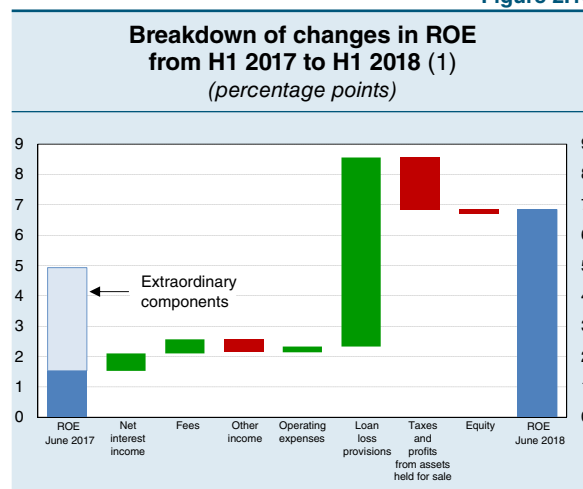
(1) The Italian banks in the sample are UniCredit SpA, Intesa Sanpaolo SpA, UBI Banca SpA and Banco BPM SpA. The comparison with European banks includes the other 44 EU banks that took part in the EU-wide stress test. – (2) Includes operating costs, shareholders’ dividends and other operating revenue.

Loan loss provisions fell by 56 per cent. In the first six months of 2018 the average cost of risk – measured by the ratio of loan loss provisions to the average amount of loans for the same period – was 0.6 per cent on an annual basis, the lowest it has been in the last decade.

Compared with the same period of last year, the annualized return on equity rose from 1.5 per cent to 6.8 per cent, net of non-recurring income. It rose from 1.5 to 7.1 per cent for significant banks and from 0.2 to 5.9 per cent for less significant institutions.

The evolution in the banking system's profitability is linked to the economic growth outlook for Italy and the continuing improvement in credit quality. A contribution to reducing operating costs could derive from the completion of bank reorganizations undertaken in recent years, aimed at improving efficiency by downsizing the workforce and cutting the number of branches. The persistence of tensions in government securities prices could hamper the recovery in profitability by increasing funding costs (see the box 'The implications for the Italian economy of an increase in the yields on government securities' in Chapter 1).

Figure 2.19



Sources: Consolidated supervisory reports for banking groups and individual supervisory reports for stand-alone banks.

(1) Changes are expressed as a ratio to own funds and reserves. A green/red bar indicates a positive/negative contribution to ROE starting in the 1st half of 2017, giving the value for the 1st half of 2018. The data include the Italian subsidiaries of foreign banks. Data for 2018 are provisional.

2.3 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

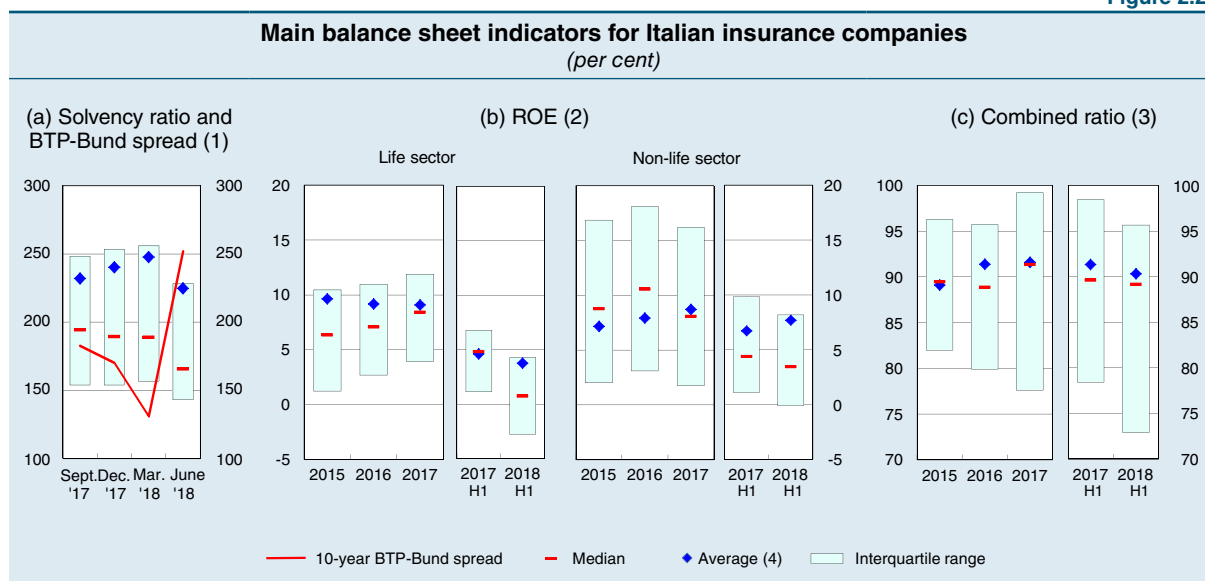
Insurance

Italy's insurance sector is particularly exposed to sovereign risk, given the investments required to cover liabilities towards customers and the high share of government securities in these companies' portfolios, which amount to around one third of their total assets. Moreover, prudential regulations require capital positions to be calculated on the basis of balance sheets whose items are valued at market prices.

In the second quarter of 2018, the rekindling of tensions on Italian sovereign debt led to a fall of 2.3 per cent in the overall market value of insurance companies' assets and a reduction of 23 percentage points in their average solvency ratios, which declined to 225 per cent (Figure 2.20.a). The decline was less marked for companies with more diversified investment portfolios. The reduction in the solvency ratios was barely attenuated by the volatility adjustment, a Solvency II measure designed to mitigate the impact of fluctuations in the market value of assets on companies' capital position (see the box 'The impact of the long-term guarantees packages under Solvency II', in *Financial Stability Report*, 1, 2018). On average, solvency ratios are well above the minimum requirements; they could, however, come down significantly if there are further drops in the prices of government securities (see the box 'The implications for the Italian economy of an increase in the yields on government securities', in Chapter 1).

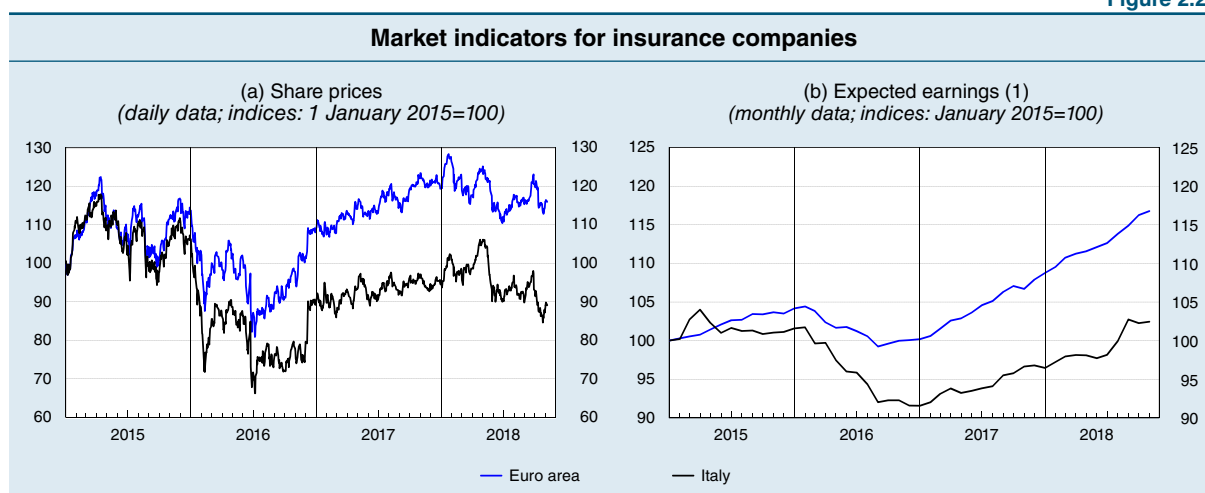
The fall in the value of government securities also had a negative impact on the return on equity of the main companies in the life sector, which in the first six months of the year fell to 3.8 per cent (4.6 per cent in the first half of 2017; Figure 2.20.b). The profitability of the non-life sector has instead continued to rise following the widespread improvement in the combined ratio, i.e. the ratio

