



BANCA D'ITALIA
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Financial Stability Report

November 2019

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Number 2 / 2019
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Address

Via Nazionale 91 – 00184 Rome – Italy

Telephone

+39 0647921

Website

<http://www.bancaditalia.it>

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SYMBOLS AND CONVENTIONS

Unless otherwise specified, Bank of Italy calculations; for Bank of Italy data, the source is omitted.

In the tables:

- the phenomenon does not exist;
- the phenomenon exists but its value is not known;
- .. the value is nil or less than half of the final digit shown;
- :: not statistically significant;
- () provisional.

In the figures with different right- and left-hand scales, the right-hand scale is identified in the notes.

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 deteriorating global economic outlook and the geopolitical tensions have heightened the uncertainty and the risks to financial stability.

The sharp decline in interest rates worldwide is improving debt sustainability and helping to contain the rise of macroeconomic risks, although this may spur investors to seek out higher returns on risky assets and encourage the accumulation of excessive levels of debt. Protracted low interest rates may squeeze the profitability of banks and insurance companies.

Economic activity weakened in the euro area and there was an increased risk of a reduction in inflation; as a result, the ECB Governing Council adopted a broad package of expansionary measures. The new measures include provisions to mitigate the impact on banks' profitability arising from the further reduction of the already negative deposit facility rate.

European banks are continuing to gradually strengthen their balance sheets and the sector is sound overall, although there are still pockets of vulnerability. Banks' profits are still low as are price-to-book ratios for shares, especially for banks that are larger and more complex. In several countries, there has been an increase in risks arising from a potential overvaluation of property prices and from household indebtedness.

In Italy, the risks to financial stability have abated somewhat in recent months, following the decline in sovereign risk premiums. The deterioration in the macroeconomic outlook and the high level of public debt continue to represent a source of significant vulnerability and expose the entire economy to the risks associated with a reigniting of market tensions.

The weak cyclical conditions are negatively impacting firms' profitability, but the adverse effects on their ability to repay debts are being

mitigated by the low interest rates. Households' financial conditions remain sound. The reduction in interest rates has led to an increase in the value of financial assets and a decrease in debt servicing costs. According to our models, the share of debt held by financially vulnerable firms and households would only increase in the event of particularly adverse macroeconomic events.

Italian banks are continuing to reduce the riskiness of their assets by selling their non-performing loans and by implementing highly selective lending policies. With the easing of tensions on sovereign debt, banks have resumed the sale of government bonds. The fall in risk premiums has helped banks to place bonds on the international markets at low costs, though they remain higher than those borne by banks in the other main euro-area countries. The capital strengthening of Italian banks is continuing, albeit gradually; for some smaller banks the process needs to be intensified. The average cost of funding is close to zero and further interest rate falls could have more marked effects on profitability than in the past.

The solvency ratios and the profitability of Italian insurance companies have improved as a result of the reduction in sovereign risk. The matching of the duration of financial assets and liabilities makes the balance sheets of Italian insurers less exposed to risks arising from a prolonged period of very low interest rates, if compared with insurers in other European countries. If this scenario worsens, however, it could be more costly to offer guaranteed life insurance policies, with negative consequences for insurance companies' profits.

In Italy the investment fund sector has reached an appreciable size, even if the strong growth of past years seems to have come to a halt. The risks associated with investments by open-end funds in less liquid assets are limited to segments that represent only a very small share of the funds sector.

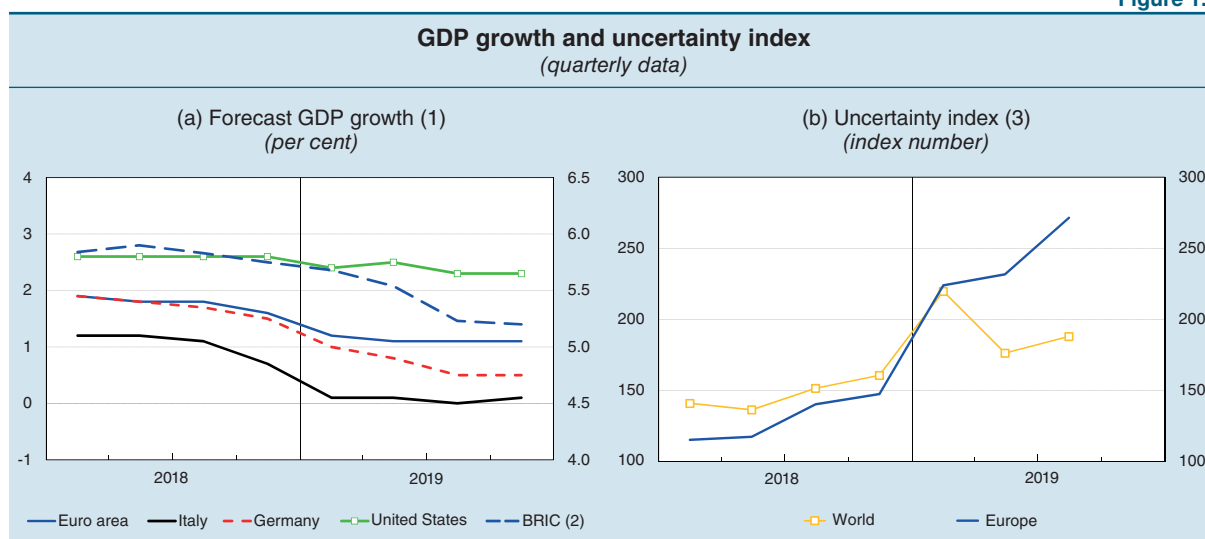
1 MACROECONOMIC RISKS

1.1 MACROECONOMIC RISKS

Global risks and euro-area risks

A deteriorating world economy and the existing geopolitical tensions have heightened the risks to financial stability (Figure 1.1).

Figure 1.1



Source: Based on Consensus Economics and world uncertainty index data.

(1) Forecasts for 2019 are made in the last month of the quarter. The data for the 4th quarter of 2019 refer to October. – (2) Average of the forecasts for Brazil, Russia, India and China (BRIC), weighted on the basis of each country's GDP in 2018. Right-hand scale. – (3) The world uncertainty index for all countries and for Europe is constructed based on the frequency of the word 'uncertainty' in the quarterly Economist Intelligence Unit reports. Higher index levels are associated with rising uncertainty. A detailed description of the methodology and the precise definition of the geographical areas are found in H. Ahir, N. Bloom and D. Furceri, *The World Uncertainty Index*, October 2018.

Trade disputes between the United States and China and the risk that the exacerbation of protectionist stances will extend to other geographical areas are having negative repercussions on trade flows, the growth outlook and investor confidence. An increase in the likelihood that negotiations between the two countries will be unsuccessful could have an adverse impact on the global financial and currency markets and could trigger outflows of capital from emerging economies, especially from those with high foreign currency debt, as occurred in August.

The more expansionary stance of the main central banks, prompted by the deterioration in the macroeconomic outlook and low inflation, led to a sharp decline in long-term interest rates on government securities (Figure 1.2.a) and buoyed share and corporate bond prices. Low global interest rates make the debt more sustainable and help to contain the rise in macroeconomic risks and market volatility. It could, however, motivate investors to seek out higher returns on risky assets and encourage

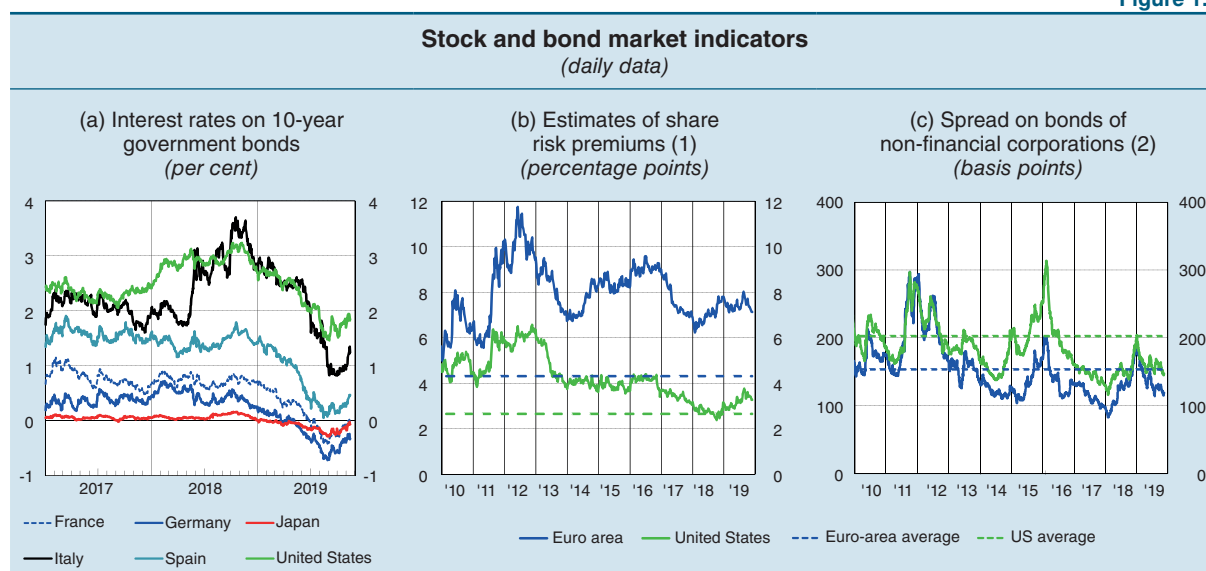
the accumulation of excessive levels of debt. Protracted low interest rates tend to push down the profitability of banks and insurance companies.

The stock markets of the main advanced countries have given no clear signs of being overvalued: the risk premiums are higher than their long-term average, especially in the euro area (Figure 1.2.b). The spreads between corporate and government bonds have, however, fallen to very low levels (Figure 1.2.c) and could be subject to sudden increases in the face of unexpected events. In the major economies, the large gap between the cost of equity and that of debt continues to encourage listed companies to purchase their own shares, financing the purchases through bond issues; for some of these companies, this could result in the composition of their liabilities being excessively slanted towards debt securities.

The placement of high-yield bonds and leveraged loans (debt instruments issued by heavily indebted firms, particularly widespread in the US) continues at a rapid pace (Figure 1.3). These operations tend to be more covenant-lite, i.e. contain fewer protections for lenders, than in the past.¹ A significant portion of the issues is being purchased by investment and exchange-traded funds (ETFs), which offer their subscribers the option of redeeming their ownership interests quickly, despite the fact that the liquidity of the portfolio assets held is low and subject to sudden drops. This exposes them to the risk of not being able to immediately meet significant redemption flows, as occurred in June for two European funds that specialize in buying high-yield bonds and other illiquid assets, with potentially destabilizing effects during periods of market stress.

Tensions arose in the US money market around mid-September, accompanied by large increases in the repo rate. Both temporary factors, such as tax deadlines, and structural factors, such as the banking sector's high and inelastic demand for reserves and the shrinking of the Federal Reserve's balance sheet, contributed to this. The Fed intervened by supplying enough liquidity to bring the money market rates to levels compatible with the federal funds rate target. The tensions shed light on the risks that could arise when central banks pare their balance sheets in an environment of heightened uncertainty concerning banks' demand for reserves.

Figure 1.2

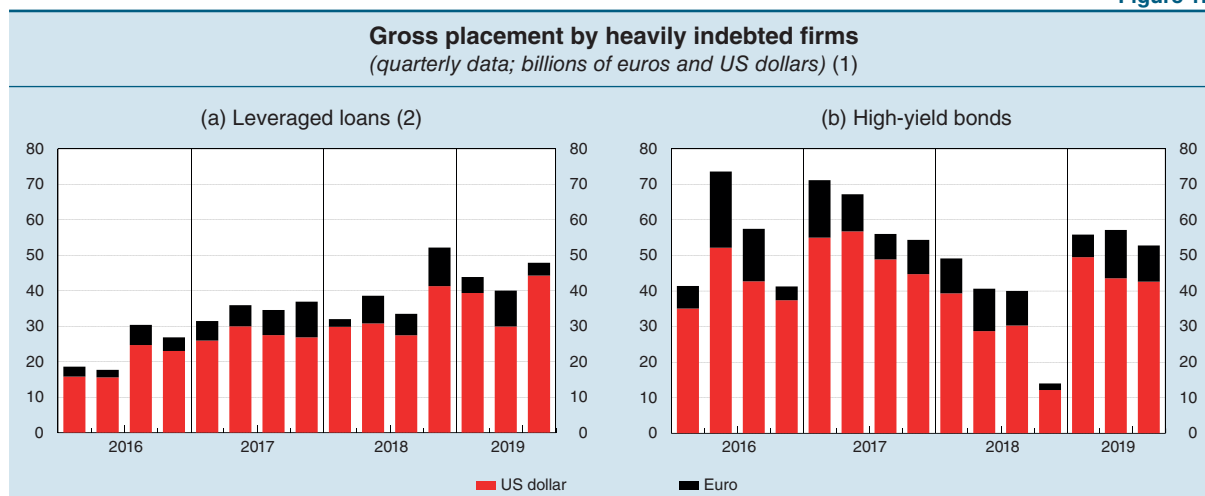


Sources: Bloomberg, ICE Bank of America Merrill Lynch and Refinitiv.

(1) For the Datastream EMU Total Market (euro area) and S&P 500 (US), ratio of the 10-year moving average of earnings per share to the value of the stock index (both at constant prices). We deduct from the resulting ratio, which is an estimate of the expected real return on the shares, the real return on inflation-indexed 10-year government bonds to obtain an estimate of the share risk premium. The dashed lines indicate the averages of the risk premiums from 1993 to 2019. – (2) Spreads are on BBB-rated bonds issued by non-financial corporations. The dashed lines indicate the averages of spreads from 2000 to 2019.

¹ For further details, see IMF, *Global Financial Stability Report: Lower for Longer*, October 2019.

Figure 1.3



Source: Based on data from Refinitiv.

(1) Notional values of leveraged loans and high-yield bonds issued during the quarter and denominated in US dollars or in euros. Instruments denominated in US dollars are mainly issued by companies domiciled in the US and those denominated in euros are mainly issued by euro-area firms. – (2) The data refer to the leveraged loans recorded by Refinitiv as institutional term loans.

The global slowdown and the contraction in international trade have dampened economic activity in the euro area, where growth has weakened and the risks of a reduction in inflation have intensified. At its September meeting, the ECB Governing Council adopted a broad package of expansionary measures (see the box ‘The monetary policy measures adopted in September 2019’, in *Economic Bulletin*, 4, 2019): it lowered the Eurosystem deposit facility rate and it decided to restart net purchases under the expanded asset purchase programme (APP). It also modified the terms of the new series of targeted longer-term refinancing operations (TLTRO III) established in March of this year² and introduced a two-tier system for banks’ reserve remuneration in order to mitigate the impact on banks’ profitability of the negative interest rate on central bank deposits.³

The main European banks have continued to reduce the non-performing loans on their balance sheets and on the whole are in sound shape.⁴ However, vulnerabilities remain, signalled in part by the high dispersion of credit default swap (CDS) spreads. Profitability continues to be low on average and varies across countries. The differences are attributable both to structural factors and cyclical conditions, including the divergent trends in the real estate markets (see the box ‘The real estate cycle and banks’ profitability’).

THE REAL ESTATE CYCLE AND BANKS’ PROFITABILITY¹

The development in property prices is one of the cyclical factors identified in the literature that has an influence on bank profits. Growing real estate markets generate demand for credit, both directly

¹ By Raffaele Gallo and Francesco Palazzo.

² The interest rate for each transaction is set at the level of the average rate applied in the Eurosystem’s main refinancing operations over the life of the operation; if the banks’ net lending exceeds a benchmark, the rate applied in TLTRO III operations will be lower and can be as low as the average interest rate on the deposit facility prevailing over the life of the operation. The maturity of the operations was extended from two to three years and the option of making voluntary early repayments was introduced.

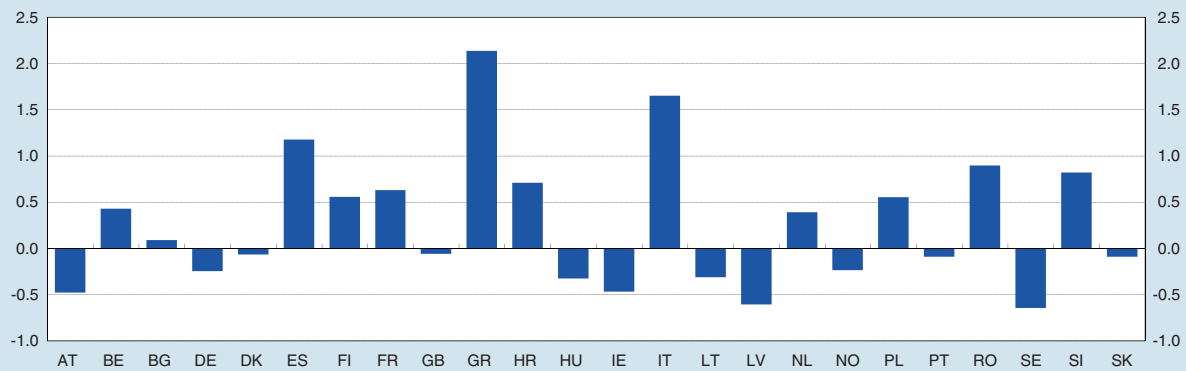
³ The new system exempts a part of banks’ holdings of excess liquidity from the negative deposit facility rate. The maximum amount of the reserves that are exempt is six times the minimum reserve requirement for each bank; the remuneration rate for the exempt tier is zero per cent. The new two-tier system for remunerating banks’ reserves has applied since the start of the maintenance period that began on 30 October.

⁴ ECB, *Financial Stability Review*, May 2019.

to fund transactions and indirectly to expand the construction sector. The rise in property values also improves the value of collateral and reduces losses in the event of insolvencies.

An analysis carried out on 24 European countries for the years 2010-18 shows that developments in property prices have had significant effects on the profitability of banks.² In this period, around one quarter (1.2 percentage points) of the gap between the average return on equity (ROE) of banks resident in countries where growth in property prices has been particularly high and that of banks in other countries is attributable to the different trends in national real estate markets.³ Based on this estimate, between 2010 and 2018, the average ROE of Italian banks would have been about 1.6 percentage points higher if the average annual growth rate of residential property prices in Italy had been equal to the median figure for the countries analysed (1.8 per cent, against the -3.4 per cent actually recorded). The impact of a growth in property prices in line with this median rate would have been positive and high in Greece and Spain, while in Austria and Sweden the average ROE would have been lower by about half a percentage point (see the figure).

Counterfactual impact on average ROE in the period 2010-18 (1)
(yearly data; percentage points)



Sources: Based on SNL Financial and BRI data.

(1) Variations in the average counterfactual ROE compared with the average ROE observed in the period 2010-18 for the banking system of every country included in the sample. The counterfactual impact is estimated by assuming that the growth in every country's real estate market is equal to the sample median. Country codes: AT=Austria; BE=Belgium; BG=Bulgaria; DE=Germany; DK=Denmark; ES=Spain; FI=Finland; FR=France; GB=United Kingdom; GR=Greece; HR=Croatia; HU=Hungary; IE=Ireland; IT=Italy; LT=Lithuania; LV=Latvia; NL=Netherlands; NO=Norway; PL=Poland; PT=Portugal; RO=Romania; SE=Sweden; SI=Slovenia; SK=Slovakia.

The analysis also shows that, despite the growing risks posed by a potential downturn in the real estate cycle, the capitalization of banks has not increased in response to the rapid increase in property prices and to the higher profits realized. The European Systemic Risk Board (ESRB) recently suggested – for some of the countries that have already adopted macroprudential measures to mitigate the risks stemming from the performance of the real estate market – the activation of additional instruments to counter the vulnerabilities that may emerge in the medium term because of household indebtedness and house price trends.⁴

² R. Gallo and F. Palazzo, 'A note on the effects of residential property price growth on bank profitability', Banca d'Italia, Notes on Financial Stability and Supervision, forthcoming.

³ The average ROE in the years 2010-18 was 6.5 and 1.6 per cent respectively for the first and second groups of countries.

⁴ ESRB, 'Vulnerabilities in the residential real estate sectors of the EEA countries', September 2019.

The market values of listed European banks are generally lower than their book values, reflecting both low current and expected profitability and the high risk premiums asked by investors; these premiums are particularly sizeable for highly leveraged intermediaries. Investors also penalize banks that are larger and more complex (see the box 'The asset diversification and market value of banks').

THE ASSET DIVERSIFICATION AND MARKET VALUE OF BANKS¹

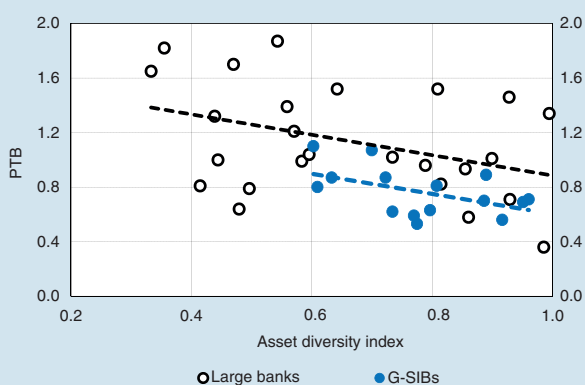
The price-to-book ratio (PTB), defined as the ratio of the market value of a listed company's shares over its book value, is a measure of the expected value that a company can create given the composition of its assets and liabilities (franchising value). Differences between the market value and the book value, i.e. when the PTB is other than 1, stem from investors' risk assessments and profit expectations that differ from those reflected in the financial statements. In Europe, a large number of banks have a PTB below 1, though the ratio varies greatly among intermediaries within the same country.

One of the factors that may explain the difference in bank PTB values is how banks diversify their assets between loans and other components.² A high degree of diversification may have both positive and negative effects. This depends on whether the benefits associated with operational synergies and more efficient risk management outweigh the risks that stem from greater organizational complexity and from investments in riskier assets.

An empirical study on a sample of 92 listed European banks during the 2011-17 period³ demonstrates that the disadvantages of diversification outweigh the benefits. The study found the existence of a negative relationship between asset diversification – alternatively measured by an asset diversity index or by a concentration index⁴ – and the market value of European banks, controlling for other factors deemed significant in the literature,⁵ such as profitability, operational efficiency, credit quality, asset opaqueness⁶ and size.

The relationship is particularly negative for larger, more complex intermediaries, among which global systemically important banks (G-SIBs; see the figure). A reduction in asset diversification of one standard deviation in the diversity index would result in an increase of 0.06 in the PTB,

Price-to-book ratio of European banks: relationship with the asset diversity index (1)
(years 2016-17)



Sources: Based on data from Refinitiv and BankFocus.
(1) The dashed lines represent the regression for the sample of large banks and for G-SIBs. For a description of the asset diversity index, see footnote 4 in the box.

¹ By Federica Ciocchetta.

² L. Laeven and R. Levine, 'Is there a diversification discount in financial conglomerates?', *Journal of Financial Economics*, 85, 2007, 331-367.

³ For a description of the empirical analysis, see F. Ciocchetta, 'Asset diversification and banks' market value', Banca d'Italia, Notes on Financial Stability and Supervision, forthcoming.

⁴ The asset diversity index is calculated as $1 - |\text{net loans} - \text{other assets}| / \text{total assets}$, where: 'net loans' are loans net of loan loss provisions, 'other assets' includes securities and investments, and 'total assets' are the sum of net loans and other assets. The concentration index is calculated as $1 - \text{HHI}$, where 'HHI' is the normalized Herfindahl-Hirschman index. These indices range in value from 0 to 1 and indicate an increasing degree of diversification.

⁵ B. Bogdanova, I. Fender and E. Takats, 'The ABCs of bank PBRs', *BIS Quarterly Review*, March 2018.

⁶ 'Asset opaqueness' is defined as the share of assets other than loans that are valued at level 2 and 3 in the fair value hierarchy, i.e. they are not listed on active markets.

equal to 7 per cent of the sample's average value. Results of a similar magnitude are obtained using the concentration index. The negative relationship between the PTB and the diversity index is also confirmed when the scope of the analysis is limited to Italian intermediaries.

The poor profitability of European banks is a source of vulnerability, especially in an environment of gradually rising competitive pressures from FinTech companies. At the global level, authorities are increasingly focused on stablecoins, a crypto-asset whose price fluctuates very little. Stablecoins are not comparable to legal tender and their spread, still rather low in Italy, could carry risks for users and to financial stability (see the box 'Stablecoins and financial stability').

STABLECOINS AND FINANCIAL STABILITY¹

Stablecoins are a category of crypto-asset² whose price fluctuates very little (see panel (a) of the figure); they can be placed into two main categories that are differentiated based on the method used to stabilize their value:³ asset-pegged stablecoins, whose price is linked to the value of a portfolio of assets,⁴ and algorithmic stablecoins, whose price is stabilized using automatic rules that adjust the supply of the instruments to changes in demand.

A few major technological and financial firms have recently launched projects to develop stablecoins that can be used globally, which could considerably expand the circulation of these instruments. Currently there are 24 known stablecoins,⁵ worth a total of around €5 billion (see panel (b) of the figure), almost all linked to a portfolio of assets. Stablecoins whose price is pegged to the dollar make up 95 per cent of total market capitalization. The remainder is pegged to a basket of currencies (4.5 per cent) or the euro (0.5 per cent; see panel (c) of the figure). There are a number of online platforms for buying and selling these instruments operating in Italy.

