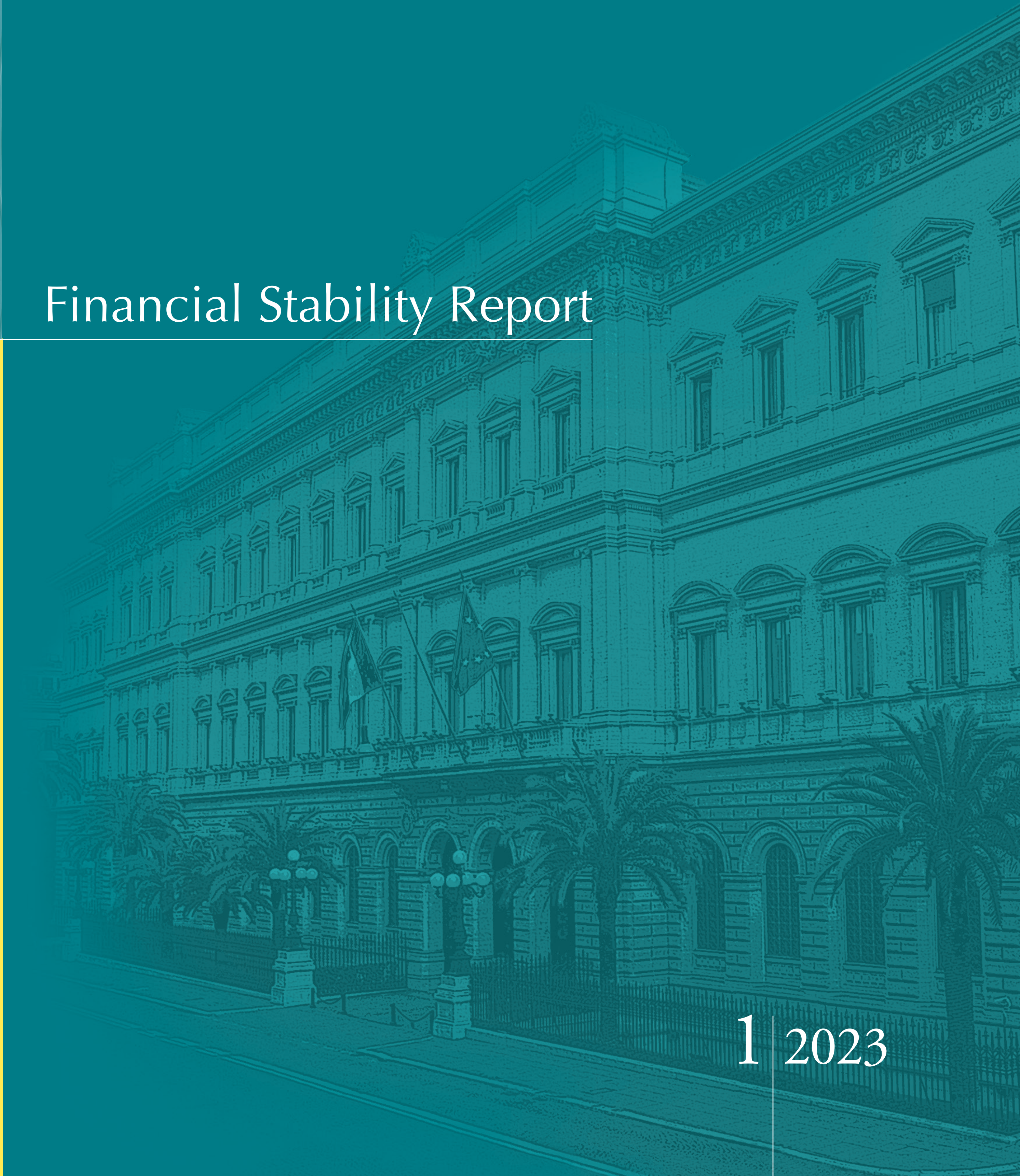
BANCA D'ITALIA
EUROSISTEMA

Financial Stability Report



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April 2023

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Number 1 / 2023
April

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For the hard copy version: registration with the Court of Rome No. 209, 13 May 2010
For the electronic version: registration with the Court of Rome No. 212, 13 May 2010

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ISSN 2280-7616 (print)
ISSN 2280-7624 (online)

Based on data available on 21 April 2023, unless otherwise indicated.

Designed and printed by the Printing and Publishing Division of the Bank of Italy

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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 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 global economy remained sluggish in the first quarter of this year, but signs of improvement are emerging. *Growth estimates for 2023 continue to point to a clear slowdown, but one less pronounced than was forecast last autumn. Cyclical developments are being affected by persistently strong inflationary pressures, the connected increase in interest rates and geopolitical tensions.*

Starting in February and against a background of great uncertainty, the conditions on the global financial markets have deteriorated again. *The recent bank crises in the United States and in Switzerland have led to a sharp increase in volatility, a higher risk of contagion and a significant rebalancing of portfolios from riskier assets towards those regarded as safer. Tensions have eased following intervention by the authorities.*

The risks to financial stability remain significant in Italy too. *The impact of the tensions on the international banking markets was modest, thanks to Italian banks' limited exposure to the failing banks and, more generally, to the strengthening of banks' balance sheets accomplished in recent years.*

Public finance conditions improved in 2022. Net borrowing as a percentage of GDP and the debt-to-GDP ratio both fell, the latter by more than 5 percentage points. *The consolidation of these trends continues to be key, also in light of the uncertainty over changes in the macroeconomic outlook and rising interest rates. In a context of prudent management of the public finances, the reduction in government bonds on the Eurosystem's balance sheet, conducted at a measured and predictable pace, should not have a significant impact on yields or on the functioning of the secondary market for Italian government securities, in which the yield spread compared with the corresponding German government securities has remained in line with the levels observed at the end of last November.*

The real estate market is showing signs of a slowdown. *In the second half of 2022, house prices rose, though at a slower pace than previously and well below consumer price inflation, while house sales declined, affected by the slowdown in mortgage lending. According to our estimates, nominal price growth is expected to remain weak this year too.*

The worsening cyclical situation is having a moderate impact on the risks connected with households' financial situation. *Liquidity remains high, but disposable income has declined in real terms due to inflation. The higher interest rates are affecting the average cost of outstanding loans and the share of financially vulnerable households might increase this year. In proportion to income, debt is nevertheless still well below the euro-area average.*

Firms' financial situation and their vulnerability are being affected by the worsening macroeconomic projections and the higher interest rates. *Against the background of virtually unchanged demand, the growth in lending to firms gradually came to a halt in 2022 and is now in negative territory. However, the contraction only affected the riskiest firms and, among these, mainly the smallest ones. Bond issuance also slowed. Overall, despite deteriorating slightly, firms' debt servicing capacity is benefiting from the balanced financial situation, supported by the still broad liquidity margins. The share of debt ascribable to vulnerable firms may nevertheless rise over the course of the year, especially in construction and manufacturing.*

The financial situation of the Italian banking system is sound overall. *Asset quality does not show signs of worsening and profitability has improved, benefiting from the increase in net interest income. Despite the reduction in funding and the shift in the composition of customer deposits, banks' liquidity profile remains balanced for both short- and medium-term maturities. Assets eligible as collateral for Eurosystem refinancing operations continue to be widely available.*

The main sources of vulnerability for the banking system continue to stem from the weak macroeconomic outlook and global geopolitical uncertainty, compounded by the ongoing conflict in Ukraine. *Any unrealized losses on the portfolio of debt securities, valued at amortized cost, would only materialize in a scenario – unlikely at the moment – in which financial intermediaries are forced to sell their securities before maturity. Profitability is expected to remain positive in 2023, though the ability of households and firms to repay their loans could weaken, with potential consequences for loan loss provisions, which are still at low levels. There may also be further upward pressures on the cost of funds, partly as a result of the need to continue to replace the funding acquired through the Eurosystem's third targeted longer-term refinancing operations (TLTRO III) and to issue instruments that satisfy the minimum requirement for own funds and eligible liabilities (MREL).*

The capitalization of the insurance sector declined, owing to interest rate dynamics, but is still high and close to the EU average. *Profitability also decreased, while the liquidity position remains sound overall. In the life segment, however, customers' search for yields that protect the purchasing power of their savings kept premium income down and fuelled surrenders. Unrealized losses on the securities portfolio, which were mainly recorded by insurance companies operating in the life segment, decreased in the first three months of the year.*

Net subscriptions to Italian investment funds turned negative in the first quarter of 2023*, though net inflows were still recorded for equity and bond funds, especially for those that invest in accordance with environmental, social and governance (ESG) criteria. The degree of liquidity fell owing to the increase in interest rates, which discourages cash holdings. The risks facing the sector remain modest overall.*

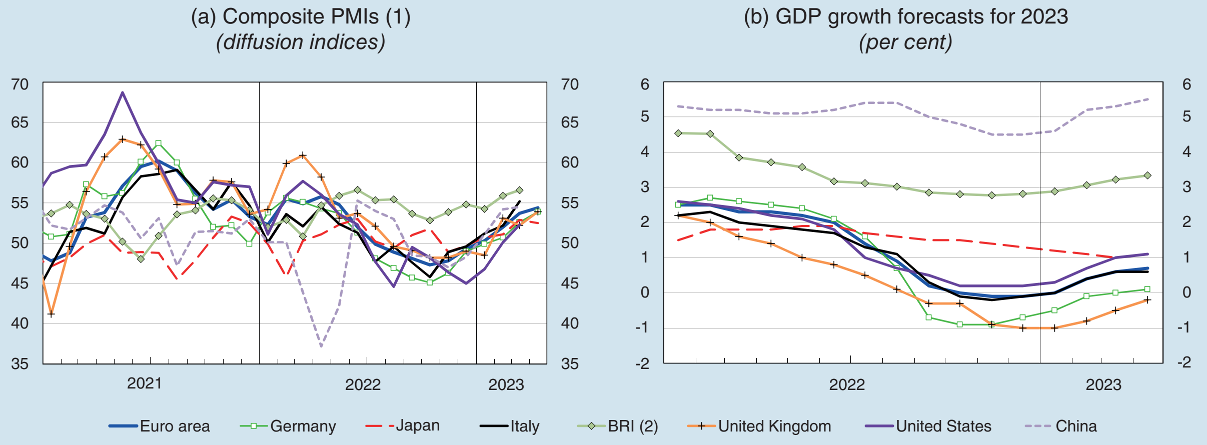
1 MACROECONOMIC, FINANCIAL AND SECTORAL RISKS

1.1 GLOBAL RISKS AND EURO-AREA RISKS

Global economic activity slowed down in the fourth quarter of 2022. In the early months of 2023, the purchasing managers' indices (PMIs) rose in the leading advanced economies (panel (a) of Figure 1.1), thanks to the positive trend in the service sector. However, growth estimates continue to indicate a slowdown (panel (b) of Figure 1.1) attributable to continued monetary tightening and the uncertainty deriving from international tensions.

Figure 1.1

PMIs and growth expectations



(a) Composite PMIs (1)
(diffusion indices)

(b) GDP growth forecasts for 2023
(per cent)

Sources: Based on data from Consensus Economics, ISM, Markit and Refinitiv.
(1) Composite diffusion indices of economic activity in the various sectors based on purchasing managers' assessments (PMIs). Values above (below) 50 are compatible with an expansion (contraction) in activity compared with the previous month. – (2) Average of the forecasts for Brazil, Russia and India (BRI), weighted on the basis of each country's GDP (IMF, World Economic Outlook Database, April 2023).

In the advanced economies, inflation continues to be high, although it is showing signs of moderation. In the euro area, the core component is still rising.

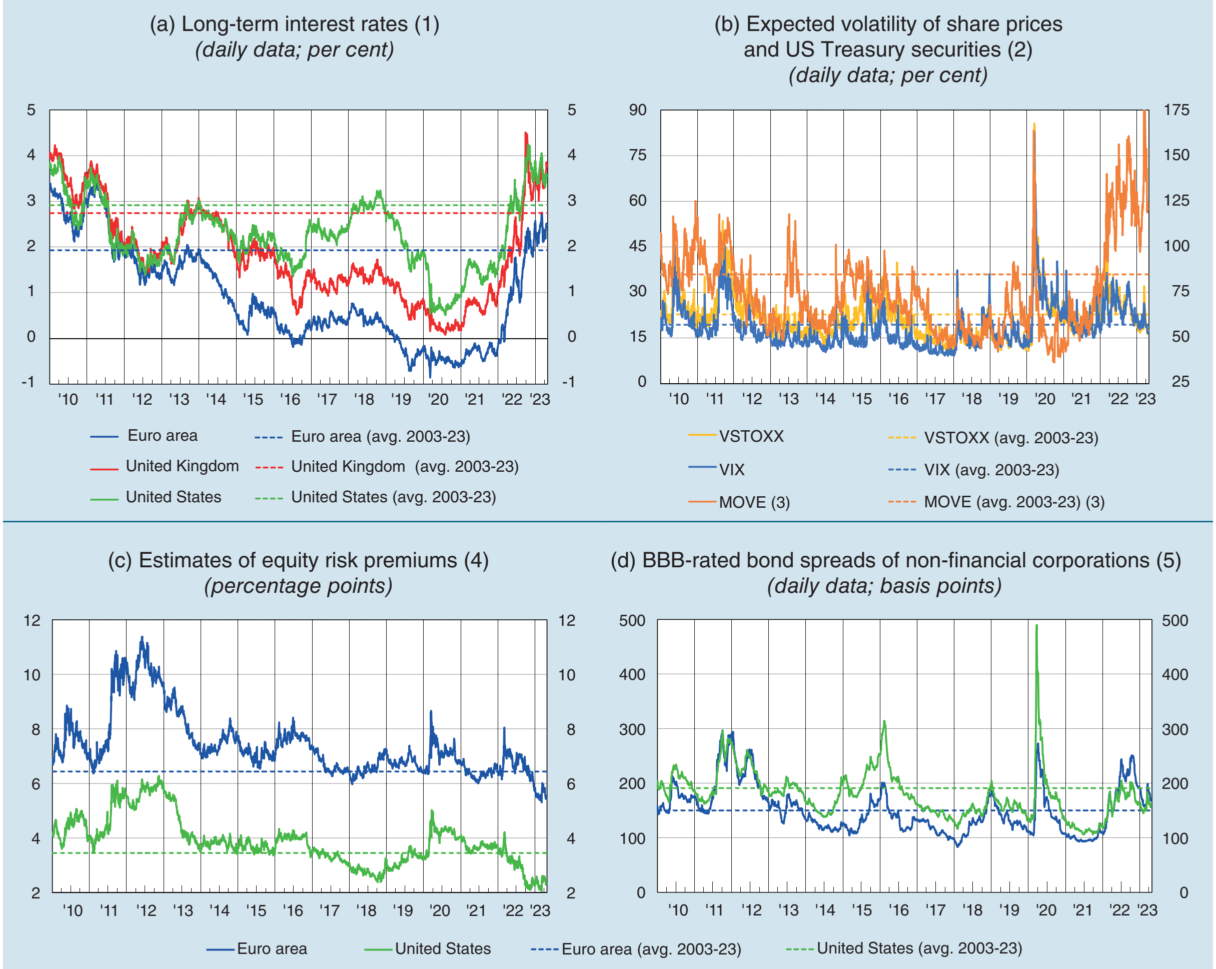
Global financial markets

The conditions on the global financial markets have worsened since February, due to high inflation and renewed concerns among market operators about the pace of monetary tightening. The recent crises of some regional banks in the United States and of Credit Suisse in Switzerland were then followed by a sharp increase in volatility, by an increase in the risk of contagion and by significant rebalancing of portfolios from riskier assets towards assets regarded as safer. Tensions have eased since the US and Swiss authorities intervened.

Ten-year government bond yields rose in the euro area, while they declined in the United States (panel (a) of Figure 1.2), where volatility has increased considerably. Market uncertainty mainly reflects the difficulties of operators in assessing the extent to which risks in the banking sector may affect the process of monetary tightening.

Figure 1.2

Interest rates, volatility and risk premiums



(a) Long-term interest rates (1)
(daily data; per cent)

(b) Expected volatility of share prices and US Treasury securities (2)
(daily data; per cent)

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

(d) BBB-rated bond spreads of non-financial corporations (5)
(daily data; basis points)

Sources: Bank of America Merrill Lynch (BofAML), Bloomberg, ICE and Refinitiv.
(1) Yields on the German 10-year Bund for the euro area, yields on the US 10-year Treasury and yields on the UK 10-year Gilt. – (2) Indices of the implied volatility in the prices of options on the stock market indices (VSTOXX for the euro area and VIX for the United States) and on US government securities (MOVE index). The latter is a weighted index of the implied volatilities of 1-month options on US interest rates of various maturities. – (3) Right-hand scale. – (4) For S&P 500 (US) and Datastream EMU Total Market (euro area), the ratio of the 10-year moving average of average earnings per share to the value of the stock index (both at constant prices) is calculated. 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 is deducted to obtain an estimate of the equity risk premium. – (5) Yield spreads between corporate bonds issued by non-financial corporations and the corresponding risk-free bonds (obtained from the yield curve of German government bonds for euro-denominated securities and yield curve of US government bonds for securities in dollars), option-adjusted and weighted by market capitalization of the companies' individual stocks.

The performance of stock market indices has been uneven across different segments and countries, repeatedly affected by the various sources of instability. In spite of temporary increases, the expected volatility of share prices stood at relatively low levels, especially compared with the volatility of government bond yields (panel (b) of Figure 1.2), and risk premiums remained below their long-term averages (panel (c) of Figure 1.2). These levels may not, however, be consistent with high uncertainty, exposing share prices to the risk of strong downward corrections and sharp increases in volatility.

Spreads on corporate bonds of non-financial corporations have contracted in the euro area and, to a lesser extent, in the United States, where they remain, however, below their long-term averages (panel (d) of Figure 1.2). In both areas, high-yield bond spreads stand below their respective long-term averages. According to some rating agencies, there could be a significant increase in the number of defaults in the course of 2023, especially in the high-yield segment, owing to a worsening of the growth outlook and of financing conditions for firms.

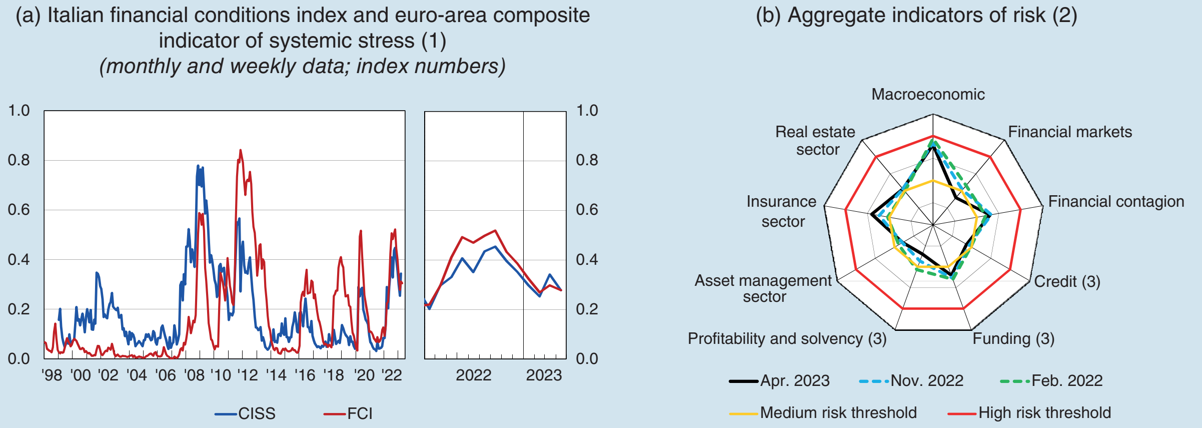
1.2 MACROFINANCIAL CONDITIONS IN ITALY

The risks to financial stability remain high in Italy, driven by persistent geopolitical instability, high inflationary pressures and uncertainty about the economic outlook.

Although the index for the tightening of financial conditions has improved slightly in recent months, it remains high, partly as a result of the tensions generated by recent episodes of banking crises abroad (panel (a) of Figure 1.3; see Sections 1.1 and 1.3). The overall cyclical outlook remains uncertain (panel (b) of Figure 1.3) and in the medium term, challenges linked to the sizeable public debt and to the risk of returning to structurally low growth persist.

Figure 1.3

Synthetic indicators of risks for financial stability



(a) Italian financial conditions index and euro-area composite indicator of systemic stress (1)
(monthly and weekly data; index numbers)

(b) Aggregate indicators of risk (2)

Sources: ECB, and based on Refinitiv and Bank of Italy data.
(1) The index ranges from 0 (minimum risk) to 1 (maximum risk). The two indicators are comparable as they are based on the same estimation methodology. For further details on the Italian financial condition index (FCI), 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. Compared with the version used in this paper, the indicator used in this chart also includes the corporate bond, repo and short-term government bond market segments, which were not previously considered. For further details on the euro-area composite indicator of systemic stress (CISS), see D. Holló, M. Kremer and M. Lo Duca, 'CISS – A composite indicator of systemic stress in the financial system', European Central Bank, Working Paper Series, 1426, 2012. – (2) The aggregate indicators are based on the analytical framework for assessing 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. The data for February 2022 precede the start of the conflict in Ukraine. – (3) Risk indicators referring to the banking sector.

According to the estimate of the 2023 Economic and Financial Document (DEF 2023) approved in April, GDP will grow by 1.0 per cent in 2023 and by 1.5 per cent in 2024, a slowdown compared with 2022.[1] The projections, revised upwards compared with those released in November, are higher than

[1] 'Preliminary hearing on the 2023 Economic and Financial Document' (only in Italian), testimony by S. Nicoletti Altimari, Head of the Bank of Italy's Directorate General for Economics, Statistics and Research, before the joint session of the Fifth Committee of the Senate of the Italian Republic (Economic Planning and Budget) and the Fifth Committee of the Chamber of Deputies (Budget, Treasury and Planning), Rome, 20 April 2023.

those for the next two years recently published by the International Monetary Fund (0.6 and 0.9 per cent respectively) and by Consensus Economics (0.6 and 1.0 per cent; see Section 1.1).

Public finance balances improved in 2022. Net borrowing in relation to GDP fell by 1 percentage point, to 8.0 per cent. The final outturn figures also reflect the adjustment of the accounting treatment of some tax credits for building renovation works, which are now entered for the full amount accrued in the year the credit is created.[2] The debt-to-GDP ratio fell further, by more than 5 percentage points, to 144.4 per cent, mainly thanks to the favourable trend in the gap between nominal growth and the average cost of the debt.