Figure 2.20



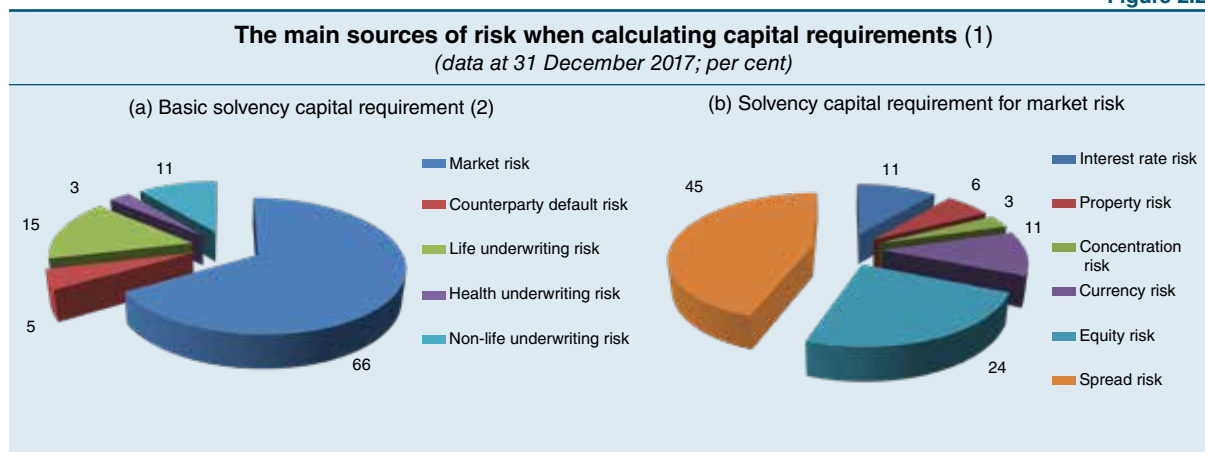
of incurred losses plus operating expenses to premium income (Figure 2.20.c). Premium income is stable in the non-life sector while it is growing in the life sector; in the first six months of the year, the latter recorded an increase of 6 per cent compared with the same period in 2017, thanks to the growth of with-profits policies and unit-linked products. The risks linked to the devaluations of the assets were reflected in the earnings expectations of analysts and the share prices of the main companies: since the start of May share prices have shed 15 per cent on average, compared with 4 per cent in the euro area as a whole (Figure 2.21).

Figure 2.21



As in the main European countries, for Italian companies the risks stemming from investment activities remain predominant (Figure 2.22.a). Given the significant share of private sector debt securities in the asset portfolios of insurance companies (Figure 2.23), the risk of a widening spread between bond yields and the risk-free rates represents the biggest risk¹⁷ and in 2017 absorbed 45 per cent of the capital requirement for market risks (Figure 2.22.b).

Figure 2.22



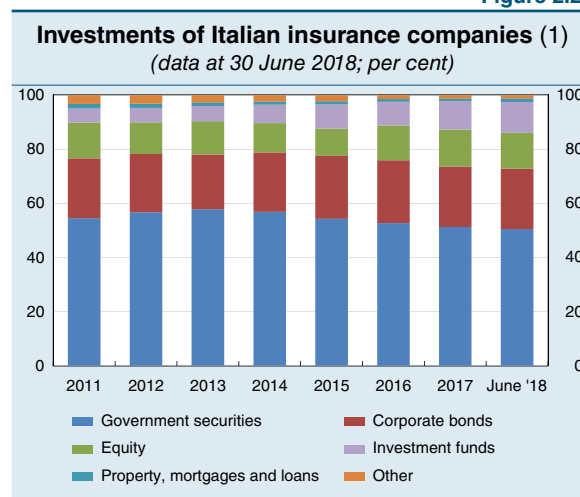
Source: IVASS.

(1) The data only consider those companies (84 undertakings representing 58 per cent of total assets) that use the standard formula to calculate the solvency capital requirement (SCR). The standard method used for calculating the spread risk does not set capital requirements for exposures to an EU state that are denominated and funded in the domestic currency. – (2) The basic solvency capital requirement (BSCR) is calculated by aggregating the market risk, counterparty default risk and underwriting risk (life, non-life and health) modules. The final SCR is determined by adding an operational risk module to the BSCR and taking account of the loss-absorbing capacity of technical provisions and deferred taxation.

The share of annual premiums sold by Italian firms to reinsurance companies comes to barely 3.3 per cent, against an EU average of 8.7 per cent (Figure 2.24.a). Reinsurance policies are concentrated among a small number of counterparties¹⁸ (Figure 2.24.b), primarily with high credit ratings (AA and A). Limited recourse to reinsurance by Italian firms is linked to their lower exposure to technical risks, such as those stemming from catastrophes, which are typically sold to reinsurers.

Unlike for the banking sector, at European level there is still no single regulatory framework for the application of macroprudential measures in the field of insurance. The European Insurance and Occupational Pensions Authority (EIOPA) and the European Systemic Risk Board (ESRB) recently drew up broadly converging proposals for macroprudential instruments and harmonized recovery and resolution (see the box ‘The proposals for macroprudential measures in the insurance sector’).