Stablecoins can contribute to reducing some inefficiencies in payment systems, cutting the time and costs of clearing and settling cross-border payments. Their spread, however, does carry with it potential risks to financial stability.⁶ Asset-pegged stablecoins are subject to the same credit, liquidity and market risks as their underlying assets, while algorithmic stablecoins are exposed to risks tied to a potential malfunction in the rules established to stabilize them. These risks could have a systemic impact if stablecoins were to become a widely adopted payment instrument, and a large number of operators would suffer significant losses as a result of a drop in their value. A high number of requests for redemption by stablecoin holders could create risks to financial stability analogous to those stemming

¹ By Nicola Branzoli.

² The term 'crypto-assets' indicates digital assets that are transferred using cryptography and distributed ledger technology (see the box 'The spread of crypto-assets and the implications for financial stability', in *Financial Stability Report*, 1, 2018).

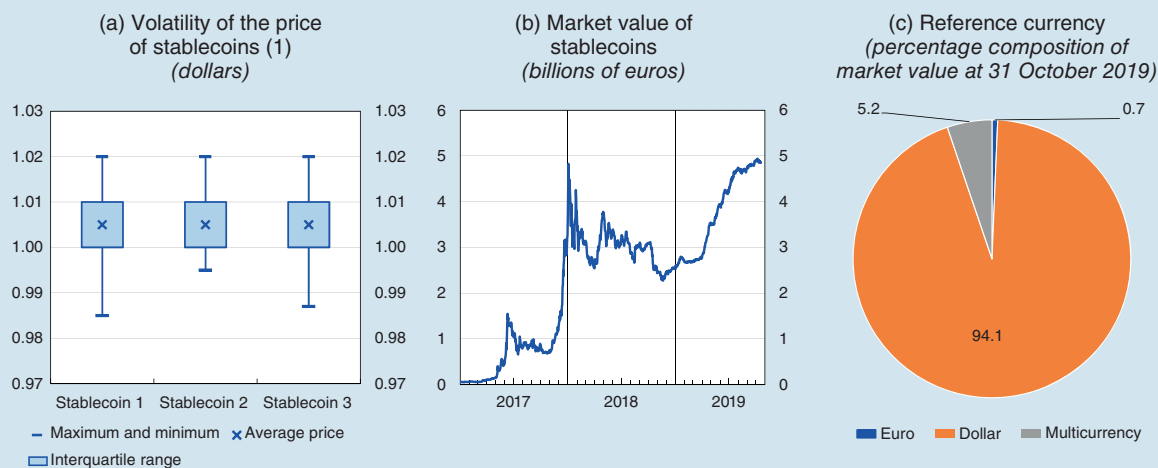
³ The term 'stablecoin' refers to a phenomenon whose development is still under way, for which there is no agreed definition and no harmonized classification at international level. The value of stablecoins may not actually be stable and may carry risks similar to those of other crypto-assets.

⁴ The basket may be composed of financial assets (such as bank deposits and public sector bonds), real assets (such as commodities), or other crypto-assets. The volatility of the exchange rate for asset-pegged stablecoins with respect to the reference currency or basket of currencies depends upon the volatility of the value of the assets included in the basket. This characteristic has prompted some experts to put forth the theory that stablecoins could be treated as similar to investment fund units usable as a payment instrument.

⁵ It is estimated that there are at least 30 stablecoins currently being developed; see also D. Bullmann, J. Klemm and A. Pinna, 'In search for stability in crypto-assets: are stablecoins the solution?', European Central Bank, Occasional Paper Series, 230, 2019.

⁶ For an examination of the risks associated with the spread of stablecoins, see G7 Working Group on Stablecoins, *Investigating the impact of global stablecoins*, October 2019.

Stablecoin market



Source: Our calculations based on CoinMarketCap.com data.

(1) The data refer to the three stablecoins with the highest market value at the end of October 2019 and consider the daily data for all of 2019.

from the functioning of open-end investment funds (see the box ‘The risks to financial stability arising from the activity of open-end investment funds’, in *Financial Stability Report*, 1, 2017).

The potential global spread of these instruments requires international coordination between authorities to establish standard regulatory safeguards. In light of the possible benefits, but also the numerous uncertainties concerning the impact of these instruments on the financial system and the potential speed with which this market is developing,⁷ the Financial Stability Board (FSB) and the other bodies responsible for establishing the international principles governing the financial sector are considering whether the existing standards can be applied to stablecoins. The FSB will submit a final report to the G20 Finance Ministers and the Central Bank Governors in July 2020.⁸ The Bank of Italy is contributing to the work of the FSB and the other international bodies and is taking steps to monitor the spread of these assets in Italy.

⁷ For more information, see G7 Working Group on Stablecoins, 2019, op. cit.

⁸ See also the FSB website: ‘FSB Chair’s letter to G20 Finance Ministers and Central Bank Governors: October 2019’, 13 October 2019.

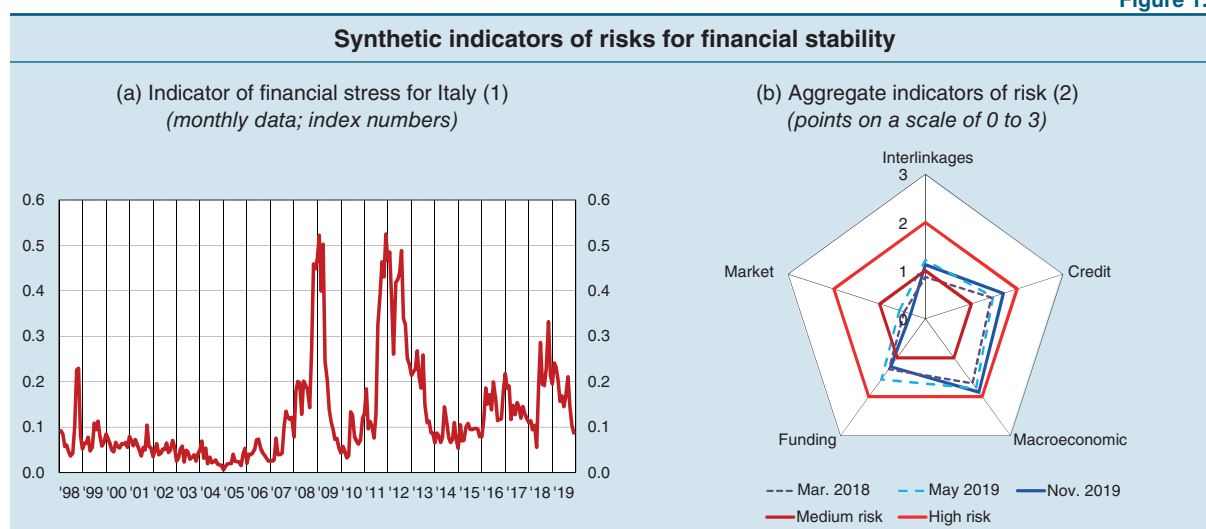
Uncertainty continues to surround the United Kingdom’s withdrawal from the European Union (Brexit), although it has eased since the parties reached an agreement on 17 October and the European Council granted the UK an extension until 31 January 2020 to complete the Brexit process. How the British Parliament will ratify the new agreement is still uncertain; in fact, Parliament has been suspended and will not sit again until after the 12 December elections. The EU and the member states, including Italy, have been taking measures for some time now to ensure the operational continuity of financial markets and intermediaries and to mitigate the risks to financial stability in the event the British Parliament fails to ratify the agreement.⁵

⁵ The Italian government issued Decree Law 22/2019, converted into Law 41/2019, to ensure that intermediaries and markets (Italian intermediaries operating in the UK and UK intermediaries operating in Italy) will be able to continue to operate for a transition period of 18 months in the event of a no-deal Brexit and to provide protection for customers.

Macrofinancial conditions in Italy

In the last six months, the risks to financial stability in Italy have decreased slightly as a result of the easing of tensions in the public sector securities market and the improvement in corporate bond market conditions. The financial stress indicator has fallen, reaching the levels observed in the early months of 2018 (Figure 1.4.a), well below those seen during the most tense phases. The repercussions of the stress in the financial system on the real economy should therefore be limited (see the box ‘Financial conditions and economic growth in Italy’).

Figure 1.4



Source: Based on data from Refinitiv.

(1) The index ranges from 0 (minimum risk) to 1 (maximum risk). For further details, see A. Miglietta and F. Venditti, ‘An indicator of macro-financial stress for Italy’, Banca d’Italia, Questioni di Economia e Finanza (Occasional Papers), 497, 2019. – (2) The aggregate indicators are based on the analytical framework to assess risks described in F. Venditti, F. Columba and A.M. Sorrentino, ‘A risk dashboard for the Italian economy’, Banca d’Italia, Questioni di Economia e Finanza (Occasional Papers), 425, 2018. Values between 0 and 1 indicate low risk, between 1 and 2 medium risk, and between 2 and 3 high risk.

FINANCIAL CONDITIONS AND ECONOMIC GROWTH IN ITALY¹

Various recent empirical studies, whose results are also used by international institutions,² estimate the probability distribution of future growth based on the current value of economic and financial variables (‘growth at risk’ models).

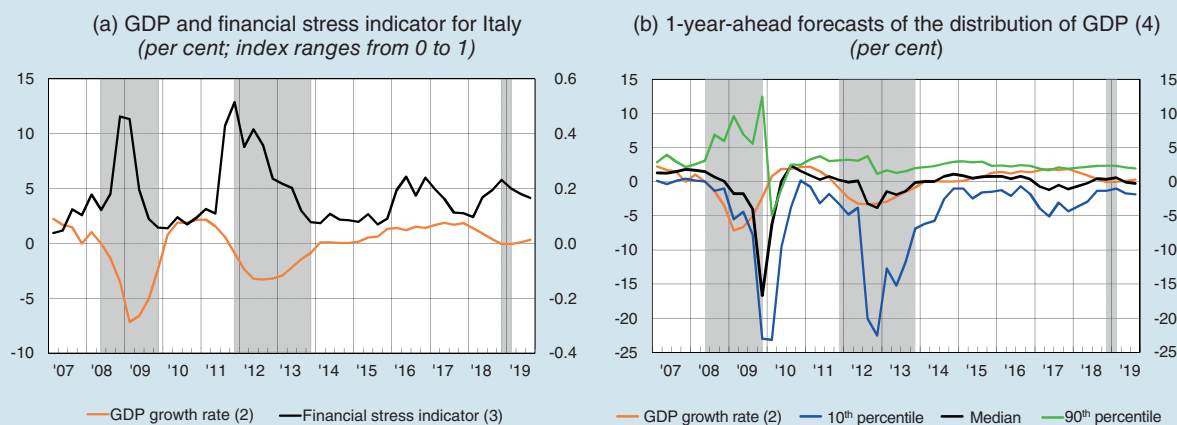
An analysis of the relationship between financial conditions and economic growth for Italy shows that in this country, as in the United States, the nexus between the financial markets and economic activity is asymmetrical and non-linear:³ the correlation is weak in phases of economic stability, while spikes in financial stress indicators – for example, as was observed during the global financial crisis of 2007-08 and the sovereign debt crisis of 2011-12 (see panel (a) of the figure) – are followed by a sharp slowdown in economic activity. However, exploiting this regularity for real-time forecasting of economic performance is complex. Indeed, point forecasting is characterized by high variance and tends to overestimate the magnitude of the contraction during phases of great uncertainty (see panel (b) of the figure).

¹ By Leonardo Del Vecchio and Arianna Miglietta.

² IMF, *Global Financial Stability Report. Is Growth at Risk?*, October 2017; ECB, *Financial Stability Review*, May 2018.

³ P. Alessandri, L. Del Vecchio and A. Miglietta, ‘Financial conditions and ‘growth at risk’ in Italy’, Banca d’Italia, Temi di Discussione (Working Papers), 1242, 2019.

Relationship between financial conditions and economic growth in Italy (1) (quarterly data)



Sources: Based on Refinitiv and Istat data.

(1) The grey areas represent the points in time in which the GDP growth rate was negative for at least two consecutive periods. The data for the 3rd quarter of 2019 on the GDP growth rate are based on Istat's preliminary estimate. – (2) Percentage change with respect to the year-earlier quarter. Chain-linked volumes; the quarterly data are adjusted for seasonal and calendar effects. – (3) The index ranges from 0 (minimum risk) to 1 (maximum risk). Right-hand scale. – (4) The forecasts were made 1-year ahead relative to the quarter shown on the horizontal axis.

Based on these results, the forecasts obtained from these models are not as yet suitable to be used directly and in isolation in activating or calibrating Italy's macroprudential policies. The financial condition indicators do, however, provide us with useful qualitative information to enable an articulated assessment of systemic risk.

The deterioration in macroeconomic conditions constitutes a serious vulnerability for the Italian financial system (Figure 1.4.b). The analysts polled in October by Consensus Economics expected GDP to remain stagnant this year and to rise by 0.4 per cent in 2020.

The weakening economic activity has had an impact on the financial cycle: lending to households is rising at a modest pace while lending to firms is decreasing (see Section 1.2). The credit-to-GDP gap is deep in negative territory. Our projections, which are consistent with the latest macroeconomic developments, suggest that lending, especially to firms, will remain weak; over the next two years the credit-to-GDP gap is expected to stay very negative (Figure 1.5).

The persistence of a weak financial cycle creates risks to financial stability in the medium term: it has a negative effect on banks' profitability⁶ and, in the presence of accommodative credit supply conditions, may contribute to the decline in risk premiums demanded by investors, thereby fostering the inefficient allocation of credit.

Compared with the end of April, the yield spread between 10-year Italian and German government bonds has dropped from about 240 basis points to around 160 points, which is still larger than that for analogous Spanish and Portuguese bonds. The yields on Italian bonds on the secondary market are currently negative for those with maturities of up to two years. In mid-November, 21 per cent of all bonds had negative yields

⁶ E. Bonaccorsi di Patti and F. Palazzo, 'Bank profitability and macroeconomic conditions: are business models different?', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 436, 2018.

(compared with 11 per cent at the start of the year),⁷ a level nonetheless lower than those of Spain and Portugal, where the shares were around 50 per cent.

The increases in the risk premiums for Italian government securities that occurred in August and November indicate that investor confidence in Italy is still fragile. The high level of public debt continues to be a significant factor in rendering Italy vulnerable and accentuates its exposure to a reigniting of tensions in the financial markets. The Government recently updated the public finance estimates and objectives: the net borrowing target for 2020, equal to 2.2 per cent of GDP, is in line with that forecast for the current year; the debt-to-GDP ratio is expected to be 135.7 per cent in 2019 (almost 1 point higher than in 2018), and then to fall by about half a percentage point next year. To achieve these objectives, at the end of October the Government presented a budget that in 2020 will increase the deficit compared with the current legislation projections by just under 1 percentage point of GDP, also following the deactivation of the safeguard clauses.⁸ The Government's objectives for the coming years still rely heavily on the revenue generated by these clauses,⁹ whose activation had been repeatedly delayed in previous years. Dispelling the uncertainty associated with the potential elimination of this revenue as soon as possible would boost the confidence of the markets concerning the credibility of the rebalancing the budget in the medium term and would contribute to consolidating the decrease in the sovereign risk premium.¹⁰ This decrease, if protracted, could cause interest payments to fall and, other things being equal, could lead to a reduction in the debt-to-GDP ratio.

Real estate markets

In Europe the real estate cycle continues to be in an expansionary phase. To contain the risks arising from a potential overvaluation of property prices and from high or rising household debt, different countries have adopted macroprudential measures (see Chapter 3, 'Macroprudential measures'). The European Systemic Risk Board (ESRB) issued to 11 countries warnings concerning vulnerabilities in their residential real estate markets or recommendations on strengthening measures already in place or on introducing new ones.¹¹

⁷ The calculation excludes floating-rate bonds indexed to inflation since their yield cannot be directly compared with that of fixed-rate or zero-coupon bonds.

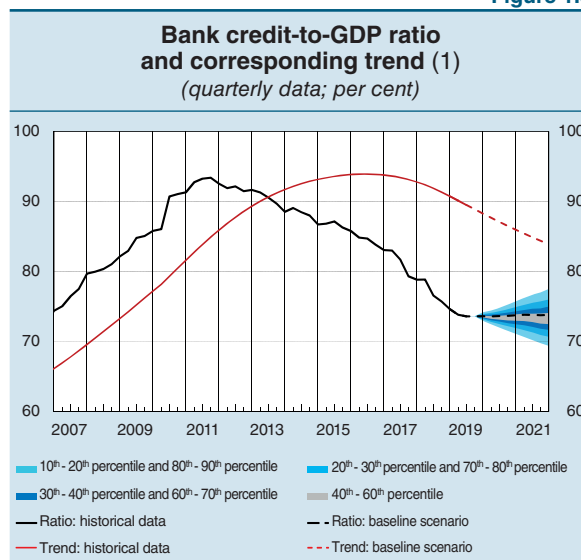
⁸ These clauses envisage increases in value-added tax and excise duty rates.

⁹ Failure to activate the safeguard clauses could cause the deficit to rise by 1.0 and 1.3 percentage points of GDP in 2021 and 2022, respectively.

¹⁰ For more information, see 'Preliminary hearing on the budgetary provisions for the three years 2020-21', Testimony of L.F. Signorini, Deputy Governor of the Bank of Italy, at the Senate of the Republic, Rome, 12 November 2019 (only in Italian).

¹¹ The ESRB published its recommendations and warnings in September. The recommendations were issued to those countries that had already received warnings in 2016 and that had failed to adequately address their vulnerabilities: Belgium, Denmark, Finland, Luxembourg, the Netherlands and Sweden. The countries that received warnings for new vulnerabilities identified were: France, Germany, Iceland, Norway and the Czech Republic.

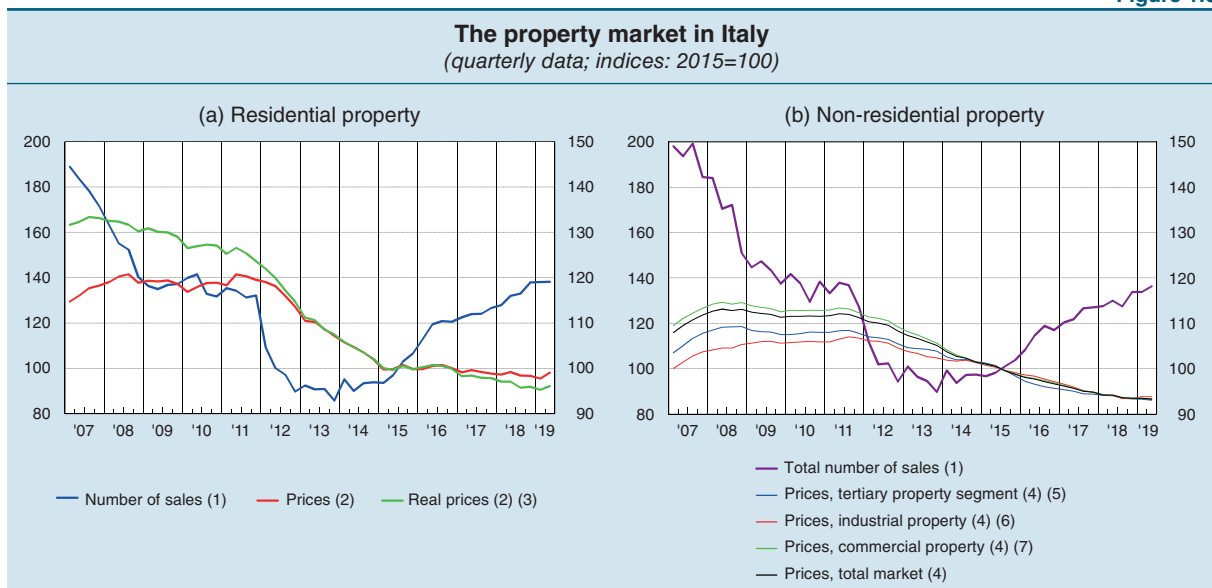
Figure 1.5



Source: Based on Bank of Italy and Istat data.

(1) The projections do not take account of any securitizations. The probability distribution of the projections, shown here by percentile classes, makes it possible to assess the size of the risks that characterize the scenario deemed most likely (baseline scenario). The distribution takes account of asymmetric shocks to the main risk factors, following 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. The long-term trend is calculated using a one-sided Hodrick-Prescott filter.

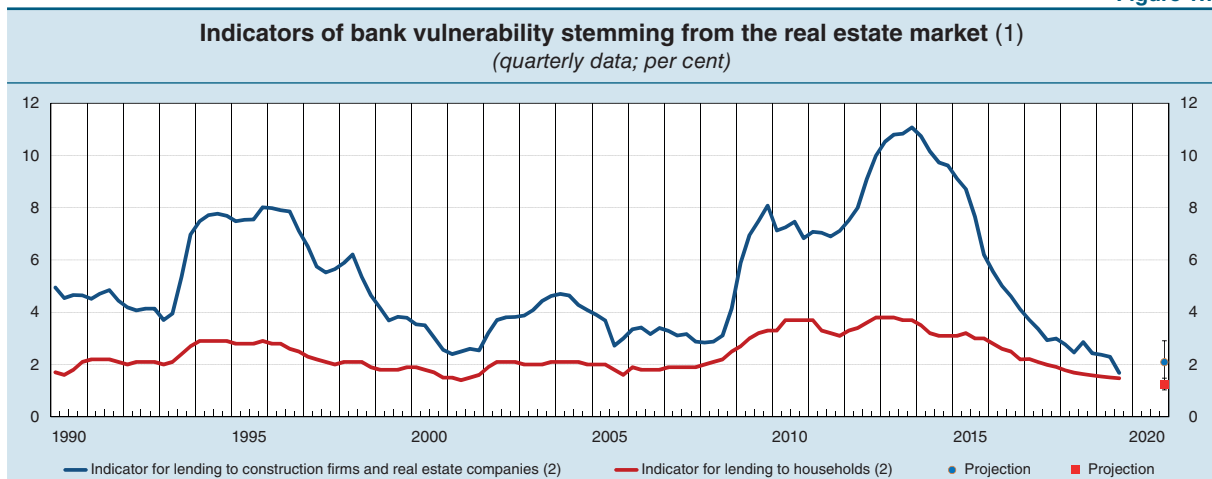
Figure 1.6



Sources: Based on data from the Bank of Italy, Istat, Osservatorio del Mercato Immobiliare (OMI), Nomisma and Scenari Immobiliari. (1) Data adjusted for seasonal and calendar effects. – (2) Right-hand scale. – (3) Data deflated using the change in consumer prices. – (4) The indicator, which is still being tested, uses data drawn from transactions already concluded on the market. Right-hand scale. – (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.

In Italy the real estate cycle is still weak: in the first half of 2019 prices continued to decline compared with the year-earlier period, in both the residential and non-residential markets (Figure 1.6). The housing price dynamics reflect different geographical trends. Prices rose moderately in the North, particularly in large cities such as Milan and Turin, but fell once again in the rest of the country. According to our estimates, housing price growth is expected to remain weak next year. The rise in housing sales, under way for five years, was interrupted in the first six months of 2019; in the wholesale and retail trade sector, however, the expansion continued.

Figure 1.7



(1) Bank 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. For the projection for the 4th quarter of 2020, the graph shows the median and the 10th and 90th percentiles. For the methodology, see F. Ciocchetta, W. Cornacchia, R. Felici and M. Loberto, 'Assessing financial stability risks 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 from the real estate market in Italy: an update', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 493, 2019. – (2) The vulnerability indicators for the period 1990-2005 are reconstructed using econometric techniques.

The risks for banks arising from exposures to the real estate sector were limited (Figure 1.7). Our projections for the fourth quarter of 2020 point to another drop in the vulnerability indicator regarding mortgage loans to households and a slight increase in the indicator for loans to construction and real estate firms.

1.2 HOUSEHOLDS AND FIRMS

Households

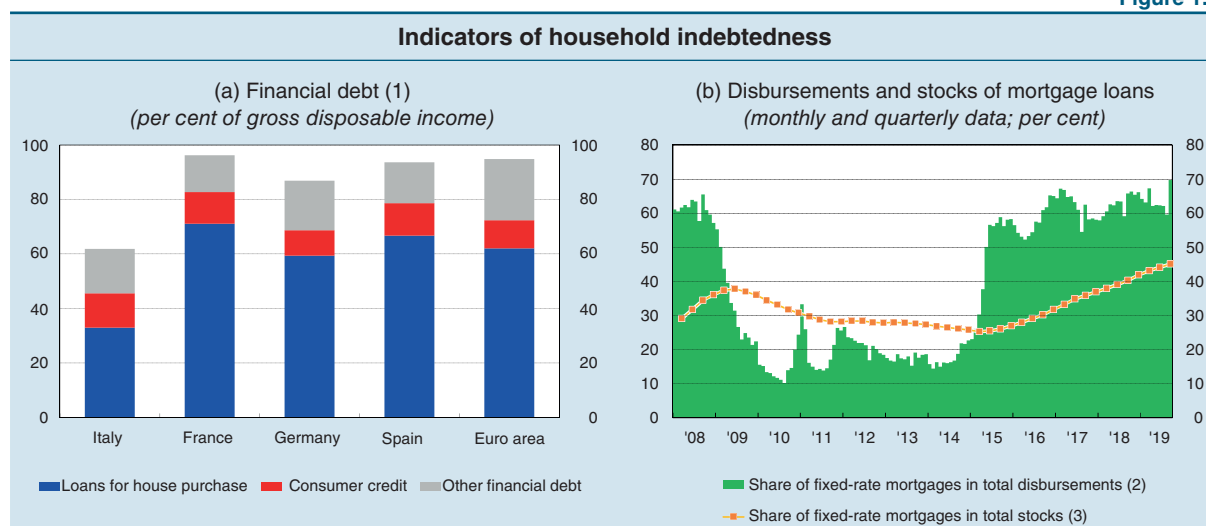
Households' financial conditions remain sound. Over the course of the year, the reduction in interest rates has led to an increase in the value of assets and a decrease in the cost of debt.