In the policy scenario of the 2023 DEF, both net borrowing and the public debt will gradually decline in the current year and in the following three years, to 2.5 and 140.4 per cent of GDP respectively in 2026. In the future, a significant increase in growth potential and a structural improvement in the primary balance will be necessary to consolidate this trend, also in light of rising interest rates.

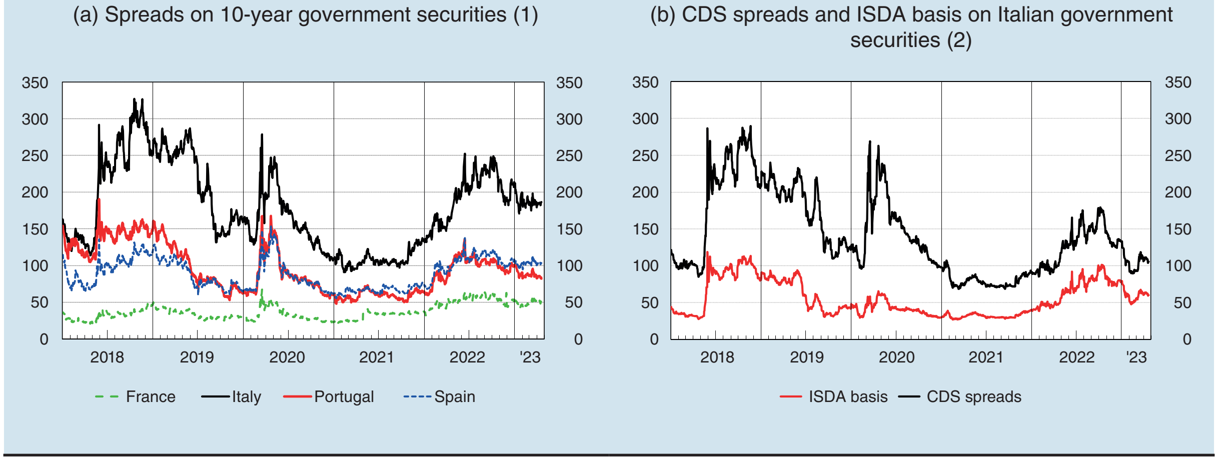
1.3 THE FINANCIAL MARKETS

The government securities market

The yield spread between Italian and German government securities has remained stable at the levels observed at the end of November (panel (a) of Figure 1.4); the default risk premium and the ISDA basis in the credit default swap (CDS) market have declined (panel (b) of Figure 1.4).

Figure 1.4

Risk premiums on government securities
(daily data; basis points)

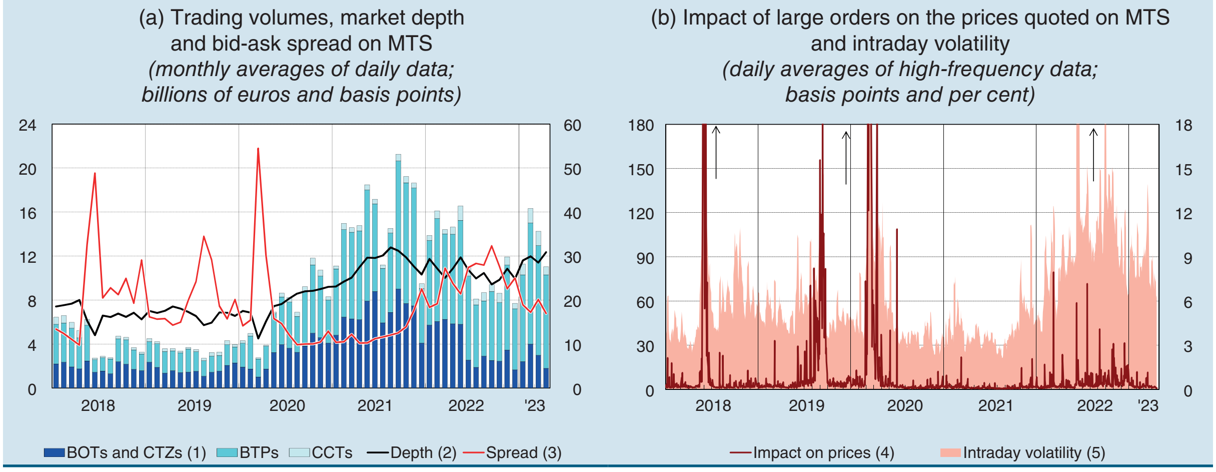


Source: Based on Bloomberg data.
(1) Differences between the yields on the benchmark 10-year government bonds of the countries in the key and the yield on the corresponding German Bund. – (2) The International Swaps and Derivatives Association (ISDA) is an organization of participants in the market for 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] The accounting adjustment does not change the overall impact these tax incentives on net borrowing, but brings forward their distribution over time; the debt profile remains unchanged. For further details, see the 'Hearing on the macroeconomic and public finance effects of tax incentives in construction' (only in Italian), testimony by P. Tommasino, an official in the Bank of Italy's Structural Economic Analysis Directorate, before the Fifth Committee (Budget, Treasury and Planning) of the Italian Chamber of Deputies, Rome, 29 March 2023.

Figure 1.5

Liquidity indicators for Italian government securities



Source: Based on MTS data.

(1) Since October 2022, the series has only included data on BOTs because the stocks of CTZs were reduced to zero following the suspension of the placement of this kind of bond and the redemption of the last CTZs to mature. – (2) The average of the bid and ask quantities recorded during the entire trading day for the BTPs quoted on MTS. – (3) The simple average of the bid-ask spreads recorded during the entire trading day for the BTPs quoted on MTS. Right-hand scale. – (4) Average daily impact on bid-ask prices quoted on MTS of a sale or purchase order of €50 million. The indicator refers to the 10-year benchmark BTP and is based on data recorded at 5-minute intervals. – (5) A measure of volatility (realized volatility) based on the 10-year BTP intraday returns calculated at 5-minute intervals; 5-day moving average of annualized values. Right-hand scale.

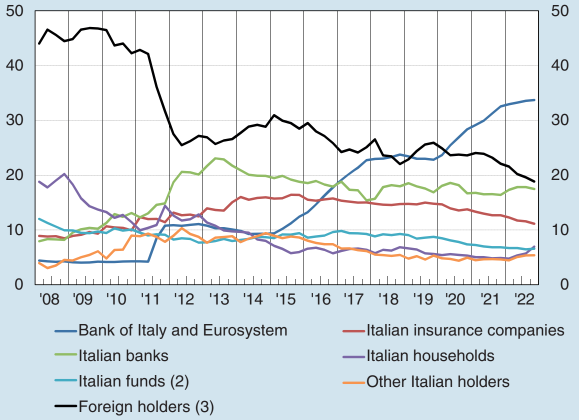
Liquidity conditions in the secondary market have improved overall since the end of 2022. However, there was a moderate deterioration at the beginning of March, following the turmoil associated with the crisis in US regional banks and at Credit Suisse; the intraday price volatility and the average bid-ask spread on BTPs remain well above the more relaxed levels observed up to the end of the first half of 2021 (Figure 1.5).

In the second half of 2022, the share of Italian government securities held by Italian households continued to increase, while that held by insurance companies and foreign investors declined further (Figure 1.6). The share held by the Bank of Italy also continued to grow, although, looking ahead, it is set to decrease as a result of the normalization of monetary policy.

Figure 1.6

Italian government securities by holder category (1)

(quarterly data; per cent)



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) Includes foreign individually managed portfolios and investment funds attributable to Italian investors (round trip). – (3) Securities held by foreign investors net of those held by the Eurosystem and by round-trip managed portfolios and investment funds.

In a context of prudent management of the public finances, the reduction of government bonds on the balance sheets of central banks, conducted at a measured and predictable pace, should not have a significant impact on yields or on the functioning of the secondary market for government bonds.

Placement on the primary market continued at a steady pace, though with an average yield at issue that is increasing significantly (Figure 1.7).

The average cost of government securities outstanding reached 2.3 per cent, continuing the phase of growth that began in April 2022. Owing to the high average residual maturity of government securities (around 7 years), the higher yields at issue are only gradually reflected in the average cost of outstanding securities.

Redemptions of medium- and long-term securities will equal €249 billion in 2023, €276 billion in 2024 and €225 billion in 2025 (they amounted to €226 billion in 2022).

The equity and corporate bond markets

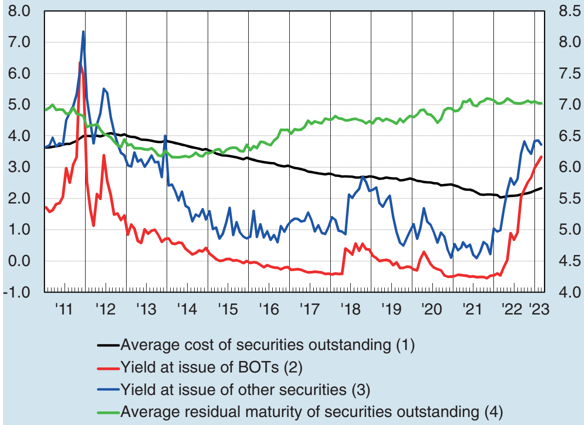
The rise in interest rates has led to a growth in funding costs for firms; this burden is expected to increase further (Figure 1.8), especially for high-yield companies in other euro-area countries, which, compared with Italian companies, have a greater presence in the automotive and utilities sectors, and in the lower credit rating categories. The increase in the cost of financing may also have led some of these companies to reduce their issuances on the bond market: after peaking in June 2022, the nominal value of outstanding high-yield bonds started to decline both in Italy and, to a lesser extent, in the rest of the euro area (see Section 1.5).

The issuance of private sector bonds whose proceeds are intended to improve the state of the environment (green bonds) continues in Italy; however, the volumes outstanding as a share of GDP are still lower than those in the other major European economies (1.8 per cent against 4.4 per cent). On the secondary market, the yield on green bonds issued by Italian non-financial corporations is on average lower by about 5 basis points than that of traditional securities with similar maturities and the same credit risk (this yield spread is referred to as the ‘greenium’).

In December 2022, the European Central Bank announced that it will only partially reinvest the principal payments from maturing securities held under the asset purchase programme (APP), favouring issuers with a better climate-related performance. Moreover, in contrast to other corporate bonds, the bonds issued by private companies with better climate-related performances and

Figure 1.7

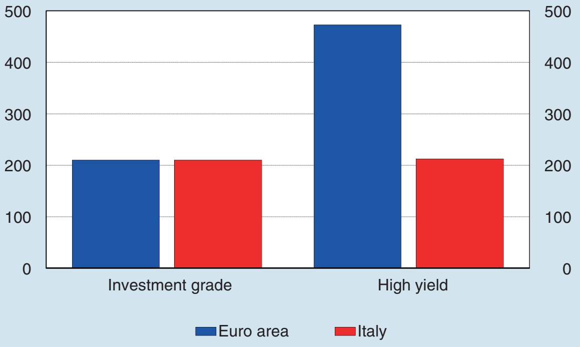
Average cost, yield at issue and average residual maturity of government securities
(monthly data; per cent and years)



Sources: Based on Bank of Italy and Ministry of Economy and Finance (MEF) data on outstanding government securities, updated to 31 March 2023.
(1) Weighted average of the yields at issue of government securities outstanding at end of month. – (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 indexed BTPs placed during the month, by settlement date. – (4) End-of-period values, expressed in years, weighted by the outstanding amounts. Right-hand scale.

Figure 1.8

Expected change in the refinancing cost for firms (1)
(basis points)



Sources: Based on ICE Bank of America Merrill Lynch (BofAML) and Bloomberg data.
(1) The analysis only includes euro-denominated bonds of non-financial corporations resident in euro-area countries with a maturity of up to 10 years. The BofAML indices for the euro area have been recalculated to exclude Italy. For each bond, the expected change in the refinancing cost at maturity is equal to the difference between: (a) the sum of the forward rate for an investment in Bunds – starting on the bond's maturity date and having a maturity equal to the original maturity of the bond itself – and the spread between the yields to maturity of the bond and the Bund with the same residual maturity; and (b) the annual coupon rate paid by the bond. The values obtained are weighted by market capitalization and aggregated by distinguishing between bonds issued by Italian and euro-area companies, and investment-grade and high-yield companies.

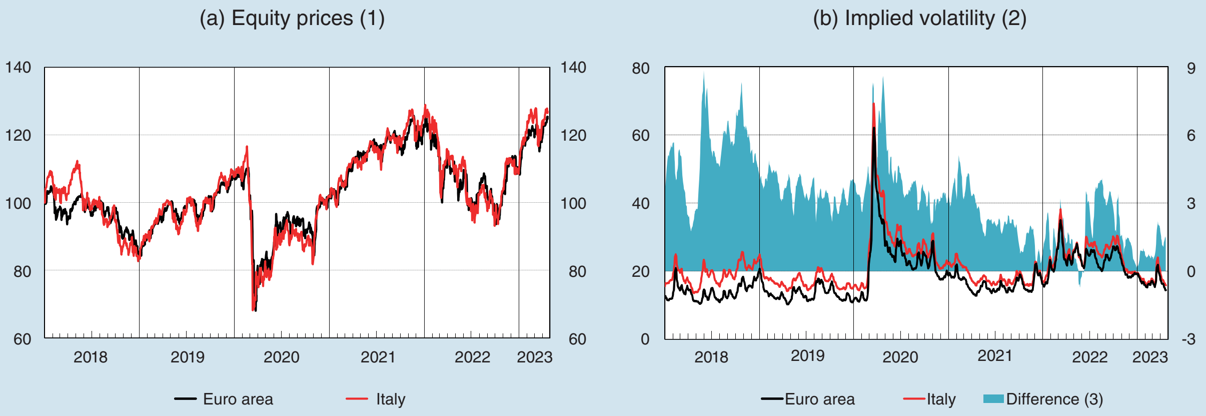
green bonds can continue to be purchased on the primary market as well. Without prejudice to the ECB's price stability objective, this criterion will support the gradual decarbonization of the Eurosystem corporate bond portfolio, in line with the targets of the Paris Agreement.

The recent banking crises have led to temporary strains on Italian and euro-area stock markets. Specifically, the fall in equity prices has been flanked by an increase in implied volatility (Figure 1.9). At the same time, the cost of hedging against sharp declines in equity prices (risk reversal) has risen and the term structure of implied volatility has temporarily returned to indicating a stronger perception of short-term risks.

Figure 1.9

Equity market indicators

(daily data; indices and percentage points)



Source: Based on Bloomberg data on the Italian FTSE MIB index and, for the euro area, on the EURO STOXX 50 index.
(1) Indices: 1 January 2018=100. – (2) Volatility implied by the prices of 2-month options. 5-day moving averages. – (3) Difference between implied volatility in Italy and in the euro area. Right-hand scale.

The money market

The process of monetary policy normalization continues to be transmitted to money market rates, with no significant frictions, in both the unsecured deposits (€STR) and the repo segments. The Italian general collateral (GC) rate is still in line with the Eurosystem deposit facility rate (DFR; Figure 1.10); the spreads between GC and DFR rates are at their lowest levels for the past two years in France and Germany too, reflecting a reduction in premiums associated with the scarcity of collateral securities. The narrowing of spreads has benefited from the expansion of the Eurosystem's securities lending programme, announced in November of last year,[3] and from the decision by some sovereign issuers, including Italy and Germany, to increase their portfolio of securities available for lending, starting from last autumn.[4] The continued repayment of funds acquired

[3] For further information, see the ECB's website: 'Decisions taken by the Governing Council of the ECB (in addition to decisions setting interest rates)'.

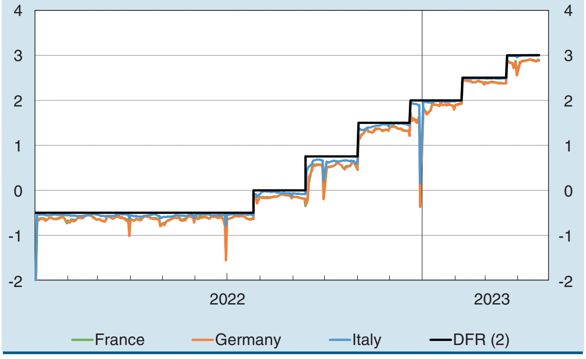
[4] On 25 November, the MEF expanded the portfolio of securities to be used exclusively for repos from €30 billion to €45 billion. A similar decision was taken in October by the German Finance Agency, which increased its holdings of securities to lend on the repo market by €54 billion; see MEF, 'Operatività pronti contro termine del MEF. Aggiornamento del portafoglio titoli', communication, 25 November, and Finanzagentur, 'German Finance Agency increases own holdings for repo market trading', press release, 19 October.

by banks through the third series of targeted longer-term refinancing operations (TLTRO III) and the fall in reinvestments made by the Eurosystem will further help to alleviate the scarcity of securities.

The functioning of the repo market has remained smooth, in part thanks to the ECB's measures for the remuneration regime for non-monetary policy deposits, which was adjusted to the positive interest rate environment.[5] These changes aim to preserve the functioning of the money market by providing incentives for a gradual and orderly transfer towards it of the large amounts of liquidity held on the Eurosystem's euro-denominated reserve accounts.

Figure 1.10

Repo rates in the money market (1)
(daily data; per cent)



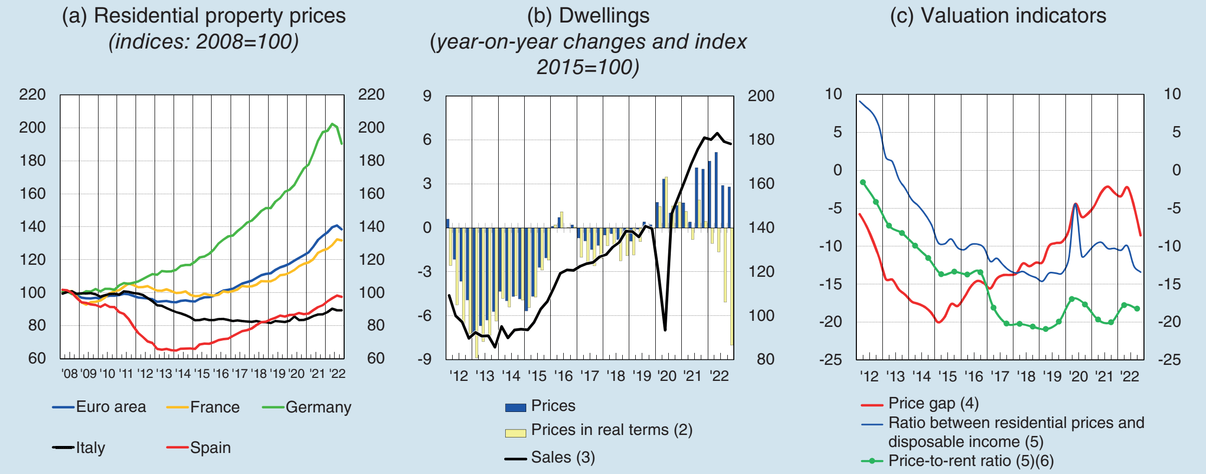
Source: Based on CME Group data.
(1) 1-day euro-area government bond repo rates traded in the general collateral segment, on BrokerTec or MTS platforms. – (2) Eurosystem deposit facility rate.

1.4 REAL ESTATE MARKETS

At the end of 2022, residential property prices recorded their first quarterly decline since 2015, falling by almost 2 per cent in the euro area as a whole and even more markedly in Germany (panel (a) of Figure 1.11). Their twelve-month growth thus nearly halved on average for the euro area (to 4.7 per cent) in the second half of the year. Over the same period, commercial property prices decreased in the main euro-area countries.

Figure 1.11

Residential property market in Italy and the euro area (1)
(quarterly data, unless otherwise specified)



Sources: Based on data from the Bank of Italy, Eurostat, Istat, Nomisma, Osservatorio del Mercato Immobiliare (OMI) and Scenari Immobiliari.
(1) Panels (b) and (c) refer to Italy. – (2) Data deflated using the change in consumer prices. – (3) Data adjusted for seasonal and calendar effects. Right-hand scale. – (4) The price gap is defined as the percentage deviation of the house prices index in real terms from its long-term trend. – (5) The data are expressed as a percentage deviation compared with the long-term average. – (6) Half-yearly data.

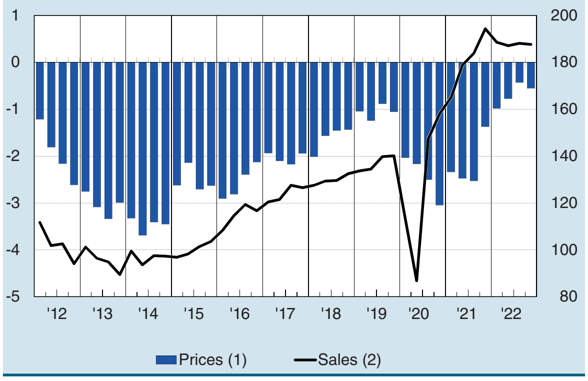
[5] On 7 February, the Governing Council of the ECB decided to adjust, with effect from 1 May 2023, the rate of remuneration for general government deposits and for deposits under the Eurosystem Reserve Management Services (ERMS) held with the Eurosystem. Specifically, it established a cap on the remuneration of government deposits at the €STR minus 20 basis points, and subsequently also adjusted the remuneration of ERMS deposits to the same level.

In Italy, sales of residential properties went down in the second half of 2022 compared with the first half and the twelve-month house price growth weakened, to levels well below consumer price inflation (panel (b) of Figure 1.11); demand was affected by the slowdown in mortgage lending (see Section 1.5). According to the real estate agents interviewed in January 2023 as part of our periodic surveys, market conditions weakened in the first months of 2023 as well. Our estimates suggest that house prices are still recording positive growth but will likely continue to slow throughout 2023 and in the following two years.[6] Considering the long-term trends, the indicators that make it possible to assess the dynamics of the residential market continue to show no risks of overvaluation (panel (c) of Figure 1.11).

Figure 1.12

Non-residential property market in Italy

(quarterly data)



Sources: Based on data from the Bank of Italy, Istat, Osservatorio del Mercato Immobiliare (OMI), Nomisma and Scenari Immobiliari.
(1) Year-on-year percentage changes. The indicator, which is still being tested, uses data drawn from transactions actually concluded on the market. – (2) Index: 2015=100; data adjusted for seasonal and calendar effects. Right-hand scale.

Sales remained stable in the non-residential sector and the drop in prices moderated in the second half of 2022 (Figure 1.12). The potential vulnerabilities stemming from this sector remain limited (see Section 2.1).

1.5 HOUSEHOLDS AND FIRMS

Households

The worsening economic conditions are having a moderate impact on the risks connected with the financial situation of Italian households, which remain limited. High inflation has led to a decrease in households' real disposable income, partly mitigated by government measures.[7] According to the ECB's Consumer Expectations Survey (CES) for February 2023, the share of Italian households expecting their financial situation to deteriorate over the next 12 months remains relatively large, albeit less so than last summer.