Figure 2.23



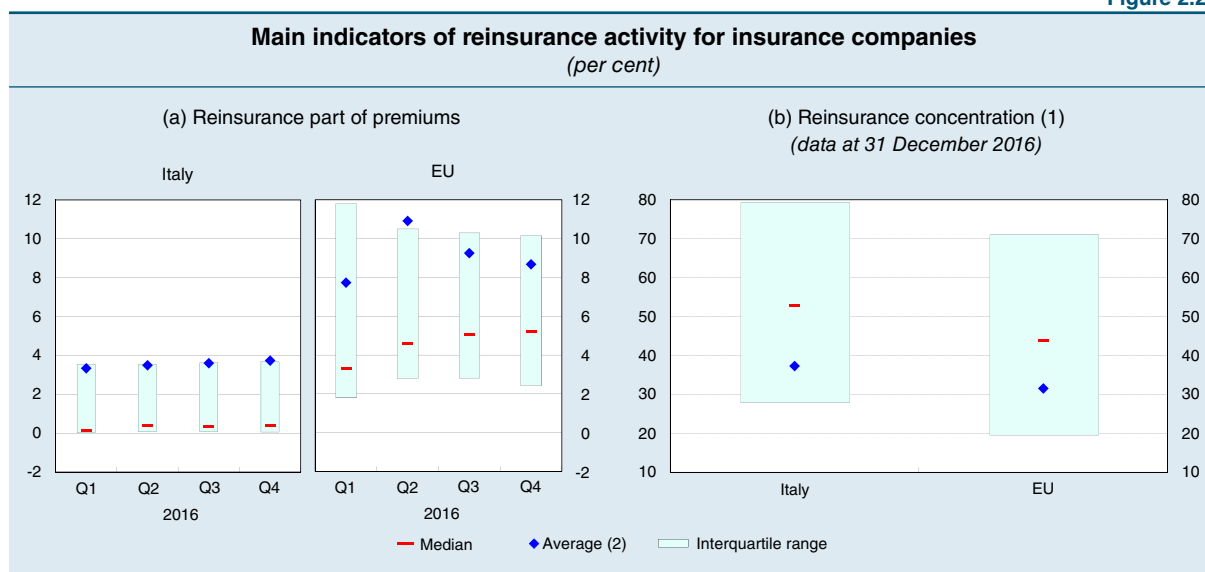
Source: IVASS.

(1) Class C investments, whose risks are borne by the insurance companies.

¹⁷ Prudential regulation envisages special treatment for sovereign exposures (see Note 1 to Table 2.22).

¹⁸ Some 50 per cent of premiums relative to reinsured positions are concentrated in eight of the main EU and non-EU insurance companies.

Figure 2.24



Sources: IVASS and EIOPA.

(1) Herfindahl-Hirschman index, used in the Risk Dashboards designed by IVASS AND EIOPA to assess if reinsurance is overly concentrated in a few reinsurers. –
(2) Weighted average with weights equal to the amount of gross premiums written.

THE PROPOSALS FOR MACROPRUDENTIAL MEASURES IN THE INSURANCE SECTOR

In recent months the European Insurance and Occupational Pensions Authority (EIOPA) and the European Systemic Risk Board (ESRB) compiled reports¹ that examine the sources of systemic risk for the sector, explore the mitigation and prevention tools provided for under current legislation² and formulate proposals for a European macroprudential framework. These reports analyse potential instruments and powers of intervention specific to systemic risk management and, more broadly, call on companies to prepare contingency plans.

In order to assess the adequacy of the sector's capitalization and its degree of interconnectedness with other parts of the financial system, account is taken of financial leverage indicators (measured as the ratio of own capital to total assets) and indicators of the value of non-insurance liabilities as a share of own capital.³ Among the powers of regulatory intervention that merit further attention is the definition of any additional capital requirements in view of: (a) the risks associated with the systemic importance of the companies (along the lines of what is required in the banking sector for other systemically important institutions or O-SIIs); (b) the involvement of insurance companies in activities that are not traditionally insurance-related and which are more exposed to macroeconomic risks, such as mortgage lending and the provision of financial guarantees; (c) unexpected events that

¹ EIOPA, *Systemic risk and macroprudential policy in insurance*, 2018; EIOPA, *Solvency II tools with macroprudential impact*, 2018; EIOPA, *Other potential macroprudential tools and measures to enhance the current framework*, 2018; the ESRB's report is forthcoming.

² In addition to the long-term guarantees (LTG), Solvency II: (a) enables companies to avail of a transitional measure to apply the new principles for calculating the technical reserves, subject to authorization by the competent authorities; (b) extends, in exceptionally adverse circumstances declared by EIOPA, the period during which ailing companies must restore solvency. The European regulations on packaged retail and insurance-based investment products (PRIIPS) have also introduced the power to limit or ban activities or products in the event of substantial risks to the orderly functioning of the markets.

³ The measures also comprise the stepping up of reports on technical reserves for the purpose of monitoring the risks of an inaccurate determination of technical liabilities.

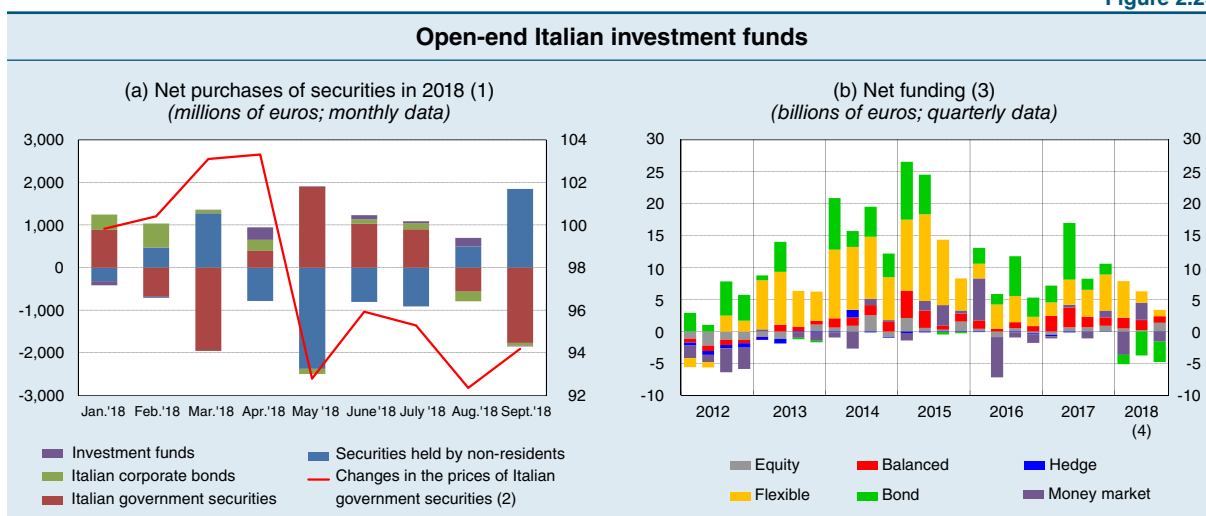
could affect the entire insurance sector, or a significant part of it; and (d) cyclical risks, including interest rate risk and spread risk, for which there is a proposal to use an additional discretionary capital buffer, which can be activated by the authorities.

The reports also assess the introduction of specific indicators and instruments for liquidity risk management, such as stress tests and quantitative requirements. One of the measures proposed to address this type of risk is the temporary suspension of the right to redeem policies. Regarding asset risks, non-binding limits on the concentration of investments are also being analysed, with the thresholds defined by the national authorities.

The asset management industry

Up until July, Italian investment funds made portfolio decisions that ran counter to the trends in government securities prices: in particular, flexible funds and, to a lesser extent, bond funds, sold Italian public sector securities in the period leading up to the sharp fall in prices and subsequently purchased them (Figure 2.25.a). This development is probably linked to investment choices designed to benefit from market prices that are deemed to be temporarily misaligned with the fundamentals and very volatile. Since August there have been predominantly sales.