Gross financial wealth rose by 2.7 per cent in the first half of the year and continued to grow during the summer months. Households' investment was mainly directed towards highly liquid financial instruments such as bank and postal deposits.

Indebtedness towards banks and financial companies specializing in consumer credit continues to grow at a moderate pace (3.5 per cent on an annual basis in September). While the growth in mortgage loans slowed slightly, reflecting the weak housing market (see Section 1.1), consumer loans accelerated (8.4 per cent). As a share of disposable income, Italian households' total debt nevertheless remains the lowest among the major euro-area countries (Figure 1.8.a).

In the first nine months of the year, the interest rates on mortgage and consumer loans diminished by about 50 and 10 basis points respectively, to historically very low levels (1.8 and 8.1 per cent in September).¹² To hedge against the risk of a rise in market yields, households are resorting widely to fixed-rate contracts. For mortgage loans, fixed-rate contracts have accounted for more than 60 per cent of disbursements in 2019 and in September represented 45 per cent of the total stock, up from 25 per cent at the beginning of 2015 (Figure 1.8.b).

Figure 1.8

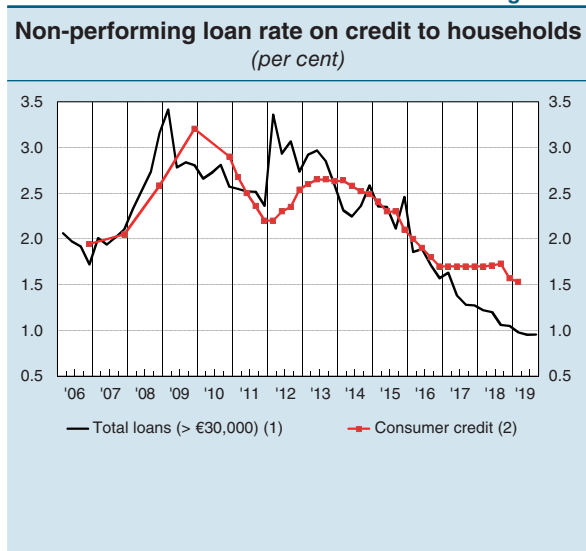


Sources: Bank of Italy and Istat for Italy, ECB for the other euro-area countries.

(1) Consumer and producer households and non-profit institutions serving households; the data refer to June 2019. – (2) Consumer and producer households and non-profit institutions serving households; the data refer to new loans and include loans with an interest rate that remains fixed for at least 10 years. – (3) Consumer households.

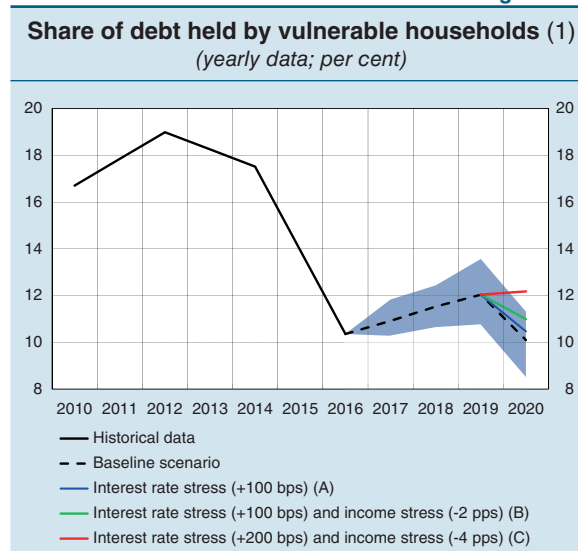
¹² The interest rates on loans for house purchase are aligned with those of the euro area, while those on consumer loans continue to be higher by about 2 percentage points.

Figure 1.9



Sources: Central Credit Register and Crif.
 (1) Annualized quarterly flow of adjusted NPLs (past-due by more than 90 days, other NPLs and bad loans) in relation to the stock of loans net of adjusted NPLs at the end of the previous quarter. Data seasonally adjusted where necessary. – (2) Annual flow of non-performing contracts (bad loans or past-due by more than 180 days) in relation to total outstanding performing contracts at the beginning of each reference period.

Figure 1.10



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 equivalized disposable income is below the median. The latest SHIW data available refer to 2016. The shaded area represents the interval between the 10th and the 90th percentiles of the probability distribution in the simulations. Compared with the baseline scenario, in 2020: (A) the 3-month Euribor, the 10-year interest rate swap (IRS) and the interest rate on consumer credit are 100 basis points higher; (B) the 3-month Euribor, the 10-year IRS and the interest rate on consumer credit are 100 basis points higher and the growth rate of nominal income is 2 percentage points lower; and (C) the 3-month Euribor, the 10-year IRS and the interest rate on consumer credit are 200 basis points higher and the growth rate of nominal income is 4 percentage points lower.

The reduction in interest rates has favoured a further drop in the flow of non-performing loans: as a share of total loans, they have fallen well below pre-crisis levels (Figure 1.9).

The projections of the Bank of Italy's microsimulation model, which are based on a scenario consistent with the latest macroeconomic forecasts,¹³ indicate that at the end of 2020, the share of vulnerable households and the ratio of their debts to the total would decrease to 1.8 and 10.1 per cent respectively (Figure 1.10). The growth in disposable income and the fall in interest rates would contribute to this reduction. Should macroeconomic developments prove more unfavourable, the share of debt at risk would reach 11.0 per cent of the total.¹⁴ In a particularly adverse scenario, characterized by greater changes in income and interest rates than those recorded historically, the share of vulnerable households would rise to 2.1 per cent and their share of total debt would rise to 12.2 per cent,¹⁵ figures which are nevertheless below the levels observed between 2010 and 2014.

¹³ Compared with 2019, the baseline scenario for 2020 assumes higher growth in nominal disposable income and in mortgage loans, slightly lower growth in consumer credit, and a reduction in interest rates. For further details on the microsimulation model, see C.A. Attinà, F. Franceschi and V. Michelangeli, 'Modeling households' financial vulnerability with consumer credit and mortgage renegotiations', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 531, 2019.

¹⁴ Compared with the baseline scenario, this assumes a rise in interest rates of 100 basis points and a reduction of 2 percentage points in the growth rate of nominal income (around one standard deviation of the respective yearly variations recorded in the period 2003-18).

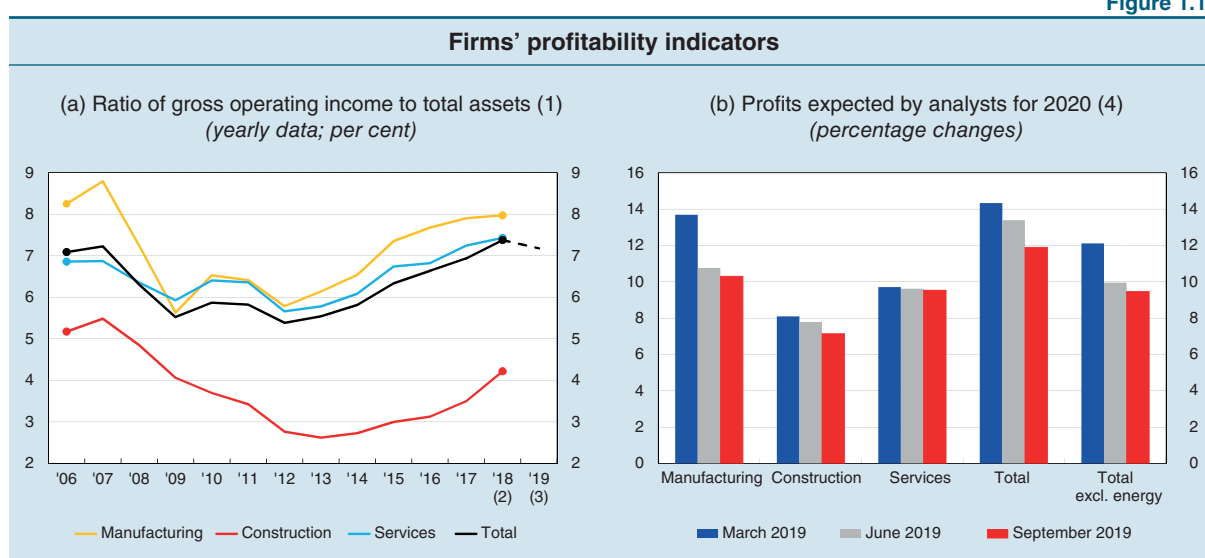
¹⁵ Compared with the baseline scenario, this assumes a rise in interest rates of 200 basis points and a reduction of 4 percentage points in the growth rate of nominal income.

Firms

The weak cyclical conditions are negatively impacting firms' profitability, but the adverse effects on their ability to repay their debts are being mitigated by the low level of interest rates.

Firms' gross operating income decreased for the first time since 2012, to 7.2 per cent of total assets (Figure 1.11.a). The ratio is nevertheless still in line with pre-crisis levels. According to the Bank of Italy's business outlook survey, the share of firms expecting to close this year with a profit is declining among small and medium-sized enterprises and in the manufacturing sector. For 2020, analysts expect listed companies' profits to rise, although the rate of growth has been progressively revised downwards over the course of the year, especially for the manufacturing sector (Figure 1.11.b).

Figure 1.11



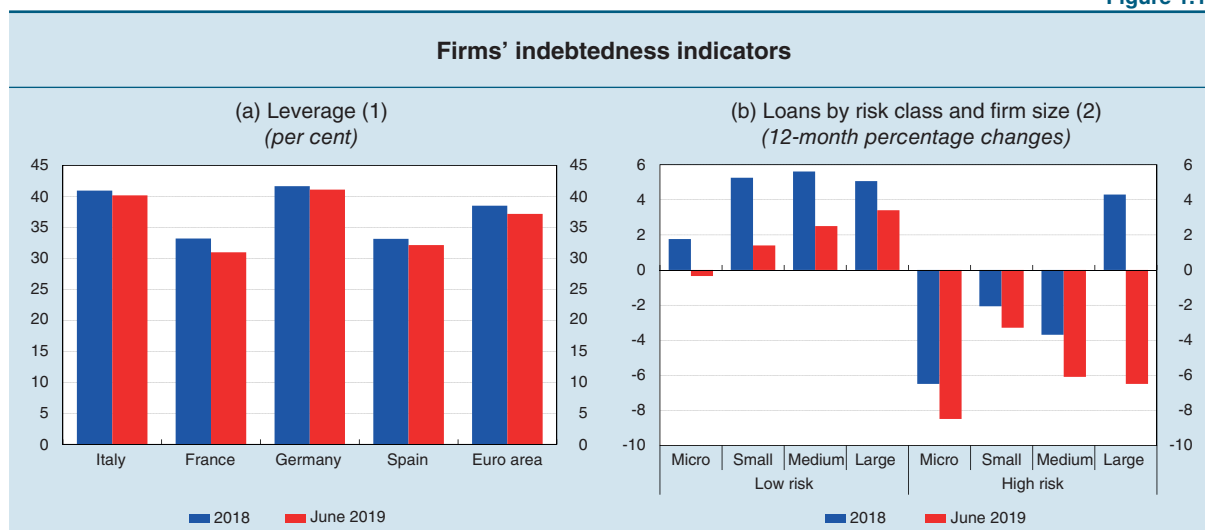
Sources: Based on data from the Bank of Italy, Cerved, Istat and Bloomberg.

(1) For the period 2006-2018, the ratio of gross operating income to total assets was obtained from Cerved balance sheet data. The indicator referring to firms as a whole has been updated to Q2 2019 using an estimate based on aggregate data on gross operating income (source: Istat) and on financial liabilities (source: Financial Accounts). To exclude the effect of market prices present in the Financial Accounts, financial liabilities are calculated by summing the end-2018 stocks and the flows for the first half of this year. – (2) The data refer to a preliminary sample of about 450,000 companies. – (3) The estimate refers to June 2019. – (4) Changes compared with the profits expected by analysts for 2019. Based on a closed sample, referring to the period between March 2018 and September 2019, of 96 listed companies, accounting for 95 per cent of the market capitalization of non-financial corporations.

In the first half of the year, indebtedness continued to fall. Despite diminishing by about 1 percentage point, leverage nevertheless remains above the euro-area average (Figure 1.12.a). This fall, mainly ascribable to the rise in the value of equity, was also attributable to the contraction in debt towards banks (-1.0 per cent on an annual basis in September). Credit dynamics continue to be highly heterogeneous: the contraction in borrowing is concentrated among the riskiest firms, while it continues to grow among financially sound larger companies (Figure 1.12.b). The cost of new loans, which has been decreasing in recent months, is at historically low levels.

Recourse to the bond market has increased and has been concentrated among the least risky firms. Between January and September, gross bond placements (€35 billion) increased by more than 25 per cent compared with the average recorded for the same period in the previous five years (Figure 1.13). The share of issues attributable to firms with lower credit ratings decreased to 19 per cent (compared with 31 per cent on average in the previous five years), mainly owing to the reduction in issues by those not belonging to large groups. The reduction in the riskiness of issuers was reflected in very low yields at issue for fixed-rate securities.

Figure 1.12

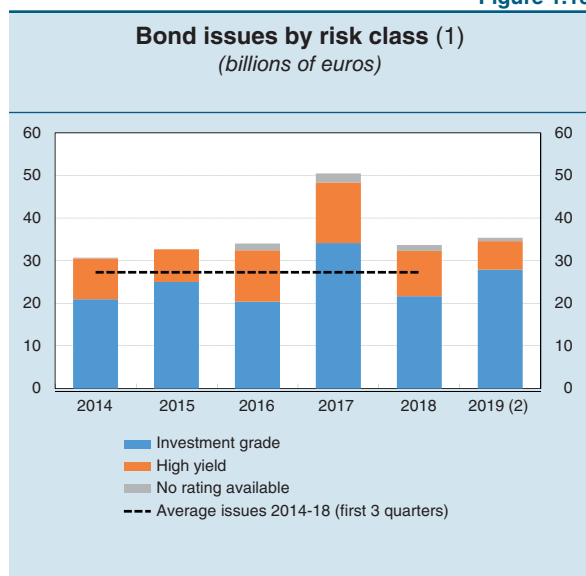


Sources: Bank of Italy, ECB and Cerved.

(1) Leverage is calculated as the ratio of financial debt to the sum of financial debt and net equity at market value. – (2) The data refer to a sample of about 460,000 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. Low (high) risk firms have a score ranging from 1 to 4 (5 to 10).

The low interest rates are supporting firms' ability to repay their debts. The non-performing loan rate, which rose slightly in the second quarter of 2019, fell in the third quarter to 1.9 per cent, a level below those preceding the financial crisis. According to the Bank of Italy's In-house Credit Assessment System (ICAS), compared with the end of 2018, non-financial firms' one-year probability of default has decreased, albeit slightly, in almost all economic sectors; it remains high in construction (Figure 1.14).

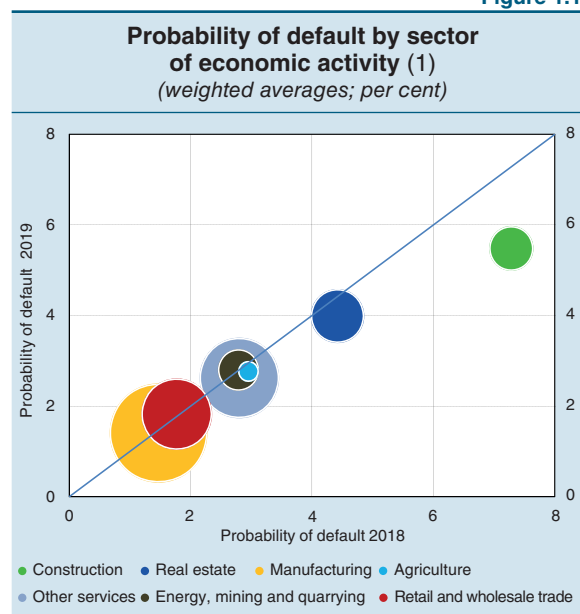
Figure 1.13



Sources: Bank of Italy, Dealogic and Cerved.

(1) The investment grade category comprises issuers with ratings from AAA to BBB-, the high yield category those with ratings below BBB-. Issuers for which no agency provided a rating (which concerns about one quarter of issues) are classified based on the probability of default estimated by Cerved, where available. – (2) The data refer to the first 3 quarters of 2019.

Figure 1.14

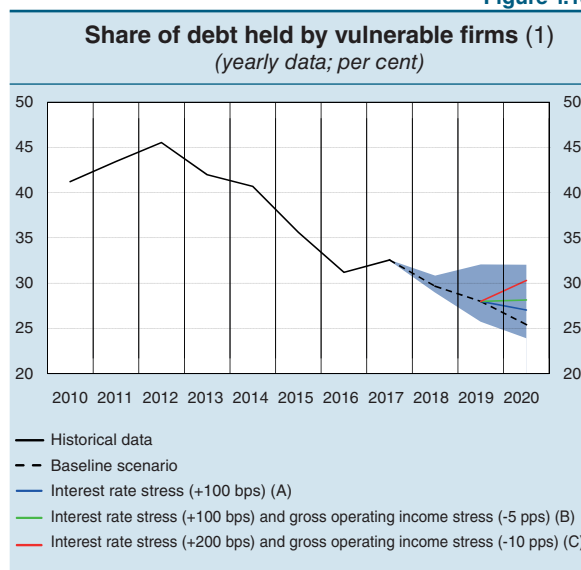


Sources: Bank of Italy and Cerved.

(1) The size of the circle corresponds to the amount of loans granted to firms in each sector. The data for 2019 are as at September, those for 2018 as at December.

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 would fall to 25 per cent at the end of 2020 (Figure 1.15).¹⁶ The reduction would be due mainly to the increase in profitability. If trends in the latter and in interest rates were to turn unfavourable, the share of debt held by vulnerable firms would come to 28 per cent of the total.¹⁷ In a particularly adverse scenario, characterized by changes in profitability and in a cost of debt greater than those recorded historically,¹⁸ the share would reach 30 per cent, a level nevertheless well below the peak recorded in 2012.

Figure 1.15



Source: Based on Cerved data.

(1) Vulnerable firms are those whose gross operating income is negative or whose ratio of interest expenses 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 2017. The shaded area indicates a confidence interval of 95 per cent around the baseline scenario. Compared with the baseline scenario, in 2020: (A) the interest rate is 100 basis points higher; (B) in addition to the interest rate being 100 basis points higher, the growth rate of nominal gross operating income is 5 percentage points lower; and (C) the interest rate is 200 basis points higher and the growth rate of nominal gross operating income is 10 percentage points lower.

¹⁶ The baseline scenario for 2020 assumes a slight increase in gross operating income, a weak expansion in financial debt and a very small reduction in interest rates. For 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.

¹⁷ Compared with the baseline scenario, the adverse scenario assumes a rise in interest rates of 100 basis points and a reduction in the growth rate of nominal gross operating income of 5 percentage points, equal to about one standard deviation around the respective yearly variations recorded in the period 2003-18.

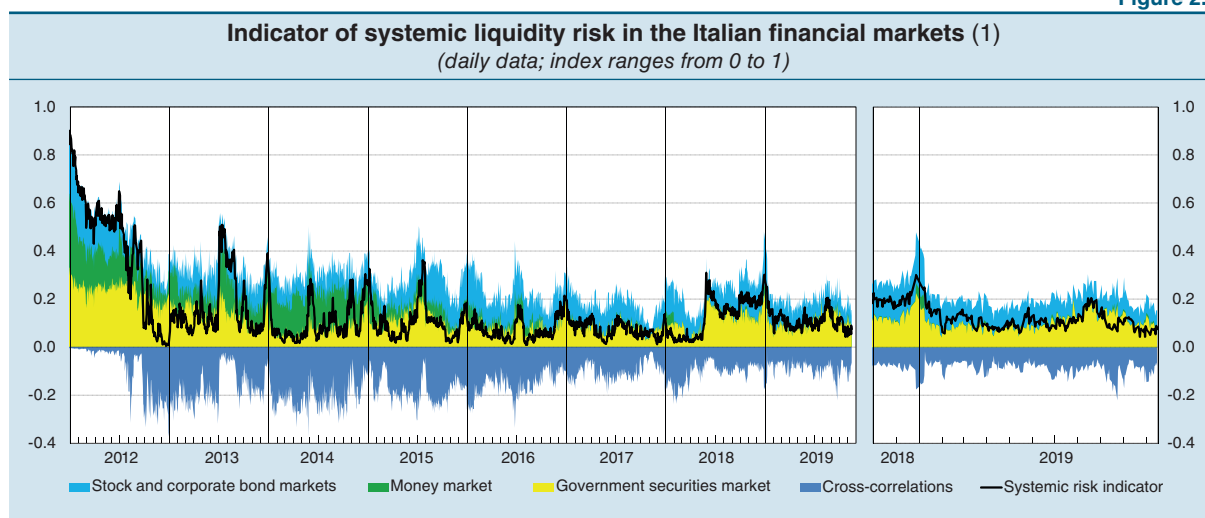
¹⁸ Compared with the baseline scenario, this assumes a rise in interest rates of 200 basis points and a decline of 10 percentage points in the growth rate of nominal gross operating income.

2 FINANCIAL SYSTEM RISKS

2.1 THE MONEY AND FINANCIAL MARKETS

The reduced uncertainty over Italy's economic policy stance and the European Central Bank's expansionary measures have mitigated tensions somewhat on Italy's financial markets. The systemic liquidity risk indicator has returned to much lower levels compared with those of the beginning of the year (Figure 2.1), although still higher than those recorded in the early months of 2018. Liquidity conditions are still fragile overall, especially in the secondary market for government securities.

Figure 2.1



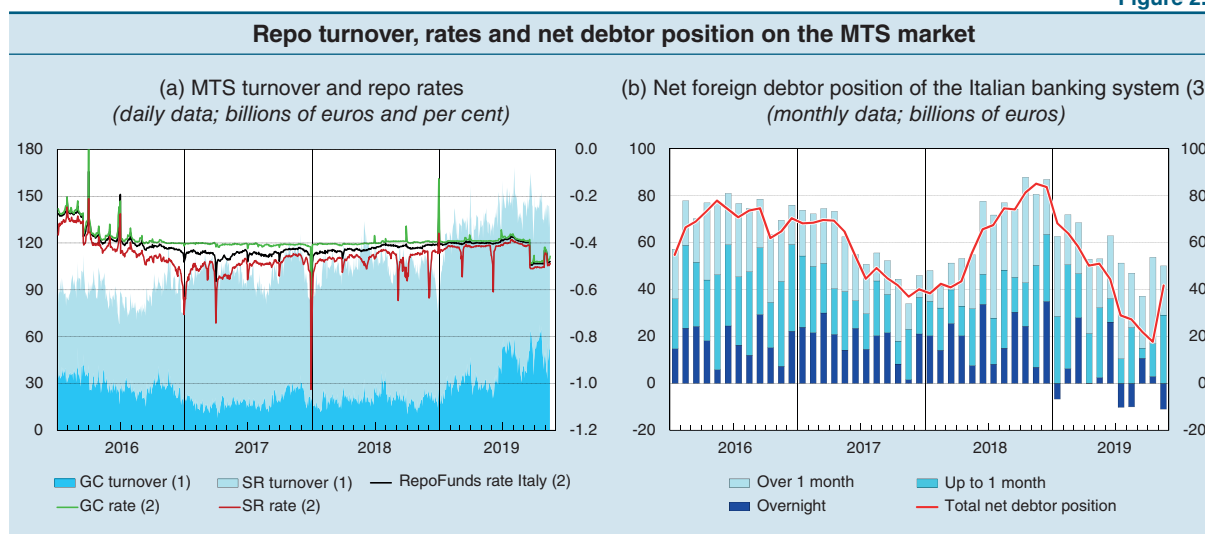
Sources: Based on data from Refinitiv, Bloomberg, Moody's KMV, MTS SpA, e-MID SIM SpA, and the Bank of Italy.

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

In the money market, the level of repo trading volumes remains high; between May and October, the liquidity invested by some Italian banks in this market and the funding of the large purchases of Italian government securities made by foreign investors led to the increase in transactions in the general collateral segment (Figure 2.2.a). The introduction of the new remuneration system for the Eurosystem's banking reserves at the end of October (see Section 1.1) has favoured an increase in Italian banks' foreign funding on the MTS repo market (Figure 2.2.b), a rise in the excess reserves on accounts held at the central bank (see Section 2.2) and an improvement in the TARGET2 balance.

On the primary market for Italian government bonds, interest rates have fallen and the average cost of securities outstanding has gone down to 2.6 per cent (Figure 2.3). In October, the average rate at issue was negative for BOTs and stood at about 0.5 per cent for the other securities. Three securities denominated in US dollars were placed for the first time since 2010, with a maturity of up to 30 years, for a total of \$7 billion, against a demand that was more than double the amount placed. The issuance

Figure 2.2



Sources: Based on data from MTS SpA and RepoFunds Rate.

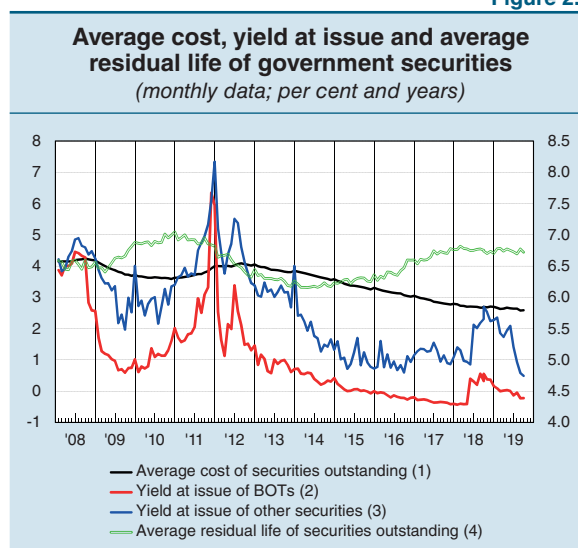
(1) Daily turnover in general collateral (GC) and special repos (SR) on the MTS market by contract settlement date. – (2) Calculated in reference to daily contracts for Italian government securities made on electronic trading platforms (MTS for GC and SR rates; MTS and BrokerTec for the RepoFunds Rate). 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. The latest observation refers to the data as at 15 November 2019.

of long-term securities has helped to maintain the average residual life of securities outstanding stable at 6.7 years.