The pass-through of the energy shock to consumer prices affected above all the propensity to save of Italian consumer households, which fell to 5.3 per cent of disposable income in the quarter ending December 2022, which was below pre-pandemic levels. Preliminary financial accounts data point to a continuing downward trend in real financial wealth, which decreased by just over 5.6 per cent in the second half of 2022 also due to unfavourable market performance. Liquidity, on the other hand, remains high, despite a decline in the growth of deposits. Investments in government securities and bank bonds are increasing (see Section 2.1), while those in shares, investment fund units, and insurance-based investment products are decreasing (see Section 2.2).

[6] The estimates are based on the models described in S. Emiliozzi, E. Guglielminetti and M. Loberto, 'Forecasting house prices in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 463, 2018.

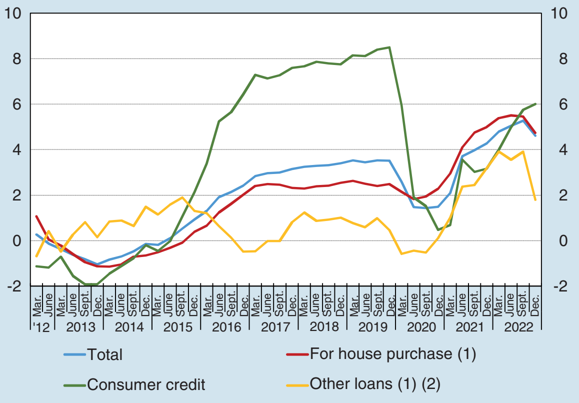
[7] In addition to the measures adopted in the first nine months of 2022, which included income support for households, Decree Law 144/22 (the 'Aid Decree-*ter*') allocated an additional €150 lump sum to households with incomes below €20,000 per year. Decree Law 167/22 (the 'Aid Decree-*quater*') and the Budget Law for 2023 extended the measures previously adopted and raised the share of social contributions exempted from payments to 3 per cent for incomes up to €25,000 and to 2 per cent for those up to €35,000.

Household debt as a percentage of disposable income continues to decline (62.5 per cent at the end of the fourth quarter of 2022, from 64.4 per cent year-on-year); it is over 30 percentage points lower than the euro-area average for the third quarter of 2022, which is the latest figure available. Mortgage loans for house purchase, while unchanged in real terms, grew by 4.7 per cent in December of last year (Figure 1.13). New mortgage loans have slowed down since late 2022, as a result of higher interest rates and tighter credit conditions; stocks of loans diminished slightly in January and February of 2023.

Figure 1.13

Loans by banks and financial corporations to consumer households

(end-of-period data; 12-month percentage changes)



Source: Supervisory reports.
(1) The figure refers to bank loans only. – (2) Other loans: the most significant are current account overdrafts and mortgage loans other than those for the purchase, construction and renovation of properties for residential purposes.

In February of this year, the average cost of outstanding mortgages neared 2.6 per cent, 74 basis points higher than in September of 2022. Households' exposure to the risk of an increase in debt servicing costs is limited overall. In December 2022, the stock of adjustable-rate mortgages stood at 37 per cent and around 30 per cent of new mortgage loans issued last year had an interest rate cap. Based on the data in the Central Credit Register, households that pay smaller loan repayment instalments, which are more likely to be owed by lower-income households,[8] do not rely more on adjustable-rate mortgages.

Consumer credit continued to grow (see the box 'Consumer credit in Italy in 2022').

CONSUMER CREDIT IN ITALY IN 2022[1]

In 2022, following the pause imposed by the pandemic crisis, consumer credit, which accounts for a quarter of total lending to households, continued to grow. It reached 12.8 per cent in relation to disposable income, which is higher than the euro-area average of 9.6 per cent. This expansion reflects an increase in the pool of borrowers, rather than a rise in the average amount of debt; loans not for the purchase of a specific asset contributed to a greater extent, i.e. personal loans, salary or pension-backed loans (CDQs) and credit cards, which could be linked to the need to finance current spending.

Growth was accompanied by a slight increase in borrowers' average risk. Based on the data provided by the Consorzio per la Tutela del Credito,[2] the loan default rate at the end of 2022 was

[1] By Mirko Moscatelli and Raffaella Pico.

[2] The database used for this analysis is provided by the Consorzio per la Tutela del Credito, a credit information company, and includes quarterly information on the characteristics of individual contracts and borrowers for a representative sample of consumer loans. Data are available from December 2021.

[8] Low-income households can also benefit from Italian Law 197/2022 to change from an adjustable-rate to a fixed-rate mortgage under the same conditions. The application criteria are: (a) ISEE (financial situation indicator) of less than €35,000; (b) maximum loan amount of €200,000; (c) no previous requests to suspend the mortgage instalments during the amortization plan.

2.1 per cent (1.8 per cent in March of the same year; annualized quarterly rate), higher for CDQs (3.5 per cent), younger people (3.1 per cent) and residents in the South and Islands (2.5 per cent). However, from a historical perspective, the loan default rate remains low, partly as a result of banks selecting their customers more carefully.[3]

Almost all loans have fixed rates; the amounts and duration are low on average, which makes them generally sustainable for borrowers. In 2022, almost 70 per cent of new contracts were for loans not exceeding €5,000 (around one third of which was below €1,000), or with a duration of less than five years. Instead, loans for larger amounts were more frequent in the CDQ segment (less than 20 per cent of total consumer credit), in which almost three quarters of new loans were for amounts larger than €15,000. The median monthly instalment for consumer loans was around €120 and only 5 per cent of the contracts had instalments of over €420. The Survey on Household Income and Wealth shows that the median debt service to income ratio was 8 per cent (18 per cent for mortgages). More than one third of contracts were held by borrowers over 56 years of age, who on average benefit from higher creditworthiness scores as they are more likely to have a regular income. A large proportion of loans (38 per cent) were concentrated among borrowers in the South and Islands, who have a higher risk assessment factored in than residents in the other macro-regions of the country.

[3] See S. Magri, V. Michelangeli, S. Pastorelli and R. Pico, 'The expansion of consumer credit in Italy and in the euro area: what are the drivers and the risks?', *European Review*, 30/3, 2022, pp. 322-352, also published in Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 500, 2019. The historical comparison is based on consumer credit quality data published in the Osservatorio del credito al dettaglio (consumer credit watchdog) of the Assofin, Crif and Prometeia associations.

The quality of loans to households recorded in the Central Credit Register[9] remains high: in the last quarter of 2022 the loan default rate was 0.5 per cent (see Section 2.1). Adjustable-rate mortgages, whose instalments are sensitive to rising interest rates, have not shown a higher likelihood of defaulting than fixed-rate mortgages compared with the past. According to data from the ECB's CES survey, the share of households expecting to struggle to repay mortgages or other loans has decreased over the last quarter and is in line with the values observed in 2021.

The projections of the Bank of Italy's microsimulation model point to a moderate increase in households' vulnerability over the course of this year. The share of vulnerable households will stand at 2.5 per cent (of which 46 per cent have adjustable-rate mortgages for the purchase of their primary residence), up by half a percentage point, while their debt is projected to rise by almost 2 percentage points to 9.6 per cent.[10]

[9] The Central Credit Register applies a reporting threshold: borrowers are reported when the amount owed to the lender is equal to or greater than €30,000; the threshold is reduced to €250 for bad debtors (for more information, see the Central Credit Register webpage on the Bank of Italy's website.

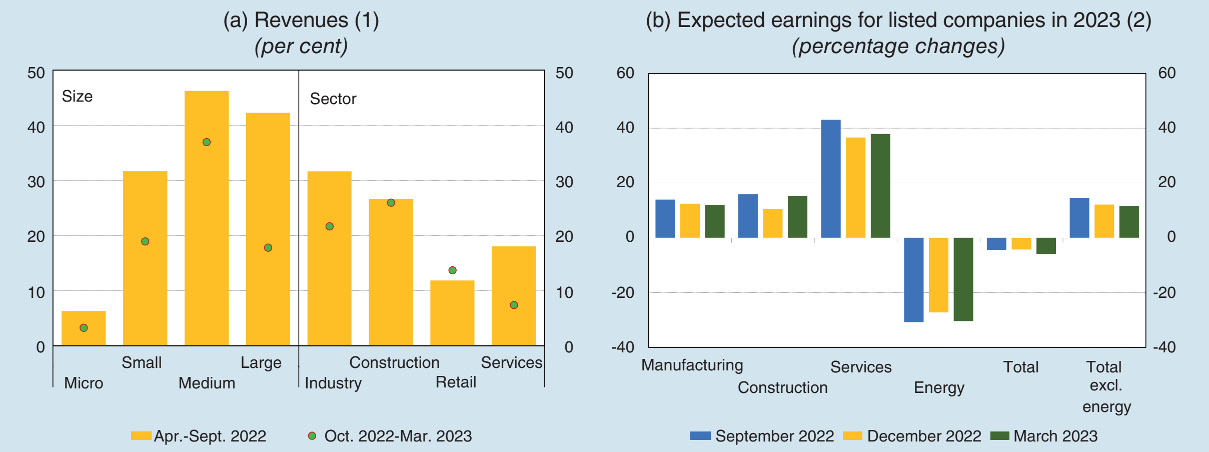
[10] Households are considered vulnerable when their debt-to-income ratio is above 30 per cent and their equivalized disposable income is below the median. The data are based on the latest edition of the 'Survey on Household Income and Wealth' for the year 2020. For further details on the microsimulation model, see C.A. Attinà, F. Franceschi and V. Michelangeli, 'Modelling households' financial vulnerability with consumer credit and mortgage renegotiations', International Journal of Microsimulation, 13, 2020, pp. 67-91, also published as 'Modeling households' financial vulnerability with consumer credit and mortgage refinancing', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 531, 2019.

Firms

Stronger recovery in production supported growth in Italian firms' gross operating income in real terms, in line with the value observed in 2021 (10 per cent). However, the revenue prospects for 2023 have deteriorated (panel (a) of Figure 1.14), especially for large companies and service firms.[11] Analysts' forecasts for the earnings of listed companies have gradually become less favourable as well (panel (b) of Figure 1.14); except for the energy sector, earnings in the main sectors are forecast to stay positive in real terms compared with 2022.

Figure 1.14

Revenues and earnings in Italy



Sources: SAFE and Bloomberg.
(1) Opinions of firms concerning expected revenues (October 2022-March 2023) and actual revenues (April-September 2022). The values refer to the balance between firms reporting an increase in revenue and those reporting a decrease. The data refer to a sample of about 1,500 Italian firms that took part in the SAFE survey, stratified by firm size (based on the number of employees: 1-9 = micro; 10-49 = small; 50-249 = medium-sized; +249 = large) and economic sector. – (2) Index of earnings expected by analysts (net of inflation expectations) for 2023 compared with 2022. Based on a closed sample of 201 listed companies as at June 2022, representing 95 per cent of the market capitalization of non-financial corporations.

Leverage, calculated as the ratio of financial debt to the sum of financial debt and net equity valued at market prices, increased by 1.8 percentage points in nominal terms, mainly because of the reduction in the market value of equity. Without taking this reduction into account, leverage would have remained broadly unchanged at historically low levels.

The risks arising from higher interest rates appear to be offset by the financial structure of firms (prevalence of medium- and long-term loans and large stocks of bank deposits; see panel (a) of Figure 1.15). Furthermore, the riskiest firms with mainly variable rate debt, account for a marginal share of the total (around 7 per cent of firms and 6 per cent of loans).

Credit quality remains at historically high levels, though it is showing the first signs of deterioration, especially in the manufacturing and construction sectors.

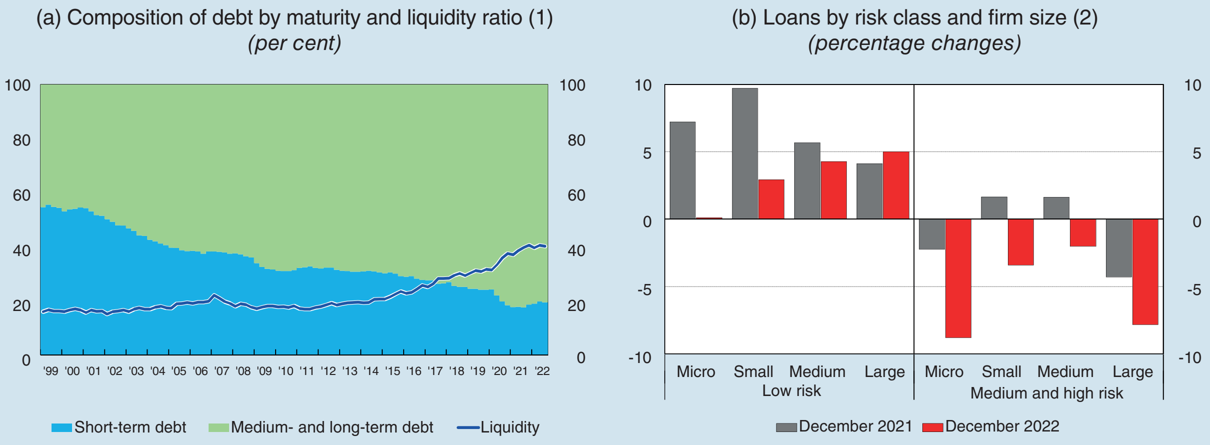
Tighter financing conditions gradually brought lending to firms to a halt during the year (-0.7 per cent in February). According to the Italian banks that took part in the euro-area bank lending survey (BLS),

[11] The ECB conducts its Survey on the access to finance of enterprises (SAFE) twice a year. The latest survey, carried out in September and October 2022, considers the opinions of firms concerning the period April-September 2022 and their expectations for the period October 2022-March 2023. For further details, see ECB, 'Survey on the access to finance of enterprises in the euro area: tighter financing conditions and an expected deterioration in the economic environment', press release, 6 December 2022.

the reduction is especially attributable to the restriction on the amount of credit granted, while demand remained broadly unchanged. However, there are considerable differences in access to credit between firms, in terms of size and riskiness (panel (b) of Figure 1.15). The contraction affected only the riskiest firms and was especially pronounced for micro-firms; among large firms, the downward trend was due to the small number of borrowers repaying their loans.

Figure 1.15

Italian firms' financial structure and borrowing



Sources: Bank of Italy and Cerved.
(1) The ratio of short-term debt (maturity within 1 year), medium- and long-term debt (maturity beyond 1 year) and liquid assets to total financial debt. – (2) The data refer to the annual change in lending for a sample of over 540,000 limited companies. Loans include those granted by financial corporations, take account of securitizations, and also include bad loans. Allocation into the risk groups is based on Cerved's CeBi-Score4 indicator. Low (medium and high) risk firms have a score ranging from 1 to 4 (5 to 10). The breakdown by firm size is in accordance with Commission Recommendation 2003/361/EC, which defines micro firms as those employing fewer than 10 workers and whose turnover or total assets do not exceed €2 million; small firms as those employing fewer than 50 workers and whose turnover or total assets do not exceed €10 million; medium-sized firms as those employing fewer than 250 workers and whose turnover or total assets do not exceed €50 million and €43 million respectively; and large firms as all the remaining ones.

From July 2022, the rise in official rates rapidly passed through to the cost of bank loans, which grew by more than 200 basis points, up to 3.7 per cent in February; a similar trend was observed in the rest of the euro area. The biggest increase involved loans with short-term maturities and variable-rate loans, which are generally more common among large and financially sound firms.

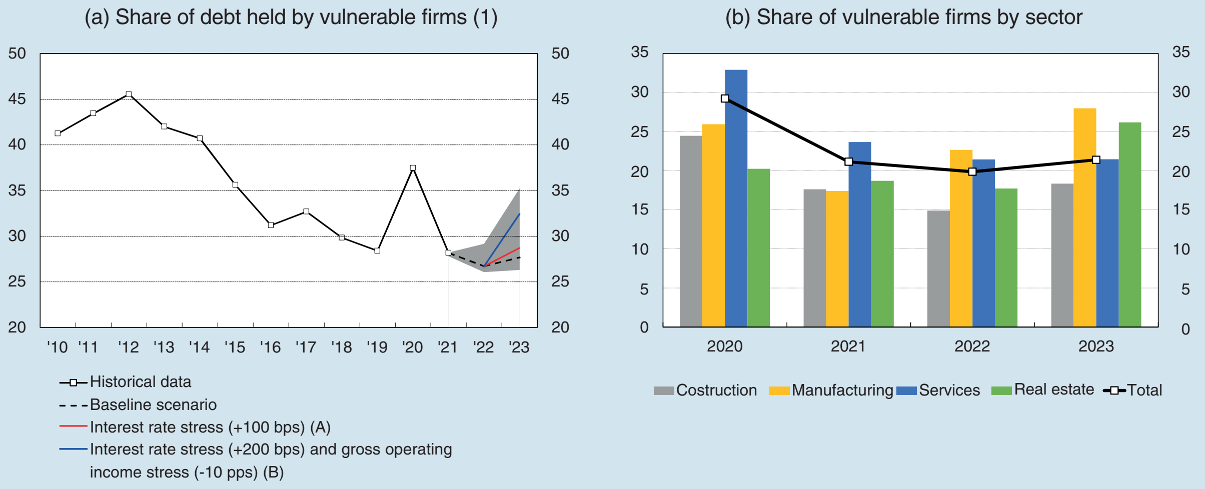
After peaking in 2021, gross bond issuances returned to the lower levels recorded before the pandemic. In a context of tighter conditions of access to the bond market (see Section 1.3), the composition of issuers has changed and is now made up of mainly large firms that are financially sound or that have already offered debt securities in the past. The firms that did not refinance maturing securities had, on average, more recourse to bank loans, the interest rates of which rose less than those of securities. The rise in official rates affected both yields at issue and the type of securities placed, mainly floating-rate bonds with a shorter average maturity than in the past. In early April, the share of BBB-rated bonds – those most exposed to the risk of a downgrading to high yield – amounted to 87.2 per cent of total investment grade issues in Italy; this is higher than the euro-area average (61.0 per cent), also reflecting the relatively lower average rating of Italian government securities.[12]

[12] The figures consider the securities included in the BofAML indices, which are highly representative of the bond issues traded in the markets and refer to the composite rating calculated as the average of the ratings of Moody's, Standard & Poor's and Fitch Ratings.

Figure 1.16

Firms' financial vulnerability

(annual data; per cent)



(a) Share of debt held by vulnerable firms (1)

(b) Share of vulnerable firms by sector

Source: Based on Cerved data.
(1) Vulnerable firms are those whose gross operating income is negative or whose ratio of interest expense to gross operating income exceeds 50 per cent. The definition excludes firms with bad loans. The latest available annual financial statements for the whole sample of firms refer to 2021. The shaded area indicates a confidence interval of 95 per cent around the baseline scenario. Compared with the baseline scenario, in 2023: (A) the interest rate is 100 basis points higher; (B) the interest rate is 200 basis points higher and the growth rate of nominal gross operating income is 10 percentage points lower.

The projections of the Bank of Italy's microsimulation model indicate that, in a baseline scenario consistent with a slowdown in economic activity and high inflation incorporated in the latest macroeconomic forecasts, the share of debt held by vulnerable firms will increase to 27.7 per cent at the end of the year (panel (a) of Figure 1.16).[13] The share of vulnerable firms is projected to increase in the real estate and in the manufacturing sectors (panel (b) of Figure 1.16).

[13] The estimates take account of the inflation outlook in the macroeconomic projections for gross operating income and interest rates, both expressed in nominal terms. 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.

2 RISKS TO FINANCIAL INTERMEDIARIES

2.1 BANKS

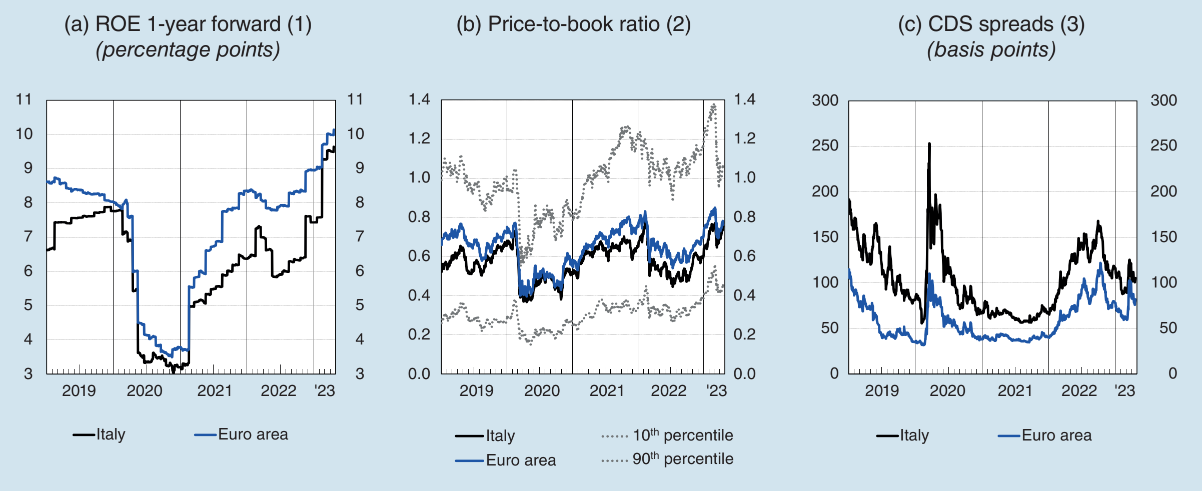
The main sources of vulnerability for the banking system continue to stem from the weak macroeconomic outlook and global geopolitical uncertainty, compounded by the ongoing conflict in Ukraine. The direct impact of the recent tensions in international banking markets arising from the crises of a number of intermediaries in the United States and Switzerland appears to be limited (Figure 2.1). However, the potential repercussions associated with the degree of dependence on less stable funding sources and with the size of potential losses on securities portfolios remain on the radar.

In the second half of 2022, asset quality did not show any signs of deterioration, but higher energy prices and interest rates may affect the ability to service debt of both firms operating in the sectors most exposed to energy price increases and borrowers with a significant share of floating-rate loans (see Section 1.5).

Profitability has improved, driven by net interest income growth and, to a lesser extent, by the reduction in loan loss provisions. Capital adequacy has risen slightly and it remains above pre-pandemic levels.