Figure 2.25



Sources: Assogestioni, supervisory reports and data from Thomson Reuters Datastream.

(1) Italian funds only. – (2) Datastream index of 10-year Italian government securities; 31 December 2017=100. Right-hand scale. – (3) Data on funds based in Italy and abroad, managed by asset management companies belonging to Italian groups. – (4) The data on the money market segment for the first two quarters of 2016 and for the first quarter of 2018 reflect several large transactions by institutional investors.

Net subscriptions of funds have been lacklustre since the start of the year. In the second quarter, as tensions on the financial market rose, there were outflows of capital from Italian bond funds and net subscriptions of funds in the other segments; in recent months the redemptions also involved monetary funds (Figure 2.25.b). For Italian open-end investment funds the risk that increased requests for redemptions could lead to the rapid unwinding of portfolios and greater market volatility is limited, both because the assets in Italian funds' portfolios tend to be highly liquid and owing to their low leverage.

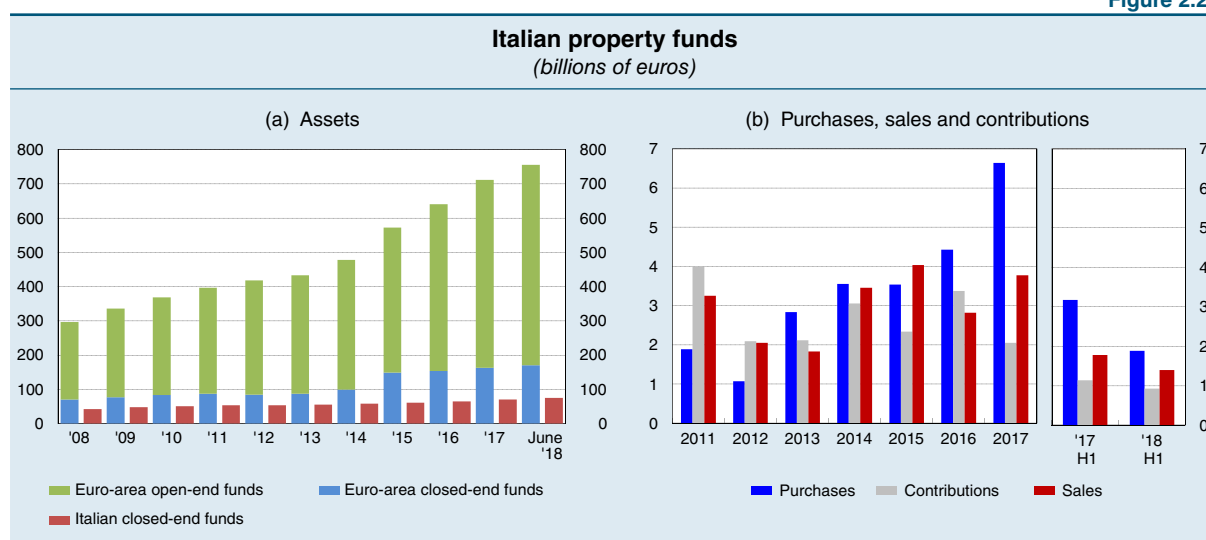
Net subscriptions of Italian funds that comply with the rules on long-term individual savings plans (*piani individuali di risparmio* or PIR), for which tax incentives discourage early redemptions, have

continued to be significant (€1.4 billion in the second quarter; see the box ‘Investments of open-end Italian investment funds that comply with the rules on individual savings plans (PIR)’, in *Financial Stability Report*, 1, 2018).

Credit funds, which were introduced in Italy at the end of 2014, have continued to expand; last September their assets – equal to around €3 billion – mainly comprised investments in NPLs sold by Italian banks. The first European long-term investment funds (ELTIF), which can invest in both equity and debt instruments and may be marketed to retail investors, are also in the process of being established. These two new categories of fund do not threaten the stability of the financial system: they are still very limited in size and the risks associated with the scarce liquidity of the assets are mitigated by the prudential legislation obliging them to be established as closed-end funds and imposing limits on indebtedness and on concentration risk.

The expansion of the Italian property fund industry has slowed (Figure 2.26.a). The value of property transactions has diminished significantly (Figure 2.26.b), in part following lower investment by international operators. While the assets of funds reserved to professional investors have increased, the segment devoted to retail investors has contracted, reflecting the liquidation of a number of funds nearing maturity and the absence of any new initiatives (see the box ‘The impact of the real estate cycle on Italy’s property fund sector’ in *Financial Stability Report*, 1, 2017).

Figure 2.26

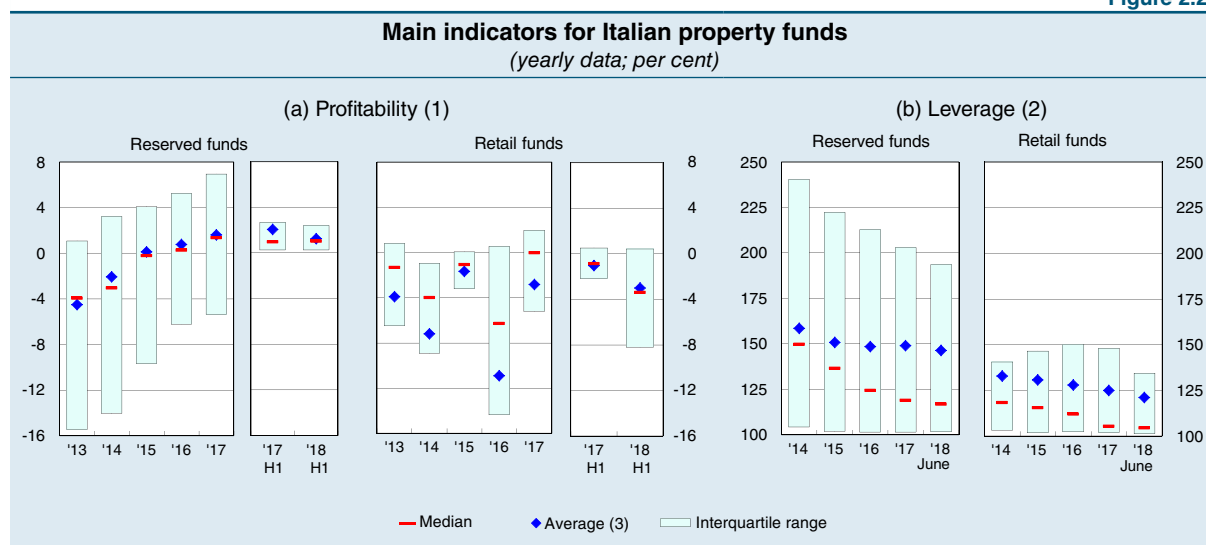


Source: Supervisory reports.

The average profitability of retail funds remains negative (Figure 2.27.a), primarily owing to write-downs of portfolio assets. Despite its limited size overall, the segment’s poor economic results remain a source of reputational risk for asset management companies and the intermediaries entrusted with placement activities. Following the heavy losses recorded on the expiry of some funds, these intermediaries adopted measures to help subscribers recover the capital invested. The reserved funds segment has instead performed positively overall, given that unlike retail funds, most of them were established after the real estate market had bottomed out.