In the first six months of 2019, foreign investors made extensive net purchases of Italian government securities and the share they hold increased by more than 2 percentage points, to 24 per cent¹ (Figure 2.4). The shares held by banks and insurance companies with headquarters in Italy remained essentially stable at 18 and 15 per cent respectively. According to preliminary data, between July and August the share of securities held abroad rose by another percentage point.

Compared with the end of April, the sovereign risk premium on Italian government securities, measured by credit default swaps (CDS), has declined, although it is still higher than at the start of 2018 (Figure 2.5.a). The gap between the premium on CDS contracts that offer protection against the risk of redenomination in a new national currency and that on contracts with no

Figure 2.3



Sources: Based on Ministry of Economy and Finance and Bank of Italy data. Data at 31 October 2019.

(1) Weighted average of the yields at issue of government securities outstanding at month-end (excluding indexed ones). – (2) Weighted average of the yields at issue of all the BOTs placed during the month, by settlement date. – (3) Weighted average of the yields at issue of securities other than BOTs and of the indexed securities placed during the month, by settlement date. – (4) End-of-period values weighted by the outstanding securities. Right-hand scale.

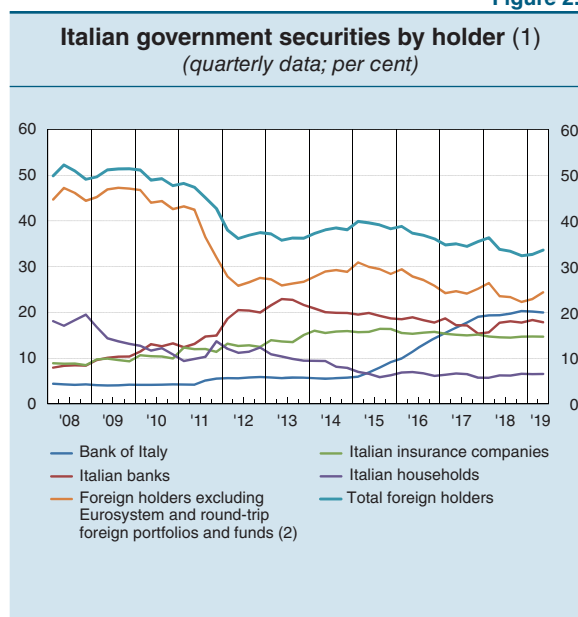
¹ The figure refers to the securities held by foreign investors net of foreign managed portfolios and investment funds attributable to Italian investors and of those held by the Eurosystem – excluding the Bank of Italy – as part of the Securities Markets Programme (SMP) and the Public Sector Purchase Programme (PSPP). The share of foreign holders that includes the abovementioned components is about 34 per cent.

such provision (ISDA basis)² has narrowed to levels a little higher than in the early months of 2018 (Figure 2.5.b); the spread compared with the other euro-area countries remains ample.

Liquidity conditions on the secondary market for Italian government securities remain fragile. Since mid-September, the market's ability to absorb large orders with no significant effect on prices, i.e. its resilience, has improved (Figure 2.6.a); the bid-ask spread and intraday volatility, though still high, are falling. Trading volumes and the quantities quoted by market makers are, however, lower than the average levels recorded in the early months of 2018 (Figure 2.6.b).

The greater volatility observed in the secondary market for government securities in the summer months was countered by the Cassa di Compensazione e Garanzia SpA (CC&G) with intraday margin requirements; no changes to the initial margins were necessary, which might have increased the cost of transactions for operators and might have led to procyclical effects on market prices (Figure 2.7).

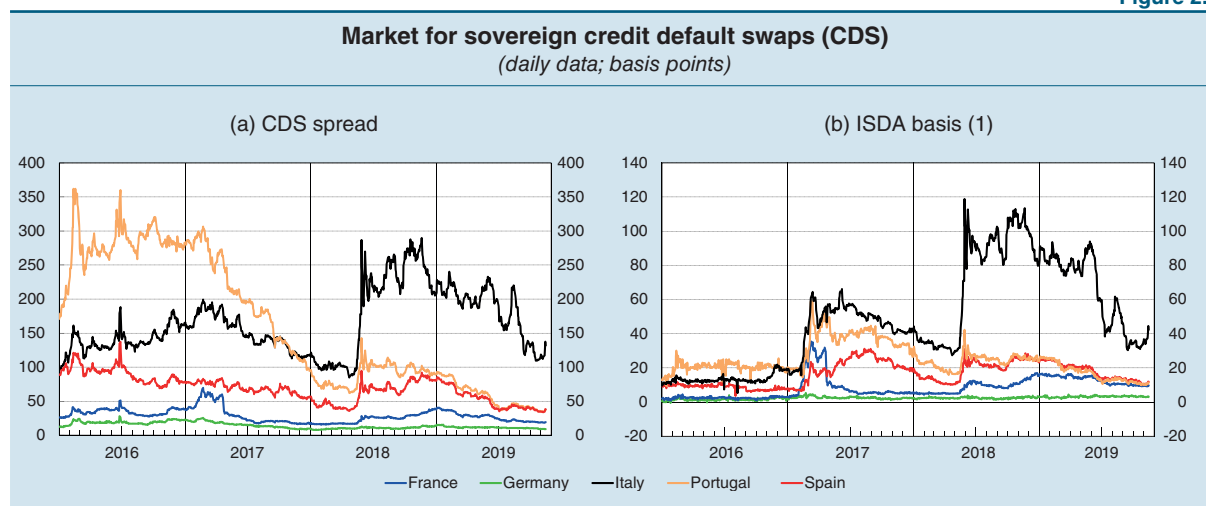
Figure 2.4



Sources: Bank of Italy, Financial Accounts, and estimates based on Assogestioni and ECB data.

(1) Shares calculated on data at market prices and net of securities held by Italian general government. Data refer to a subset of holders. – (2) Securities held by foreign investors net of those held by the Eurosystem (excluding the Bank of Italy) and by foreign managed portfolios and investment funds attributable to Italian investors.

Figure 2.5

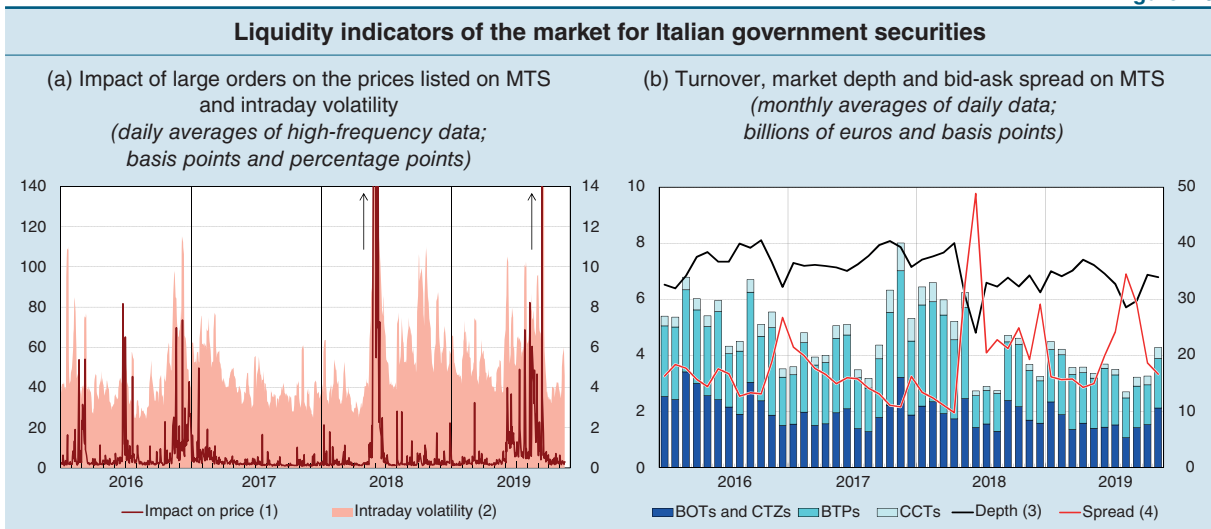


Source: Based on Bloomberg data.

(1) The International Swaps and Derivatives Association (ISDA) is an organization of participants in the market for OTC derivatives. The ISDA basis measures the difference between CDS spreads on 5-year US dollar contracts under the 2014 and the 2003 ISDA Definitions.

² CDS with different contractual characteristics, as defined by the ISDA, are currently being traded on the market. The contracts that refer to the rules introduced in 2014 offer greater protection in the event of a redenomination or restructuring of the underlying debt, compared with those that follow the rules laid down in 2003. For further details, see ISDA, *2003 ISDA Credit Derivatives Definitions*, 2003 and ISDA, *2014 ISDA Credit Derivatives Definitions*, 2014.

Figure 2.6

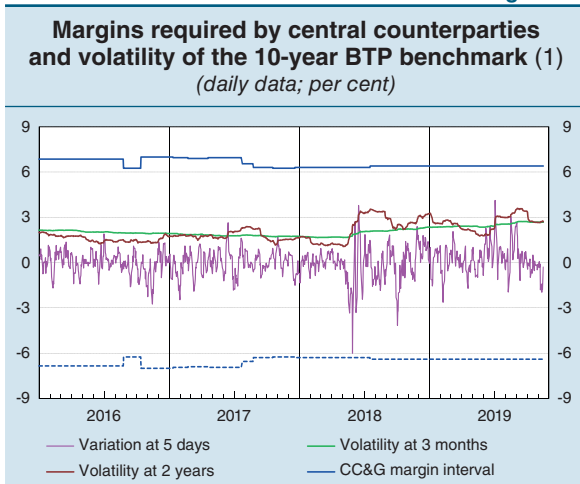


Source: Based on MTS SpA data.

(1) 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. – (2) Realized volatility is based on intraday yields calculated at 5-minute intervals; 5-day moving average of annualized values. Right-hand scale. – (3) Calculated as the average of the bid and ask quantities recorded during the entire trading day on BTPs listed on MTS. – (4) 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.

Turnover of corporate bonds listed on the MOT (Mercato Telematico delle Obbligazioni) has shown a marked recovery; between May and October, their value was about 25 per cent higher compared with the year-earlier period. The risk premium on bonds issued by Italian firms with investment-grade ratings has remained substantially stable and is slightly higher than the risk premium on similar bonds issued by euro-area firms; by contrast, it has fallen for Italian high-yield firms (Figure 2.8).

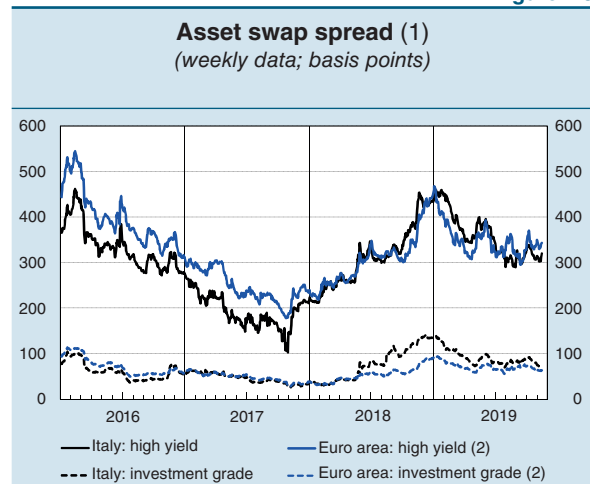
Figure 2.7



Sources: Based on data from Bloomberg and Cassa di Compensazione e Garanzia SpA (CC&G).

(1) The variation in the price of the benchmark 10-year Italian government bond (BTP) over a 5-day horizon and volatility indicators based on the value-at-risk methodology (VaR) 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 the BTP are those for the corresponding duration class. The dashed line is the mirror image of the margins, indicating the adequacy of the margin requirements to cope with the negative price fluctuations actually registered in the market.

Figure 2.8

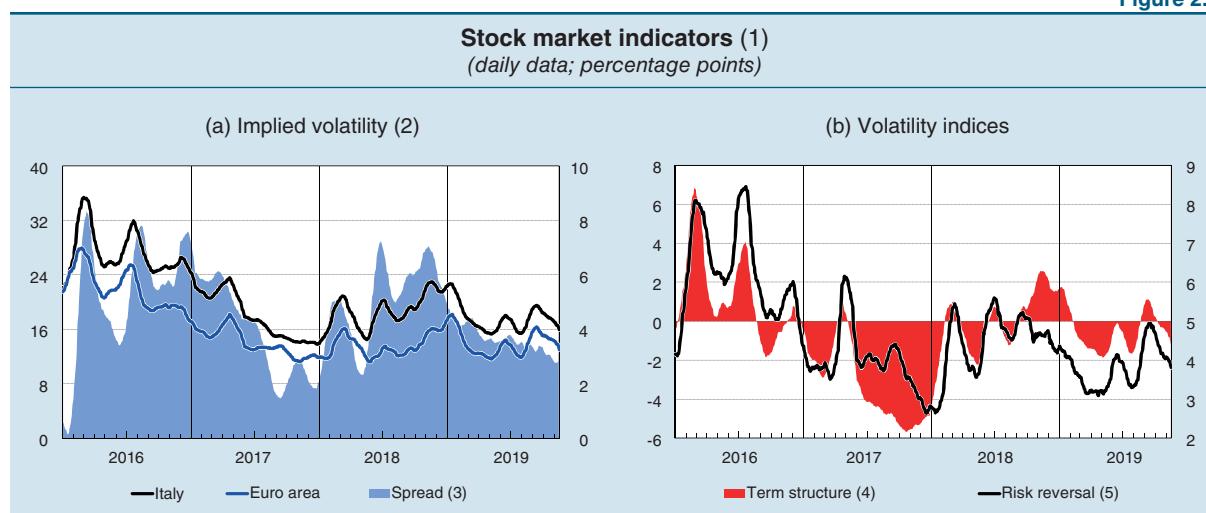


Source: Based on ICE Bank of America Merrill Lynch data.

(1) Asset swap spreads weighted by the market capitalization of individual securities issued by non-financial corporations. – (2) The ICE Bank of America Merrill Lynch indices for the euro area have been recalculated to exclude Italy.

The volatility spread between the Italian and the euro-area stock markets has continued to fall gradually, since the very high level reached in November of last year (Figure 2.9.a). Compared with the end of April, investors' demand for short-term protection against falls in prices has nevertheless increased slightly, as measured by the relative cost of the options that benefit from drops in share prices (risk reversal) and by the volatility spread between two- and twelve-month options (Figure 2.9.b).

Figure 2.9



Source: Based on Bloomberg data.

(1) Thirty-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 implied volatility 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) Spread 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 the options that protect against a fall in the stock index compared with those that profit from a rise in it. Right-hand scale.

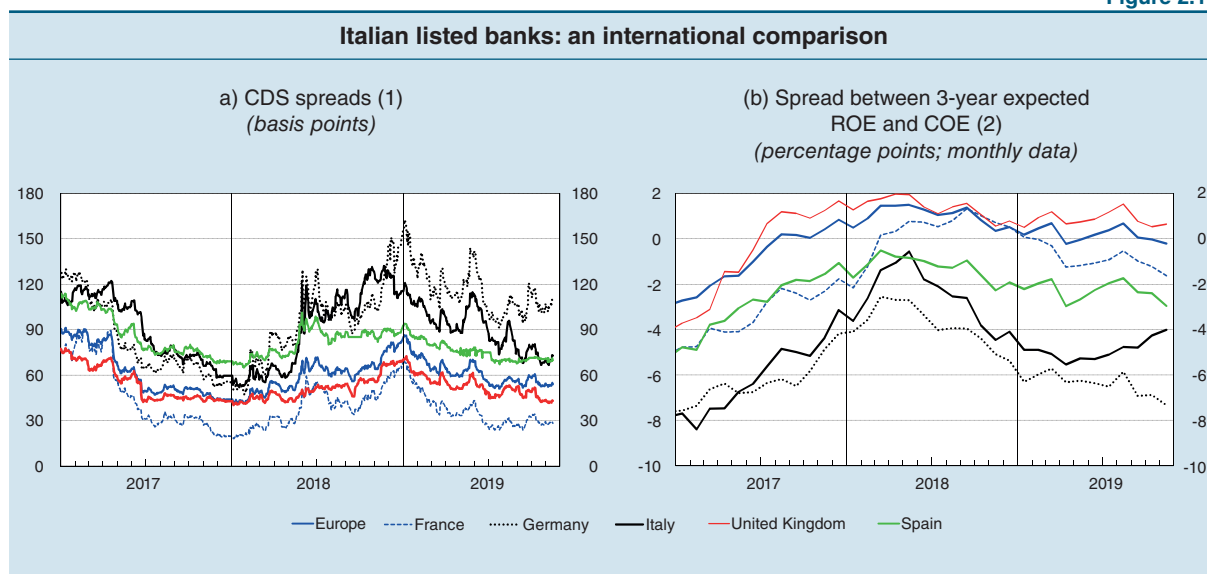
2.2 BANKS

Market indicators

With the reduction in Italy's sovereign risk, the risk indicators of banks as implied by the prices of financial assets have declined since April. The insolvency risk premium on the two main Italian banking groups, measured by the spread on credit default swaps (CDS), has declined by about 25 basis points, and is slightly higher than the average for the other large European banks (Figure 2.10.a). The negative balance between expected profitability and cost of equity has narrowed by 150 basis points for Italian banks, largely on account of the decline in the latter, but it remains very wide (-4.0 percentage points; Figure 2.10.b). The distance from the average for the European banks is still considerable. This is due to the higher cost of equity, which accounts for 60 per cent of the difference, while the rest is due to the lower expected profitability. In turn, 45 per cent of the higher cost of equity is on account of the higher risk premium on Italian shares, while the remaining 55 per cent is on account of the specific risks associated with banks' securities.

The price-to-book (PTB) ratio of Italian listed banks is below 1 and is lower than that of the other European banks (Figure 2.11.a). This difference reflects both the lower expected earnings for Italian banks (Figure 2.11.b) and the higher risk premium demanded by investors, as demonstrated in the ratio between share prices and earnings expectations (Figure 2.11.c).

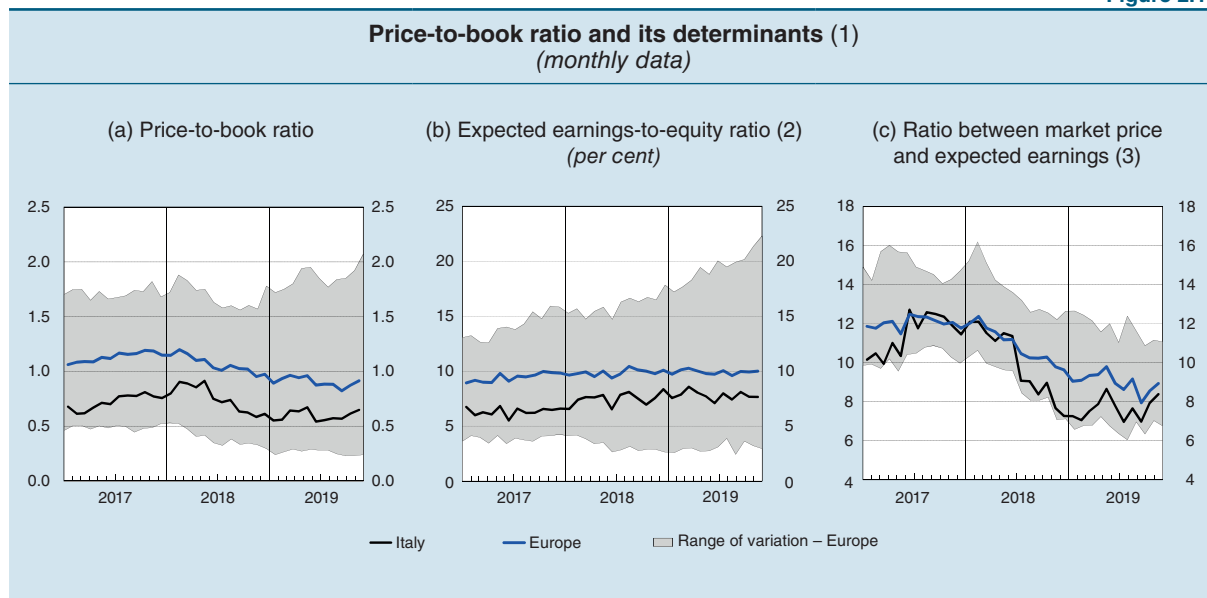
Figure 2.10



Source: Based on data from Refinitiv.

(1) Simple average of 5-year CDS spreads. The data relate to the following sample of banks: for Italy, UniCredit and Intesa Sanpaolo; for France, BNP Paribas, Société Générale and Crédit Agricole; for Germany, Deutsche Bank and Commerzbank; for the United Kingdom, Barclays, Royal Bank of Scotland Group, HSBC Holdings and Lloyds Banking Group; for Spain, Banco Santander and Banco Bilbao Vizcaya Argentaria. – (2) Return on equity (ROE) and cost of equity (COE). The sample includes the 34 listed European banks that took part in the European Banking Authority’s stress test conducted in 2016: for Italy, UniCredit, Intesa Sanpaolo, UBI Banca and Banco BPM; for Austria, Erste Group Bank and Raiffeisen Bank International; for Belgium, KBC Group; for Denmark, Danske Bank and Jyske Bank; for Finland, Nordea Bank; for France, BNP Paribas, Société Générale and Crédit Agricole; for Germany, Deutsche Bank and Commerzbank; for Ireland, Allied Irish Banks and Bank of Ireland; for Norway, DNB; for the Netherlands, ABN AMRO Groep and ING Groep; for Poland, Bank Pekao and Powszechna Kasa Oszczędności Bank Polski; for the United Kingdom, Lloyds Banking Group, HSBC Holdings, The Royal Bank of Scotland Group and Barclays; for Spain, Banco Santander, Banco Bilbao Vizcaya Argentaria, Banco de Sabadell and Caixabank; for Sweden, Swedbank, Skandinaviska Enskilda Banken and Svenska Handelsbanken; and for Hungary, OTP Bank. 3-year-forward ROE is estimated by market operators. COE is obtained using the capital asset pricing model (CAPM). The data relate to averages weighted by market capitalization.

Figure 2.11



Source: Based on data from Refinitiv.

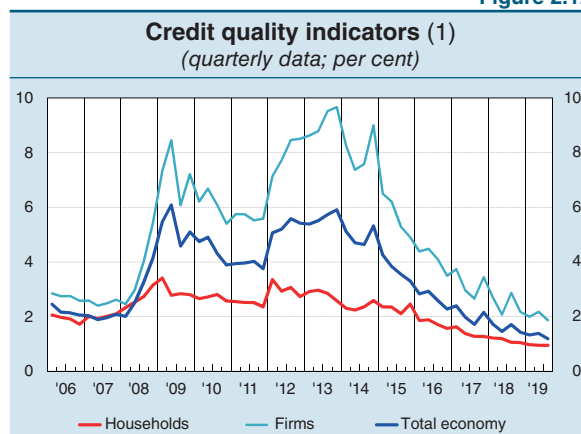
(1) For the sample, see footnote 2 to Figure 2.10. The data for Italy and Europe refer to the averages weighted by market capitalization. All the indicators are calculated using individual bank data, winsorized at the 1st and 99th percentile. – (2) Expected earnings per share one year ahead as a percentage of the book value of equity (the indicator is calculated as the ratio between the PTB ratio and the market price on expected earnings). – (3) Ratio of market price per share to expected earnings per share one year ahead.

Asset risks

Italian banks are continuing to reduce the riskiness of their assets. On the one hand, banks are selling non-performing loans to rebalance their accounts, which are still feeling the lingering effects of the Italian economy's long recessionary phase and of the sovereign debt crisis. On the other hand, they have a low risk propensity: growth in loans to the non-financial private sector has virtually stalled and growth in business loans is largely focused on lending to large firms with high credit ratings (see Section 1.2), which continue to benefit from very low interest rates.

In the first half of 2019, €8 billion worth of NPLs were sold gross of loan loss provisions; those sold after 30 June amounted to about €12 billion. The NPL sales were consistent with the

Figure 2.12



Source: Central Credit Register.