Figure 2.1

Italian listed banks: an international comparison



Source: Calculations based on Refinitiv data.
(1) Return on equity (ROE) is estimated by market operators. Average weighted according to market value. The data refer to the banks included in the FTSE Italy Banks and the Euro STOXX Banks indices. – (2) Average weighted according to market value. For the banks included in the sample, see note 1. – (3) The data refer to the following sample of banks: for Italy, UniCredit and Intesa Sanpaolo; for the euro area, BNP Paribas, Société Générale, Crédit Agricole, Deutsche Bank, Commerzbank, Banco Santander, Banco Bilbao Vizcaya Argentaria. Simple average of 5-year CDS spreads.

The shift in bank funding towards relatively more expensive liabilities, such as fixed-term deposits and bonds, is putting upward pressure on the cost of funding. The latter will also be affected by the need to replace part of the funds acquired through the Eurosystem's third targeted longer-term refinancing operations (TLTRO III), as well as the need for larger banks to issue instruments that meet the minimum requirement for own funds and eligible liabilities (MREL).

Asset risks

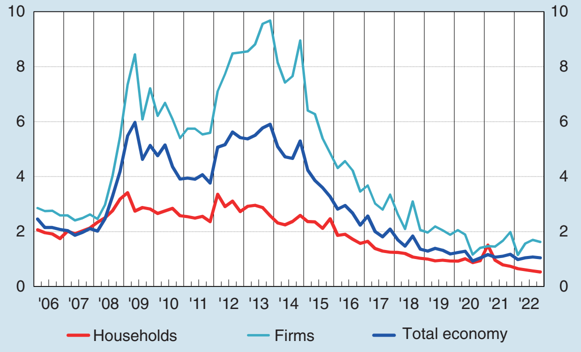
In the second half of 2022, the ratio of new non-performing loans to performing loans (loan default rate) for Italian banks stood at 1 per cent, unchanged from the end of the first half of the year (Figure 2.2). Among firms, those that had obtained a legislative moratorium remain the riskiest borrowers, with a loan default rate of 2.8 per cent, down from the end of last year. The indicator for firms with only state-guaranteed loans is in line with that for firms not benefiting from any support measures.[1]

In 2022, around €20 billion in non-performing loans were sold, in line with 2021. Together with the low loan default rate, this has contributed to a further decline in the stock of this type of asset, with the non-performing loan (NPL) ratio, net of loan loss provisions, slightly down to 1.5 per cent (Figure 2.3; see Table A.2 in the Appendix).

Figure 2.2

Credit quality indicators (1)

(quarterly data; per cent)



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

The coverage ratio for NPLs in the balance sheets of Italian banks was 49.7 per cent in December. In the same month, IFRS 9 Stage 2 loans accounted for 10.0 per cent of total performing loans, down in the last six months, but still above pre-pandemic levels. There continues to be a difference between significant institutions (SIs) and less significant institutions (LSIs) in terms of their shares of Stage 2 loans (10.5 and 10.1 per cent, respectively).[2]

Though the exceptional increases in energy prices have strongly affected the operating costs, production and profitability of the most exposed European companies over the past two years, no major impact on credit quality has been observed so far (see the box 'The effects of rising energy costs on credit risk in the main euro-area countries').

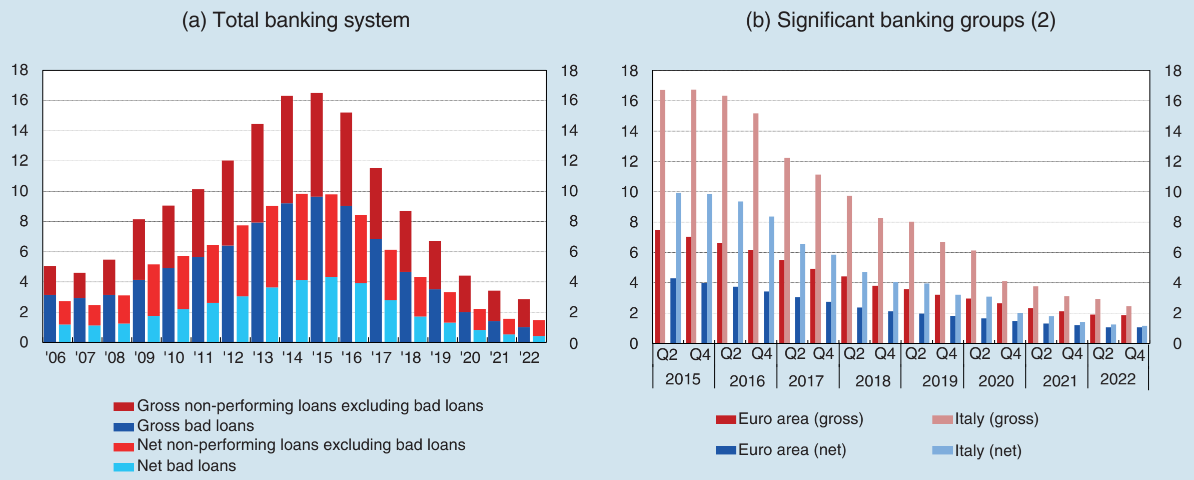
[1] For more details on the methodology, see the box 'The phasing-out of support measures and bank asset quality', *Financial Stability Report*, 1, 2022.

[2] The Italian banking system also includes subsidiaries of European significant groups, which are not classified as significant or less significant institutions, and for which the indicator is well below average.

Figure 2.3

Non-performing loans: share of total loans (1)

(per cent)



Sources: Consolidated supervisory reports for Italian banking groups and individual supervisory reports 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 December 2022 are provisional. – (2) The perimeter of significant banks and less significant banks differs between the dates shown in the figure: since June 2019, when the reform of the cooperative banking sector was completed, Cassa Centrale Banca has become a significant banking group for supervisory purposes and 143 cooperative credit banks (BCCs) have joined the ICCREA group, which was already classified as significant before the reform. Mediolanum and FinecoBank have been included among the significant banks since June 2022.

THE EFFECTS OF RISING ENERGY COSTS ON CREDIT RISK IN THE MAIN EURO-AREA COUNTRIES[1]

For sectors that are not net suppliers of energy products, it is possible to use an energy input-output model[2] to estimate the changes in unit costs in 2022 that were caused by increases in energy prices, taking into account both higher direct charges and indirect effects due to the rise in the prices of intermediate goods. Overall, increases in estimated unit costs are of a similar magnitude (around 6 per cent) in the various countries studied (France, Germany, Italy and Spain).

To assess the implications of the energy shock on credit quality at sectoral level in the four countries, changes were considered in relation to: (a) the ratio of non-performing loans to total loans (NPL ratio), and (b) the coverage ratio of performing loans.

The average NPL ratio in the sectors most exposed to energy price rises did not increase more than in other sectors. There were significant increases in some sectors, such as chemicals and metallurgy in Germany and land transport in Spain. While there are still no widespread signs of a deterioration in borrowers' capacity to service their loans in France, Germany and Italy, the coverage ratios of performing loans increased significantly in the sectors most exposed to energy

[1] By Raffaele Gallo and Francesco Palazzo.

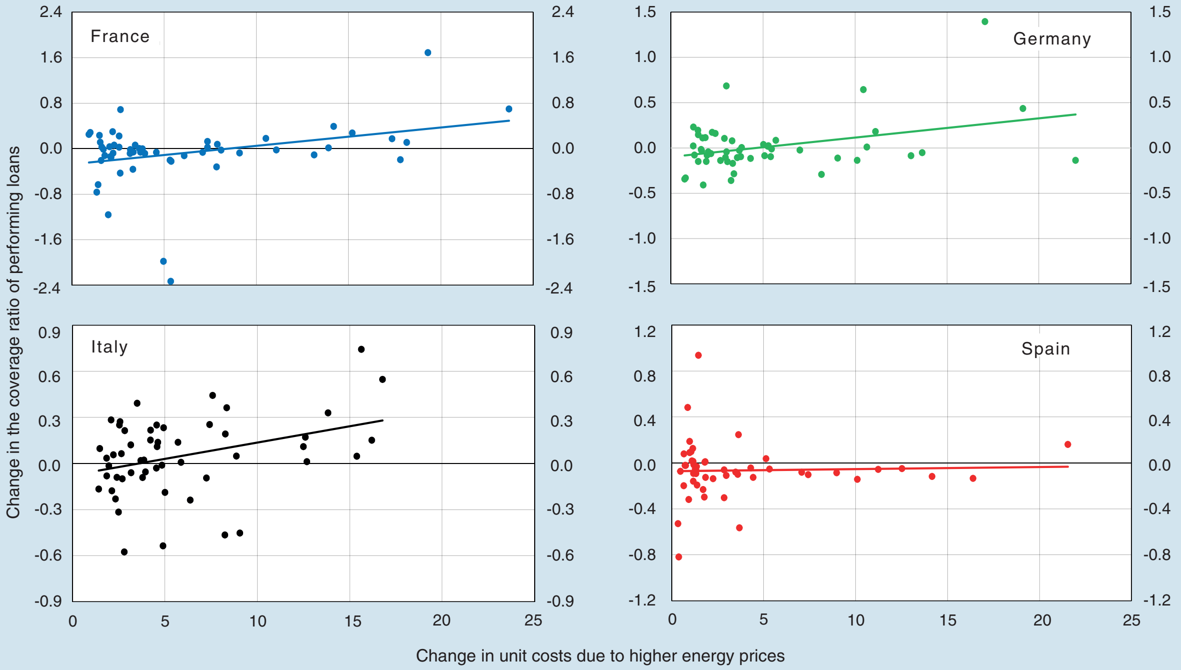
[2] The model used was created by Z. Guevara and T. Domingos, 'The multi-factor energy input-output model', Energy Economics, 61, 2017, pp. 261-269 (see the box 'Rising energy prices and the implications for Italian firms', in *Economic Bulletin*, 1, 2023). The model is calibrated for the leading four euro-area economies using the Physical Energy Flow Accounts (PEFA) and the cross-sector relationships (at the country-sector level) obtained from the European input-output tables in the Full International and Global Accounts for Research in Input-Output Analysis (FIGARO).

price rises (see the figure). In particular, banks expect higher future losses for companies in the metallurgy, chemical, fishing and non-metallic mineral sectors. However, the risks to the banking sector coming from firms operating in these sectors appear to be small, both because the overall amount of loans is low (less than 5 per cent of total loans to firms in all the countries) and because these firms are, on average, larger and less financially vulnerable.

Looking ahead, the decline in energy prices observed in early 2023 is likely to help contain the increase in the riskiness of the sectors most exposed to higher energy commodity prices.

Figure

Change in the coverage ratio of performing loans and unit costs due to energy price increases between December 2021 and December 2022 (1)
(12-month percentage changes)



Sources: Based on data from PEFA for energy consumption; FIGARO for the input-output matrices; Refinitiv for the market prices of energy products; and AnaCredit for credit risk indicators.
(1) Based on a sample of bank-firm relationships existing both in December 2021 and in December 2022. Each country's observations are aggregated based on the 2-digit ATECO 2007 sectors that are not net suppliers of energy products.

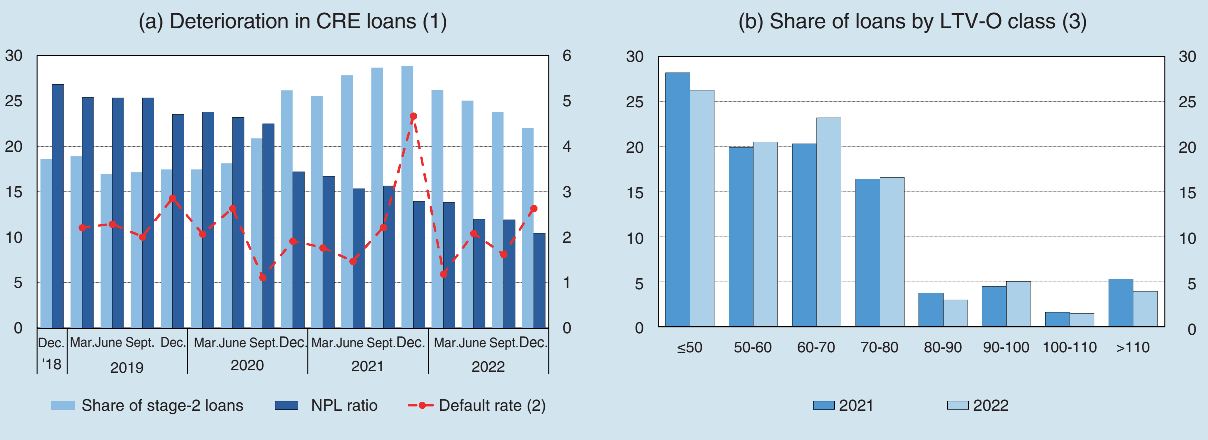
In the second half of 2022, the vulnerability of Italian banks stemming from real estate exposures remained low. This is also the case for loans to the commercial real estate sector (CRE),[3] which are relatively riskier (panel (a) of Figure 2.4). With reference to the new loans, the share of loans with a loan-to-value (LTV) ratio above 80 per cent is 13 per cent, down by 2 percentage points year on year (panel (b) of Figure 2.4).

[3] CRE loans are loans to non-financial corporations 'backed by' or 'for the purchase of' commercial real estate. The definition of commercial real estate is taken from Recommendation ESRB/2019/03, amending Recommendation ESRB/2016/14.

Figure 2.4

Characteristics of CRE loans

(per cent)



Source: AnaCredit.

(1) The loan default rate is the ratio of the flow of new non-performing loans to performing loans at the start of the period. Annualized rate. – (2) Right-hand scale. – (3) The loan-to-value ratio at origination (LTV-O) is based on new loans made during the year, identified by settlement date, and includes only loans collateralized by real estate. Based on the AnaCredit dataset classification, real estate collateral includes: residential buildings, office and commercial premises, and other commercial properties. The denominator is the protection value allocated to the loan and not the initial overall protection value. The protection value allocated to the loan therefore appears to provide a better indication of the actual coverage degree of the collateral in the event of a borrower's default than its overall value, which may back more than one loan.

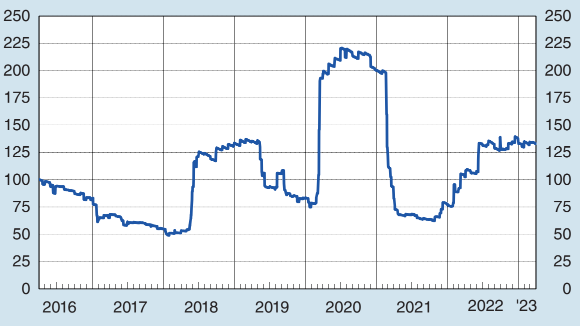
Our projections for the loan default rate,[4] consistent with the macroeconomic scenario published by the Bank of Italy in its January *Economic Bulletin*, point to a significant increase in 2023 for both households and firms, mostly driven by a higher cost of credit. However, this indicator is projected to remain below the level seen in previous times of crisis.

Market risk and interest rate risk

Figure 2.5

The VaR trend of Italian banks (1)

(daily data; index: March 2016=100)



Sources: Based on data from supervisory reports, the securities registry database, and Refinitiv.

(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 tail level (99 per cent). The indicator for the banking system as a whole is calculated every day at the close of business, using granular data on the stocks and the characteristics of the assets in the portfolio of each Italian bank at the end of each month, taking account of the changes in risk factors over the last 250 business days.

Based on our estimates, at the end of March, the value at risk (VaR) for the entire securities portfolio (banking and trading books) remained unchanged from September (Figure 2.5).

Between September 2022 and February 2023, public sector securities as a share of banks' total assets held broadly stable at 9.2 per cent (panel (a) of Figure 2.6). The average duration of the portfolio continued to decline (panel (b) of Figure 2.6). The share of securities valued at amortized cost decreased to 70.6 per cent for significant banks, while it rose to 73.7 per cent for less significant banks.

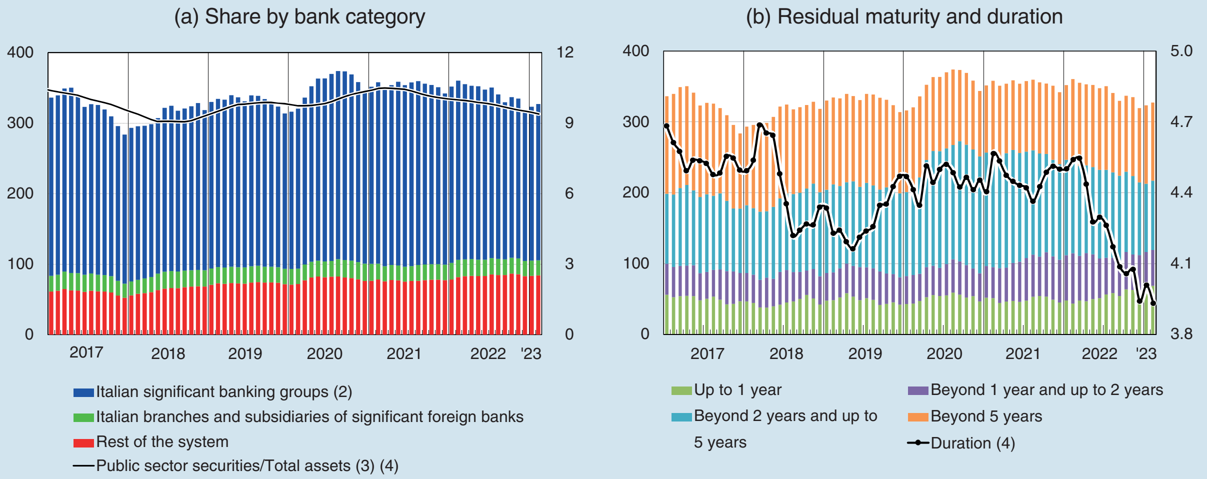
Changes in the value of the entire debt securities portfolio valued at amortized cost do not

[4] E. Bonaccorsi di Patti and G. Cascarino, 'Modelling the dynamics of non-performing loans in Italy', Banca d'Italia, *Notes on Financial Stability and Supervision*, 19, 2020.

Figure 2.6

Banks' investment in Italian public sector securities (1)

(monthly data; billions of euros, per cent and years)



Source: Supervisory reports.
(1) Comprises all public sector securities, including those issued by local government authorities. Excludes Cassa Depositi e Prestiti SpA. – (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 bond buybacks. – (4) Right-hand scale.

have a direct effect on banks' profitability or capital. Any unrealized losses materialize only if the intermediary is forced to sell those securities before maturity, e.g. in order to meet urgent liquidity needs.[5] With reference to the portfolio as at end-December 2022, the estimated impact of unrealized losses on the CET1 ratio – i.e. the ratio of common equity tier 1 (CET1) to risk-weighted assets (RWAs) – averaged around 200 basis points, against a CET1 ratio of 15.3 per cent. However, less than 2 per cent of unrealized losses were held by banks with a relatively low average liquidity coverage ratio (LCR) over a period of one month (less than 150 per cent, against the 100 per cent minimum requirement).[6]

Taking into account the total assets and liabilities in the banking book at the end of December 2022, under a risk-free rate scenario in line with the expectations implied by the market interest rate curves over a two-year horizon, the median change in the economic value of the portfolio[7] would be negative

[5] These liquidity needs could also be met without selling the securities, by using them in market or central-bank refinancing operations, provided they are unencumbered.

[6] Based on the IAS/IFRS accounting standards, banks are required to include in their financial statements disclosures on the fair value measurement of financial assets classified in the portfolio at amortized cost. Pursuant to Bank of Italy Circular 262/2002 (Banks' financial statements: layouts and preparation), this information should be disclosed in Table 4.2 (Financial assets measured at amortized cost: breakdown of loans to customers by product type) of Part B – Information on the balance sheet in the notes to the financial statements.

[7] The estimates are based on the simplified methodology for determining exposure to interest rate risk as defined by the Bank of Italy. For more details, see Bank of Italy Circular 285/2013 (Supervisory rules for banks), Part One, Section III, Chapter 1, Annex C (Interest rate risk for the banking book in terms of change in economic value), only in Italian; this methodology is applied to the assets/liabilities of the banking book reported by banks using the maturity bucket. More specifically, the scenario under consideration suggests an increase of 50-100 basis points for maturities up to six months, a reduction of 5-20 basis points for maturities beyond six months and up to five years, and an increase of no more than 10 basis points for longer maturities.

both for significant and less significant banks (-36 and -26 basis points of CET1 ratio, respectively).[8] Some 90 per cent of banks would incur losses of less than 50 basis points and impairments would be sustainable, even assuming that the deposits considered to be stable had a shorter average duration, in line with a growing customer preference for investments other than liquidity and in an environment of high inflation.

On the other hand, the impact on net interest income of a 200 basis point upward parallel shift[9] in the risk-free rate curve would be positive for most banks. According to our estimates,[10] the average 12-month weighted increase for the banking system would be equal to 37 basis points of the CET1 ratio. In scenarios where sight deposits are less stable, the result would be progressively lower.

Refinancing risk and liquidity risk

In February the funding gap of banks[11] stood at -11.1 per cent, slightly up from September 2022, as a result of the contraction in funding, which more than offset the slowdown in lending. Retail funding consists mainly of deposits; at the end of 2022, more than half of their total amount was protected by national guarantee schemes.

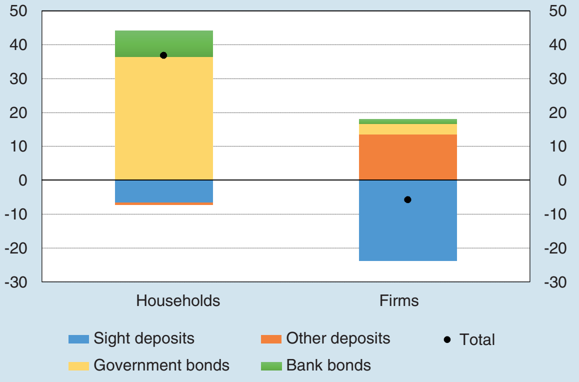
Changes in the preferences of households and firms regarding the allocation of liquidity, with a view to protecting their purchasing power, are leading to a significant rebalancing towards higher-yielding assets. Since last summer, the decline in sight deposits has gone in parallel with an increase in flows into government securities and, to a lesser extent, into bank bonds and other types of deposits (Figure 2.7). The shift in bank funding towards relatively more expensive instruments is creating upward pressure on the cost of funding.

Since the second quarter of 2022, net bond issuance has gradually increased, up to €6 billion in the first quarter of this year (panel (a) of Figure 2.8), despite the rise in yields associated with interest rate hikes (panel (b) of Figure 2.8).

Figure 2.7

Deposits and bonds held in banks' custody (1)

(billions of euros; cumulative flows; July-December 2022)



Source: Supervisory reports.
(1) Bank and government bonds are considered alternative forms of investment for customers, in addition to deposits.