Indebtedness levels continue to fall, both for retail and reserved funds (Figure 2.27.b). Reserved funds with negative net assets account for just over 2 per cent of the assets of the funds in the segment.

Figure 2.27



Source: Supervisory reports.

(1) Ratio of earnings or losses in the reference period to net assets. The half-yearly data for funds reserved to professional investors refer to a sample of the main funds. – (2) Ratio of total assets to net assets. – (3) Weighted average with weights equal to the denominator of each ratio.

3 MACROPRUDENTIAL MEASURES

The Bank of Italy, in coordination with the European Central Bank (ECB), is responsible for activating in Italy the macroprudential instruments for banks provided for in European legislation (Table 3.1). The Bank's latest macroprudential decisions have regarded the setting of the countercyclical capital buffer rate (CCyB) and the identification of material third countries¹ for the Italian banking system for the purpose of applying the countercyclical capital buffer. Before the end of the year the Bank of Italy will publish the results of the annual exercises for identifying global systemically important institutions (G-SIIs) and, at domestic level, other systemically important institutions (O-SIIs), as well as the relative capital buffers.

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 list is not exhaustive.

The countercyclical capital buffer rate has been kept at zero per cent throughout 2018 (Table 3.2). This is consistent with the generally weak macrofinancial cyclical conditions inferable from the leading indicator, which measures the expected difference between the credit-to-GDP ratio and its long-run trend (credit-to-GDP gap; see Section 1.1), and from the other cyclical indicators:² while

¹ Non-EU countries.

² 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 (per cent)
22 June 2018	Setting of the CCyB rate for the third quarter of 2018	0.00
28 June 2018	Identification by Italy of material third countries	–
22 September 2018	Setting of the CCyB rate for the fourth quarter of 2018	0.00

(1) The dates given are those on which the decision was published. For a complete list of the [macroprudential policy decisions](#) see the Bank's website.

the unemployment rate has come down, it is still relatively high; in real terms property prices have continued to contract and remain far off their long-term levels; growth in business lending continues to be limited.

The third countries identified as material for the Italian banking system for the purpose of applying the countercyclical capital buffer are unchanged from 2017: Russia, the United States, Switzerland and Turkey.³ The four countries were also identified by the European Systemic Risk Board (ESRB) as being material for the EU banking sector and are already subject to risk monitoring by the ESRB. The Bank of Italy accordingly determined not to carry out direct monitoring of these economies.⁴

In accordance with European legislation and no later than 1 December 2018, the Bank of Italy will publish its decisions on the banking groups identified as O-SIIs for 2019 and their capital buffers. By the end of this year, the decision concerning the identification and capital buffers of G-SIIs will also be made public. Last year the Bank of Italy identified UniCredit, Intesa Sanpaolo, Banco BPM and Banca Monte dei Paschi di Siena as O-SIIs⁵ and UniCredit as a G-SII⁶ (see *Financial Stability Report*, 1, 2018).

In Italy the real estate cycle is struggling to gain strength and indicators of banks' vulnerability stemming from the market are at low levels (see Section 1.1), households' financial conditions are solid and those of firms have considerably improved in recent years (see Section 1.2). The Bank of Italy does not therefore deem it opportune to activate macroprudential measures designed to address risks in these sectors at the present time. In recent months, in response to signs of a strengthening economic cycle, several EU countries have introduced macroprudential measures to make the financial system more resilient, including the countercyclical capital buffer, the systemic risk buffer, and several measures to combat the risks originating from the real estate market (see the box 'The main macroprudential measures recently adopted in the European Union').⁷

³ Identified by applying the methodology used by the ESRB that defines material third countries as those to which a banking system is exposed for an amount equal to or more than 1 per cent of its total exposures.

⁴ In addition to the four countries already indicated, the third countries monitored by the ESRB include Brazil, China, Hong Kong and Singapore. The ESRB monitors and periodically assesses a set of systemic risk indicators in the countries identified as material, among which the credit-to-GDP gap.

⁵ The additional capital buffers for this year are equal to 0.25 per cent for UniCredit, 0.19 per cent for Intesa Sanpaolo and 0.06 per cent for Banca Monte dei Paschi di Siena; it is equal to 0.00 per cent for Banco BPM.

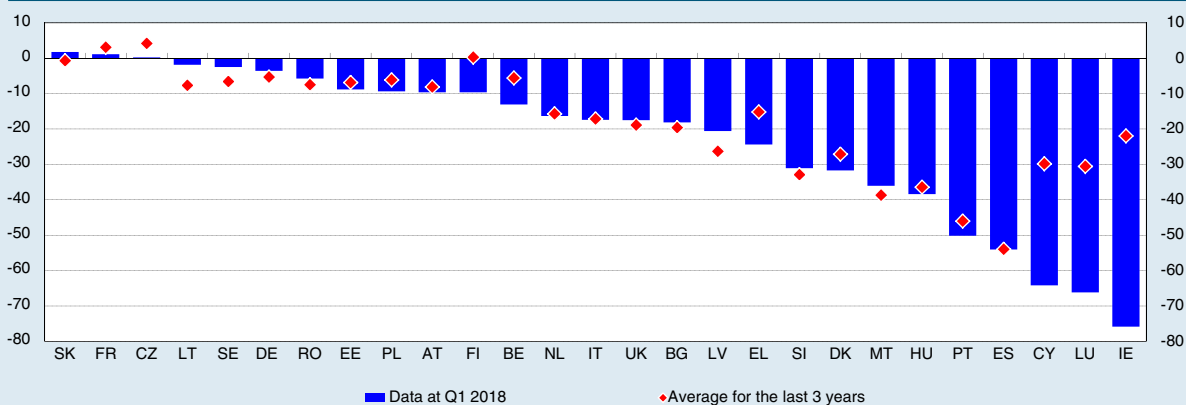
⁶ For 2018 the UniCredit Group is required to maintain an additional capital buffer of 0.75 per cent of total risk-weighted exposure; this will be raised to 1 per cent in 2019. In accordance with European legislation, the UniCredit Group will apply only the higher between the G-SII and the O-SII requirements.

⁷ For details on the individual measures, see the table on the ESRB's website 'National measures of macroprudential interest in the EU/EEA'.

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) continues to be negative for the majority of EU countries (see the figure). In a growing number of member states, however, signs of a strengthening of the financial cycle have led the macroprudential authorities to announce the activation of countercyclical capital buffers or to increase existing rates (see the table).

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: SK=Slovakia; FR=France; CZ=Czech Republic; LT=Lithuania; SE=Sweden; DE=Germany; RO=Romania; EE=Estonia; PL=Poland; AT=Austria; FI=Finland; BE=Belgium; NL=Netherlands; IT=Italy; UK=United Kingdom; BG=Bulgaria; LV=Latvia; EL=Greece; SI=Slovenia; DK=Denmark; MT=Malta; HU=Hungary; PT=Portugal; ES=Spain; CY=Cyprus; LU=Luxembourg; IE=Ireland.