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

Table 2.1

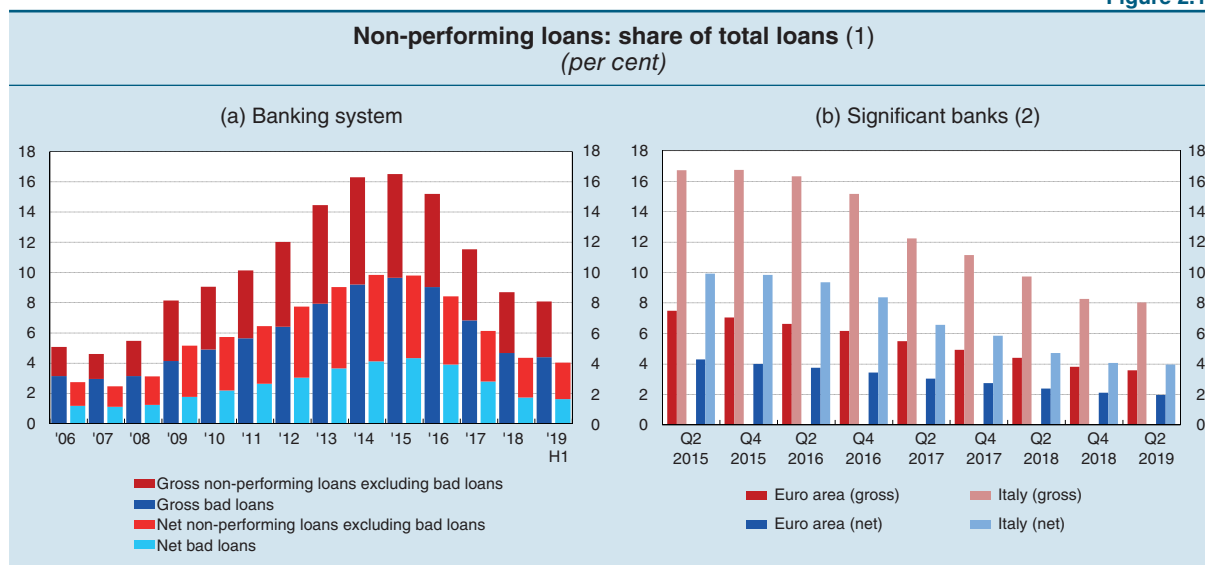
Credit quality: amounts and shares of non-performing loans and coverage ratios
(billions of euros and per cent)

	Significant banks (1)					Less significant banks (1)					Total (1)				
	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)
June 2019 (3)															
Loans (4)	1,757	1,674	100.0	100.0	4.7	214	203	100.0	100.0	5.3	2,198	2,094	100.0	100.0	4.7
Performing	1,616	1,608	92.0	96.1	0.5	192	191	89.8	94.3	0.5	2,021	2,010	91.9	96.0	0.5
of which: stage 2 (5)	150	144	9.1	9.2	3.7	12	12	7.2	7.4	3.4	174	168	8.6	8.7	3.8
Non-performing	141	66	8.0	4.0	53.0	22	12	10.3	5.7	47.6	177	84	8.1	4.0	52.5
Bad loans (6)	75	26	4.3	1.5	65.7	12	5	5.6	2.4	59.9	96	34	4.4	1.6	64.9
Unlikely to pay (6)	62	38	3.6	2.3	39.3	9	6	4.0	2.7	35.7	76	46	3.5	2.2	38.9
Past-due (6)	3	3	0.2	0.2	25.2	1	1	0.6	0.6	12.6	5	4	0.2	0.2	23.1
December 2018															
Loans (4)	1,630	1,550	100.0	100.0	4.9	338	316	100.0	100.0	6.4	2,184	2,073	100.0	100.0	5.1
Performing	1,495	1,487	91.7	96.0	0.5	299	296	88.4	93.7	0.8	1,995	1,984	91.3	95.7	0.6
of which: stage 2 (5)	141	136	9.2	9.4	3.4	28	27	9.8	10.0	4.8	183	176	9.0	9.1	3.8
Non-performing	135	63	8.3	4.1	53.4	39	20	11.6	6.3	49.0	189	90	8.7	4.3	52.8
Bad loans (6)	71	24	4.4	1.6	66.1	21	8	6.2	2.5	62.2	102	35	4.7	1.7	65.4
Unlikely to pay (6)	61	37	3.7	2.4	39.5	16	10	4.8	3.3	36.2	82	50	3.8	2.4	38.8
Past-due (6)	3	2	0.2	0.1	28.1	2	2	0.6	0.5	12.9	5	4	0.2	0.2	23.2

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

(1) 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. The perimeter of significant banks and less significant banks differs between the two dates: in June 2019, with the reform of the cooperative banking sector, Cassa Centrale Banca became the 12th banking group classified as significant for supervisory purposes; a large number of BCCs joined the ICCREA group, which was already classified as significant before the reform. – (2) The coverage ratio is measured as the ratio of loan loss provisions to the corresponding gross exposure. – (3) Provisional data. – (4) 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 the Financial Stability Report up to 2017 ('customer loans'). – (5) Based on the IFRS 9 accounting standard, stage 2 includes loans whose credit risk has increased significantly since initial recognition. The aggregate includes loans recorded in the portfolio at amortized cost. – (6) 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.

Figure 2.13



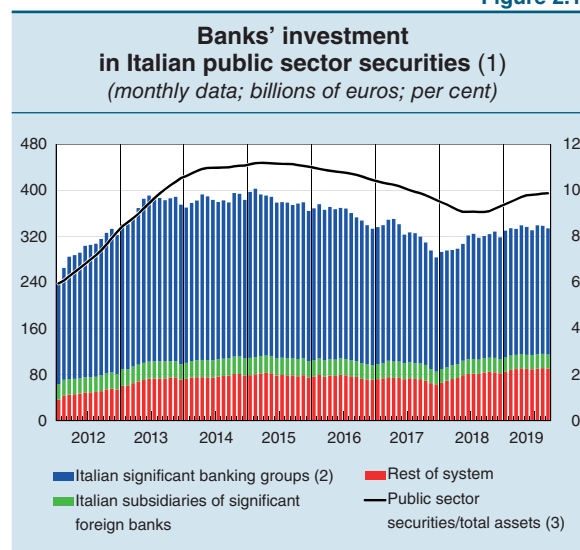
Sources: Supervisory reports, on a consolidated basis for banking groups and on an individual basis for the rest of the system; ECB, *Supervisory Banking Statistics* for the euro area.

(1) Includes loans to customers, credit intermediaries and central banks. Includes banking groups and subsidiaries of foreign banks; excludes branches of foreign banks. Amounts are calculated net and gross of provisions. The data for June 2019 are provisional. – (2) The perimeter of significant banks and less significant banks differs between the dates in the figure: in June 2019, with the reform of the cooperative banking sector, Cassa Centrale Banca became the 12th banking group classified as significant for supervisory purposes; a large number of BCCs joined the ICCREA group, which was already classified as significant before the reform.

plans prepared by banks at the start of the year to reach the reduction objectives agreed with the supervisory authorities. Notwithstanding the worsening cyclical conditions, the flow of new non-performing loans in proportion to total performing loans declined again (Figure 2.12), mostly on account of the low interest rates. Based on the most recent macroeconomic projections, it is estimated that the NPL rate will remain close to current levels in 2020 as well.

At the end of June, the stock of NPLs net of provisions fell to €84 billion (€177 billion gross of provisions), 7 per cent less than at the end of 2018 (Table 2.1); the ratio of NPLs to total loans (including interbank and central bank exposures) fell to 4.0 per cent (Figure 2.13.a). The coverage ratio (i.e. loan loss provisions in relation to the stock of gross NPLs) remained stable at 52.5 per cent. The ratio of net NPLs to total loans of the Italian significant banks was still 2 percentage points higher than that of the euro-area significant banks (Figure 2.13.b). According to our projections, based on the NPL reduction plans prepared by banks at the start of this year, the ratio of NPLs to outstanding loans is expected to decline to 2.9 per cent at the end of 2021, net of loan loss provisions (5.8 per cent gross of provisions).

Figure 2.14



Source: Supervisory reports.

(1) All public sector securities, including those issued by local authorities. Excludes Cassa Depositi e Prestiti SpA. The stock of Italian public sector securities in portfolios was revised starting in 2013, following the extension of the perimeter of general government as defined by Istat in agreement with Eurostat. – (2) Includes the cooperative credit banks merged into cooperative credit banking groups. – (3) Twelve-month moving average ending in the month indicated. The series 'total assets' does not include repurchased self-issued bonds. Right-hand scale.

Following the easing of market tensions, banks have resumed selling the Italian government securities in their portfolios: between May and September, net sales amounted to €20 billion (of which €16 billion by significant banks); on account of the increase in prices, the value of the stock of government securities diminished by only €5 billion, to €334 billion (9.7 per cent of total assets, from 10.1 in April; Figure 2.14). In the same period, Italian banks made net purchases of €8 billion in government securities of other euro-area countries, mostly those of Spain. The share of Italian government securities in the asset portfolio that are valued at amortized cost increased to 62 per cent. The changes in their value have no effect on regulatory capital; this accounting choice protects banks from price fluctuations, but it does constrain part of their assets for the residual maturity of those securities.

In June, Italian banks' exposure to emerging economies was €165 billion (about 5 per cent of assets), 6.4 per cent higher than at the end of 2018. This increase is largely due to the sustained growth in exposures to Eastern European countries, with the exception of Italian banks' exposure to Turkey, which continued to decline (see Table A3 in the Selected Statistics section).

Refinancing risk and liquidity risk

The fall in loans and in portfolio securities has limited the need for bank funding, while the demand for liquid investment instruments on the part of households (see Section 1.2) has driven the growth in deposits (Table 2.2). The increase in retail funding has translated into a decline in net borrowing vis-à-vis the Eurosystem and a reduction to zero of the share of loans financed by wholesale funding (funding gap; Figure 2.15). In June, the net stable funding ratio (NSFR), which will be a binding requirement for European banks in 2021, stood at an average of 114 per cent for the Italian significant banks; none of these banks had a ratio below 100, the regulatory minimum.

Table 2.2

Main assets and liabilities of Italian banks (levels and percentage changes)							
	Assets			Liabilities			
	Stocks (shares)	12-month percentage changes (1)		Stocks (shares)	12-month percentage changes (1)		
	September 2019	September 2019	March 2019	September 2019	September 2019	March 2019	March 2019
Loans to Italian residents (2)	42.2	-2.0	-3.8	Deposits of Italian residents (2)	38.2	4.1	3.3
Debt securities (3)	13.3	-2.2	13.4	Deposits of non-residents	9.4	1.8	11.1
External assets	12.5	4.8	1.8	Bonds (8)	6.5	-2.6	-9.1
Claims on the Eurosystem (4)	2.8	11.1	-14.7	Liabilities towards the Eurosystem (4)	6.8	-3.5	-3.0
Claims on central counterparties (5)	2.6	27.8	11.1	Liabilities towards central counterparties (5)	2.6	-25.2	21.4
Shares and participating interests	1.9	0.0	-3.9	Capital and reserves	10.1	-0.6	-1.5
Claims on resident MFIs (6)	13.8	5.6	5.3	Liabilities towards resident MFIs (9)	13.7	4.8	3.0
Other assets (7)	11.1	15.7	10.2	Other liabilities (10)	12.8	11.4	-6.1

Source: Individual supervisory reports. Excludes Cassa Depositi e Prestiti SpA.

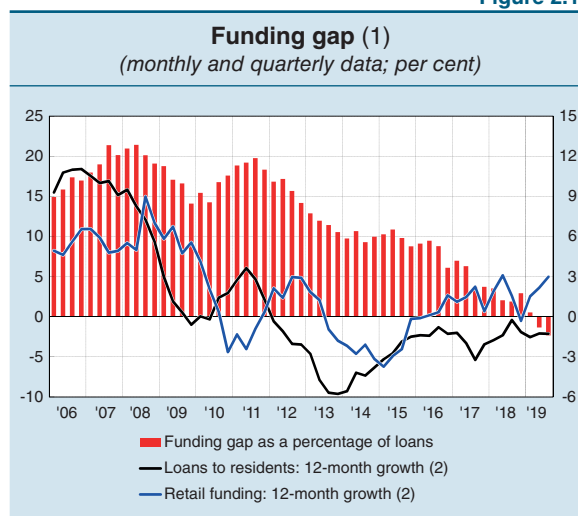
(1) Adjusted for reclassifications, value adjustments and exchange rate variations. Changes in loans are adjusted for securitizations. – (2) Excludes transactions with central counterparties. – (3) Excludes bonds of resident MFIs, i.e. banks and money market funds. – (4) Includes the accounts with the Eurosystem for monetary policy operations; see Tables 3.3a and 3.3b in 'Banks and Money: National Data', Banca d'Italia, Statistics Series. – (5) Only repos. – (6) Includes bonds issued by resident MFIs and loans to resident MFIs. – (7) Includes: cash, money market fund units, derivatives, movable and immovable goods, and some minor items. – (8) Excludes bonds held by resident MFIs. – (9) Includes bonds held by resident MFIs and deposits of resident MFIs. – (10) Includes derivatives, deposits with a maturity above 2 years held by vehicle companies and some residual items.

Bond issues on the international markets continued the recovery that began at the start of the year, following the easing of tensions on the government securities market. From May to October, net issues amounted to €11.9 billion (Figure 2.16.a). Gross issues involved senior covered securities for €3.8 billion. Moreover, senior unsecured issues amounted to €10.9 billion, senior non-preferred securities to €2.2 billion and subordinated securities to €2.4 billion. These issues are all eligible for use in the calculation of the minimum requirement for own funds and eligible liabilities (MREL) subject to bail-in, part of which must in any event include senior non-preferred or subordinated securities.

The decline in Italian government bond yields was positively reflected in the prices of bank bonds in the secondary market, which returned to the levels present at the start of 2018. Since the end of April, the average yield on listed senior unsecured 5-year bank bonds has fallen by about 40 basis points to 0.7 per cent, while that on covered bonds has declined to virtually nil (Figure 2.16.b). The spread between the yields on senior unsecured bonds of Italian banks and those of German, French and Spanish banks narrowed to 0.4, 0.6 and 0.1 percentage points respectively. The average yield on 5-year subordinated bonds issued by Italian banks also declined, falling by 0.3 points to 2.7 per cent.

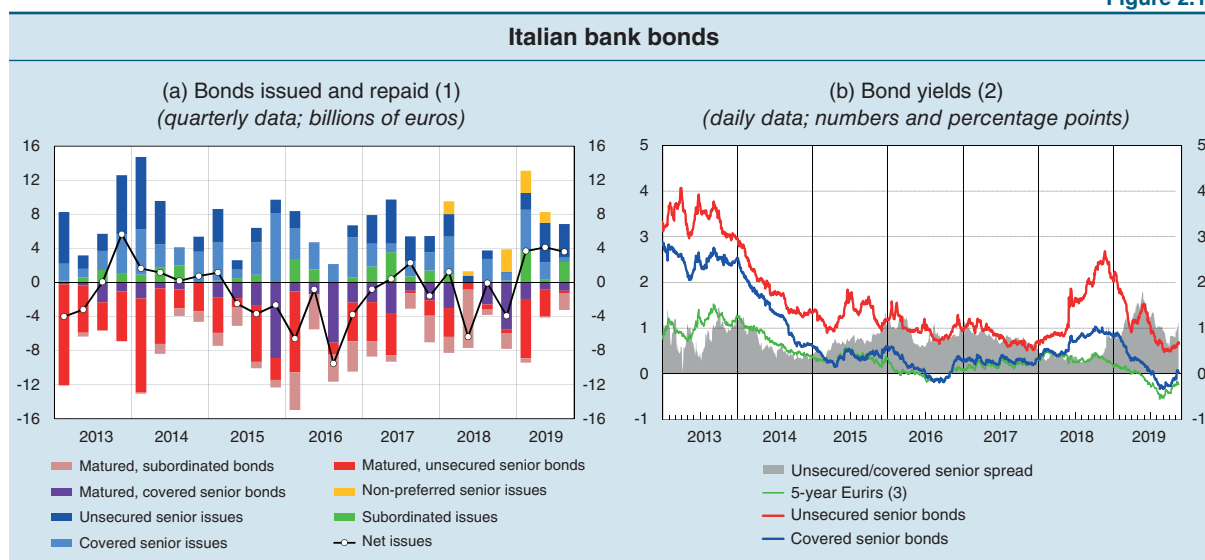
By 2023, some €171 billion worth of bank bonds will have matured, with senior non-preferred securities accounting for €3 billion and subordinated securities accounting for €13 billion. In addition

Figure 2.15



Source: Supervisory reports. Excludes Cassa Depositi e Prestiti SpA and branches of foreign banks in Italy. (1) Retail funding consists of 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 on international markets. Does not include issues retained on issuers' balance sheets and those earmarked for the retail market. Includes bonds deriving from securitization operations. – (2) Yields at maturity of Italian bank bonds with a residual maturity of 5 years. – (3) Average interest rate applied by the main European credit institutions to 5-year swap contracts.

to the rolling over of maturing bonds, other funding needs relate to the MREL requirement (which will be fully implemented in 2024), for which it is estimated that new issues totalling between €32 billion and €55 billion will be needed, depending on the share of senior non-preferred or subordinated instruments required by the resolution authority.³

The liquidity coverage ratio (LCR) has remained well above the regulatory minimum of 100 per cent. The net liquidity position, valued at one month and at three months, has increased for every category of bank (Table 2.3).

Table 2.3

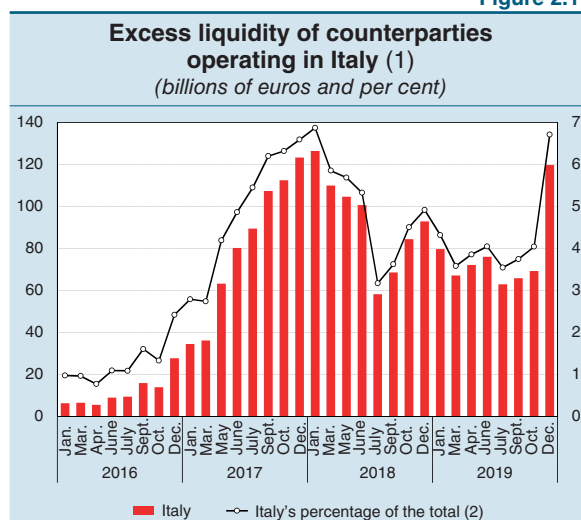
Liquidity indicators of Italian banks (per cent; September 2019)			
	LCR	Net liquidity position at 1 month	Net liquidity position at 3 months
Significant banks (1)	165.4	16.8	15.8
Less significant banks (2)	286.1	20.1	19.4
Total banking system	176.5	17.0	16.0

Source: Consolidated supervisory reports for banking groups; individual supervisory reports for banks not belonging to a group.
(1) Banks directly supervised by the ECB. – (2) Banks supervised by the Bank of Italy in cooperation with the ECB.

At the end of September, recourse to Eurosystem refinancing on the part of the counterparties operating in Italy stood at €234 billion, a decline of €6 billion from March; the decrease was largely attributable to some early redemptions of the targeted longer-term refinancing operations introduced in 2016 (TLTRO II) and to the lower participation in weekly transactions. The maximum liquidity amount that Italian banks may request under the new series of refinancing operations, TLTRO III (see Section 1.1), is just over the current amount under TLTRO II.⁴ The new operations will help to manage the expiration of the TLTRO II operations, which will occur between June 2020 and March 2021, extending the residual maturity of central bank loans and making it possible for banks to gradually substitute the expiring Eurosystem loans with other funding sources.

The new system for excess reserve remuneration, which introduced the exclusion of part of institutions' excess liquidity holdings from negative remuneration (see Section 1.1), has driven Italian banks to increase their stocks. The excess liquidity held by Italian intermediaries with the

Figure 2.17



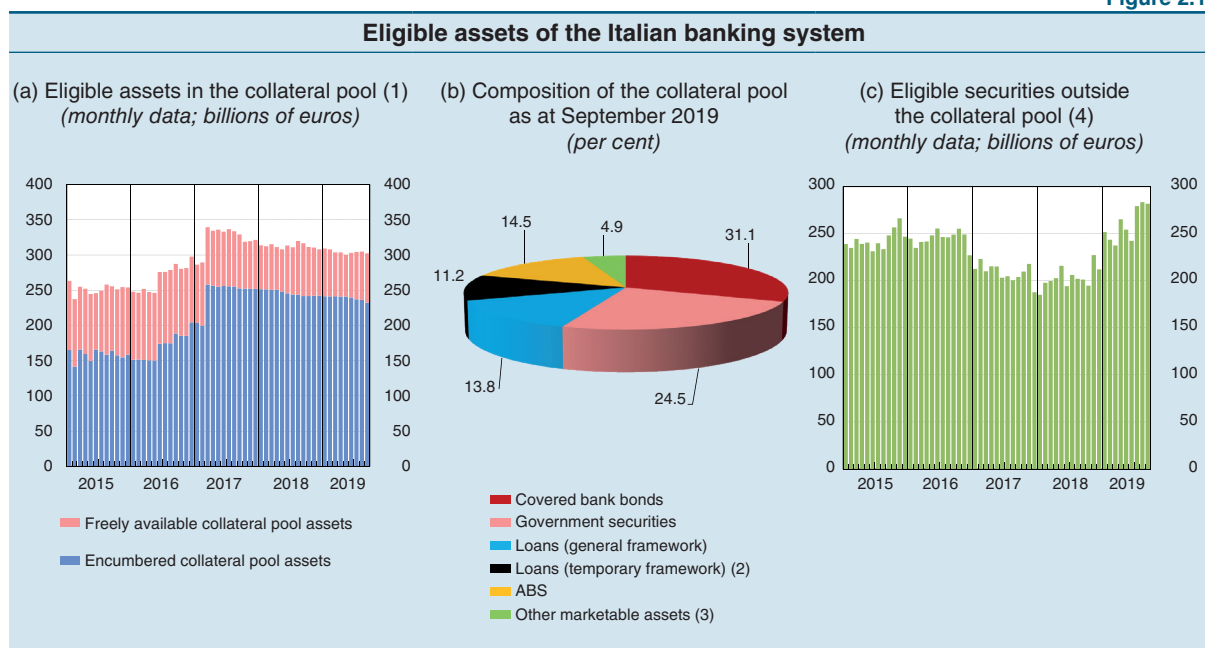
Sources: Based on ECB and Bank of Italy data.

(1) The data indicated on the x-axis refer to the month ending each maintenance period. The exception is December 2019, for which the data cover up to 15 November. Excess liquidity is calculated as the sum of banks' average reserve balances, net of the reserve requirement, plus average recourse to the deposit facility. – (2) Right-hand scale.

³ The Bank Recovery and Resolution Directive (2019/879/EU, BRRD2), approved in June of this year, in fact allows the resolution authorities to increase the share of the requirement that must be met through senior non-preferred or subordinated instruments, depending on the intermediary's specific situation.

⁴ TLTRO III counterparties are entitled to borrow up to a total of 30 per cent of the stock of eligible loans as at 28 February 2019.

Figure 2.18



Sources: Based on Eurosystem data and supervisory reports.

(1) End-of-period data for the monetary policy counterparties of the Bank of Italy. The volume of encumbered Eurosystem collateral pool assets includes the part covering accrued interest and refinancing in dollars. The collateral pool is valued at the prices taken from the Common Eurosystem Pricing Hub, net of haircuts. – (2) Under the temporary framework, the eligibility criteria for assets that can be used as collateral are set by the individual national central banks pursuant to the rules provided by the ECB Governing Council (under the general framework, the criteria are set according to common rules that are applicable to the entire Eurosystem). – (3) Includes bank bonds, including those backed by the state guarantee scheme, and securities issued by non-financial corporations and international organizations. – (4) End-of-period data for the entire banking system, not including Cassa Depositi e Prestiti SpA. Amounts at market values as reported by the banks, net of the haircuts applied by the Eurosystem.

central bank during the maintenance period which began on 30 October increased, compared with the previous period, from €70 billion to €120 billion (Figure 2.17).

At the end of September, Italian banks had about €300 billion worth of assets on deposit with the Bank of Italy, eligible for use as collateral for Eurosystem refinancing operations (collateral pool; Figure 2.18.a), the same level recorded in March. The share of collateral in the form of bank loans, including those used in securitized instruments such as covered bonds and asset-backed securities (ABS), remained stable at 71 per cent (Figure 2.18.b), of which more than 11 percentage points consisted of loans granted under the temporary ‘additional credit claims’ framework.⁵ A growing number of counterparties use the loans as guarantees. The higher prices for Italian government securities resulted in a slight increase in their weight in the collateral pool (to 24 per cent), notwithstanding a decline in the nominal amount posted as collateral.

In the first nine months of the year, the significant decline in Italian banks’ net foreign debtor position on the repo market (see Section 2.1) resulted in a marked increase in the securities eligible for use as collateral in Eurosystem operations that are available outside the collateral pool, which rose by about €70 billion to about €280 billion (Figure 2.18.c). According to our estimates, in the first half of November, with the recovery in external funding tied to the new system for excess reserve remuneration, securities outside the collateral pool declined by about €25 billion compared with the September level. The asset encumbrance ratio, which declined in the second and third quarters of the year, seems to have returned

⁵ In September, the ECB Governing Council extended the duration of this framework to the end of March 2024, aligning it with the maturity date of the final TLTRO III operations; see the ECB website: ‘Decisions taken by the Governing Council of the ECB (in addition to decisions setting interest rates)’, September 2019.

in November to the levels recorded at the end of March, to around 28 per cent.

Market risk and interest rate risk

According to our estimates for the Value at Risk (VaR) of the banking system as a whole, market risk increased in the third quarter, owing to both the greater volatility of public sector securities during that period and the higher value of the exposures due to the rise in prices of portfolio securities. In September, the VaR was about double the minimum level reached in the first part of 2018 (Figure 2.19).

The exposure of Italian significant banks to interest rate risk remains moderate overall and below the threshold set in the EBA Guidelines.⁶ Based on June data, the various interest rate scenarios examined⁷ would result in an average reduction⁸ in the economic value of the banking book of between 1.3 and 5.4 per cent of tier 1 capital (Figure 2.20.a). The worst case scenario for banks in terms of higher losses and more heterogeneous results is seen with an upward parallel shift in the yield curve of 200 basis points. In this case, 5 out of 11 groups would suffer losses of between 1.3 and 8.2 per cent of tier 1 capital (between 0.1 and 0.4 per cent in terms of total assets), while the other 6 groups would benefit from an increase in value of between 0.1 and 4.6 per cent of tier 1 capital; the effect on net interest income⁹ would instead be positive for all intermediaries, with an average increase of 4.5 per cent of tier 1 capital (Figure 2.20.b).