[8] Given a sensitivity of portfolio items broadly in line with previous estimates, the negative effect, albeit small, can be associated with the valuations of banks' assets; the latter are affected by the assumptions of positive (non-parallel) shocks in long-term maturities, not offset by negative shocks in medium-term maturities (see *Financial Stability Report*, 2, 2022).

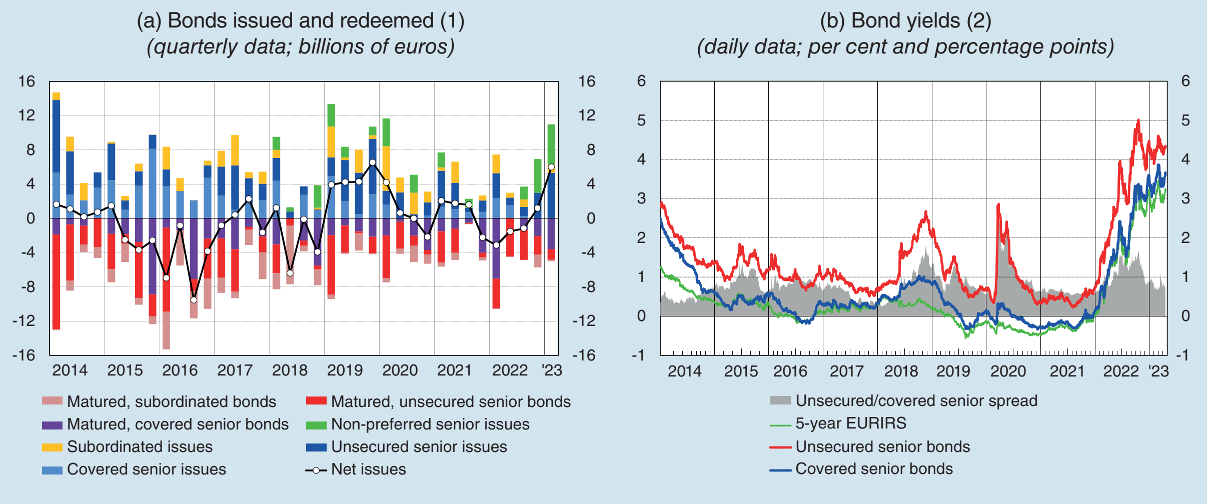
[9] The impacts have been estimated using the simplified methodology for the assessment of interest rate risk illustrated in Bank of Italy Circular 285/2013 (Supervisory rules for banks), Part One, Section III, Chapter 1, Annex C-bis (Interest rate risk in the banking book in terms of variations in net interest income), only in Italian; under this methodology, it is possible to simulate scenarios of parallel rate curve shocks only.

[10] Estimates are based on the assumption that only items maturing or changing their interest rates by 30 June 2023 will be rolled over under market conditions, based on a static balance sheet assumption that does not take into account: (a) any future reallocation of assets and liabilities following changes in monetary policy; (b) the conditions of outstanding TLTROs; (c) market conditions.

[11] The funding gap is calculated as the difference between the value of loans and retail funding, expressed as a percentage of loans.

Figure 2.8

Bank bonds placed on international markets

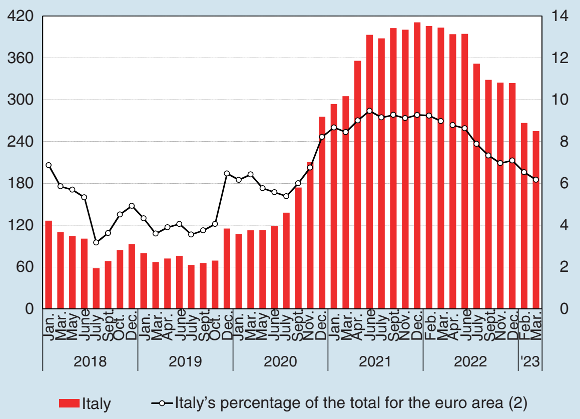


Sources: Bloomberg and Dealogic.
(1) Italian banks' issues on international markets. Does not include issues retained on issuers' balance sheets or those earmarked for the retail market. Includes securitized bonds. – (2) Yields at maturity of Italian banks' bonds with residual maturity of 5 years.

In the coming months, banks will have to replace part of the funds acquired through TLTRO III operations, including as part of their process of fully aligning with the MREL target requirement.[12]

Figure 2.9

Excess liquidity of counterparts operating in Italy (1)
(billions of euros and per cent)



Sources: Based on Bank of Italy and ECB data.
(1) The months indicated on the x-axis are those in which each maintenance period ends. 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.

The liquidity in excess of the minimum reserve requirements deposited with the Bank of Italy has gradually declined: in the maintenance period to March 2023, it averaged €255 billion, €69 billion lower than in November 2022 (Figure 2.9). This decline is attributable to early TLTRO III repayments, totalling €96 billion in the period November 2022 to March 2023. For Italian banks, the propensity to repay early has so far been lower than for banks in the other major euro-area countries.

At the end of March, outstanding TLTRO refinancing amounted to €318 billion, of which around 45 per cent due by June. As the outstanding stocks exceed central bank excess reserves, intermediaries may raise funds in the market to cover maturing amounts, replace a share of TLTRO III funding with other central bank operations, or reduce their assets. Based on our estimates, if the banks with insufficient

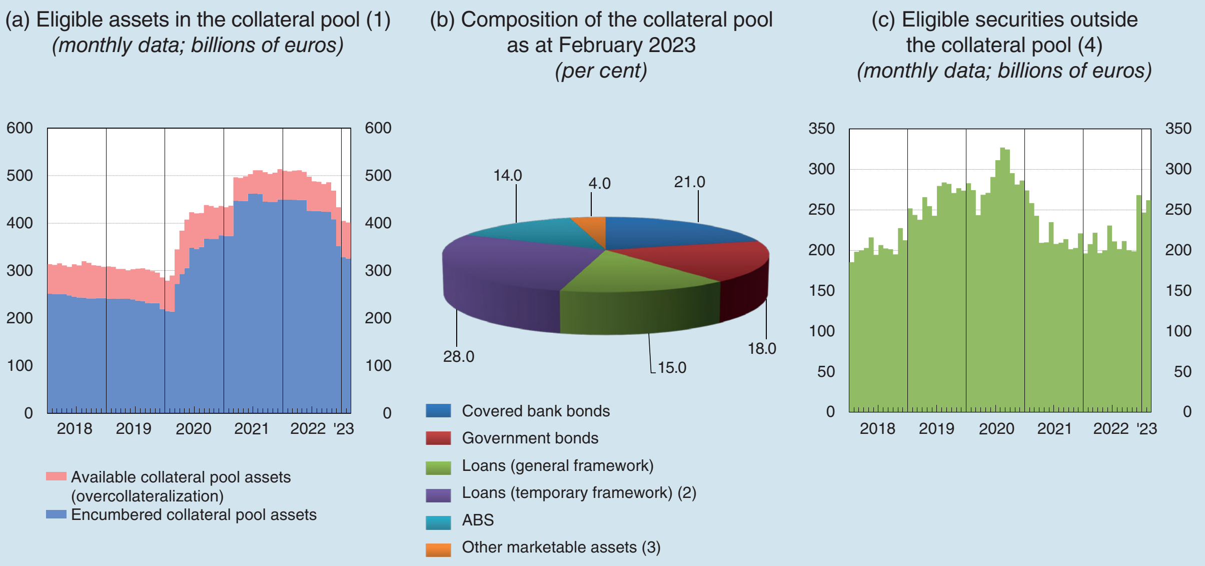
[12] Recently, the Bank of Italy has issued implementing provisions on covered bonds, which will allow banks to expand the range of available instruments. The new framework, which harmonizes the existing national regimes while preserving some of their specificities, should lead to greater market integration at European level, enhance the quality of these instruments and therefore their appeal to potential investors.

reserves to repay all or part of their TLTRO III funding – i.e. just under half the banks in the system – used regular operations with the central bank to fully finance their liquidity deficit, the resulting higher costs would shave around 350 basis points off their ROE.[13]

Between September 2022 and February 2023, following TLTRO III repayments, the value of the assets pledged as collateral in Eurosystem operations (collateral pool) fell by €81 billion, to €401 billion (panel (a) of Figure 2.10). Italian banks have mainly freed up government bonds. Loans are the largest asset class (43 per cent of the total; panel (b) of Figure 2.10). The measures taken in response to the pandemic emergency, which eased the eligibility criteria for assets posted as collateral, have continued to increase the availability of collateral by €51 billion; some of the measures will be lifted in June, reducing the value of collateral by €8 billion. As a result of a further 100 basis point upward shift of the entire yield curve, the availability of assets pledged as collateral is estimated to shrink by 5.3 per cent. In addition, Italian banks have €262 billion in unencumbered eligible securities available outside the collateral pool, of which 80 per cent are government securities (panel (c) of Figure 2.10).

Figure 2.10

Eligible assets of the Italian banking system



(a) Eligible assets in the collateral pool (1)
(monthly data; billions of euros)

(b) Composition of the collateral pool as at February 2023
(per cent)

(c) Eligible securities outside the collateral pool (4)
(monthly data; billions of euros)

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 supranational organizations. – (4) End-of-period data for the entire banking system, not including Cassa Depositi e Prestiti SpA and Poste Italiane SpA. Amounts at market values as reported by the banks, net of the haircuts applied by the Eurosystem.

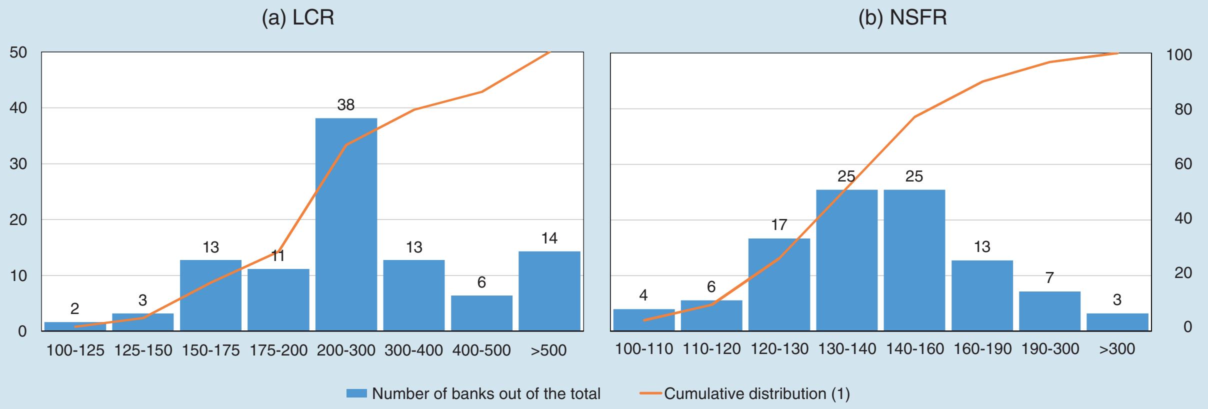
The liquidity profile remains balanced for both short- and medium-term maturities. At the end of December, the LCR, which already incorporates stress assumptions, was 190 per cent on average; the net stable funding ratio (NSFR) averaged 133 per cent. For no bank were the indicators below the regulatory minimum of 100 per cent (see Table A.9 in the Appendix).

[13] The reduction in ROE for the entire system would be around 130 basis points.

An analysis of the distribution for the banking system shows that 95 per cent of intermediaries had an LCR of more than 150 per cent (panel (a) of Figure 2.11); only 10 per cent of banks had an NSFR below 120 per cent (panel (b) of Figure 2.11).

Figure 2.11

Distribution of Italian banks by LCR and NSFR as at December 2022
(per cent)



Source: Based on supervisory reports.
(1) Right-hand scale.

Capital and profitability

In the second half of 2022, the capital position of Italian banks improved slightly, returning to end-2021 levels. In December, the CET1 ratio for the entire system was, on average, 15.3 per cent of RWAs. Both significant and less significant banks saw an increase in the CET1 ratio, albeit to varying degrees: by 80 and 20 basis points, respectively, to 15.7 and 16.4 per cent.[14] For the former, a substantial reduction in risk-weighted assets, especially among the largest groups, contributed strongly to the improvement in the capital position, while CET1 played a smaller part. For less significant banks, higher profit reserves and lower intangible assets (which are deducted from capital) more than offset the negative impact of the decrease in the market value of securities classified in the Held To Collect and Sell (HTCS) portfolio, as well as of the increase in RWAs.

At the end of December 2022, the average level of capitalization of Italian significant banks was about 40 basis points higher than that of their counterparties in countries participating in the Single Supervisory Mechanism (SSM).

In the second half of 2022, the leverage ratio, which measures capital adequacy relative to non-risk-weighted assets, improved by 40 basis points, to 6.0 per cent, mainly as a result of a reduction in assets. In December, the leverage ratio of Italian significant banking groups stood at 5.9 per cent, still above the European average; for less significant banks, it was 6.6 per cent.

In the second half of last year, the ratio of MREL eligible liabilities to risk-weighted assets for significant banks subject to resolution rose to 30 per cent on average, against average values for

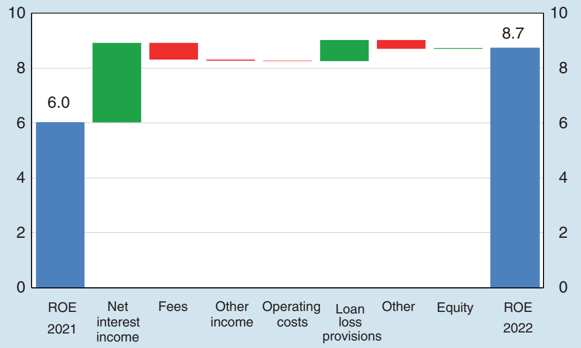
[14] The Italian banking system also includes subsidiaries of European significant groups, which are not classified as significant or less significant institutions, and for which the indicator is below average.

the intermediate and final targets of 23.3 and 24.6 per cent, respectively.[15] Buoyant issuance of eligible liabilities, along with the decline in risk-weighted assets, contributed to this improvement. However, some banks are still not in line with the final requirements to be met by 1 January 2024 (or any extended deadline, as determined by the resolution authority). The aggregate shortfall of eligible liabilities to meet the total and subordinated MREL requirements amounted to €1.2 billion and €1.8 billion, respectively.[16]

The profitability of Italian banks improved in 2022. Net of non-recurring items, ROE increased from 6.0 to 8.7 per cent (Figure 2.12). Net interest income rose by 18.5 per cent, mainly on account of interest income on loans to firms, three fourths of which are floating-rate loans, and on government bonds. In contrast, interest expense on deposits rose slightly, and the positive effect of TLTRO III operations faded. Gross income rose by 6.7 per cent; the decline in fees partly offset the increase in net interest income. The decrease in loan loss provisions (-17.3 per cent) also contributed to the improvement in profitability; operating costs remained broadly unchanged.

Figure 2.12

Breakdown of the change in ROE between 2021 and 2022 (1)
(per cent and percentage points)



Sources: Consolidated supervisory reports for banking groups and individual supervisory reports for stand-alone banks.
(1) Changes are expressed as a ratio to own funds and reserves. A green/red bar indicates a positive/negative contribution to ROE at the start of 2021, giving the final ROE value for 2022.

Based on estimates consistent with the baseline macroeconomic scenario published by the Bank of Italy in its January *Economic Bulletin*, the overall profitability of Italian banks is set to remain close to 2022 levels in 2023, before contracting in the following two years. Net interest income is expected to soar this year and to slow down in 2024-25. Loan loss provisions are set to grow in 2023, to more than twice the level of 2022, before edging down in the following two years, though remaining above last year's very low levels.

The Bank of Italy's ongoing monitoring efforts show that the number of serious cyber incidents occurring at Italian banks remained virtually unchanged from the previous year (13 reports in 2022 versus 12 in 2021).[17] The European Digital Operational Resilience Act (DORA) entered into force in January 2023. It will be enforceable as of 2025[18] to ensure that European supervisory authorities adopt a harmonized approach to digital resilience across the financial services industry. Moreover, in 2022, supervision was intensified to improve the assessment of less significant institutions' exposure to cyber risk and to strengthen their governance system in the context of digital transformation (see the box 'Analysis of IT risk in connection with the digitalization of less significant institutions').

[15] The largest banks (with total assets exceeding €100 billion) and those for which significant systemic risks are identified in case of failure are also required to meet part of the requirement through subordinated instruments, including non-preferred senior debt. For these banks, the ratio of own funds and subordinated instruments to RWAs was 21.8 per cent on average, against intermediate and final targets of 17.5 and 19.3 per cent, respectively.

[16] Banks with shortfalls in both requirements could fill them jointly by issuing eligible instruments to cover both the overall and the subordinated requirements.

[17] For the definition of the criteria and thresholds to be used for classifying operational or security incidents as serious, see the Bank of Italy's website, 'Reporting significant operational or security incidents'.

[18] The entities addressed by the regulation have two years to comply.

ANALYSIS OF IT RISK IN CONNECTION WITH THE DIGITALIZATION OF LESS SIGNIFICANT INSTITUTIONS[1]

In recent years, the supervision of less significant institutions (LSIs) has focused on the risks and opportunities associated with the use of technology, partly due to increasing digitalization by banks.

In 2022, an information and communication technology (ICT) risk self-assessment questionnaire was submitted to a highly representative sample of 55 LSIs.

Taking the approach used for significant institutions (SIs), the questionnaire – supplemented with other available data – collected detailed information on the banks' ICT risk profiles and self-assessments of their exposure and existing controls.

The following areas were found to be most in need of strengthening: (a) IT risk governance and oversight processes in relation to the full or partial outsourcing of ICT services (concerning 91 per cent of the LSIs); (b) data management systems, for both reporting and classifying data in relation to the risk of breaches of the confidentiality, integrity and availability of the data; and (c) cyber security and, in particular, maintaining updated IT asset inventories, relying on IT systems that are no longer supported and managing access by outside parties. There are aspects of change management that require further attention, especially with regard to improving project management and IT security systems: 70 per cent of the banks reported having suffered data confidentiality and integrity breaches or having experienced the non-availability of data or services following IT system changes.

The number of LSIs reporting successful cyber-attacks remained basically stable (15 per cent of the sample), even though there was a significant increase in the time needed to identify the threat and devise appropriate solutions. The overall financial impact of these attacks was modest (around €1 million).

Spending on ICT grew by 18 per cent between 2020 and 2021, mainly due to higher outsourcing costs (up by 20 per cent), which is the largest item for LSIs. While still deemed residual (8.5 per cent of total expenses for 2021), IT spending and investment in innovation rose by 12 per cent on 2020, consistent with the rising tide of digital transformation initiatives: the share of banks in the sample that utilize digital distribution channels, went from 51 per cent in 2020 to 69 per cent in 2021. These initiatives have not yet had a dramatic impact on banks' perception of the importance of digital channels as only 31 per cent of those surveyed thought them to be essential. Other digitalization initiatives were centred around the use of innovative technologies, with around half of the banks in the sample reporting that they had transferred some critical functions to cloud systems.

Inspections of the major IT service providers used by the LSIs revealed that the banks' ability to engage in discussions with their providers has improved, although it is not yet at a fully satisfactory level. Dialogue can only actually improve once certain IT skills become more common; as of now, only half of the banks reported having at least one board of directors member with this expertise, and the percentage of second- and third-level control function employees who have this knowledge remains minimal.

The entry into force of the update to the 'Supervisory Instructions for Banks'[2] will help to strengthen banks' ICT risk control and management, including by setting up a second-level control function for IT security.

[1] By Giovanni Rumolo and Salvatore Vitiello.

[2] For further information, see the 40th update of the Bank of Italy Circular No. 285/2013 (only in Italian), in force as of 30 June 2023.

2.2 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

Insurance companies

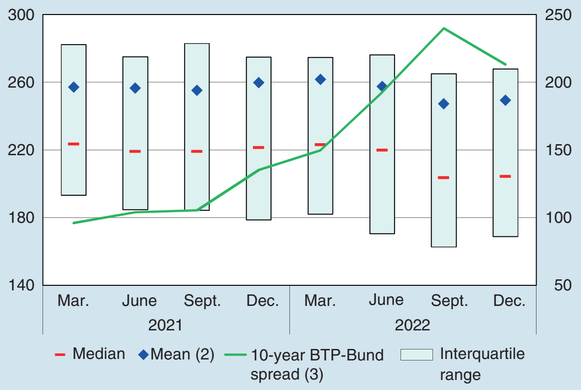
High inflation and the rapid upward shift in the risk-free interest rate curve were reflected in the average solvency ratio of Italian insurance companies, which went from 257 to 249 per cent between June and December 2022 (Figure 2.13), though it remained at high levels close to the European average (261 per cent in September 2022).[19] The decline was driven by the increase in the capital requirement due to the higher exposure to interest rate risk and to lapse risk in life insurance (see Figure A6 in the Appendix).

According to simulations by the Italian Insurance Supervisory Authority (IVASS), which use scenarios in line with the shocks considered in the banking stress tests currently conducted by the European Banking Authority (EBA) and the ECB,[20] further upward shifts in the interest rate curve could lead to an average decrease of 7 per cent in life insurance companies' own funds.

Figure 2.13

Solvency ratio and BTP-Bund spread (1)

(per cent and basis points)



Sources: IVASS and calculations based on Refinitiv data.
(1) The solvency ratio is calculated as the ratio of eligible own funds held for coverage to the solvency capital requirement established under Solvency II. The regulations require a ratio of 100 per cent or more. The data are taken from the quarterly Solvency II supervisory reports based on the quantitative reporting templates. – (2) Weighted average with weights equal to the solvency capital requirement. – (3) The BTP-Bund spread refers to the end of each period. Right-hand scale.

The increase in bond yields observed in the second half of 2022 following the change in the monetary policy stance led to a negative balance between unrealized gains and losses on insurance companies' investments (see *Financial Stability Report*, 2, 2022). In March 2023, net unrealized losses amounted to €31 billion, down from €52 billion at the end of 2022 (panel (a) of Figure 2.14). This mostly impacted companies operating in the life segment (panel (b) of Figure 2.14).

The build-up of net unrealized losses on portfolio investments marked, in particular, the crisis of the Eurovita insurance company, which is playing out against a background characterized by further, specific structural weaknesses of that insurance company (namely, inadequate risk management, limited capital, and shareholder disengagement).[21] Also owing to these factors, between January and February of this year, news that the controlling shareholder was unwilling to strengthen the company's capital position, as requested by the supervisory authority, triggered a rapid and significant growth in surrenders by customers, thereby generating tensions capable of jeopardizing the liquidity position of the company and making it inevitable to adopt measures to reorganize the company and safeguard financial stability.[22]

[19] For more information, see the EIOPA website: 'Insurance statistics'.