Countercyclical capital buffers in the EU countries

	Rate applicable (per cent)	As of	Rate announced (per cent)	As of
Austria, Belgium, Croatia, Cyprus, Estonia, Finland, Germany, Greece, Hungary, Italy, Latvia, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain,	0.00	1 January 2016	–	–
Bulgaria	0.00	1 January 2016	0.50	1 October 2019
Denmark	0.00	1 January 2016	0.50	31 March 2019
France	0.00	1 January 2016	1.00	30 September 2019
Ireland	0.00	1 January 2016	0.25	1 July 2019
Lithuania	0.00	1 January 2016	1.00	5 July 2019
United Kingdom	0.00	1 January 2016	0.50	31 December 2018
Czech Republic	0.50	27 June 2018	1.00	30 June 2019
Slovakia	1.00	1 July 2018	1.25	28 November 2018
Sweden	1.25	1 August 2018	1.50	1 January 2019
	2.00	19 March 2017	2.50	1 July 2019

Source: ESRB.

The systemic risk buffer (SyRB). – This buffer is designed to prevent and mitigate the systemic risks associated with the specific vulnerabilities of domestic financial systems.¹ In 2018 it was activated in Finland and Romania. In Finland it is used to combat the risks stemming from the high concentration of the banking system and its excessive size compared with the national economy. In Romania the SyRB was introduced to strengthen banks' balance sheets, given the risk of an increase in the stock of non-performing loans. In Hungary the buffer was instead reduced following the decline in the NPL ratio of the banks to which it had been applied.²

Measures to address risks stemming from the real estate market. – A number of limits were introduced in Portugal on bank lending to the real estate sector in respect of loan-to-value ratios, debt service-to-income ratios, and the maturity of new loans. In the Czech Republic, limits were introduced on debt service-to-income ratios and debt-to-income ratios. In Slovakia the limits on loan-to-value ratios and debt-to-income ratios were made more stringent.

¹ For the SyRB a minimum of 1 per cent but no maximum is envisaged.

² In Finland the SyRB will apply starting on 1 July 2019 and will be equal to 1 per cent for all authorized credit institutions except for three large banks, for which the buffer rate will be higher. In Romania, a systemic risk buffer of 1 or 2 per cent has applied to 23 banks since 30 June 2018. In Hungary, where the buffer had applied to two banks at rates of 1.5 and 2 per cent, from 1 July 2018 these rates were lowered to zero and 1 per cent respectively.

The adoption of a macroprudential approach to supervision is a relatively recent development and to date there has been no comprehensive assessment of the effectiveness of its instruments. A number of studies, however, suggest that the macroprudential measures taken are achieving the set objectives – including the strengthening of banks' balance sheets and the smoothing out of fluctuations in the financial cycle – even if the positive effects can be partly diluted by other factors, such as an increase in the loans disbursed by non-banking or foreign intermediaries.⁸ In some cases the limited effectiveness of the interventions may be attributable to an insufficient calibration of the instruments rather than to their design. These conclusions appear to be confirmed by the analyses conducted on the effects of the measures adopted in some European countries for the real estate sector (see the box 'The effectiveness of the macroprudential measures adopted in some European countries for the real estate sector: early evidence').

THE EFFECTIVENESS OF THE MACROPRUDENTIAL MEASURES ADOPTED IN SOME EUROPEAN COUNTRIES FOR THE REAL ESTATE SECTOR: EARLY EVIDENCE

The empirical evidence on the effectiveness of macroprudential measures in Europe is confined to some countries and focuses primarily on the instruments used to combat risks stemming from the real estate sector.

In Ireland, limits on loan-to-value and loan-to-income ratios may have helped to make banks and borrowers more resilient and to curb the procyclicality of lending to the residential real estate sector and house prices.¹ The measures nonetheless appear to have prompted the hardest hit banks to increase credit to the riskiest households and firms and investment in higher yield securities.²

¹ Central Bank of Ireland, *Review of residential mortgage lending requirements: mortgage measures 2017*, 2017.

² V.V. Acharya, K. Bergant, M. Crosignani, T. Eisert and F. McCann, *The anatomy of the transmission of macroprudential policies*, May 2018.

⁸ See E. Cerutti, S. Claessens and L. Laeven, 'The use and effectiveness of macroprudential policies: new evidence', *Journal of Financial Stability*, 28, 2017, 203-224; O. Akinci and J. Olmstead-Rumsey, 'How effective are macroprudential policies? An empirical investigation', *Journal of Financial Intermediation*, 33, 2018, 33-57.

Based on the analyses conducted by the Bank of England, the macroprudential measures introduced in 2014 in the United Kingdom – limits on loan-to-value ratios for new loans and verification by banks of borrowers' ability to service debts in the event of a rise in interest rates – helped prevent a marked easing of the terms of lending and excessive growth in the number of highly indebted households.³

The activation in 2013 in Switzerland of a sectoral countercyclical capital buffer, i.e. for exposures to the residential real estate sector only, appears to have helped raise interest rates on loans granted both by banks with capital levels close to the regulatory minimum and by those specialized in lending to the real estate sector; for the latter, there was also a reduction in mortgage lending growth. The effects of the measure appear to have been modest, also because of the relatively low value of the buffer.⁴ Taking account of all the macroprudential measures adopted between 2012 and 2014⁵ the measures appear to have been effective overall.⁶

In Belgium too, banks' response to a measure that increased risk weightings on the residential real estate sector exposures of those that use internal models appears to have varied: the banks that were most affected by higher capital requirements and those with capital levels close to the regulatory minimum appear to have been more proactive in reducing lending growth; the average impact on the rates and growth of real estate loans appears in any event to have been moderate, also owing to the limited calibration of the instrument.⁷

³ Bank of England, 'The FPC's review of its 2014 mortgage market recommendations', *Financial Stability Report*, 40, 2016, 20-25; Bank of England, *Financial Stability Report*, 43, 2018.

⁴ C. Basten and C. Koch, 'The countercyclical capital buffer', mimeo, February 2017. The study focuses on the effects of the initial activation of a CCyB of 1 per cent of risk-weighted domestic mortgage loans; the CCyB was subsequently raised to 2 per cent, but this increase was not taken account of in the analysis.

⁵ Aside from the initial activation of the CCyB, these measures include its subsequent increase, the reduction of the period allowed for the amortization of loans, the introduction of an obligatory minimum equity capital (10 per cent), the increase in the risk weighting for riskier loans (loan-to-value ratios of more than 80 per cent).

⁶ J.-P. Danthine, 'Macroprudential policy in Switzerland: the first lessons', speech delivered at the conference *Next Steps for Macroprudential Policy*, organized by Columbia University, New York, 12 November 2015.

⁷ S. Ferrari, M. Pirovano and P.R. Kaltwasser, 'The impact of sectoral macroprudential capital requirements on mortgage loan pricing: evidence from the Belgian risk weight add-on', Working Paper Research, National Bank of Belgium, 306, October 2016.