Capital and profitability

The capital strengthening of Italian banks is continuing, albeit gradually: in the first half of the year, the ratio between common equity tier 1 and risk-weighted assets (CET1 ratio) rose by about 25 basis points, to 13.5 per cent. The growth in equity of 3 per cent more than offset the 1 per cent increase in risk-weighted assets. In June, the CET1 ratio stood at 13.3 per cent for significant banks and at 16.9 per cent for less significant banks. The growth in the capital adequacy indicators seems to have continued in

Figure 2.19



Sources: Data provided by the five banking groups that use internal models to measure market risk; estimates based on data from supervisory reports, the securities registry and Reuters.
(1) Averages weighted according to the size of each bank's portfolio. VaR is the loss on a portfolio that within a day will not exceed a given confidence level (99 per cent). The indicator relating to the banking system as a whole is calculated using granular data on the stock and the characteristics of the assets in the portfolio of each Italian bank at the end of every month, taking account of the changes in risk factors over the last 500 business days. The indicators for the 5 groups are provided directly by the intermediaries. The base is equal to 100 at the start of January 2013 for the system-wide VaR; for the other two indicators, vis-à-vis the 5 banking groups, the base is calculated as the ratio between the value at the start of January 2013 and the system-wide VaR, in order to represent each intermediary's share of the banking system's total market risk.

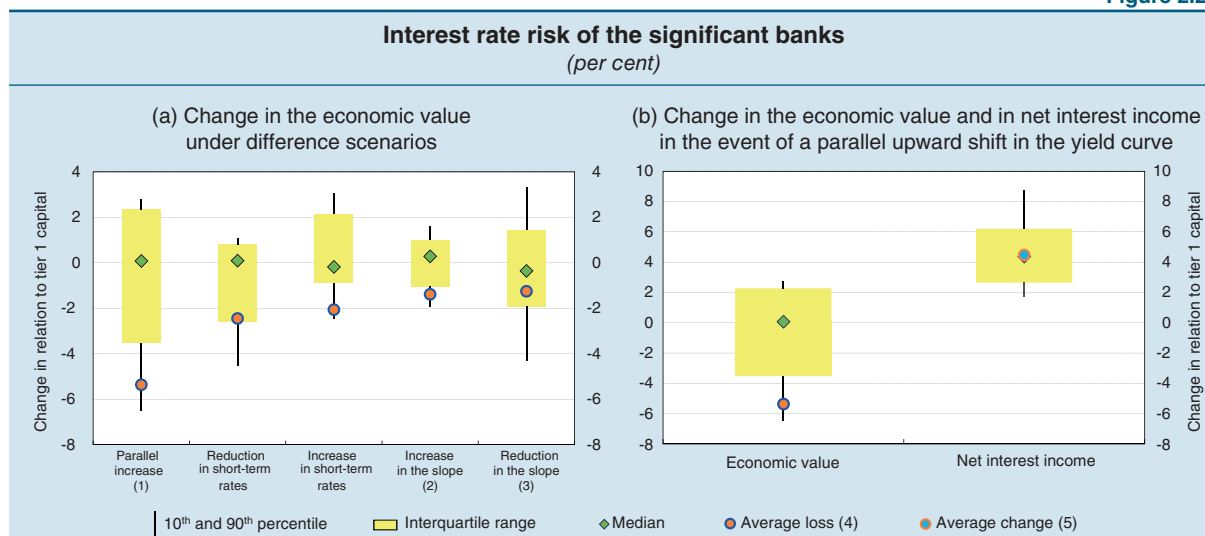
⁶ The exposure to interest rate risk for prudential purposes is calculated by the banks based on EBA guidelines, which were revised last year (EBA, *Guidelines on the management of interest rate risk arising from non-trading book activities*, July 2018). The results are sent to the supervisory authorities for use in the Supervisory Review and Evaluation Process (SREP). The supervisory authorities may adopt measures if the losses exceed 20 per cent of own funds or 15 per cent of tier 1 capital.

⁷ The main scenarios considered are: (a) a parallel increase in the yield curve of 200 basis points; (b) a reduction in short-term rates; (c) an increase in short-term rates; (d) an increase in the slope of the curve (due to the combined effect of a decline in short-term rates and an increase in long-term rates); and (e) a reduction in the slope of the curve (due to the combined effect of an increase in short-term rates and a decline in long-term rates).

⁸ The average reduction is calculated by only taking account of banks with negative exposures.

⁹ Banks are not asked to estimate the effects on net interest income for the other scenarios.

Figure 2.20



Source: Short Term Exercise (STE) data at 30 June 2019 relating to 11 significant banking groups.
 (1) Increase of 200 basis points along the entire risk-free yield curve. – (2) A reduction in short-term rates and an increase in long-term rates. – (3) An increase in short-term rates and a reduction in long-term rates. – (4) Average of the changes in economic value, weighted by tier 1 capital, calculated by taking account of only those banks with negative changes under each scenario. – (5) Average of the changes in net interest income under the scenario with a parallel weighted increase for tier 1 capital.

the third quarter thanks to the increase in the prices of Italian government securities. A re-evaluation, based on the prices recorded at end-September, of the end-June stocks of sovereign securities entered at fair value results in an increase of around 30 basis points in the system-wide average CET1 ratio.¹⁰

At the end of June, the gap between the average capital ratio of significant banks in countries participating in the Single Supervisory Mechanism (SSM) and that of Italian significant banks stood at 1 per cent.¹¹ The leverage ratio, which measures capital adequacy relative to non-risk-weighted assets, is higher for Italian banks (5.8 per cent) than the European average (5.4 per cent).

The Bank of Italy recently carried out a stress test on the less significant banks. The results indicate a good level of resilience overall; however, some of the banks need to improve their capacity to withstand adverse economic conditions (see the box ‘The stress tests on Italian less significant banks’).

THE STRESS TESTS ON ITALIAN LESS SIGNIFICANT BANKS¹

In mid-2019, the Bank of Italy conducted a stress test on a wide sample of less significant institutions (LSIs) which included 97 banks, accounting for 64 per cent of the total assets of the LSI sector and 7 per cent of those of the banking system as a whole. The stress test was carried out with a top-down approach, i.e. by using banks’ supervisory reports, without the involvement of the institutions. Specialized LSIs and

¹ By Maria Alessia Aiello and Francesca Blasi.

¹⁰ The value reported was calculated by including the complete revaluation of the portfolio in banks’ capital, without considering the effects of taxation.

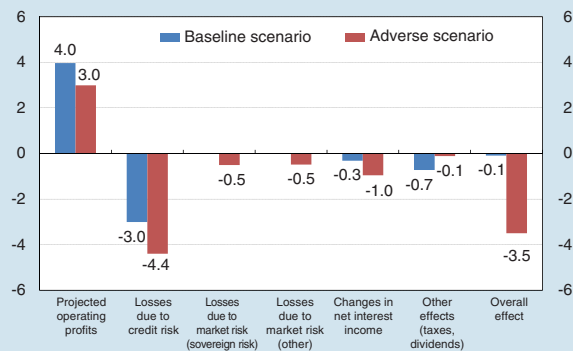
¹¹ The completed reform of the cooperative credit banking sector means that Cassa Centrale Banca has become the twelfth significant banking group for supervisory purposes, while a large number of cooperative credit banks (BCCs) have merged into the ICCREA group, which was already classified as significant prior to the reform. The CET1 ratio for the two new groups was higher than the average for the other Italian significant banks. Without considering these two new significant groups, the gap with the main banks of countries participating in the SSM would be 140 basis points.

LSIs for which a business model change was recently adopted were excluded from the sample. Moreover, the cooperative credit banks (*banche di credito cooperativo*, BCC) that joined the two newly-established significant cooperative credit banking groups at the start of 2019 were also excluded. The stress test, which assessed the banks' resilience over the three-year period 2019-2021 against adverse macroeconomic conditions, also provided input for the Supervisory Review and Evaluation Process (SREP).²

The stress test's starting point data were those as at 31 December 2018. The macroeconomic scenarios consisted of a baseline and an adverse scenario. They were initially defined by the European Central Bank using the macroeconomic projections for Italy published in December 2018;³ they were subsequently updated to take into account the downward revision to the projections made by the Bank of Italy in June 2019⁴ as well as the changes in the main financial variables. The adverse scenario envisaged a severe recession during the three-year period, with a total cumulated decline of 5.9 percentage points in GDP compared with the baseline scenario; it also assumed an increase in Italian government bond yields of between 63 and 125 basis points, depending on their maturity. Based on these scenarios, the projections for the main revenue sources and for the expected losses on loans and portfolio investments were calculated.⁵

Overall, the banks in the sample were broadly resilient to the adverse scenario: the ratio between common equity tier 1 and risk-weighted assets (fully loaded CET1 ratio)⁶ would fall on average by 3.5 percentage points by the end of the three-year period (see the figure). Consistent with the business model of the banks in the sample, which

Overall effect on the CET1 ratio under the baseline and adverse scenarios (percentage points)



² The stress tests conducted annually by the Bank of Italy, together with those carried out by the banks themselves, contribute to setting the non-binding capital requirements (Pillar 2 Guidance), in accordance with the guidelines of the European Banking Authority (EBA). See Bank of Italy Circular No. 269/2008 (Guide to supervisory activities, 11th Update).

³ See the ECB website: 'December 2018 Eurosystem staff macroeconomic projections for the euro area', December 2018.

⁴ Based on these projections, used in the baseline scenario, the overall GDP growth rate would be equal to 1.9 per cent in the period 2019-21, the index of consumer prices and the unemployment rate would reach 1.5 per cent and 10.4 per cent respectively at the end of 2021; see the Bank of Italy website at: 'Macroeconomic projections for the Italian economy (coordinated by the Eurosystem)', 7 June 2019.

⁵ The changes in net interest income were estimated by applying different shocks to the unit yields of interest-bearing assets and to the unit costs of onerous debts according to the sector of the counterparty, the contractual features of the financial instrument and the instrument's residual maturity. When defining the shocks, account was taken of the changes to the risk-free interest rate and to the risk premiums during the reference period. The adverse scenario also assumed that annual net interest income would not exceed the level recorded in 2018. For non-interest income (including fees and dividends), a negative multiple was applied to the values recorded during the previous stress test. Loan losses were calculated by assigning sectoral default rates to the loan portfolio, which were estimated based on the changes to the macro-financial variables over the reference period. The methodology for credit risk takes into account the introduction of the IFRS 9 accounting standard. The losses relating to market risk were computed by applying haircuts to the value of the securities assessed at fair value at December 2018; the haircut varied according to the type of instrument and issuer.

⁶ The fully loaded CET1 ratio anticipates the effects of the initial application of the IFRS 9 accounting standard, whose effects on capital will be fully seen only in 2023.

is based on the traditional model of taking deposits and making loans, the loan portfolio would incur the greatest losses (3.0 percentage points in the baseline scenario and 4.4 in the adverse in terms of risk-weighted assets). Losses on government securities would be relatively contained (0.5 percentage points), partly due to the effects of the increase in 2018 in the share of government securities valued at amortized cost (for which price fluctuations do not affect banks' own funds).

Under the adverse scenario, the CET1 ratio would fall below the Pillar 1 minimum regulatory requirement (4.5 per cent) for six banks, which account for 13 per cent of the total assets of the banks in the sample. For another four banks, which together account for 15 per cent of assets, the CET1 ratio would fall below the threshold of 7 per cent, which includes the 2.5 per cent capital conservation buffer.

Overall, the results are consistent with supervisory assessments, which suggest a difficult outlook for some LSIs with traditional business models. These intermediaries are indeed already subject to a particularly intense level of supervision by the Bank of Italy, in order to increase their ability to withstand adverse economic conditions.

In the first half of 2019, the profitability of Italian banks, excluding extraordinary components, remained stable compared with the year-earlier period.¹² Annualized ROE was 7.1 per cent (Figure 2.21).¹³ The indicator fell by 0.7 percentage points to 6.9 per cent for the significant banks, owing to the drop in income, which was only partially offset by the reduction in operating costs. For the less significant banks, ROE grew by more than 2 percentage points, to 8.7 per cent;¹⁴ net of the very positive performance of a few large banks, ROE would be around half that level. The share of less significant banks reporting negative results went down from 23 to 17 per cent and profitability improved for 58 per cent.

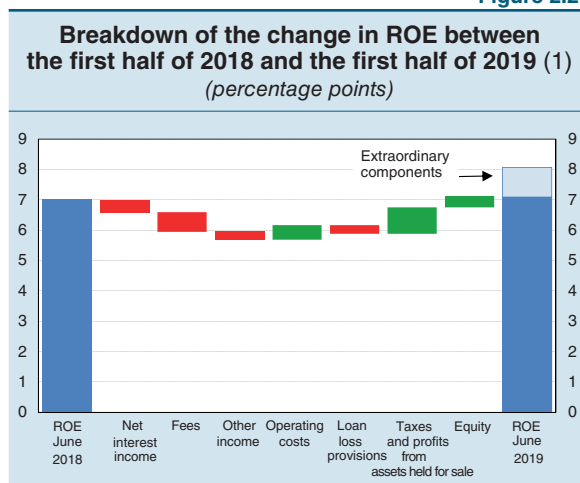
For the sector as a whole, gross income fell by 3.5 per cent as a result of the reduction in net fee income, especially that from asset management, and in net interest income, which was affected by low unit margins. The fall in operating costs has continued (-1.9 per cent), and its impact on the cost-income ratio, which measures operational efficiency, has increased by about 1 percentage point to 66 per cent. The cost of risk, measured by the ratio of loan loss provisions to the average value of the loans, has remained low by historical standards, at 0.7 per cent.

¹² The one-off items refer to the sale made by the UniCredit group of 17 per cent of the share capital of FinecoBank, which generated a capital gain of €1.1 billion.

¹³ Taking account of UniCredit's extraordinary transaction, ROE for Italian banks overall would be 8.1 per cent (8.3 per cent for the significant banks).

¹⁴ For a homogeneous comparison, the data referring to the two categories of banks, unlike banking system data, do not include the cooperative credit banking groups ICCREA and Cassa Centrale Banca.

Figure 2.21



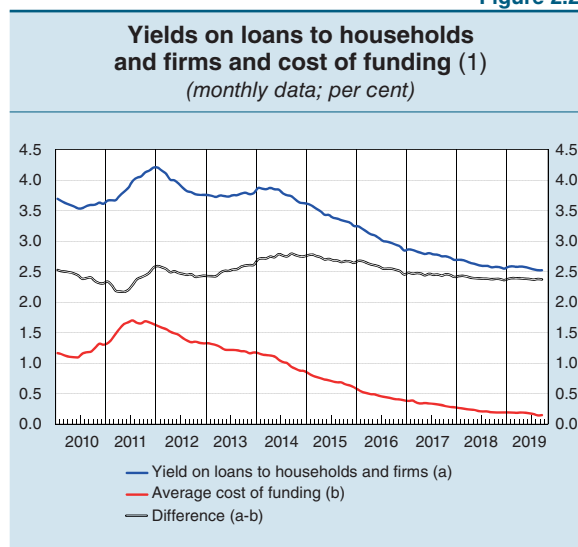
Source: Consolidated supervisory reports for banking groups and individual supervisory reports for the rest of the system.

(1) Changes are expressed as a ratio to own funds and reserves. A green/red bar indicates a positive/negative contribution to ROE at the start of the first half of 2018, giving the final ROE value for the first half of 2019. Data for 2019 are provisional.

The measures adopted by the ECB Governing Council since mid-2014, including the introduction of negative remuneration rates on banking reserves within the Eurosystem, have led to a marked decrease in the interest rates on loans to the non-financial private sector. The reduction of the unit margin has, however, been very limited, as a result of a corresponding decline in the average cost of funding (Figure 2.22). The latter has reached a figure close to zero though, and any further contractions could be curbed by the downward rigidity of interest rates on deposits. In the future, further falls in interest rates on loans could therefore lead to a more pronounced squeezing of margins.

Although interest rate reductions, even when interest rates are negative, have an adverse effect on unit yields, they have positive effects on other components of banks' profitability: they stimulate economic activity and alleviate the financial vulnerability of firms, thereby helping to contain the cost of risk, and they boost the prices of financial assets, allowing intermediaries to make capital gains on the securities held. Looking ahead, the benefits associated with a further fall in interest rates could be lower than those recorded in the past, especially bearing in mind there may be a more marked squeeze on the unit margin on loans.

Figure 2.22



(1) Yields are interest rates on loans to households and firms; the cost of funding is obtained as the average of the interest rates applied to various forms of bank funding weighted by the respective quantities.

2.3 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

Insurance

The average solvency ratio of Italian insurance companies has risen as a result of the sharp reduction in risk premiums on government bonds: in September they had reached 228 per cent,¹⁵ a level that is, however, still lower than in March 2018 (Figure 2.23.a).

The rise in government securities prices also had a positive effect on ROE which, for the life sector, rose to 11 per cent in the first half of 2019 (4 per cent in the same period in 2018; Figure 2.23.b),¹⁶ mainly as a result of the recoveries of portfolio securities. The increase in profitability encouraged an increase in share prices and in analysts' expected profits (Figure 2.24).

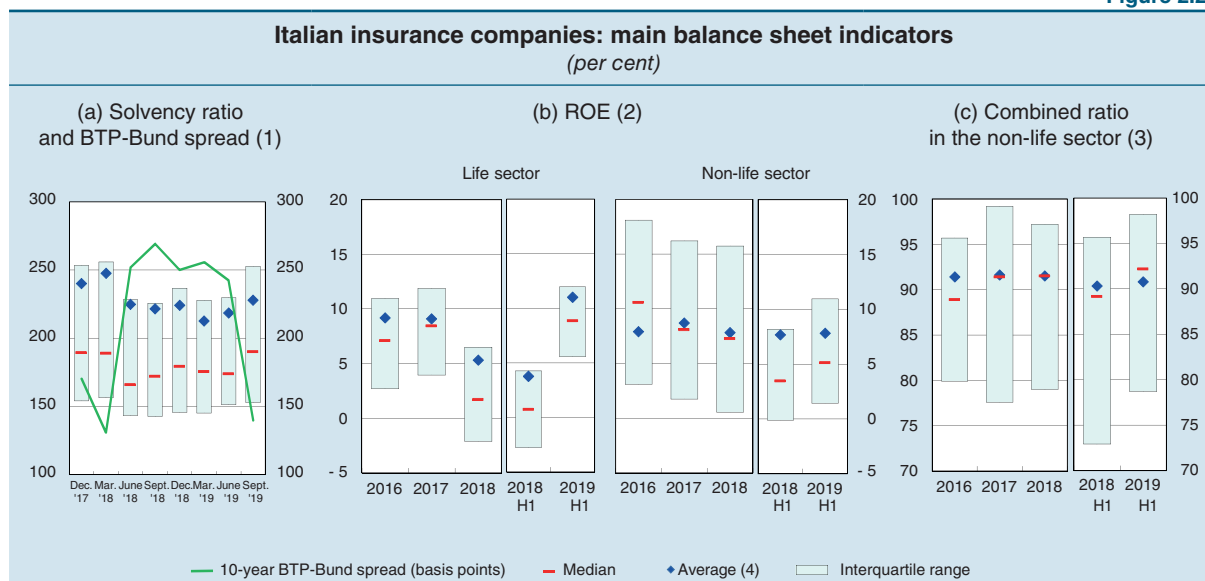
Since last June, the growth in securities prices has led to a significant increase in insurance companies' net latent gains, which reached 13 per cent of total portfolio value (Figure 2.25).

In the first nine months of the year, the value of public sector securities held by insurance companies increased from €360 billion to €414 billion, due to purchases of new securities and also to the revaluation of those already held in the portfolio. At the end of September, government bonds,

¹⁵ For the definition of the solvency ratio, see note (1) to Figure 2.23. The regulations require a ratio of 100 per cent or more.

¹⁶ The data are not annualized.

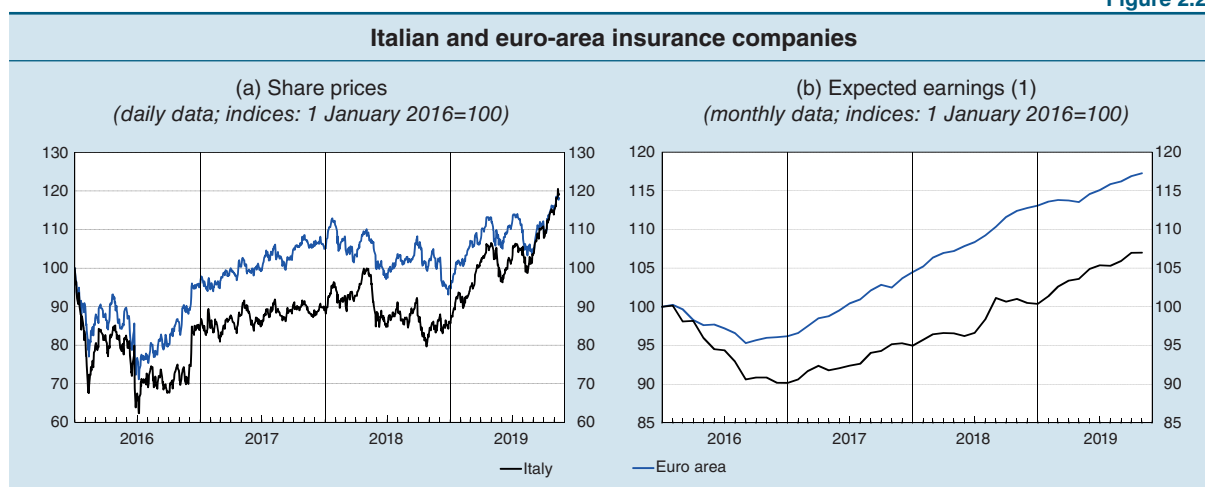
Figure 2.23



Sources: IVASS and Refinitiv.

(1) The solvency ratio is calculated as the ratio of own funds held for coverage to the solvency capital requirement established under Solvency II. The data are taken from the quarterly Solvency II supervisory reports based on the quantitative reporting templates. The BTP-Bund spread is expressed in basis points and refers to the end of each period. – (2) Ratio of earnings to shareholders' equity. The half-yearly ROE data are not annualized and are based on a sample that includes the leading Italian insurance companies. – (3) Ratio of surrenders plus operating expenses to premium income. – (4) Weighted average with weights equal to the denominator of each ratio.

Figure 2.24



Source: Based on Refinitiv data.

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

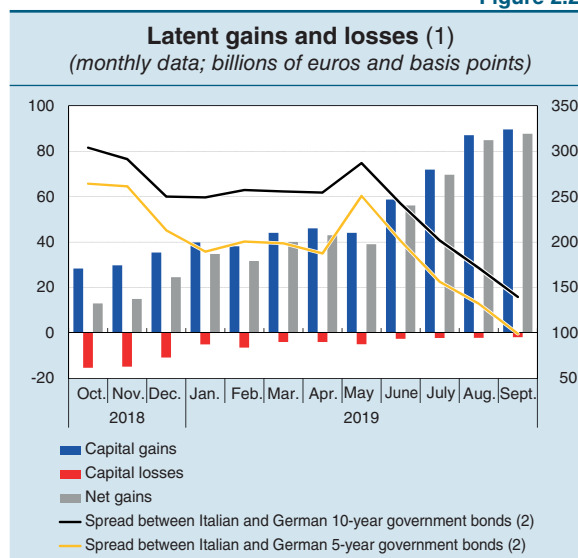
mainly Italian issues, accounted for 52 per cent of all investments whose risk is borne by the insurance companies, a level that is well above the European average (Figure 2.26.a). The share of corporate bonds is still smaller than that of other countries and is mainly made up of securities issued by foreign non-financial corporations with a high credit rating (Figures 2.26.b and 2.26.c).

The quarterly financial vulnerability survey conducted by the Insurance Supervisory Authority (IVASS) on the leading Italian groups and firms shows that the companies making significant

investments (more than 5 per cent of total investment) in high risk and high return financial instruments account for only 4 per cent of the insurance sector's total assets. The share of securities issued by small and medium-sized enterprises in relation to all assets is still extremely low. An incentive to increase these investments could ensue from recent changes to EU legislation on capital requirements,¹⁷ which include a reduction in capital absorption for non-rated bonds, for unlisted equity portfolios and for long-term investments in equity securities.¹⁸

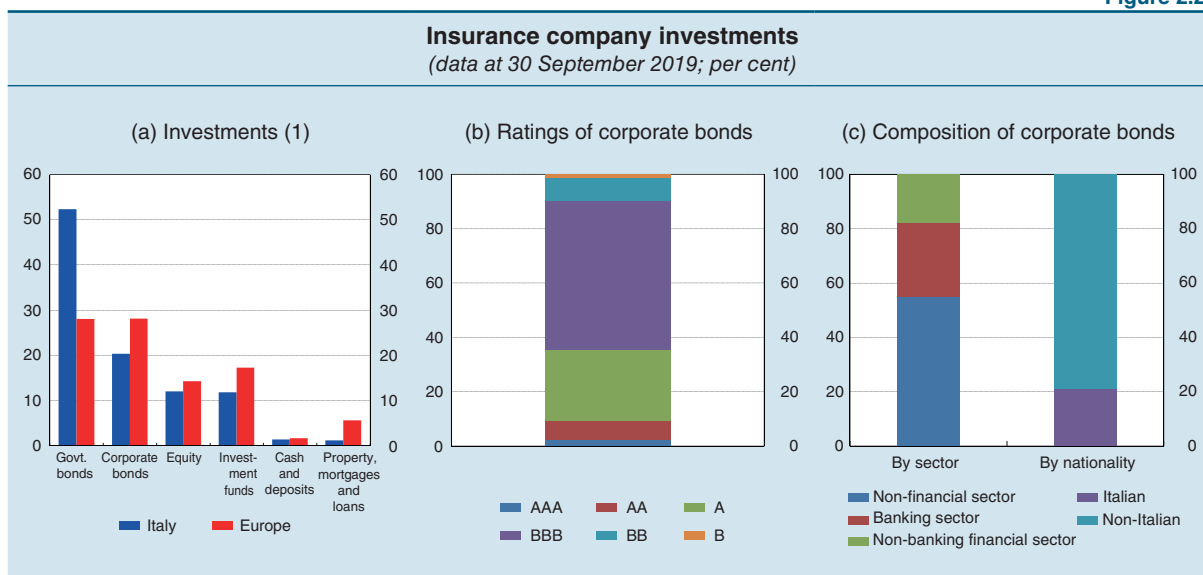
In line with the European average, Italian insurance companies are more exposed to market risk, which accounts for 61 per cent of the basic capital requirement, compared with the technical risks associated with insurance activity (Figure 2.27.a). In particular, Italian insurers are mainly subject to risks linked with varying bond spreads (44 per cent; Figure 2.27.b). The risks associated with a prolonged period of low interest rates appear to be limited (see the box ‘The effects of low interest rates on Italian insurance companies’).