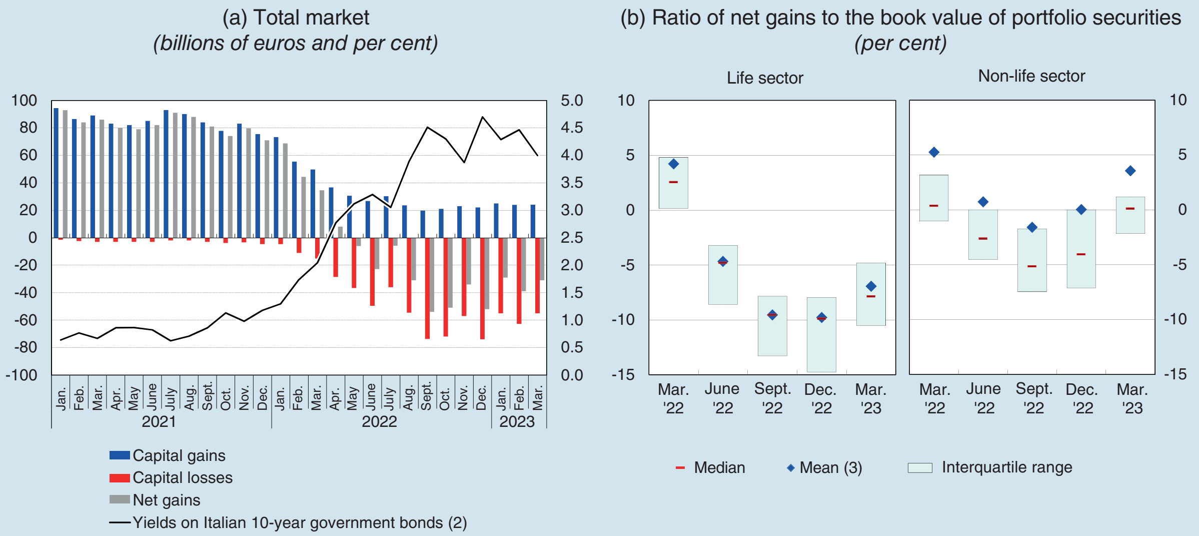
[20] In its analyses, IVASS forecast the following compared with the end of 2022: (a) increases in government bond yields, differing based on issuing country and maturity (e.g. 238 and 52 basis points, respectively, for ten-year Italian and German government securities); (b) an increase in corporate bond yields, differing based on rating class, sector and geographical area (e.g. 239 basis points for European non-financial corporate bonds with a BBB rating); (c) an upward shift in the interest rate swap curve across all maturities (e.g. an increase of 176 basis points at the ten-year maturity).

[21] Eurovita mainly sells insurance-based investment products placed by financial advisors and banks. At the end of December 2022, it had assets equal to €15 billion (less than 2 per cent of the Italian insurance sector total) and a solvency ratio below 100 per cent.

[22] On 31 January 2023, IVASS appointed an interim commissioner and, at the latter's request, decided on 6 February to temporarily suspend redemptions, pursuant to Article 188 of the Private Insurance Code. On 29 March, based on a proposal by IVASS, the Minister for Enterprises and 'Made in Italy' issued a decree ordering that Eurovita be placed under special administration.

Figure 2.14

Unrealized gains and losses of Italian insurance companies (1)



(a) Total market
(billions of euros and per cent)

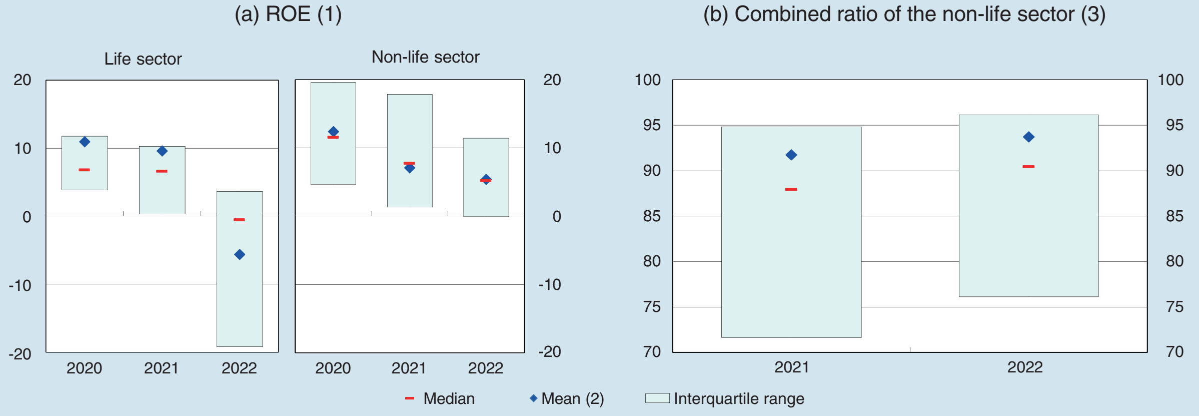
(b) Ratio of net gains to the book value of portfolio securities
(per cent)

Sources: IVASS and calculations based on Refinitiv data.
(1) Unrealized 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. – (3) Weighted average with weights equal to the book value of portfolio securities.

The profitability of the Italian insurance sector worsened in 2022. In the life sector, ROE was negative by around 6 percentage points (panel (a) of Figure 2.15), due to both net unrealized losses and a decrease in premium income (-11 per cent). In the non-life sector, ROE fell to 5 per cent (panel (a) of Figure 2.15), mainly owing to inflation dynamics leading, among other things, to a rise in the combined ratio (i.e. the ratio of operating costs to premium income; panel (b) of Figure 2.15), despite the growth in premium income (up by 5 per cent compared with 2021). The legal exception that makes it possible to temporarily suspend the effects that unrealized losses on

Figure 2.15

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



(a) ROE (1)

(b) Combined ratio of the non-life sector (3)

Source: IVASS.
(1) Ratio of earnings to shareholders' equity. – (2) Weighted average with weights equal to the denominator of each ratio. – (3) Ratio of operating costs to premium income.

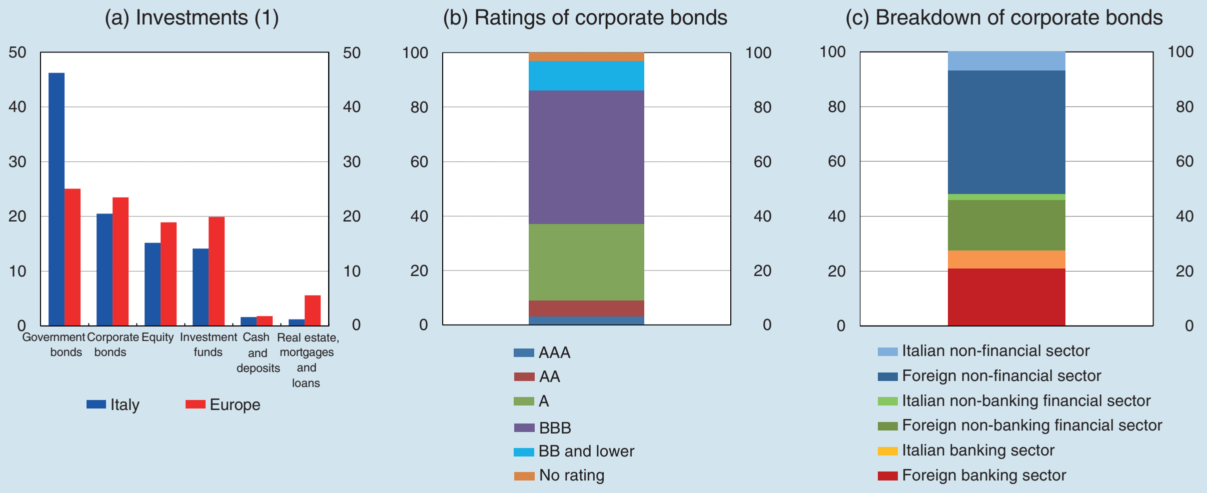
non-permanent securities have on the financial results for 2022[23] was used by around one third of Italian insurance companies, which in terms of assets account for about two thirds of the market.

The fall in the prices of securities recorded in the second half of the year led to a decline of 4 per cent in the market value of Italian insurance companies' total investments. Among the exposures with risk borne by companies (€701 billion in December 2022, down by 5 per cent since June), the share of public sector securities has continued to decline (see Section 1.3), though it remains above the European average (46 per cent, against 25 per cent; panel (a) of Figure 2.16). Investments in corporate bonds, stable at 20 per cent of the portfolio, are mostly made up of securities issued by foreign companies and non-financial corporations (panel (c) of Figure 2.16); about half of them have a BBB rating, while 10 per cent are high yield (panel (b) of Figure 2.16). Insurance companies' direct exposures to US banks and to the Credit Suisse group are negligible (0.5 and 0.12 per cent of total investments respectively).

Figure 2.16

Insurance company investments

(per cent; data at 31 December 2022)



Sources: IVASS and EIOPA.
(1) The data for Europe, as at 30 September 2022, refer to the European Economic Area.

Despite decreasing slightly, the liquid asset ratio remained higher than the EU median (65 and 47 per cent, respectively) at the end of 2022.[24]

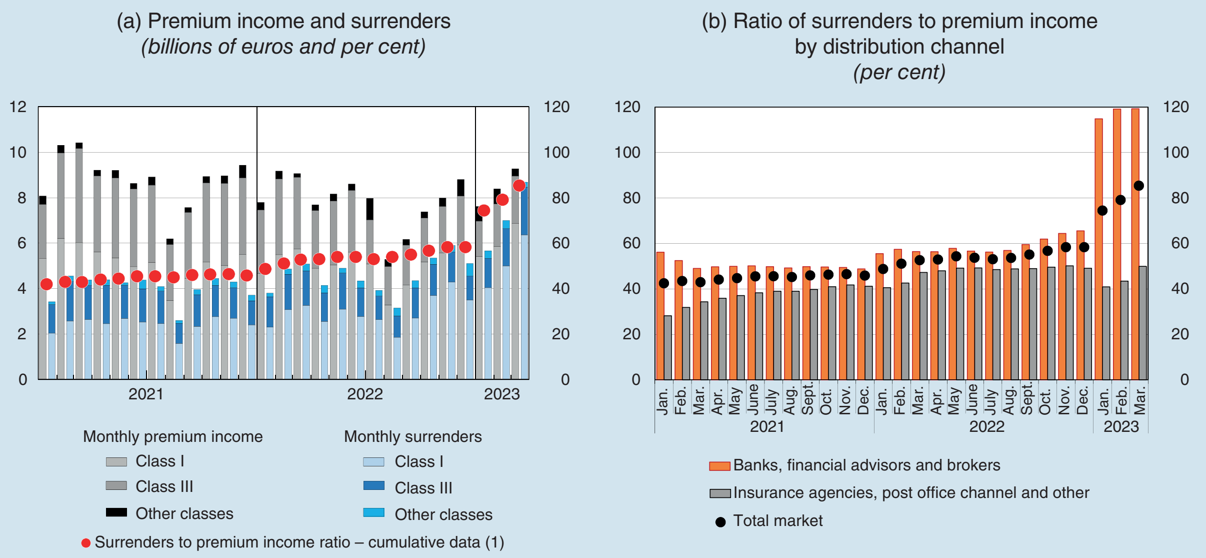
In the life sector, the ratio of surrenders to premium income continued to rise, especially in the early months of 2023. At the end of March, it had reached 85 per cent on average, compared with 53 per cent in March 2022 (panel (a) of Figure 2.17), owing to both the increase in surrenders (57 per cent) and the decline in premium income (4 per cent). This was particularly significant for companies distributing via the banking channel or through financial advisors (at the end of March the surrenders to premium income ratio was 119 per cent on average; panel (b) of Figure 2.17).

[23] The possibility of waiving the assessment criteria that the Italian GAAP set for financial statements was introduced by Article 45, paragraphs 3-*octies*, 3-*novies* and 3-*decies* of Decree Law 73/2022, converted, as amended, into Law 122/2022. The provision requires insurance companies using this option to build up a non-distributable reserve by taking into account unrealized losses incurred by the company and excluding those attributable to policyholders. IVASS Regulatory order 127/2023, amending IVASS Regulation 52/2022, introduced specific prudential and governance safeguard measures for the insurance companies availing of this option.

[24] EIOPA, 'Risk Dashboard. January 2023', February 2023.

Figure 2.17

Life insurance sector



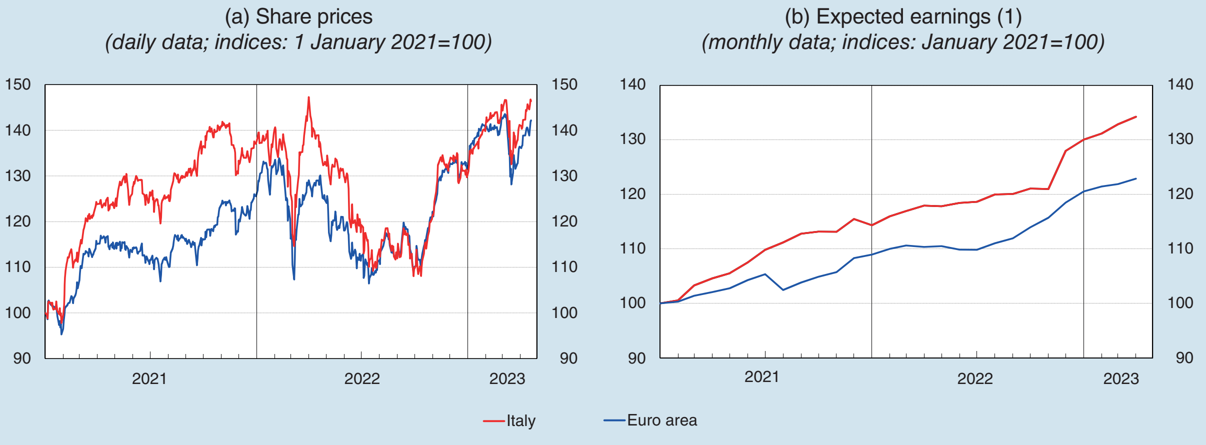
Source: IVASS.
(1) Calculated as the ratio of surrenders to premium income. Right-hand scale.

The sharp increase in surrenders for life contracts observed in the Italian market since the second half of 2022 is due to the choices made by policyholders both in terms of the higher liquidity needs stemming from the changed macroeconomic environment and the search for more profitable alternatives to insurance-based investment products (see Section 1.5).

The April market indicators suggest that share prices and earnings expectations are in any case growing (Figure 2.18).

Figure 2.18

Italian and euro-area insurance companies



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

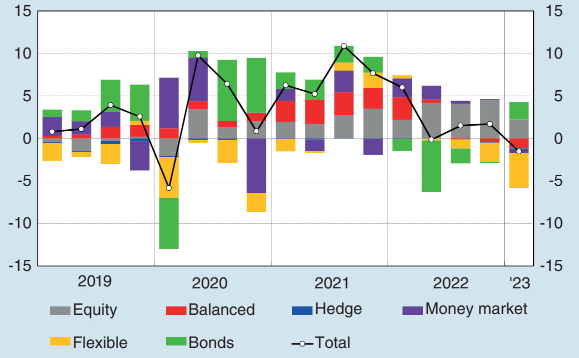
The asset management industry

Net subscriptions to Italian open-end investment funds were positive in the fourth quarter of 2022 (by €1.7 billion) and subsequently turned negative in the first quarter of 2023 (by €1.5 billion). Overall, net subscriptions were marginally positive during the period considered (by €200 million; Figure 2.19), owing to inflows into equity and bond funds (€6.8 billion and €2 billion respectively) and outflows out of flexible and balanced funds (€6.3 billion and €1.6 billion respectively). In the fourth quarter of 2022, funds that invest in accordance with environmental, social and governance (ESG) sustainability criteria continued to record positive net subscriptions (€5.2 billion).

Figure 2.19

Open-end Italian investment funds: net subscriptions (1)

(quarterly data; billions of euros)



Source: Assogestioni.

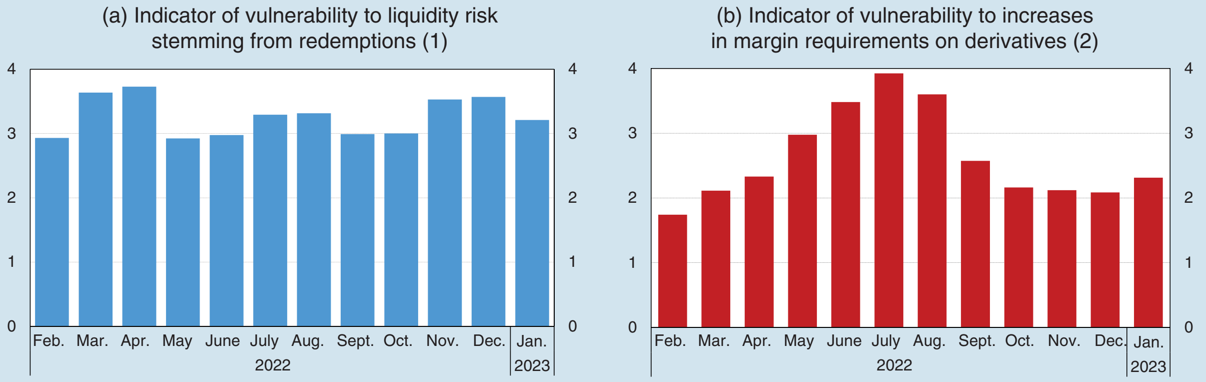
(1) The data refer to Italian and foreign funds run by asset management companies belonging to Italian groups. Provisional data for Q1 2023.

The degree of liquidity fell between September 2022 and February 2023, from 8.3 to 4.9 per cent.[25] This contraction was due to the increase in interest rates and the rise in inflation, both of which provide an incentive to reduce cash holdings. No significant changes were observed in the lines of credit available or in debt.[26]

Figure 2.20

Liquidity risk indicators for Italian open-end investment funds

(February 2022 - January 2023; percentage share of net assets)



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

(1) Ratio of the assets of funds with a liquidity risk indicator of less than 1 to the assets of all funds in the market segment. Open-end investment funds in the flexible and mixed bond segments are included. The liquidity risk indicator is equal to the ratio of the fund's assets weighted by the degree of liquidity of each exposure to net redemptions under a stress scenario. The stress scenarios are equal to the average of the values above the 99th percentile of the distribution of net monthly redemptions in relation to total assets for each of the sectors analysed between January 2008 and November 2020 (high yield and emerging market funds: 14 per cent; euro area: 30 per cent; United States and global: 24 per cent; mixed funds: 24 per cent). – (2) Ratio of vulnerable funds' assets to total sub-sector assets. Vulnerable funds are those whose ratio of liquid assets to margin requirements, determined under the stress scenario and applied to futures positions, is less than 1. The stress scenario is equal to the 1st percentile in the distribution of variation margins in the period from January 2008 to November 2020. Liquid assets include bank current accounts,government securities of euro-area countries, and government securities of other countries with ratings equal to or higher than AA.

[25] The degree of liquidity is defined as the ratio of current account holdings (net of purchases, sales and subscriptions to be settled) to net assets.

[26] Italian legislation envisages that Italian open-end investment funds can only take out loans on a temporary basis, in relation to the need to invest in or disinvest from fund assets, and within the maximum limit of 10 per cent of the overall net value of the fund.

Between August 2022 and January 2023, the share of Italian funds vulnerable to very sizeable redemptions[27] was unchanged (panel (a) of Figure 2.20),[28] while the percentage of those vulnerable to liquidity risk stemming from changes in margin requirements decreased (from 3.6 to 2.3 per cent), mainly owing to the reduction in derivatives exposure (panel (b) of Figure 2.20).

During 2022, Italian funds reduced the average duration of the bond portfolio (from 5.8 to 4.7 years), which is lower than the average duration of European funds (6.4 years), thus displaying a lower exposure to interest rate risk. They also decreased their exposure to Italian government securities (by €1.7 billion) and purchased foreign sovereign bonds (€6 billion). Exposure to high yield corporate bonds declined, while the share of BBB-rated corporate bonds increased and that of other investment grade bonds rated above BBB held stable.

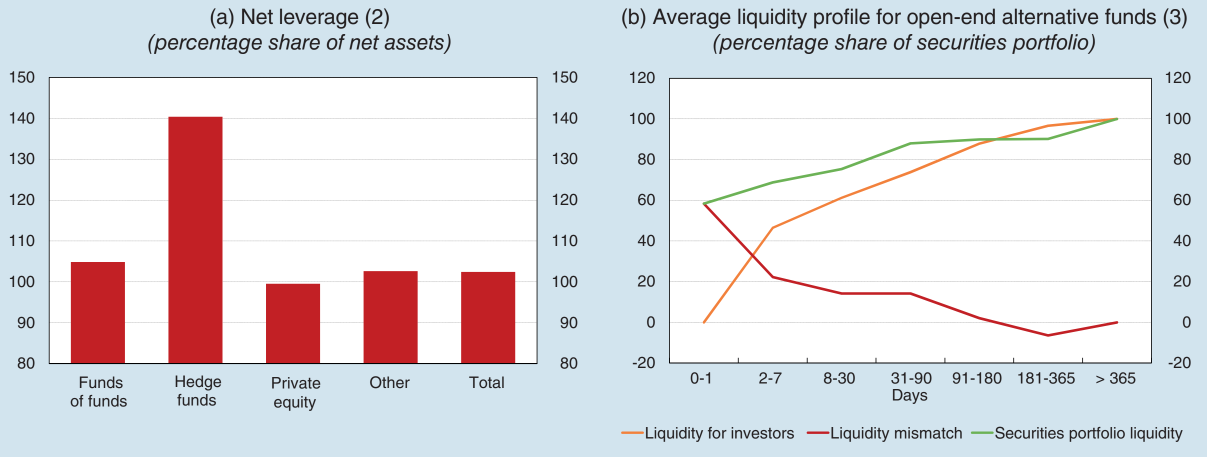
At the end of last year, securities issued by the banking sector accounted for around 9 per cent of the total assets of Italian funds. The exposure was mainly concentrated on Italian and euro-area banks. The shares of securities issued by banks based in the United States and Switzerland were instead very small (3 and 1.2 per cent respectively).