SELECTED STATISTICS

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Table A1

Financial sustainability indicators (per cent of GDP, unless otherwise specified)												
	GDP (1) (annual growth rate)		Characteristics of public debt				Primary surplus (2)	S2 sustainability indicator (4)	Private sector financial debt (5)		External position statistics (6)	
	2018	2019	level (2)		Average residual life of gov't. securities (3) (years)	Nonresidents' share (3) (% of public debt)			Households	Non-financial firms	Current account balance	Net International investment position
	2018	2019	2018	2019	2018	2018	2018	2016	2018	2018	2018	2018
Italy	1.1	1.2	131.1	131.0	6.9	37.0	1.7	0.6	41.1	71.2	2.8	-3.4
Germany	1.7	1.8	60.1	56.7	5.8	53.9	2.5	1.2	52.6	55.6	8.1	58.3
France	1.7	1.6	98.7	98.5	7.4	61.1	-0.8	1.1	59.2	143.6	-0.3	-19.1
Spain	2.6	2.2	96.9	96.2	7.0	52.4	-0.3	1.2	60.8	94.9	1.4	-82.4
Netherlands	2.8	2.4	53.2	49.6	6.9	48.0	1.9	3.0	103.6	171.6	10.5	59.0
Belgium	1.5	1.5	101.4	99.8	9.4	63.6	1.4	2.7	60.7	159.9	0.0	52.2
Austria	2.7	2.0	74.5	71.0	8.3	80.9	1.3	2.7	49.6	91.3	2.4	5.0
Finland	2.9	2.2	59.8	58.5	6.2	80.7	0.1	2.8	67.2	117.0	-0.9	-3.9
Greece	2.0	2.0	182.5	174.9	....	....	3.9	....	54.9	59.1	-1.3	-141.5
Portugal	2.2	1.8	121.5	119.2	6.2	61.8	2.7	1.0	67.9	102.4	0.0	-106.0
Ireland	7.8	4.5	63.9	61.1	10.6	70.3	1.5	-0.5	44.4	194.1	13.8	-140.4
Euro area	2.1	1.9	86.9	84.9	....	....	1.2	1.3	57.8	106.2	3.5	-4.7
United Kingdom	1.3	1.2	86.0	84.5	14.9	37.0	-0.3	2.1	86.5	80.5	-3.5	-11.9
United States	2.9	2.5	106.1	107.8	5.8	31.9	-2.9	....	76.7	74.0	-2.2	-43.3
Japan	1.1	0.9	238.2	236.6	7.7	10.5	-3.3	....	54.6	99.9	4.0	59.2
Canada	2.1	2.0	87.3	84.7	5.4	25.9	-0.9	....	99.9	115.6	-3.0	23.7

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

(1) For the European countries, European Commission, *European Economic Forecast*, Autumn 2018, November 2018; for the non-European countries, *World Economic Outlook* - October 2018 – (2) For the European countries, European Commission, *European Economic Forecast*, Autumn 2018, November 2018; for the non-European countries, IMF, *Fiscal Monitor*, October 2018 – (3) IMF, *Fiscal Monitor*, October 2018. – (4) 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. – (5) Loans and securities. End of Q2 2018. 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. – (6) The data refer to Q2 2018. 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

Credit quality: customer loans (1)
(billions of euros and per cent; June 2018)

	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)	1,424	1,322	100.0	100.0	72	300	272	100.0	100.0	9.4	1,906	1,764	100.0	100.0	75
<i>Performing</i>	1,253	1,246	88.0	94.3	0.6	250	248	83.6	91.4	1.0	1,669	1,657	87.5	94.0	0.7
Non-performing	171	76	12.0	5.7	55.5	49	23	16.4	8.6	52.4	238	106	12.5	6.0	55.3
Bad loans (4)	98	31	6.9	2.4	68.3	30	10	9.9	3.7	66.3	140	45	7.4	2.5	68.1
Unlikely to pay (It. Definition) (4)	69	42	4.8	3.2	38.6	17	11	5.7	4.2	34.0	91	57	4.8	3.2	37.8
Past-due (It. Definition) (4)	3	2	0.2	0.2	28.2	2	2	0.8	0.8	12.0	6	5	0.3	0.3	22.4

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. Rounding may cause discrepancies in the totals. The percentage share is calculated on the basis of the amounts expressed in millions of euros. 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) Does not include lending to credit institutions and central banks. 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.

Table A3

Italian banks' non-performing loans and guarantees by counterparty sector (1)
(billions of euros; per cent; June 2018)

	Gross exposures	Share of total gross loans (2)	Net exposures	Share of total net loans (2)	Collateral (3)	Personal guarantees (3)	Coverage ratio for unsecured loans
Firms (4)							
Non-performing customer loans	161.3	22.0	70.4	11.0	78.1	32.6	64.5
<i>of which:</i> manufacturing	29.8	15.8	11.3	6.7	9.2	7.0	64.7
construction (5)	73.2	39.8	34.2	23.9	45.0	10.8	64.3
services	48.6	16.6	20.1	7.7	19.0	13.1	66.0
<i>of which:</i> bad loans	93.6	12.7	28.0	4.4	41.2	23.1	79.5
<i>of which:</i> manufacturing	18.6	9.9	4.7	2.8	6.0	5.2	82.8
construction (5)	40.7	22.1	13.4	9.3	22.8	7.7	77.7
services	28.9	9.9	8.2	3.1	9.7	9.2	79.2
Consumer households							
Non-performing customer loans	38.6	7.6	19.0	3.9	24.9	1.6	68.1
<i>of which:</i> bad loans	24.9	4.9	9.3	1.9	15.3	1.1	76.3
Total (6)							
Non-performing customer loans	209.3	13.3	93.9	6.5	106.3	35.0	64.4
<i>of which:</i> bad loans	121.7	7.7	38.2	2.6	57.6	24.7	78.6

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. Includes 'non-current assets held for sale', which at the end of June 2018 came to about €14 billion for the total amount of non-performing loans gross of provisions. Provisional data. – (2) Calculated, gross and net of the relative loan loss provisions, as a percentage of the total corresponding gross and net exposures to the individual sector or sub-sector. – (3) The amounts correspond to the gross exposure that is collateralized or backed by personal guarantees. – (4) In addition to manufacturing, construction and services, the 'firms' sector also comprises agriculture, forestry, fishing and industrial activities other than manufacturing. – (5) Includes real estate activities. – (6) Includes general government, financial and insurance corporations, non-profit institutions serving households, and non-classifiable and unclassified entities.