Figure 2.25



Sources: IVASS and Refinitiv.
(1) The latent gains and losses are the difference between the market value and the book value of portfolio securities. – (2) Right-hand scale. End-of-period data.

Figure 2.26

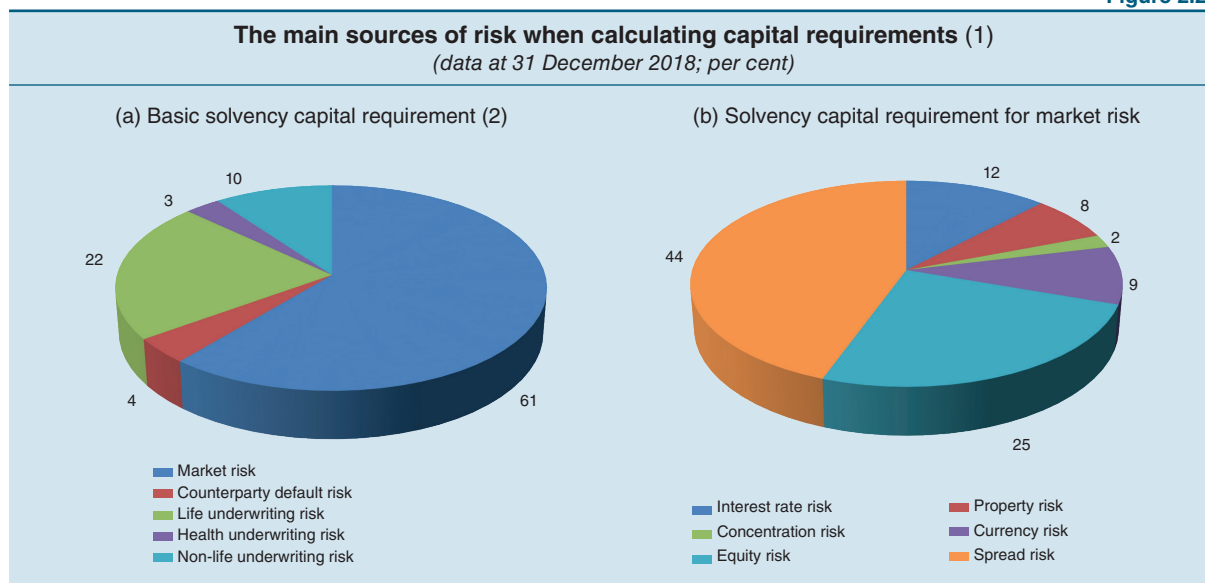


Sources: IVASS and EIOPA.
(1) Data as at 31 March 2019. For Europe, the data refer to the European Economic Area.

¹⁷ Commission Delegated Regulation (EU) 2019/981.

¹⁸ The legislation provides for a reduction in capital absorption for investments in shares and other equity securities with an average holding period of more than 5 years and which satisfy other specific management criteria.

Figure 2.27



Source: IVASS.

(1) The data only consider those companies (82 undertakings representing 57 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 risks (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 taxes.

THE EFFECTS OF LOW INTEREST RATES ON ITALIAN INSURANCE COMPANIES¹

The prolonged low interest rate environment is adversely affecting the profitability and the solvency ratios of insurance companies. In Italy these effects are more limited than in other European countries since there is a good matching of asset durations (mainly government bonds with relatively high yields)² and liability durations (among which traditional life products have guaranteed minimum rates that are generally low).

The stress test conducted in 2018 by the European Insurance and Occupational Pensions Authority (EIOPA)³ confirms that for Italian insurance companies the risks connected with a prolonged scenario of low interest rates are, on average, more limited than for other European insurers (see the box ‘The results of the insurance stress tests’, in *Financial Stability Report*, 1, 2019).

According to the biannual survey carried out by Italy’s Insurance Supervisory Authority (IVASS) on Italian life insurance companies offering guaranteed insurance policies, in June 2019 the additional amount of provisions needed to cover the guarantees implicit in life insurance policies was still very small (0.45 per cent of all mathematical provisions) even in the case of a hypothetical reduction of 100 basis points in the risk-free interest rate curve.

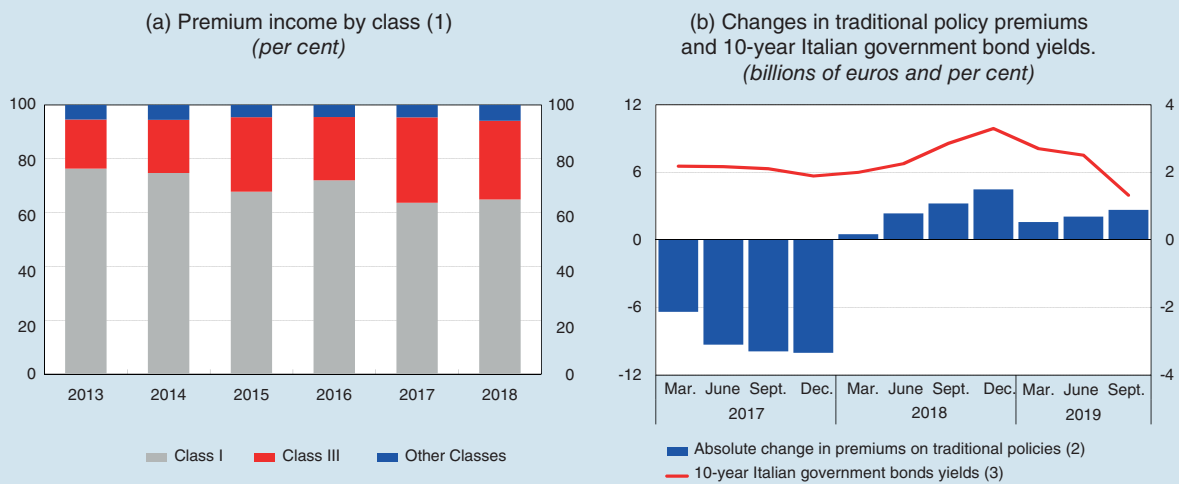
¹ By Federica Pallante (IVASS).

² Segregated funds, which invest mainly in government securities, produced returns of 3.5 per cent on average in 2018.

³ The last European stress test assumed a reduction in risk-free interest rates (by 80 basis points for 10-year residual maturities). It should be noted, however, that at the end of last September the yield curve had fallen below the stress test’s hypothesis: the yield at 10 years was -0.14 per cent on 30 September, against 0.09 per cent in the scenario.

The low risk exposure deriving from the low interest rates is also the result of the Italian insurers' sales strategies in recent years. From 2013 to 2018, the share of traditional life insurance policies with a guaranteed minimum return fell from 76 to 65 per cent (see panel (a) of the figure), while the share of policies where the investment risk is borne entirely or in part by policyholders increased from 18 to 29 per cent. The average duration of traditional life insurance policies sold by Italian insurers is just over 10 years, which is shorter than that of policies sold by insurance companies in some other European countries (for example, it is around 30 years in Germany, Norway and Spain).⁴

Premium income and Italian government bond yields



Sources: IVASS and Refinitiv.

(1) Class I is mainly composed of policies that can be revalued (traditional life insurance policies with guaranteed returns); Class III is mainly composed of unit- and index-linked policies (life insurance policies where policyholders bear the risk); and Other Classes include other kinds of life insurance policies. – (2) The change is calculated in relation to the same quarter in the previous year. – (3) Right-hand scale. Average data in the reference quarter.

Insurance companies have steadily reduced their levels of minimum guaranteed returns and they have changed the characteristics of the guarantees provided. In the first half of 2019, around 80 per cent of new policies had a guaranteed minimum return of zero. Furthermore, the guarantees on new products usually apply to the average return calculated over the full duration of the policy and not to each yearly return, which can therefore be lower than the guaranteed level.

Insurance companies manage the risks associated with the sale of traditional life insurance policies by investing in assets such as government securities, with maturities and yields in line with their guaranteed minimum returns. For this reason, the offer of traditional insurance policies tends to fall as government bond yields decline (see panel (b) of the figure). If the low, or even negative, levels of the medium and long-term interest rates were to decrease further, the insurance companies might no longer be able to offer these policies, with potentially serious repercussions on their profits.⁵

⁴ EIOPA, *Report on long-term guarantees measures and measures on equity risk 2018*, 18 December 2018.

⁵ In 2018 a measure was introduced by IVASS to allow insurance companies to set up a special fund to redistribute, over time, the net profits from the sale of securities. This could have a positive impact on the relaunch of traditional policies with guaranteed minimum returns (up to now, eight insurers have established segregated funds with their own special funds for this purpose). See IVASS, *Order no. 68 of 14 February 2018*, containing amendments to ISVAP regulations nos. 14/2008, 22/2008 and 38/2011, on the subject of segregated funds.

The ratio of surrenders to premiums, an indicator of potential liquidity problems for life insurance companies, remained at historically low levels (42 per cent in September).

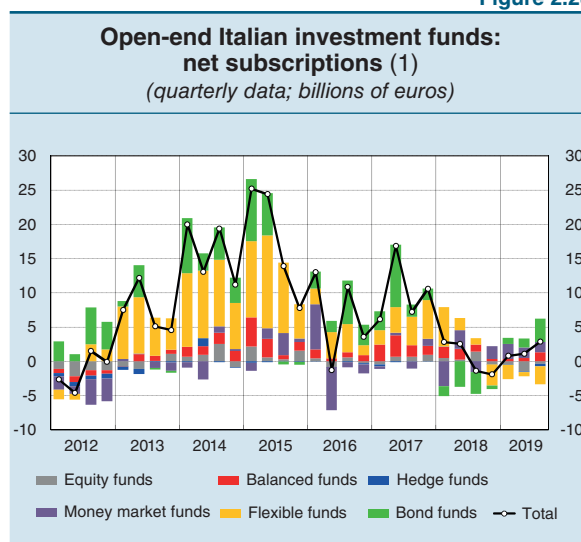
The asset management industry

The period of strong growth in the investment fund sector between 2013 and 2017 when Italian households shifted their portfolio holdings, mainly away from bank bonds, seems to have come to an end. Since 2018 net subscriptions have fluctuated less and are generally in line with market trends (Figure 2.28).

The investment fund sector has grown considerably, now representing around 11 per cent of Italian households' financial assets (against 9 per cent in the euro area as a whole). The reactions of operators in this sector of the finance industry can, therefore, be of systemic importance. In particular, heavy demand from investors for the redemption of their fund shares might lead to fire sales and increase the volatility of financial asset prices, jeopardizing the stability of other financial intermediaries. In Italy these risks are mitigated by prudential regulations that require funds that invest in illiquid assets to establish themselves as closed-end funds.

A simulation exercise conducted on Italian open-end investment funds, for which there is granular data on portfolio composition, shows that their exposure to liquidity risk is fairly limited overall. There is significant risk only in the sectors specialized in high-yield or emerging-market securities, which account for less than 3 per cent of Italian open-end investment funds' total assets (see the box 'The liquidity risk of Italian open-end investment funds').

Figure 2.28



Sources: Assogestioni, supervisory reports and Refinitiv.
(1) Data on funds based in Italy and abroad, managed by asset management companies belonging to Italian groups. The data on the money market segment for Q1 and Q2 of 2016 and for Q1 of 2018 reflect several large transactions by institutional investors. Provisional data for Q3 2019.

THE LIQUIDITY RISK OF ITALIAN OPEN-END INVESTMENT FUNDS¹

The activity of open-end investment funds is exposed to risks associated with the fact that assets and liabilities have different degrees of liquidity. As there are no limitations on the redemption of fund shares on the part of investors, heavy demand may necessitate fire sales, which may lead to a reduction in share values and give rise to further outflows. Such episodes, if widespread, could increase the volatility of financial asset prices, jeopardizing the stability of other financial intermediaries (see the box 'The risks to financial stability arising from the activity of open-end investment funds', in *Financial Stability Report*, 1, 2017).

In September, the European Securities and Markets Authority (ESMA) issued its guidelines for the stress testing of liquidity risk in relation to harmonized open-end investment funds and of alternative

¹ By Dario Portioli and Raffaele Santioni.

funds.² The guidelines set out the scenarios to be applied and measures to be implemented to manage liquidity risk.³ In Italy, the regulations require managers to conduct periodic stress tests to assess the liquidity risk of their funds and also to adopt suitable investment strategies to mitigate it.

ESMA also published the results of a simulation carried out on EU-domiciled bond funds, with the aim of examining their liquidity profile.⁴ The results show that, at European level, in situations of market stress about 40 per cent of high-yield bond funds – about 7 per cent of the funds analysed – would have difficulty in meeting heavy demand for redemptions and there would also be limited problems for funds that invest in emerging market bonds.

A simulation exercise was conducted by the Bank of Italy to evaluate the exposure of Italian investment funds to liquidity risk which, in line with ESMA methodology, estimated funds' resilience to high demand for redemptions. The analysis looked specifically at the bond, balanced and flexible fund sectors whose assets – accounting for 90 per cent of the market (see the table) – generally have a lower degree of liquidity than equity sectors. The exercise was conducted with three reference dates (December 2017, December 2018 and July 2019).

The degree of liquidity of fund assets is assessed based on the methodology used to measure banks' prudential liquidity requirements (HQLA – high quality liquid assets). Compared with ESMA's simulation exercise, this analysis was more precise in that it was able to use granular data taken from supervisory reports on portfolio composition. In the stress scenarios, monthly net redemptions of fund shares in relation to net assets were set, for each of the main sectors, as equal to the average of the values above the 99th percentile of the distribution for the period running from January 2008 to July 2019 (see panel (a) of the figure).

The results of this analysis show that Italian open-end investment funds that mostly invest in bonds have low exposure to liquidity risk overall: in July 2019 barely 2.7 per cent of the total assets of the funds analysed could be classified as 'vulnerable', i.e. funds that in a scenario of market stress would not be able to meet a particularly high demand for redemptions by selling the most liquid part of their own assets. Only funds specialized in the high-yield and emerging-market sectors have any significant exposure: in these cases, the share of vulnerable funds in total sector assets rises to 21.7 per cent (see panel (b) of the figure).

Assets of Italian open-end investment funds
(millions of euros)

	2017	2018	July 2019
Money market	4,108	3,201	2,025
Euro bonds	14,408	12,773	13,052
Global bonds	29,963	28,188	30,024
High-yield and emerging-market bonds	7,263	6,212	6,770
Balanced, flexible and other bond funds	188,274	177,563	179,951
Equity	22,384	19,428	21,606
Total	266,400	247,365	253,428

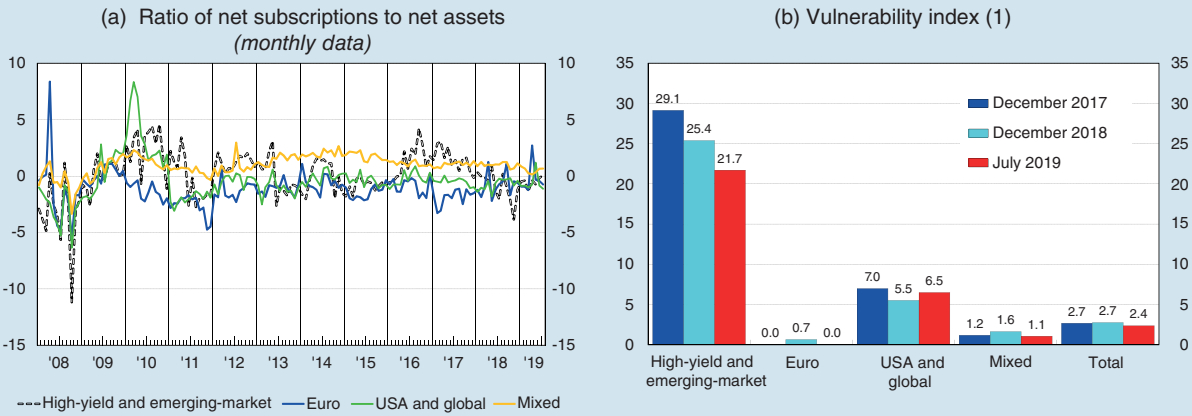
Source: Supervisory reports.

² ESMA, *Final report. Guidelines on liquidity stress testing in UCITS and AIFs*, September 2019.

³ In July 2019, ESMA issued specific guidelines on stress tests for money market funds. In recent years the regulatory framework for this sector has been reviewed both in the European Union (Regulation (EU) 2017/1131) and in the United States, in relation to the systemic importance of these funds, whose portfolios contain monetary instruments issued by governments, banks and firms. Within the EU, money market funds are concentrated in France, Ireland and Luxembourg; the share of funds of this kind domiciled in Italy is marginal. Furthermore, in Italy there are no money market funds with a constant net asset value (CNAV). Such funds are more exposed to liquidity risk in the presence of wide fluctuations in asset values.

⁴ ESMA, *ESMA Economic Report. Stress simulation for investment funds 2019*, September 2019.

The liquidity risk of Italian open-end investment funds (per cent)



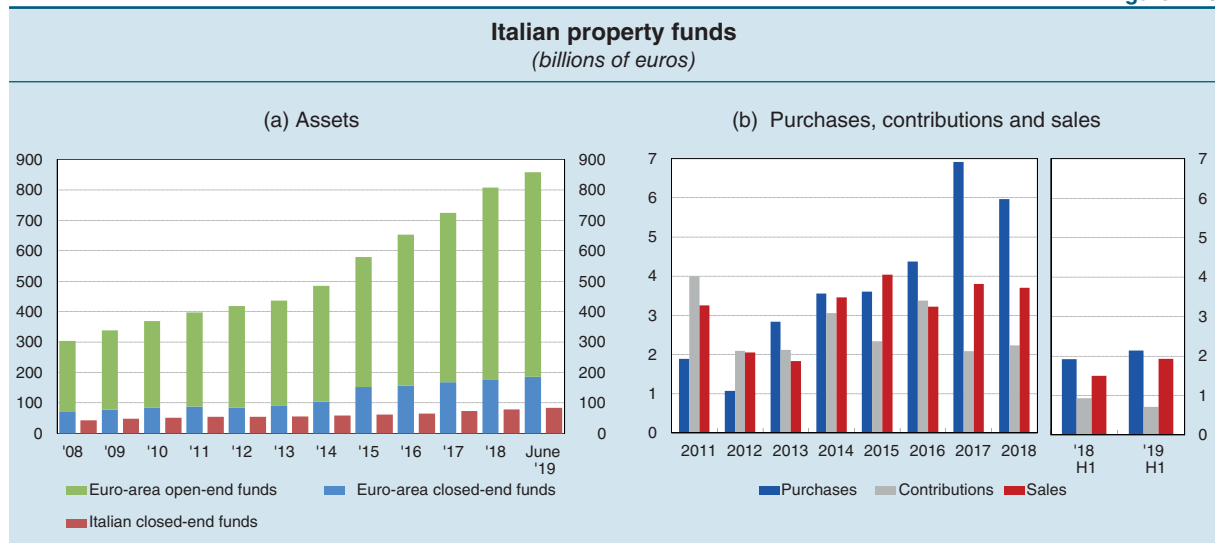
Sources: Supervisory reports and ECB (Centralised Securities Database).

(1) Ratio of vulnerable funds' assets to total sector assets. Vulnerable funds are those whose ratio of assets weighted by their degree of liquidity (HQLA) to net redemptions under the stress scenario is lower than 1.

From December 2017 to July 2019 Italian investment funds' exposure to liquidity risk declined, mainly as a result of assets being shifted towards more liquid positions. The share of assets of vulnerable funds declined by 0.3 percentage points for all funds analysed and by 7.4 percentage points for the funds that mostly invest in the high-yield and emerging-market sectors.

Property funds continue to grow, their assets reaching €82 billion in June (Figure 2.29.a). In the first half of the year, the value of new property transactions on the part of the funds grew by about 10 per cent compared with the same period in 2018 (Figure 2.29.b). The expansion, which only involves the sector reserved to professional investors, is mainly supported by foreign investment, whose market share – valued on a net assets basis – rose to 68 per cent of the funds set up in 2019 (24 per cent in previous

Figure 2.29



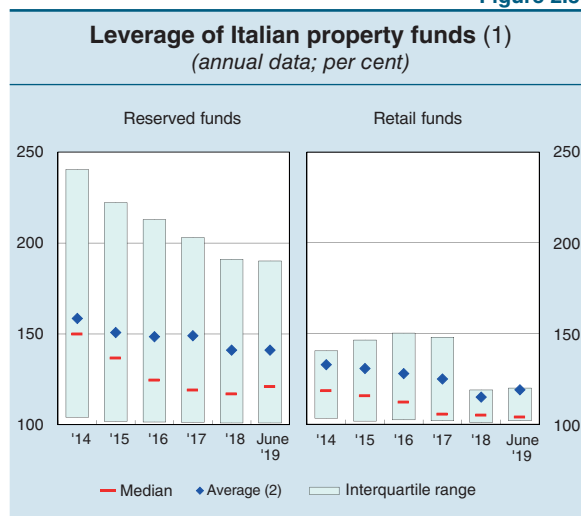
Source: Supervisory reports.

years). Social security institutions and insurance companies play an important role as regards Italian investors. Investments by funds established in 2019 are concentrated in the Milan area (62 per cent, against 38 per cent for other funds) and they almost exclusively involve commercial and office properties (98 per cent, against 83 per cent for pre-existing funds).

The size of the retail property funds sector is declining as existing funds approach maturity and are not being replaced by new funds. Only 14 funds operate in this sector with total net assets below €2 billion, many of which will reach maturity in the next three years.

The risks to financial stability stemming from property funds remain limited. The financial leverage of this sector has remained stable in the half-year period, at historically low levels (Figure 2.30), while the funds established in the last few years have a lower debt level on average if compared with earlier funds. The reserved funds that had negative net assets at the end of June 2019 account for just over 2 per cent of the sector's assets. The overall exposure of banks and other Italian financial intermediaries to this sector is limited (€20 billion, which is around 1 per cent of total loans).

Figure 2.30



Source: Supervisory reports.
(1) Leverage is measured as the ratio of total assets to net equity. —
(2) Weighted average with weights equal to the denominator of each ratio.

3 MACROPRUDENTIAL MEASURES

In Italy, the macrofinancial cycle remains weak. Credit to households is slowing and business lending is decreasing; the difference between the credit-to-GDP ratio and its long-term trend (credit-to-GDP gap) is markedly negative (see Section 1.1). The real-economy indicators closely linked to trends in macrofinancial conditions are signalling consistent developments: house prices continue to fall in real terms and remain significantly below their long-term level; the unemployment rate, while declining, is still high. Against the backdrop of stagnant cyclical conditions, households' financial conditions are sound and those of firms have improved in recent years (see Section 1.2).

In the absence of risks connected with excessive credit growth, the Bank of Italy has kept the countercyclical capital buffer at zero per cent for the whole of 2019 (Table 3.1).¹

Table 3.1

Recent macroprudential policy decisions of the Bank of Italy (1)		
	Decision	Capital requirement (per cent)
21 June 2019	Setting of the CCyB rate for the third quarter of 2019	0.00
28 June 2019	Identification by Italy of material third countries	–
20 September 2019	Setting of the CCyB rate for the fourth quarter of 2019	0.00

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

Last June the Bank of Italy identified four countries as 'material third countries' for the Italian banking system for the purpose of applying the countercyclical capital buffer.² As in 2018, these countries are Russia, Switzerland, Turkey and the United States.³ These four countries have also been identified by the European Systemic Risk Board (ESRB) as material for the European Union and are subject to ESRB

¹ For details on the main macroprudential instruments for the banking system, see Table A8 in *Selected Statistics*.

² With a view to fostering uniformity in the decisions of the individual EU countries regarding the application of a countercyclical capital buffer on their banks' exposures to non-EU countries ('third countries'), the European Systemic Risk Board (ESRB) issued Recommendation ESRB/2015/1, which asks national authorities to (a) identify on an annual basis the third countries to which each jurisdiction has material exposures; (b) monitor the risks stemming from excessive credit growth in those countries; and (c) alert the ESRB to cases in which they consider that the CCyB set by those countries may not be appropriate. Based on these reports or as a result of its own monitoring, the ESRB can recommend that member states set a harmonized CCyB for their exposures to the third countries concerned.