The total assets of alternative investment funds (AIFs) continued to increase at a fast pace (11 per cent in 2022), driven by the financial intermediaries investing in private equity and those specialized in the direct provision of funding or in the purchase of loans originated by other financial intermediaries. Conversely, the capital of alternative individual savings plans (PIRs)

Figure 2.21

Indicators for Italian alternative investment funds (1)

(*December 2022*)



Sources: Supervisory reports and data submitted pursuant to the Alternative Investment Fund Managers Directive (AIFMD).
(1) Based on supervisory reports and data submitted pursuant to Directive 2011/61/EU (AIFMD); this requires the managers of such funds to regularly provide the competent authorities with information on their main assets and exposures. – (2) Overall exposure calculated using the method based on the ratio of commitments to net assets of alternative funds managed by Italian asset management companies. 'Other' includes funds that provide direct financing or buy credit from other financial intermediaries and those not included in the other categories according to the criteria adopted by the European Securities and Markets Authority (ESMA). – (3) For each period, the liquidity mismatch is the difference between the liquidity of the securities portfolio, equal to the average share of the securities portfolio that the open-end alternative funds can liquidate by that date, and the liquidity profile for investors, equal to the average share of assets that investors in these funds can redeem in the same period.

[27] Vulnerable funds are those for which the indicator is less than 1. The liquidity indicator is equal to the ratio of the fund's assets weighted by the degree of liquidity of its components to net redemptions under the stress scenario (see note (1) to Figure 2.20).

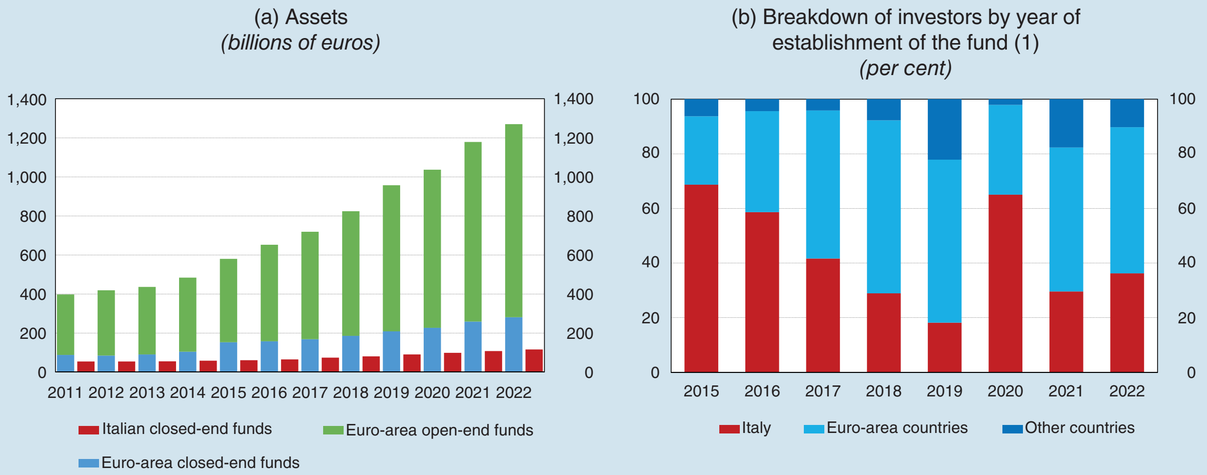
[28] In December, the vulnerable funds were those primarily specialized in bond segments characterized by low credit ratings (high yield) and in emerging markets. Among the vulnerable funds, excluding those nearing maturity, none have recorded significant net redemptions in recent months.

decreased (from €1.7 billion to €1.4 billion in 2022), owing to the negative dynamics of financial asset prices, compared with positive net subscriptions of around €250 million.

The risks to financial stability stemming from alternative investment funds (AIF), which accounted for 10 per cent of the overall net assets of funds managed by Italian groups at the end of 2022, are low. Leverage (102 per cent of net assets; panel (a) of Figure 2.21) is lower than the European average (139 per cent in 2020). Private equity funds frequently resort to indirect borrowing through their subsidiaries: as at

Figure 2.22

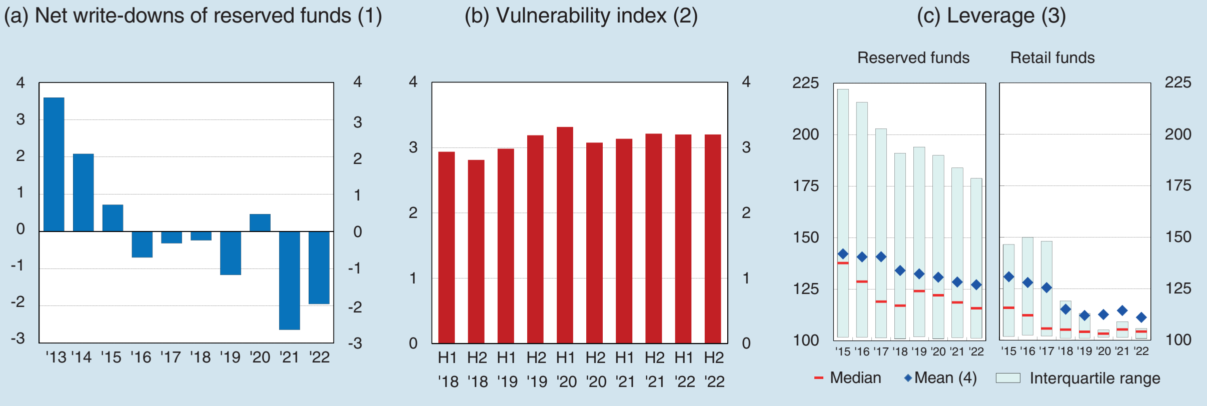
Italian real estate funds



Source: Supervisory reports.
(1) Share of net assets subscribed by the different categories of investor.

Figure 2.23

Main indicators for Italian real estate funds
(per cent)



Sources: Supervisory reports and calculations based on data from Istat and the Osservatorio del Mercato Immobiliare (OMI).
(1) Ratio of reserved fund balance sheet write-downs net of revaluations to the average of total assets at the end of the reference year and at the end of the previous year. – (2) Share of the sector's total assets held by real estate funds for which the estimated difference between the book value and the market value of properties is greater than net assets. For each fund, the difference is calculated between the fund's cumulative net write-downs as a ratio to its assets and the cumulative variations of a theoretical price index for the properties in the portfolio. The index is calculated as the weighted average of the price indices for properties (divided into residential and commercial) for each Italian region. The weights are equal to the shares of the assets of each fund that are invested in the markets included in the price indices under consideration. Write-downs and variations in the indices are calculated from the year that each fund was established or from 2009 (the year in which data became available) if the fund was set up prior to that date. Excludes funds in liquidation and those set up in the half year prior to the reference period. – (3) Ratio of total assets to net assets. – (4) Weighted average with weights equal to the denominator of each ratio.

December of last year, indirect leverage amounted to about 60 per cent of their net assets. Short-term liquidity risks remain limited for AIFs (panel (b) of Figure 2.21). They are also mitigated by Italian legislation, which provides that funds investing more than 20 per cent of their assets in illiquid assets be set up as closed-end funds.

The assets of Italian real estate funds rose by 7.1 per cent in 2022, reaching €114 billion (panel (a) of Figure 2.22). Euro-area players were the main investors in the funds established in 2022 (54 per cent of the total; panel (b) of Figure 2.22). About half of the new investments were made in the province of Milan. Real estate funds recorded a net revaluation of their portfolio, thanks to the favourable trend in the prices of the assets they hold (panel (a) of Figure 2.23). The risk that, at maturity, the valuation of the real estate portfolio entered on the funds' books may diverge significantly from market values remains low (panel (b) of Figure 2.23). Leverage is at historically low levels (panel (c) of Figure 2.23). The risks to financial stability remain limited overall, despite the worsening macroeconomic conditions (see the box 'The risks to financial stability stemming from the activity of real estate funds').

THE RISKS TO FINANCIAL STABILITY STEMMING FROM THE ACTIVITY OF REAL ESTATE FUNDS[1]

Intermediaries operating in the real estate sector – especially those active in the commercial real estate (CRE) sector – are particularly vulnerable to the risks associated with high inflation, rising interest rates and substantial uncertainty about the macroeconomic outlook. Structural changes, such as the pandemic-induced effects on demand for commercial real estate and stricter environmental requirements in response to the climate crisis, are additional factors.[2]

The risks to financial stability connected with real estate funds continue to be low overall. Italian funds are not subject to the liquidity risk deriving from high demand for redemptions, as national legislation requires them to be closed-end. The sector's leverage, i.e. the ratio of total assets to net assets, gradually decreased from 2009 to 2022 (from 180 to 130 per cent; panel (a) of the figure)[3] and is in keeping with the European average (140 per cent). Although this level is relatively low, at the end of 2022, around 3.8 per cent of the sector's total assets were held by funds that were highly leveraged, i.e. above 300 per cent. Some 1.2 per cent of the assets were held by funds with a negative net equity, signalling a financial stress situation.

Other financial intermediaries' direct exposures to the sector are limited. At the end of 2022, the performing loans granted by banks and other intermediaries operating in Italy to Italian real estate funds amounted to around €17 billion (panel (b) of the figure). Of these, €8 billion (just under 1 per cent of total loans to firms and non-bank financial corporations) were granted by Italian banking groups.[4] The ratio of NPLs to total outstanding loans to the sector, gross of loan loss provisions, gradually fell, hitting 13 per cent at the end of 2022.

Italian real estate funds hold substantial exposures (over 90 per cent of investments) to the CRE sector, where purchases by funds represent about one third of the total value of trades. Historically, the NPL ratio of real estate funds is negatively correlated mainly with price trends for office space in

[1] By Raffaele Gallo and Dario Portioli.

[2] ESRB, *Vulnerabilities in the EEA commercial real estate sector*, January 2023.

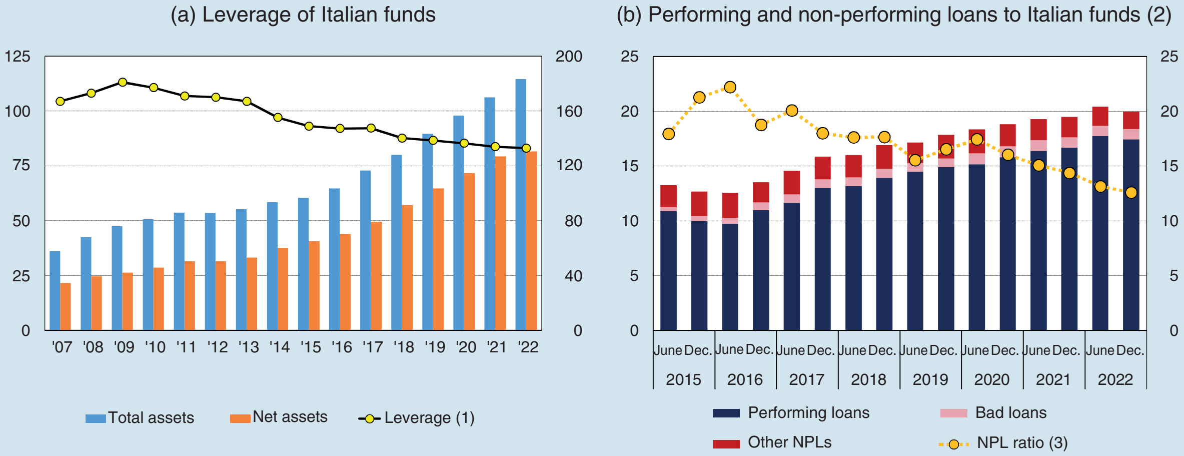
[3] The decline in leverage is mainly due to lower borrowing by funds established in recent years and to the revaluation of assets as a result of the positive trend in real estate market values.

[4] The other €9.2 billion were granted by branches and subsidiaries of significant foreign banks (€5.6 billion) and by special purpose vehicles, leasing companies or asset management companies (€3.6 billion).

Figure

Italian real estate funds

(billions of euros and per cent)



Sources: Supervisory reports and Central Credit Register.
(1) Ratio of total assets to net assets. Right-hand scale. – (2) Includes loans from banks and other intermediaries operating in Italy. – (3) Per cent; right-hand scale.

the regions of the North West where the funds' investments are concentrated. Sector conditions could therefore worsen if there is a drop in commercial property values, which are particularly sensitive to the economic cycle.

In light of the deterioration in macroeconomic conditions and in line with the recent ESRB recommendation,[5] the Bank of Italy will continue to closely monitor risks in the real estate market and, if necessary, will promote measures to make intermediaries operating in the sector sounder.

[5] ESRB, *Recommendation of the European Systemic Risk Board of 1 December 2022 on vulnerabilities in the commercial real estate sector in the European Economic Area (ESRB/2022/9)*, 1 December 2022.

3 FINANCIAL STABILITY POLICIES

In the absence of risks stemming from excessive credit growth, the Bank of Italy has kept the countercyclical capital buffer (CCyB; see Table A.11 in the Appendix)[1] at zero per cent for the first two quarters of 2023. The credit-to-GDP gap remained negative and widened further. Growth in bank lending fell, especially for loans to non-financial corporations (see Sections 1.5 and 2.1).

Developments in the credit cycle and vulnerabilities in the financial system, including those relating to the real estate sector, are uneven across the countries participating in the Single Supervisory Mechanism (SSM). These differences have resulted in diverse macroprudential policy stances regarding the level and use of the CCyB, of the systemic risk buffer (SyRB) and of measures to reduce banks' exposure to risks stemming from the real estate sector. Macroprudential decisions were taken across 16 countries overall. Specifically, over the last two quarters Croatia, Estonia, France and Ireland have increased the CCyB by 0.5 percentage points, while Cyprus and Slovenia both introduced it for the first time at 0.5 per cent;[2] this brings the number of countries that will have a positive CCyB by the end of 2023 to 12. Furthermore, five countries (Belgium, Germany, Lithuania, Malta and Slovenia) have activated or announced a SyRB on residential real estate exposures since last May, while Austria, Bulgaria, Croatia and Finland continue to use a SyRB that is applied to all sectors (see Table A.12 in the Appendix). The European Systemic Risk Board (ESRB) has recently recommended that national and EU authorities improve their monitoring of the risks to the stability of the financial system stemming from the commercial real estate sector (see the box 'The risks to financial stability stemming from the activity of real estate funds', Section 2).

Last December, the Bank of Italy exercised its supervisory judgement[3] to identify the UniCredit Banking Group as a global systemically important institution (G-SII) for 2024 as well, placing it into the first sub-category of global systemic importance.[4]

At the end of 2022, the European Central Bank announced its revised floor methodology for assessing the capital buffers for other systemically important institutions (O-SIIs) proposed by national authorities.[5] According to data as at 31 December 2021, the overall score indicating the domestic systemic importance of UniCredit and Intesa Sanpaolo would determine a floor[6] of 1.25 per cent for both banks under the new methodology, as opposed to the current levels of 1.0 and 0.75 per cent respectively.

[1] Bank of Italy, 'The Countercyclical Capital Buffer (CCyB) rate for the second quarter of 2023 remains unchanged at zero per cent', press release, 24 March 2023.

[2] Cyprus introduced a positive-cycle-neutral CCyB, in line with what Estonia, Ireland, Lithuania and the Netherlands have already done (see the box 'The recent use of the CCyB in SSM countries', *Financial Stability Report*, 2, 2022).

[3] Constrained supervisory judgement, based on additional factors and taking into account entities' characteristics and complexity.

[4] Bank of Italy, 'Identification of the UniCredit banking group as a global systemically important institution (G-SII)', press release, 9 December 2022.

[5] ECB, 'Governing Council statement on macroprudential policies', December 2022.

[6] Minimum capital buffer level associated with the score for identifying domestic systemically important banks.

The tools available to the Bank of Italy for preserving the stability of the national financial system include the product intervention power, pursuant to Regulation (EU) 2014/600.[7] Based on the latest assessments of securities and derivatives, at the end of December 2022, the instruments potentially posing a risk to financial stability were securitizations, additional tier 1 subordinated bonds (AT1, also known as contingent convertibles), and certificates.[8] Our analysis of the instruments identified suggests that the risks to financial stability are currently low. However, the Bank of Italy remains highly alert, with a particular focus on certificates and AT1 bonds. The former, which grew in 2022, are mostly held by households; although certificates account for a very small share of households' financial wealth on average (around 1 per cent, equal to €37 billion),[9] they are highly sensitive to changes in the underlying risk factors and their market value may be subject to large fluctuations in the event of an adverse scenario. The volumes of AT1 bonds, by contrast, are not at historically high levels and their rare presence among banks' holdings limits contagion risks.

[7] For more information on the product intervention power, see the Bank of Italy's website: 'The Bank of Italy's 'intervention power' concerning financial instruments, structured deposits and related financial activities/practices'.

[8] Certificates are debt securities traded on the capital market and include a derivative component. For the list and definitions of all financial instruments considered in our intervention power analysis, see the Bank of Italy's website: Glossary of the types of financial instruments analysed by the Bank of Italy within the scope of its intervention power.

[9] Bank of Italy, 'The Bank of Italy's intervention power concerning financial instruments: regular assessment of risks to financial stability', press release, 21 April 2023.

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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 (2)				Gen. govt. primary surplus (2)	S2 sustainability indicator (3)	Private sector financial debt (4)		External position statistics (5)	
			Level		Average residual life of govt. securities (*years*)	Non-residents' share (*% of public debt*)			House-holds	Non-financial firms	Current account balance	Net international investment position
	2023	2024	2023	2024	2023	2022	2023	2022				
Italy	0.7	0.8	140.3	140.0	7.0	24.1	0.4	0.7	42.3	69.1	-0.6	5.6
Germany	-0.1	1.1	67.2	66.5	6.4	36.5	-2.9	3.6	55.7	73.2	4.2	74.4
France	0.7	1.3	111.4	112.4	8.3	43.4	-3.7	0.9	66.4	163.9	-1.3	-23.4
Spain	1.5	2.0	110.5	108.3	8.0	38.6	-2.4	1.0	54.4	97.6	0.5	-59.4
Netherlands	1.0	1.2	48.2	47.3	8.5	33.4	-2.1	6.5	97.3	144.3	5.1	84.2
Belgium	0.7	1.1	106.0	108.3	9.8	47.5	-3.7	6.7	60.9	139.4	-4.1	58.8
Austria	0.4	1.1	74.9	72.6	11.6	53.6	-1.8	3.2	49.8	97.1	0.7	20.2
Finland	0.0	1.3	74.5	75.9	7.5	40.6	-2.1	3.0	66.3	113.1	-4.4	-2.6
Greece	2.6	1.5	166.0	160.5	….	….	0.4	-3.6	50.1	58.9	-8.4	-146.5
Portugal	1.0	1.7	112.4	108.6	6.7	42.9	1.1	-2.1	62.8	95.2	-1.9	-86.1
Ireland	5.6	4.0	39.9	36.1	11.2	53.0	2.0	4.0	27.1	158.8	6.9	-146.5
Euro area	0.8	1.4	89.8	89.0	….	….	-2.1	2.7	58.1	107.7	-0.7	3.7
United Kingdom	-0.3	1.0	106.3	109.7	14.5	22.6	-3.3	….	84.5	69.5	-5.2	-5.3
United States	1.6	1.1	122.2	125.8	6.1	26.5	-3.8	….	75.2	78.8	-2.7	-62.2
Japan	1.3	1.0	258.2	256.3	8.0	12.3	-6.2	….	67.9	116.8	3.0	71.9
Canada	1.5	1.5	105.1	102.2	5.8	19.0	-0.6	….	103.2	113.8	-1.1	21.5

Sources: IMF, ECB, BIS, European Commission.

(1) IMF, *World Economic Outlook*, April 2023. – (2) IMF, *Fiscal Monitor*, April 2023. – (3) European Commission, *Debt Sustainability Monitor 2022*, April 2023. S2 is a sustainability indicator defined as the immediate and permanent increase in the structural primary surplus that is necessary to meet the general government inter-temporal budget constraint. – (4) Loans and securities. Data for the euro area countries are from ECB, Statistical Data Warehouse and refer to the end of Q3 2022; data for the United Kingdom and non-European countries are from BIS statistics and refer to the end of Q3 2022 – (5) Data for the euro area countries are from ECB, Statistical Data Warehouse and refer to the end of Q3 2022; data for the United Kingdom and non-European countries are from IMF Data Warehouse and refer to the estimate for 2023 for the current account balance and to the end of Q3 2022 for the net international investment position as a percentage of the estimated GDP for 2023.

Table A2

Credit quality: amounts, rates and coverage ratios of non-performing loans

(billions of euros and per cent)

	Significant banks					Less significant banks					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)
								December 2022 (3)							
Loans (4)	**1,873**	**1,836**	**100.0**	**100.0**	**2.0**	**189**	**184**	**100.0**	**100.0**	**2.8**	**2,328**	**2,280**	**100.0**	**100.0**	**2.1**
Performing	1,827	1,814	97.6	98.8	0.7	178	176	94.1	95.9	1.0	2,262	2,247	97.2	98.6	0.7
of which: stage 2 (5)	192	184	10.3	10.0	4.6	18	18	9.7	9.7	3.3	227	217	9.8	9.5	4.5
Non-performing	46	21	2.4	1.2	53.5	11	8	5.9	4.1	32.5	66	33	2.8	1.5	49.7
Bad debts	14	4	0.8	0.2	72.7	5	3	2.7	1.7	38.7	24	9	1.0	0.4	63.3
Unlikely-to-pay	29	16	1.5	0.9	46.0	5	3	2.6	1.9	30.9	38	21	1.6	0.9	43.9
Past-due	3	2	0.1	0.1	30.4	1	1	0.5	0.5	9.1	4	3	0.2	0.1	27.0
								June 2022							
Loans (4)	**2,015**	**1,975**	**100.0**	**100.0**	**2.0**	**197**	**192**	**100.0**	**100.0**	**2.8**	**2,484**	**2,432**	**100.0**	**100.0**	**2.1**
Performing	1,963	1,951	97.4	98.8	0.6	186	184	94.3	96.2	0.9	2,411	2,395	97.1	98.5	0.7
of which: stage 2 (5)	221	211	11.0	10.7	4.3	18	17	9.1	9.1	3.3	255	244	10.3	10.1	4.3
Non-performing	52	24	2.6	1.2	52.7	11	7	5.7	3.9	34.6	73	37	2.9	1.5	49.8
Bad debts	18	5	0.9	0.3	70.9	6	3	2.8	1.7	40.3	28	10	1.1	0.4	62.7
Unlikely-to-pay	32	17	1.6	0.9	44.6	5	3	2.4	1.7	33.1	41	23	1.6	1.0	43.4
Past-due	3	1.9	0.1	0.1	29.4	1	1	0.5	0.5	9.9	4	3	0.2	0.1	26.7

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

(1) Includes subsidiaries of foreign banks that are classified as neither Italian significant banks nor Italian less significant banks, and account for about 12 per cent of total gross customer loans. Excludes branches of foreign banks. – (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. – (5) Based on the IFRS 9 accounting standard, stage 2 includes loans whose credit risk has increased significantly since their initial disbursement.