Table A4

Exposures of Italian groups and banks to foreign residents by counterparty sector (1) (billions of euros; per cent; June 2018)								
	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)	118.9	74.2	45.0	202.3	440.5	1.8	2.5	17.0
Other industrialized countries	32.3	23.7	28.1	30.2	114.4	16.2	0.3	4.4
<i>of which:</i> United Kingdom	1.4	14.2	15.6	7.2	38.3	7.7	0.9	1.5
Emerging and developing countries	47.0	20.8	8.6	88.5	164.9	4.9	1.8	6.4
Europe	42.0	13.2	7.0	76.9	139.1	4.8	9.9	5.4
<i>of which:</i> Russia	2.5	2.4	0.5	16.9	22.4	1.1	23.8	0.9
<i>of which:</i> Turkey	0.6	7.4	3.9	3.4	15.3	1.3	2.4	0.6
Africa and the Middle East	3.9	2.3	0.8	5.6	12.6	11.2	2.6	0.5
Asia and Pacific	0.6	2.8	0.5	3.1	7.0	0.1	0.1	0.3
Central and South America	0.5	2.6	0.2	2.9	6.2	2.1	0.6	0.2
<i>of which:</i> Argentina	0.0	0.0	0.0	0.0	0.1	-7.0	0.1	0.0
<i>of which:</i> Brazil	0.1	2.3	0.0	1.1	3.5	-2.3	1.2	0.1
<i>of which:</i> Mexico	0.1	0.0	0.2	1.0	1.3	21.0	0.5	0.1
Offshore centres	0.3	0.5	3.3	4.8	8.8	7.9	0.3	0.3
Total	205.3	119.2	85.1	325.8	735.4	4.8	1.0	28.4
<i>Memorandum item</i>								
Energy-exporting emerging and developing countries (4)	3.9	4.4	1.3	20.6	30.3	4.7	6.9	1.2

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. The numerator and denominator refer to 30 June 2018. – (3) Total exposures to residents and non-residents. – (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 A5

**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 (3)	Stocks	Net purchases	Share of total assets
2011	211,680	18,457	5.8	1,009,414	72,378	3.0
2012	322,686	90,128	8.9	1,251,226	213,410	3.8
2013	374,529	45,312	10.9	1,313,179	46,354	4.3
2014 – Q1	381,775	785	10.9	1,355,157	23,132	4.4
Q2	382,673	-3,298	11.1	1,370,453	3,515	4.5
Q3	378,433	-6,142	11.0	1,378,601	-978	4.4
Q4	382,915	4,124	11.0	1,370,727	-18,877	4.4
2015 – Q1	392,323	2,604	11.1	1,380,572	2,841	4.3
Q2	377,980	-2,877	10.9	1,343,751	-11,320	4.3
Q3	373,776	-8,803	10.9	1,337,991	-13,333	4.3
Q4	363,520	-11,930	10.6	1,295,539	-44,385	4.2
2016 – jan.	367,862	3,713	10.7	1,326,277	29,829	4.2
feb.	375,224	8,029	10.8	1,341,614	15,603	4.2
mar.	365,502	-11,184	10.6	1,328,565	-15,163	4.3
apr.	370,536	7,070	10.8	1,325,852	268	4.2
may	366,582	-4,808	10.7	1,321,028	-8,061	4.2
june	368,616	1,642	10.6	1,325,190	2,101	4.2
july	367,533	-1,525	10.7	1,309,177	-16,994	4.1
aug.	359,864	-7,930	10.5	1,284,102	-24,869	4.1
sept.	352,326	-6,892	10.3	1,257,295	-27,856	4.0
oct.	346,789	-1,311	10.2	1,245,558	-6,792	4.0
nov.	338,644	-4,105	9.9	1,232,099	-6,872	3.9
dec.	332,611	-9,216	9.8	1,205,130	-30,430	3.9
2017 – jan.	335,587	6,594	10.0	1,198,589	1,468	3.8
feb.	338,783	2,998	10.0	1,201,706	1,926	3.8
mar.	348,416	10,295	10.1	1,205,402	4,764	3.8
apr.	350,997	2,508	10.2	1,201,822	-3,961	3.8
may	341,984	-9,756	10.1	1,194,055	-8,988	3.8
june	322,502	-19,648	9.5	1,160,056	-34,170	3.7
july	326,408	3,643	9.6	1,150,183	-10,364	3.7
aug.	325,142	-1,360	9.7	1,155,041	3,685	3.7
sept.	318,919	-5,638	9.5	1,144,787	-7,616	3.7
oct.	309,029	-11,979	9.2	1,120,278	-21,476	3.6
nov.	295,217	-14,552	8.7	1,108,599	-14,017	3.6
dec.	283,229	-9,647	8.5	1,074,093	-31,585	3.5
2018 – jan.	292,772	9,491	8.7	1,094,908	20,485	3.6
feb.	295,199	2,592	8.9	1,092,194	-1,605	3.6
mar.	295,877	-1,309	8.8	1,083,047	-13,460	3.5
apr.	298,106	2,077	8.8	1,073,785	-9,641	3.5
may	306,751	22,569	9.0	1,085,993	30,615	3.5
june	321,328	12,695	9.5	1,094,025	4,498	3.5
july	324,193	3,735	9.7	1,088,968	-3,513	3.5
aug.	317,337	561	9.5	1,077,694	-679	3.5
sept.	320,343	-326	9.5	1,074,020	-7,436	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. – (3) The 'total assets' series does not include bond repurchases.

Table A6

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

	Maturity					Total
	by 2018	between 2019 and 2020	between 2021 and 2022	between 2023 and 2027	beyond 2027	
Households (2)	7,652	35,160	19,408.5	17,953	808	80,982
<i>of which: subordinated bonds</i>	1,010	3,896	3,412.9	5,108	218	13,645
Banks in the issuer's group (3)	2,813	13,069	11,780	10,574	5,249	43,486
<i>of which: subordinated bonds</i>	..	357	76	505	14	952
Other Italian banks	666	7,282	4,628	4,953	539	18,067
<i>of which: subordinated bonds</i>	69	163	161	753	47	1,193
Other investors	6,130	51,557	35,757	59,147	13,842	166,433
<i>of which: subordinated bonds</i>	319	3,028	2,901	11,393	2,588	20,229
Total	17,262	107,068	71,573	92,628	20,438	308,968
<i>of which: subordinated bonds</i>	1,397	7,444	6,551	17,759	2,867	36,018

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 A7

**Composition of the assets deposited with the Bank of Italy as collateral
for Eurosystem credit operations (*collateral pool*) (1)**
(billions of euros; end-of-period values)

	2014	2015	2016	2017		2018	
				June	December	June	September
Total	283.5	253.7	297.3	332.8	321.2	313.4	316.4
Government securities	119.8	97.6	88.8	125.4	105.8	104.5	94.1
Local and regional government securities	2.9	2.6	1.7	1.8	1.9	1.1	1.4
Uncovered bank bonds	10.4	5.8	5.3	6.2	5.4	5.5	5.4
Government-guaranteed bank bonds	15.0	0.4	0.3	2.5	1.3	0.9	2.0
Covered bonds	49.8	46.4	76.3	74.9	76.8	71.4	82.8
Non-bank bonds	1.0	2.5	3.0	3.4	3.0	3.4	4.8
Asset-backed securities	40.0	35.5	44.0	45.3	49.9	48.6	47.7
Other marketable assets	0.4	0.6	0.8	2.7	2.8	1.8	1.6
Non-negotiable assets (bank loans)	44.3	62.4	77.1	70.6	74.3	76.2	76.6

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 A8

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)
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
Apr.	0.7	13.5	14.2	-2.9	20.0	17.1
May	-0.2	14.1	13.9	-5.0	21.2	16.2
June	-1.2	14.1	12.9	-5.2	20.6	15.4
July	-1.3	13.9	12.5	-4.1	19.8	15.8
Aug.	-0.9	13.9	13.0	-5.0	20.5	15.5
Sept.	-0.2	13.7	13.5	-5.5	21.4	15.9
Oct.	-0.1	13.4	13.3	-4.7	20.2	15.5

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.