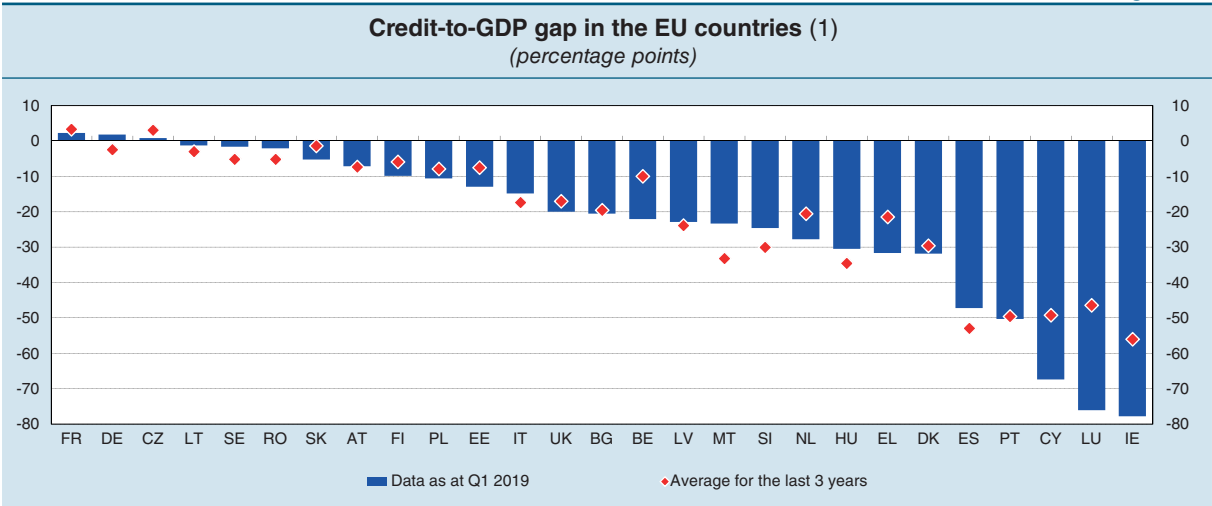
³ The four countries were selected by applying the methodology used by the ESRB to identify, on an annual basis, the third countries to which the EU banking system as a whole has significant exposures, i.e. equal to or greater than 1.0 per cent of its total exposures.

risk monitoring. Therefore, similarly to the approach taken by the authorities of most EU member states, the Bank of Italy decided to rely on the analyses carried out by the ESRB and not to conduct any direct monitoring of the risks associated with those economies.⁴

No later than 1 December 2019 the Bank of Italy will publish its annual decisions on the banking groups identified as systemically important institutions at domestic level ('Other Systemically Important Institutions', O-SIIs). By 15 December, the decision concerning the identification of Global Systemically Important Institutions (G-SIIs) and the capital buffers applicable to them will also be made public. Last year the Bank of Italy identified UniCredit, Intesa Sanpaolo and Banco BPM as O-SIIs;⁵ UniCredit was also identified as a G-SII⁶ (see *Financial Stability Report*, 1, 2019).

In most EU countries the credit-to-GDP gap is negative (Figure 3.1). In several economies, however, other indicators (e.g. growth in credit and in property prices) are signalling developments that are consistent with a strengthening of the financial cycle. Accordingly, the number of member states that have set a positive CCyB rate or expect to raise it in 2020 has gone up (Table 3.2). Moreover, in recent years several countries have adopted macroprudential measures targeted at borrowers to address the vulnerabilities stemming from the rise in property prices and household indebtedness (see the box 'The borrower-based macroprudential measures adopted in the European Union').⁷

Figure 3.1



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

⁴ Recommendation ESRB/2015/1 allows the authorities of member states to decide not to conduct direct monitoring of risks in third countries to which their banks have material exposures if these countries are also material for the entire EU and are subject to monitoring by the ESRB. In addition to the four countries mentioned above, the third countries subject to ESRB monitoring are Brazil, China, Hong Kong and Singapore.

⁵ The additional capital buffer for 2019 was set at 0.50 per cent for UniCredit, 0.38 per cent for Intesa Sanpaolo and 0.06 per cent for Banco BPM.

⁶ For 2019, the UniCredit Group is required to maintain an additional capital buffer of 1.00 per cent of its total risk-weighted exposures. In accordance with European legislation, the UniCredit Group will have to apply either the G-SII or the O-SII requirement, whichever is the higher.

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

Table 3.2

Countercyclical capital buffers in EU countries				
	Rate applicable (per cent)	As of	Rate announced (per cent)	As of
Austria, Croatia, Cyprus, Estonia, Finland, Greece, Hungary, Italy, Latvia, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain	0.00	1.1.2016	–	–
Belgium	0.00	1.1.2016	0.50	1.7.2020
Bulgaria	0.50	1.10.2019	1.00	1.4.2020
Denmark	1.00	30.9.2019	1.50	30.6.2020
France	0.25	1.7.2019	2.00	30.12.2020
Germany	0.00	1.1.2016	0.50	2.4.2020
Ireland	0.00	1.1.2016	0.25	1.7.2020
Lithuania	1.00	5.7.2019	–	–
Luxembourg	1.00	30.6.2019	–	–
United Kingdom	0.00	1.1.2016	0.25	1.1.2020
Czech Republic	1.00	28.11.2018	–	–
Slovakia	1.50	1.7.2019	1.75	1.1.2020
Sweden	1.50	1.8.2019	2.00	1.7.2020
	2.50	19.9.2019	–	1.8.2020

Source: ESRB.

THE BORROWER-BASED MACROPRUDENTIAL MEASURES ADOPTED IN THE EUROPEAN UNION¹

Borrower-based macroprudential measures aim to strengthen the resilience of the financial system by imposing limits on borrowers' risk-taking. In relation to the real estate market, possible instruments include caps on (a) the loan-to-value ratio (LTV) or loan-to-income ratio (LTI), (b) the debt-to-income ratio (DTI) or debt-service-to-income ratio (DSTI), and (c) the maximum maturity and amortization requirements of loans. These measures are not regulated by EU legislation; macroprudential authorities may use them according to their respective domestic legal systems.²

As they act on different risk parameters, these instruments complement each other, and their combined use enhances their effectiveness.³ Imposing a cap on the LTV ratio mitigates creditors' losses in case of

¹ By Wanda Cornacchia.

² With a view to facilitating the harmonization of the definitions and indicators employed in the monitoring of property markets, including those of credit standards, the European Systemic Risk Board (ESRB) issued recommendations regarding measures to close the existing gaps in the availability and comparability of data on the real estate market ('real estate data gaps'). For further details, see Recommendations ESRB/2016/14 and ESRB/2019/3.

³ For a summary of the analyses conducted on the effects of the macroprudential measures, see the box 'The effectiveness of the macroprudential measures adopted in some European countries for the real estate sector: early evidence', *Financial Stability Report*, 2, 2018).

borrower default ('loss given default', LGD). At the same time, by reducing the amount lent against a given amount of real estate collateral, the cap limits the vulnerability of borrowers. The LTV and DSTI caps limit the debt and the ratio of interest to disposable income, thereby decreasing borrowers' probability of default (PD). Limits on the maturity of loans and restrictions on loan amortization requirements are put in place to avoid that very low instalments encourage households to accumulate an excessive amount of debt.

In its recent recommendations concerning the real estate market, the ESRB invited some countries to introduce this type of instruments (see Section 1.1). In recent years various EU countries have already adopted borrower-based measures to address the vulnerabilities stemming from the rise in property prices and in household indebtedness (see the table). In most cases, multiple measures were put in place simultaneously to counter specific national risks.

Borrower-based instruments in EU countries

	Number of countries	Countries
LTV ratio	18	Austria, Cyprus (1), Czech Republic, Denmark, Estonia, Finland, Hungary, Ireland, Latvia, Lithuania, Malta, Netherlands, Poland (1), Portugal, Romania, Slovakia, Slovenia, Sweden
DSTI ratio	13	Austria, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia
Requirements concerning the maximum maturity of loans	9	Estonia, Finland, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovakia
LTI/DTI ratio	5	Czech Republic, Denmark, Ireland, Slovakia, United Kingdom
Amortization requirements	3	Netherlands, Slovakia, Sweden

Source: Based on ESRB data.

(1) Countries that have also activated borrower-based instruments in the commercial property market.

To contain household indebtedness, 18 countries have made use of LTV caps, generally setting the cap for new loans at between 80 and 90 per cent of the value of the property. In the Netherlands, where households have high levels of debt, the LTV cap was gradually reduced to 100 per cent in 2018. In Cyprus and in Poland the cap is lower for non-residential property (70 and 75 per cent respectively) than for homes (80 per cent in both countries). In several cases, for example in Ireland and in Malta, the limit is less stringent for first-time buyers compared with that set for second-time buyers or buy-to-let lending. In Estonia and Latvia, the cap is higher if the State provides additional guarantees, while in Romania and Hungary the limit varies depending on the currency in which the loan is denominated. In Norway the maximum cap was lowered to 60 per cent for second homes located in Oslo.⁴ In some countries (Estonia, Ireland, Malta) a predetermined share of loans may exceed the LTV cap to enable greater flexibility in the granting of loans and to limit circumvention.

Some member states have complemented LTV caps with additional requirements for loans. In Sweden, where the maximum LTV cap is set at 85 per cent, an amortization requirement was introduced for high-LTV loans: those with an LTV ratio ranging from 50 to 70 per cent must amortize at least

⁴ While not an EU member state, Norway is part of the European Economic Area and is therefore subject to the ESRB's monitoring of systemic risks.

1 per cent of their loan each year; for loans with an LTV ratio exceeding 70 per cent, the annual amortization requirement is 2 per cent.

Most countries that have introduced an LTV cap have also activated a DSTI cap (13 countries), generally set at between 40 and 50 per cent. In Poland, Romania, Slovenia and Hungary the DSTI cap varies according to the features of the mortgage loan (fixed vs. variable rate, maturity, denomination currency) or the borrower's income. In Estonia, Lithuania, Malta and Slovakia the DSTI cap was set assuming an increase in interest rates in order to strengthen households' ability to deal with potential adverse shocks.

Instruments that consider the amount of debt in relation to income, such as LTI or DTI caps, were activated less frequently. Denmark introduced wealth requirements for new borrowers⁵ in cases in which the DTI exceeds the value of 4 and the loan is taken out for the purchase of property located in areas marked by significant increases in property prices (Copenhagen and Århus); moreover, interest rate restrictions⁶ were introduced for highly indebted households (DTI ratio greater than 4) holding risky loans (LTV ratio greater than 60 per cent). In addition to imposing an LTI cap, Ireland and the United Kingdom require banks to conduct a test to assess the impact of an increase in interest rates on the sustainability of a borrower's debt.

Finally, several countries have introduced limits to the maximum maturity of loans, generally around 30 to 35 years. There are however some exceptions: 25 years in Finland, 25 years in Malta (but 40 years for first-home buyers) and 40 years in Portugal.

⁵ Borrowers must have net wealth that will still be positive if the property loses 10 per cent of its value (if the DTI ratio ranges between 4 and 5) or 25 per cent (if the DTI ratio exceeds 5).

⁶ These requirements provide that (a) the interest rate should remain fixed for at least 5 years and (b) repayments may be deferred only in the case of 30-year fixed-rate loans.

In all EU countries – with the exception of Italy – a national macroprudential authority has been established in recent years, as recommended by the ESRB.⁸ The presence of these authorities, which are responsible for steering and conducting macroprudential policies with the objective of contributing to preserving the stability of the financial system as a whole, makes it possible to monitor systemic risks more effectively, especially those that cut across different economic sectors. It also enables improvements in the collection of data useful for pursuing the goal of financial stability and, if the authority is established in the form of a board, it makes coordination between the various national supervisory authorities more efficient.

⁸ Recommendation ESRB/2011/3 on the macroprudential mandate of national authorities. The Bank of Italy is the national designated authority responsible, in coordination with the European Central Bank (ECB), for activating in Italy the macroprudential instruments for banks provided for in EU legislation. However, a national macroprudential authority, as recommended by the ESRB, has not yet been established. Legislative Decree 170/2016 delegated the government to establish an Italian macroprudential policies board, but the delegated powers were not exercised before the deadline of 16 September 2017 provided for in the decree.

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 (4)		External position statistics (6)		
		Level (2)		Average residual life of govt. securities (3) (years)	Non-residents' share (% of public debt)			Households	Non-financial firms	Current account balance	Net International investment position	
2019	2020	2019	2020	2019	2018	2019	2017	2019	2019	2019	2019	
Italy	0.1	0.4	136.2	136.8	6.7	29.4	1.3	2.9	41.3	68.9	2.8	-2.2
Germany	0.4	1.0	59.2	56.8	5.9	49.3	2.1	1.7	54.2	59.1	7.1	66.3
France	1.3	1.3	98.9	98.9	7.5	52.8	-1.6	-0.1	60.7	154.3	-0.7	-20.9
Spain	1.9	1.5	96.7	96.6	7.4	49.5	-0.1	2.3	58.6	94.5	1.8	-79.9
Netherlands	1.7	1.3	48.9	47.1	7.2	43.7	2.2	3.0	101.6	164.9	10.3	78.0
Belgium	1.1	1.0	99.5	99.6	9.7	57.1	0.2	4.3	60.6	149.9	-1.3	44.8
Austria	1.5	1.4	69.9	67.2	9.9	72.9	1.9	2.6	49.4	93.1	1.8	6.8
Finland	1.4	1.1	59.2	59.3	6.5	67.1	-0.3	2.7	65.1	114.3	-1.1	3.5
Greece	1.8	2.3	175.2	169.3	....	....	4.3	....	55.0	54.2	-2.5	-150.9
Portugal	2.0	1.7	119.5	117.1	6.2	54.3	3.0	0.7	65.5	100.5	-1.1	-104.4
Ireland	5.6	3.5	59.0	53.9	10.0	63.2	1.6	3.3	40.4	200.9	-0.9	-166.0
Euro area	1.1	1.2	86.4	85.1	....	....	0.9	1.8	57.8	107.9	2.7	-2.1
United Kingdom	1.3	1.4	85.2	84.7	15.0	33.5	0.0	3.0	83.5	75.5	-5.0	-13.6
United States	2.4	2.1	106.2	108.0	5.7	30.7	-3.6	....	75.0	75.0	-2.5	-50.2
Japan	0.9	0.5	237.7	237.6	8.0	11.7	-2.9	....	56.0	101.6	3.4	66.1
Canada	1.5	1.8	87.5	85.0	5.5	22.3	-0.5	....	100.9	118.8	-2.2	30.6

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 2019*, November 2019. For the non-European countries, IMF, *World Economic Outlook*, October 2019. – (2) For the European countries, European Commission, *European Economic Forecast. Autumn 2019*, November 2019. For the non-European countries, IMF, *Fiscal Monitor*, October 2019. – (3) IMF, *Fiscal Monitor*, October 2019. – (4) European Commission, *Fiscal Sustainability Report 2018*, January 2019. 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 2019. 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 2019. Data for the European countries and for the euro area as a whole are from Eurostat, Statistics Database and ECB, Statistical Data Warehouse; data for the non-European countries are from national sources

Table A2

Italian banks' non-performing loans and guarantees by counterparty sector (1)
(billions of euros; per cent; June 2019)

	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	115	16.8	53	8.5	54	24	62.1
<i>of which:</i> manufacturing	22	11.8	9	5.2	7	5	63.3
construction (5)	32	39.4	14	23.2	16	6	62.8
services	55	15.3	26	7.9	27	12	62.0
<i>of which:</i> bad loans	60	8.7	19	3.1	25	16	76.7
<i>of which:</i> manufacturing	12	6.4	3	1.9	4	4	80.4
construction (5)	16	19.9	5	8.6	8	4	74.7
services	29	8.0	10	2.9	12	8	75.7
Consumer households							
Non-performing customer loans	29	5.7	15	3.0	20	1	69.7
<i>of which:</i> bad loans	18	3.5	7	1.4	12	1	79.0
Total (6)							
Non-performing customer loans	151	10.0	71	5.0	76	25	62.8
<i>of which:</i> bad loans	80	5.3	27	1.9	38	17	76.8

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 2019 came to about €5 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 A3

Exposures of Italian groups and banks to foreign residents by counterparty sector (1)
(billions of euros; per cent; June 2019)

	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)	109.2	75.0	39.9	198.9	423.0	0.0	2.4	16.2
Other industrialized countries	38.5	22.8	30.3	32.2	123.7	4.9	0.3	4.8
<i>of which:</i> United Kingdom	2.7	13.2	15.8	6.4	38.0	5.3	0.8	1.5
Emerging and developing countries	53.7	15.3	6.5	89.8	165.3	6.4	1.7	6.3
Europe	45.8	8.8	5.5	78.1	138.2	6.9	10.0	5.3
<i>of which:</i> Russia	3.1	1.3	0.4	16.1	20.9	6.9	22.1	0.8
Turkey	0.6	4.5	2.8	2.7	10.6	-12.2	1.8	0.4
Africa and the Middle East	5.3	2.2	0.3	5.9	13.7	0.1	2.6	0.5
Asia and Pacific	1.4	2.7	0.6	3.5	8.1	1.3	0.1	0.3
Central and South America	1.3	1.7	0.1	2.3	5.3	18.7	0.4	0.2
<i>of which:</i> Argentina	0.0	0.0	0.0	0.0	0.1	-18.3	0.2	0.0
Brazil	0.1	1.5	0.0	0.2	1.8	-3.9	0.6	0.1
Mexico	0.4	0.0	0.1	1.1	1.6	33.5	0.4	0.1
Offshore centres	0.2	0.5	2.6	5.3	8.6	9.5	0.3	0.3
Total	201.6	113.7	79.3	326.0	720.6	2.4	1.0	27.7
<i>Memorandum item</i>								
Energy-exporting emerging and developing countries (4)	5.3	3.2	0.5	19.9	28.8	4.0	5.7	1.1

Source: Consolidated supervisory reports for banking groups, individual supervisory reports for the rest of the system.

(1) Exposure to 'ultimate borrowers', gross of bad loans and net of provisions. Does not include Cassa Depositi e Prestiti. – (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 31 March 2019. – (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 A4

**Investment by Italian and euro-area banks in public sector securities
issued in the banks' country of residence (1)**
(millions of euros; per cent)

	Italy (2)			Euro area		
	Stocks	Net purchases	Share of total assets (3)	Stocks	Net purchases	Share of total assets
2012	322,686	90,128	8.9	1,251,226	213,410	3.8
2013	375,081	45,331	10.9	1,313,179	46,354	4.3
2014	383,645	-4,299	11.0	1,370,727	6,792	4.4
2015 – Q1	393,047	2,594	11.1	1,380,572	2,841	4.3
Q2	378,701	-2,882	10.9	1,343,751	-11,320	4.3
Q3	374,595	-8,708	10.9	1,337,991	-13,333	4.3
Q4	364,361	-11,903	10.6	1,295,539	-44,385	4.2
2016 – Q1	366,322	547	10.6	1,328,565	30,269	4.3
Q2	369,482	3,950	10.6	1,325,190	-5,692	4.2
Q3	353,172	-16,364	10.3	1,257,295	-69,719	4.0
Q4	333,329	-14,779	9.8	1,205,130	-44,092	3.9
2017 – Jan.	336,266	6,586	10.0	1,198,660	1,524	3.8
Feb.	339,458	2,996	10.0	1,201,775	1,925	3.8
Mar.	349,081	10,286	10.1	1,205,394	4,687	3.8
Apr.	350,322	2,508	10.2	1,201,813	-3,963	3.8
May	341,318	-9,751	10.1	1,194,047	-8,988	3.8
June	323,068	-19,751	9.5	1,160,057	-34,171	3.7
July	326,959	3,629	9.6	1,150,184	-10,194	3.7
Aug.	325,690	-1,361	9.7	1,155,127	3,771	3.7
Sept.	319,447	-5,658	9.5	1,144,863	-7,448	3.7
Oct.	309,543	-11,993	9.2	1,120,354	-21,475	3.6
Nov.	295,727	-14,557	8.7	1,108,673	-14,017	3.6
Dec.	283,734	-9,649	8.5	1,074,168	-31,587	3.5
2018 – Jan.	293,267	9,483	8.7	1,094,904	20,485	3.6
Feb.	295,690	2,591	8.9	1,092,268	-1,593	3.6
Mar.	296,365	-1,311	8.8	1,083,121	-13,476	3.5
Apr.	298,592	2,074	8.8	1,073,877	-9,593	3.5
May	307,126	22,572	9.0	1,085,980	30,607	3.5
June	321,700	12,693	9.5	1,093,860	4,493	3.5
July	324,557	3,727	9.7	1,089,111	-3,205	3.5
Ago.	317,692	559	9.5	1,078,913	380	3.5
Sept.	320,687	-334	9.5	1,073,859	-8,894	3.5
Oct.	323,906	5,530	9.7	1,068,229	-3,067	3.4
Nov.	328,468	1,879	9.9	1,073,890	2,553	3.4
Dec.	318,441	-15,491	9.7	1,053,026	-27,708	3.4
2019 – Jan.	330,049	9,380	10.0	1,085,414	29,278	3.4
Feb.	334,307	6,472	10.1	1,103,430	21,255	3.5
Mar.	333,046	-3,476	9.9	1,093,887	-13,348	3.4
Apr.	339,415	6,267	10.1	1,086,189	-8,251	3.4
May	336,450	-936	10.0	1,094,257	9,098	3.3
June	330,770	-11,365	9.8	1,072,074	-31,036	3.3
July	339,340	3,277	10.0	1,085,395	5,427	3.3
Aug.	338,508	-4,867	9.9	1,083,799	-8,435	3.2
Sept.	333,948	-6,104	9.7	1,086,631	-368	3.2

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. The stock of Italian public sector securities in portfolios was revised starting in 2013, following the extension of the perimeter of general government as defined by Istat in agreement with Eurostat. – (3) The 'total assets' series does not include bond repurchases.

Table A5

Italian banks' bonds by holder and maturity (1)
(millions of euros; September 2019)

	Maturity					Total
	by 2019	between 2020 and 2021	between 2022 and 2023	between 2024 and 2028	beyond 2028	
Households (2)	3,851	23,061	18,804	21,118	530	67,364
<i>of which:</i> senior non-preferred bonds	–	–	18	6	–	24
subordinated bonds	508	2,981	2,218	4,706	315	10,727
Banks in the issuer's group (3)	1,312	6,303	6,873	13,564	3,016	31,067
<i>of which:</i> senior non-preferred bonds	–	–	–	–	–	–
subordinated bonds	2	389	85	660	8	1,144
Other Italian banks	815	9,571	8,746	7,975	530	27,637
<i>of which:</i> senior non-preferred bonds	–	–	409	174	–	583
subordinated bonds	9	150	131	616	183	1,089
Other investors	8,926	45,854	51,330	55,137	16,273	177,520
<i>of which:</i> senior non-preferred bonds	–	–	2,421	1,070	–	3,490
subordinated bonds	391	2,934	3,438	10,487	6,391	23,641
Total	14,904	84,789	85,754	97,793	20,349	303,588
<i>of which:</i> senior non-preferred bonds	–	–	2,848	1,250	–	4,098
subordinated bonds	910	6,453	5,873	16,469	6,897	36,601

Source: Individual supervisory reports.

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

Table A6

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

	2014	2015	2016	2017	2018	2019	
						June	September
Total	283.5	253.7	297.3	321.2	310.5	303.0	302.2
Government securities	119.8	97.6	88.8	105.8	78.0	73.3	74.0
Local and regional government securities	2.9	2.6	1.7	1.9	1.3	1.2	1.3
Uncovered bank bonds	10.4	5.8	5.3	5.4	5.0	3.9	3.7
Government-guaranteed bank bonds	15.0	0.4	0.3	1.3	2.5	3.6	3.6
Covered bonds	49.8	46.4	76.3	76.8	91.3	92.7	94.0
Non-bank bonds	1.0	2.5	3.0	3.0	4.3	3.8	4.4
Asset-backed securities	40.0	35.5	44.0	49.9	49.7	46.9	43.8
Other marketable assets	0.4	0.6	0.8	2.8	1.3	0.7	2.0
Non-negotiable assets (bank loans)	44.3	62.4	77.1	74.3	77.1	77.0	75.6

Source: based on Eurosystem data.

(1) The collateral pool is valued at the prices taken from the Common Eurosystem Pricing Hub, net of haircuts.

Table A7

Italian banks' net liquidity position (1) (monthly average share of total assets)						
	Significant groups			Less significant groups		
	Cumulative cash flow(2)	Counterbalancing capacity	Liquidity indicator (3)	Cumulative cash flows (2)	Counterbalancing capacity	Liquidity indicator (3)
2016 – 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
Ago.	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
Nov.	0.1	13.5	13.6	-4.5	19.6	15.2
Dec.	0.1	13.6	13.7	-5.5	19.8	14.3
2019 – Jan.	-0.5	13.8	13.3	-6.2	19.9	13.8
Feb.	-0.5	14.6	14.1	-5.5	18.9	13.4
Mar.	-0.6	14.7	14.1	-5.4	19.3	14.0
Apr.	0.2	15.6	15.8	-5.8	19.8	13.9
May	0.3	15.8	16.0	-5.5	19.7	14.2
June	0.0	15.9	16.0	-5.3	19.8	14.5
July	0.5	16.0	16.5	-3.9	19.8	15.9
Aug.	0.7	16.3	17.1	-3.5	20.4	16.9
Sept.	1.6	16.6	18.3	-3.6	21.0	17.4
Oct.	1.6	16.7	18.3	-3.2	20.7	17.6

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.

Table A8

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 the taking up of the business of credit institutions and on the prudential supervision of credit institutions and investment firms and in 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.