Table A3

Italian banks' NPL rates and coverage ratios by business model

(per cent)

	Non-performing			Bad debts			Unlikely-to-pay			Past-due		
	Gross share	Net share	Coverage ratio	Gross share	Net share	Coverage ratio	Gross share	Net share	Coverage ratio	Gross share	Net share	Coverage ratio
						December 2022 (1)						
Significant banks	2.4	1.2	53.5	0.8	0.2	72.7	1.5	0.9	46.0	0.1	0.1	30.4
Less significant banks	5.9	4.1	32.5	2.7	1.7	38.7	2.6	1.9	30.9	0.5	0.5	9.1
Traditional banks	4.5	2.4	49.0	1.9	0.7	64.3	2.4	1.5	40.0	0.2	0.2	18.1
Banks specialized in managing NPLs	22.6	22.5	6.5	13.4	13.3	6.4	8.1	8.1	6.6	1.1	1.1	6.3
Other specialized banks	4.4	3.4	22.5	1.7	1.1	35.4	1.1	0.8	27.6	1.6	1.5	5.0
Total banking system (2)	**2.8**	**1.5**	**49.7**	**1.0**	**0.4**	**63.3**	**1.6**	**0.9**	**43.9**	**0.2**	**0.1**	**27.0**
						June 2022						
Significant banks	2.6	1.2	52.7	0.9	0.3	70.9	1.6	0.9	44.6	0.1	0.1	29.4
Less significant banks	5.7	3.9	34.6	2.8	1.7	40.3	2.4	1.7	33.1	0.5	0.5	9.9
Traditional banks	4.7	2.5	48.9	2.0	0.8	63.7	2.5	1.5	39.8	0.2	0.2	18.3
Banks specialized in managing NPLs	23.0	22.6	8.4	14.4	14.3	7.8	7.3	7.0	10.0	1.3	1.3	6.4
Other specialized banks	3.3	2.4	27.4	1.5	0.9	40.5	0.7	0.4	35.4	1.1	1.1	5.3
Total banking system (2)	**2.9**	**1.5**	**49.8**	**1.1**	**0.4**	**62.7**	**1.7**	**1.0**	**43.3**	**0.2**	**0.1**	**26.7**

Source: Harmonized FINREP reports, on a consolidated basis for banking groups and on an individual basis for the rest of the system. This includes all the system's banks.
(1) Provisional data. – (2) Includes subsidiaries of foreign banks that are classified as neither 'significant' nor 'less significant' in Italy for supervisory purposes.

Table A4

Italian banks’ non-performing loans and guarantees by counterparty sector (1)

(billions of euros and per cent; December 2022)

	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 loans to customers	35	5.2	16	2.5	15	6	55.7
of which: manufacturing	6	3.3	3	1.5	2	1	54.0
construction (5)	7	12.0	3	5.4	3	1	61.3
services	19	5.4	9	2.6	9	3	54.0
of which: bad loans	13	1.9	4	0.6	5	3	72.7
of which: manufacturing	2	1.2	1	0.4	1	1	72.6
construction (5)	3	4.8	1	1.5	1	1	76.5
services	7	1.9	2	0.6	3	2	71.1
				Consumer households			
Non-performing loans to customers	14	2.5	7	1.3	9	0	62.9
of which: bad loans	5	0.9	2	0.4	3	0	73.1
				Total (6)			
Non-performing loans to customers	54	3.5	26	1.7	25	7	55.4
of which: bad loans	19	1.2	6	0.4	8	3	71.8

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 2022 came to about €2 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 A5

Exposures of Italian groups and banks to foreign residents by counterparty sector (1)

(billions of euros and per cent; December 2022)

	Public sector	Banks	Financial corpora-tions	House-holds and firms	Total	Percentage change in total compared with the end of the previous half of the year	Per cent of total exposures reported to the BIS (2)	Per cent of total exposures (3)
Euro area (excluding Italy)	178.8	54.5	64.6	216.0	513.9	-8.2	8.5	18.9
Other industrialized countries	43.3	14.0	29.8	38.1	125.2	-9.3	1.0	4.6
of which: United Kingdom	0.6	2.8	12.7	7.6	23.6	-12.7	1.2	0.9
Emerging and developing countries	68.6	16.6	4.9	88.3	178.4	-8.3	2.8	6.6
Europe	54.1	7.4	4.0	77.7	143.2	-7.0	15.2	5.3
of which: Russia	2.8	1.6	0.4	8.6	13.3	-42.1	23.0	0.5
Turkey	0.4	2.0	0.2	1.4	4.0	-18.5	4.0	0.2
Africa and the Middle East	10.8	2.5	0.2	5.7	19.2	-14.2	3.2	0.7
Asia and Pacific	2.6	4.7	0.6	2.7	10.7	-8.1	0.3	0.4
Central and South America	1.1	2.0	0.1	2.2	5.4	-17.1	0.5	0.2
of which: Argentina	0.0	0.0	0.0	0.0	0.0	–	–	–
Brazil	0.1	1.8	0.0	0.8	2.6	-23.8	0.9	0.1
Mexico	0.3	0.1	0.1	1.0	1.4	-2.8	0.4	0.1
Offshore financial centres	0.4	0.6	3.6	5.9	10.4	-3.7	0.0	0.4
Total	**291.0**	**85.7**	**102.9**	**348.3**	**827.9**	**-8.4**	**148.7**	**30.5**
Memorandum item:								
Energy-exporting emerging and developing countries (4)	8.6	3.6	0.5	11.4	24.1	-32.8	0.5	0.9

Source: Consolidated supervisory reports for banking groups and individual supervisory reports for the rest of the system.
(1) Exposures to 'ultimate borrowers', gross of loan loss provisions. Does not include BancoPosta and Cassa Depositi e Prestiti SpA. – (2) As a percentage of the total foreign exposures to each country reported to the Bank for International Settlements (BIS) by a large set of international banks; the numerator and denominator refer to 30 September 2022. – (3) Total exposures to residents and non-residents. The numerator and denominator refer to 31 December 2022. – (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 and Yemen.

Table A6

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

(millions of euros and per cent)

	Italy (2)			Euro area		
	Stocks	Net purchases (1)	Share of total assets (3)	Stocks	Net purchases (1)	Share of total assets
2013	375,081	45,331	10.9	1,313,179	46,354	4.3
2014	383,645	-4,299	11.0	1,370,728	6,792	4.4
2015	364,361	-20,898	10.6	1,295,539	-67,495	4.2
2016	333,329	-26,646	9.8	1,205,130	-89,282	3.9
2017	283,742	-46,708	8.5	1,074,168	-119,982	3.5
2018	318,449	43,974	9.7	1,054,143	-8,157	3.4
2019	313,699	-17,420	9.4	1,030,973	-44,657	3.2
2020	343,615	22,200	10.0	1,145,291	96,399	3.3
2021 – Jan.	351,550	9,131	10.2	1,155,880	12,240	3.2
Feb.	358,094	8,047	10.4	1,174,160	21,943	3.3
Mar.	351,042	-8,551	10.1	1,199,215	-11,179	3.3
Apr.	353,868	4,937	10.1	1,173,985	-22,447	3.2
May	358,734	4,829	10.2	1,181,023	6,319	3.2
June	353,978	-5,250	10.0	1,158,769	-23,451	3.2
July	357,701	2,145	10.1	1,146,802	-15,957	3.1
Aug.	359,647	2,460	10.2	1,151,468	4,745	3.1
Sept.	355,948	-2,601	10.0	1,132,866	-16,343	3.1
Oct.	354,219	1,132	9.9	1,111,654	-16,549	3.0
Nov.	351,044	-6,786	9.8	1,112,201	-3,500	2.9
Dec.	342,011	-7,226	9.6	1,092,366	-16,627	3.0
2022 – Jan.	351,964	10,512	9.8	1,098,193	8,414	2.9
Feb.	360,384	11,646	10.0	1,113,971	21,790	2.9
Mar.	355,220	-3,352	9.8	1,106,940	-4,573	2.9
Apr.	353,034	4,050	9.7	1,087,657	-8,698	2.8
May	352,253	4,125	9.6	1,111,804	32,962	2.8
June	347,613	-2,557	9.6	1,098,208	-8,945	2.8
July	350,445	1,569	9.7	1,100,915	-590	2.8
Aug.	340,866	-3,976	9.4	1,080,460	-11,326	2.7
Sept.	329,746	-5,034	9.1	1,065,543	-3,182	2.6
Oct.	336,962	4,745	9.3	1,069,246	-522	2.6
Nov.	334,947	-4,836	9.2	1,082,068	6,720	2.7
Dec.	319,442	-9,611	9.0	1,056,314	-16,367	2.7
2023 – Jan.	323,328	712	9.1	1,073,811	6,083	2.7
Feb.	327,216	5,511	9.2	1,096,856	27,204	2.7

Sources: Individual supervisory reports and ECB.
(1) The data on net purchases refer to the whole period; the data on stocks and share of total assets refer to the end of the period. Purchase amounts are shown net of variations in market prices; holdings are shown at market value. All public sector securities are counted, including those issued by local government authorities. – (2) Cassa Depositi e Prestiti SpA is excluded. – (3) The 'total assets' series does not include bond buybacks.

Table A7

Italian banks' bonds by holder and maturity (1)

(millions of euros; February 2023)

	Maturity				Total
	by 2023	in 2024	between 2025 and 2029	2030 or beyond	
Households (2)	4,230	5,099	35,875	3,836	49,041
of which: senior non-preferred bonds	1	5	587	14	607
subordinated bonds	380	360	2,442	1,599	4,781
Banks in the issuer's group (3)	1,807	2,719	17,390	1,735	23,652
of which: senior non-preferred bonds	–	–	0	–	0
subordinated bonds	20	417	246	631	1,314
Other Italian banks	2,416	4,854	16,716	2,017	26,003
of which: senior non-preferred bonds	66	104	1,979	299	2,448
subordinated bonds	78	33	540	505	1,156
Other investors	25,286	20,202	91,092	31,486	168,066
of which: senior non-preferred bonds	643	368	10,668	3,118	14,797
subordinated bonds	1,725	2,289	8,238	13,789	26,041
Total	**33,739**	**32,874**	**161,074**	**39,075**	**266,762**
of which: senior non-preferred bonds	710	477	13,234	3,431	17,852
subordinated bonds	2,203	3,099	11,466	16,524	33,292

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 A8

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)

	2015	2016	2017	2018	2019	2020	2021	2022		2023
								June	Dec.	March
Total	**253.7**	**297.3**	**321.2**	**310.5**	**285.8**	**436.1**	**513.5**	**497.6**	**433.4**	**397.3**
Government securities	97.6	88.8	105.8	78.0	68.1	129.4	156.9	149.1	87.7	71.4
Local and regional government securities	2.6	1.7	1.9	1.3	0.5	0.8	2.0	1.1	1.2	0.6
Uncovered bank bonds	5.8	5.3	5.4	5.0	3.3	5.4	7.4	5.5	5.2	5.0
Government-guaranteed bank bonds	0.4	0.3	1.3	2.5	1.0	0.6	0.6	0.5	0.5	0.4
Covered bonds	46.4	76.3	76.8	91.3	86.1	99.8	107.3	102.1	99.8	82.8
Non-bank bonds	2.5	3.0	3.0	4.3	3.7	4.9	10.0	8.8	8.1	6.5
Asset-backed securities	35.5	44.0	49.9	49.7	47.7	45.5	61.8	57.5	59.7	57.6
Other marketable assets	0.6	0.8	2.8	1.3	1.8	2.6	6.3	7.3	4.5	3.8
Non-negotiable assets (bank loans)	62.4	77.1	74.3	77.1	73.6	147.1	161.2	165.6	166.7	169.2

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 A9

Liquidity indicators of Italian banks (1)

(per cent)

	LCR (2)	Net liquidity position at 1 month (3)	NSFR (4)
Significant banks	185.4	23.4	132.1
Less significant banks	242.0	17.0	142.1
Total banking system	**190.2**	**19.9**	**133.0**

Sources: Consolidated supervisory reports for banking groups and individual supervisory reports for the rest of the system.
(1) Data updated to December 2022. (2) The average liquidity coverage ratio is calculated as the ratio between total high-quality liquid assets and total net cash outflow over a 30-day horizon. (see the Basel Committee on Banking Supervision, *Basel III.The liquidity coverage ratio and liquidity risk monitoring tools*, Bank for International Settlements, January 2013). – (3) The net liquidity position is equal to the ratio of the sum of highly liquid assets and net outflows to the total value of the assets. For significant and less significant banks, the figure is calculated as the simple average of the liquidity positions of the individual banks. – (4) The net stable funding ratio is the ratio of the available stable funding (calculated by multiplying an entity's liabilities and own funds by the factors that reflect their stability over a 1-year horizon) to the stable funding requirement (calculated by multiplying the assets and off-balance-sheet items by the factors that reflect their liquidity characteristics and residual maturities over the same time horizon). This requirement is designed to ensure that banks have sufficient stable funding to meet their funding needs over a 1-year horizon under both normal and stressed conditions, as set out in Regulation (EU) 2019/876 (Capital Requirements Regulation II or CRR II).

Table A10

Italian banks' net liquidity position (1)

(monthly average share of total assets)

	Significant groups			Less significant groups		
	Cumulative cash flow (2)	Counterbalancing capacity	Liquidity indicator (3)	Cumulative cash flow (2)	Counterbalancing capacity	Liquidity indicator (3)
2019 – Jan.	-0.5	13.8	13.3	-6.6	20.2	13.6
Feb.	-0.5	14.6	14.1	-5.9	19.1	13.1
Mar.	-0.6	15.0	14.4	-5.8	19.5	13.7
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	–	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
Nov.	0.3	18.2	18.5	-3.8	21.5	17.7
Dec.	-1.0	19.2	18.2	-5.6	21.9	16.3
2020 – Jan.	-1.1	18.6	17.5	-5.9	21.4	15.5
Feb.	-0.4	18.7	18.2	-5.9	22.1	16.1
Mar.	-0.8	18.5	17.7	-4.8	22.3	17.5
Apr.	-1.4	19.6	18.3	-4.4	22.6	18.2
May	-2.8	22.6	19.8	-6.5	25.3	18.7
June	-4.2	24.4	20.3	-7.3	26.1	18.8
July	-0.9	21.9	21.1	-4.5	25.0	20.5
Aug.	-0.9	22.4	21.6	-4.0	25.6	21.3
Sept.	-0.4	22.6	22.1	-3.6	25.1	21.5
Oct.	0.1	21.1	21.2	-2.7	23.7	21.0
Nov.	0.1	21.9	22.0	-1.9	23.3	21.5
Dec.	-0.5	22.0	21.5	-2.1	23.6	21.4
2021 – Jan.	-1.0	21.7	20.7	-3.0	23.6	20.6
Feb.	-0.7	22.0	21.3	-1.2	23.0	21.8
Mar.	0.2	21.6	21.8	-0.2	24.7	24.5
Apr.	0.5	21.0	21.5	1.4	25.3	26.7
May	0.2	22.0	22.2	0.2	26.3	26.5
June	-0.0	22.3	22.3	-0.3	26.7	26.4
July	0.2	22.2	22.4	-0.3	25.3	25.0
Aug.	-0.2	23.1	22.9	-0.7	25.6	24.9
Sept.	-0.3	22.9	22.6	-1.7	26.5	24.8
Oct.	-0.7	22.3	21.6	-1.5	25.0	23.5
Nov.	-0.2	22.4	22.2	-1.4	24.6	23.1
Dec.	-0.4	21.8	21.4	-2.2	25.4	23.2
2022 – Jan. (4)	-1.0	25.8	24.8	-2.5	25.3	22.8
Feb.	-1.5	26.3	24.8	-3.4	26.1	22.7
Mar.	-2.0	27.0	25.0	-3.0	25.6	22.5
Apr.	-3.2	27.7	24.5	-5.0	26.7	21.6
May	-3.8	28.4	24.6	-5.6	26.3	20.7
June	-4.1	27.9	23.8	-4.6	24.6	20.0
July	-4.1	27.5	23.4	-5.4	24.1	18.7
Aug.	-3.5	27.1	23.6	-6.4	24.2	17.8
Sept.	-2.7	26.1	23.4	-6.6	23.8	17.2
Oct.	-3.4	26.4	23.0	-7.0	23.5	16.5
Nov.	-3.7	27.4	23.8	-7.3	23.3	16.1
Dec.	-4.9	28.7	23.8	-7.6	23.3	15.8
2023 – Jan.	-4.8	28.1	23.3	-7.3	23.2	15.9
Feb.	-4.5	28.2	23.7	-6.0	22.8	16.8
Mar.	-4.8	28.7	23.9	-6.2	23.1	16.9

Source: Data transmitted to the Bank of Italy by a sample of banking intermediaries for periodic monitoring of their liquidity positions.

(1) Monthly averages based on weekly reports for significant banks (significant institutions, or SI, supervised directly by the ECB) and for a sample of less significant banks (less significant institutions, or LSI, 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). The calculation of outflows includes maturing obligations towards institutional clients and banks' 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. – (4) Effective on 1 January 2022, Fineco and Mediolanum are no longer in the LSI sample and are now included in the SI sample.

Table A11

Recent macroprudential policy decisions of the Bank of Italy

Date (1)	Decision	Capital requirement for this year *(per cent)*	Fully phased-in capital requirement *(per cent)* (2)
9.12.2022	Identification of the UniCredit group as a G-SII and setting of the related capital requirement ratio (3)	1.00	1.00 (2023)
16.12.2022	Setting of the CCyB rate for the first quarter of 2023	0.00	–
24.3.2023	Setting of the CCyB rate for the second quarter of 2023	0.00	–

(1) The dates given are those on which the decisions were published. For the full list, see the Bank of Italy's website: 'Macroprudential policy decisions of the Bank of Italy'. – (2) In brackets, the year when fully phased in. – (3) In accordance with European legislation, the UniCredit Group will apply only the higher between the global systemically important institution (G-SII) and the other systemically important institution (O-SII) requirements.

Table A12

Macroprudential capital buffers in the countries of the European Economic Area (1)

(per cent)

	Countercyclical capital buffer (CCyB)				Capital buffer for global systemically important institutions (G-SIIs)		Capital buffer for other systemically important institutions (O-SIIs)		Systemic risk buffer (SyRB)	
	Date of entry into force	Current rate	Fully phased-in date	Fully phased-in rate	Date of entry into force	Description	Date of entry into force	Description	Date of entry into force	Description
Austria	1 Jan. 2016	0.00					1 Jan. 2023	9 banks: 0.75-1.75 (2)	1 Jan. 2023	13 banks (includes 8 O-SIIs): 0.25-1.00 (3)
Belgium	1 Apr. 2020	0.00					1 Jan. 2023	8 banks: 0.75-1.50	1 May 2022	9 banks (includes 6 O-SIIs): 9.00 (3)
Bulgaria	1 Jan. 2023	1.50	1 Oct. 2023	2.00			1 Jan. 2023	8 banks: 0.50-1.00	3 Dec. 2021	3.00 (3)
Cyprus	1 Jan. 2016	0.00	30 Nov.2023	0.50 (4)			1 Jan. 2023	5 banks: 0.25-1 50		
Croatia	31 Mar. 2023	0.50	31 Dec. 2023	1.00			1 Jan. 2023	7 banks: 0.50-2.00	29 Dec. 2020	1.50
Denmark	31 Mar. 2023	2.50 (4)					25 June 2021	8 banks: 1.00-3.00		
Estonia	7 Dec. 2022	1.00	1 Dec. 2023	1.50 (4)			1 Jan. 2023	4 banks: 2.00		
Finland	16 Mar. 2015	0.00					1 Jan. 2023	3 banks: 0.50-2.50		(3)
France	7 Apr. 2023	0.50	2 Jan. 2024	1.00	1 Jan. 2023	4 banks: 1.00-1.50 (5)	1 Jan. 2023	7 banks: 0.25-1.50		
Germany	1 Feb. 2023	0.75			1 Jan. 2023	1 bank: 1.50	1 Jan. 2023	16 banks: 0.25-2.00	1 Feb. 2023	2.00 (3)
Greece	1 Jan. 2016	0.00					1 Jan. 2023	4 banks: 1.00		
Ireland	1 Apr. 2020	0.00	24 Nov. 2023	1.00 (4)			1 Jan. 2022	6 banks: 0.50-1.50		
Iceland	29 Sept. 2022	2.00	5 Mar. 2024	2.50			7 Dec. 2022	3 banks: 2.00	16 March 2022	3.00 (3)
Italy	1 Jan. 2016	0.00			1 Jan. 2023	1 bank: 1.00 (5)	1 Jan. 2023	4 banks: 0.25-1.00		
Latvia	1 Feb. 2016	0.00					1 Jan. 2023	5 banks: 0.25-2.00		

Source: ESRB and macroprudential supervisory authorities.

(1) The capital buffers include the capital conservation buffer, equal to 2.5 per cent for all the countries. – (2) Austria expects to complete the phase-in of the O-SII buffer at a maximum and minimum level of 1.75 and 0.90 per cent respectively in January 2024. – (3) Austria expects to complete the phase-in of the SyRB at a maximum and minimum level of 1 and 0.50 per cent respectively in January 2024. The SyRB introduced by Belgium is a sectoral buffer that applies to exposures backed by residential properties of the banks that use internal models to quantify risk-weighted exposures. In Germany there is a sectoral SyRB that applies to exposures backed by residential properties. Finland is set to introduce a SyRB of 1 per cent, starting on 1 April 2024, for 12 banks (including 3 O-SIIs). In Bulgaria and Iceland, the SyRB applies to domestic exposures only. – (4) In Cyprus, the fully-phased in CCyB (0.5 per cent) represents the minimum neutral CCyB level. With its latest increase, Denmark brought the CCyB to its target level (2.5 per cent). In Estonia, the CCyB is calculated as the sum of a base rate, set at 1 per cent, plus a cyclical component activated when the cyclical risks are assessed as being on the upside. Ireland has announced that it will raise the CCyB to 0.5 per cent on 15 June 2023, and then to 1 per cent in November; these increases will be followed by subsequent increases up to the neutral level set at 1.5 per cent for the CCyB. – (5) In France, the *Autorité de Contrôle Prudentiel et de Résolution* (ACPR) exercised its supervisory judgment and instead of applying the expected increase of the maximum G-SII capital buffer (to 2.0 per cent) for BNP Paribas starting in January 2023, it kept this buffer at 1.5 per cent and will maintain it at this level in 2024 as well. In Italy, the Bank of Italy exercised its supervisory judgment in order to continue to identify the UniCredit Banking Goup as a G-SII in 2024 as well, placing it in the first sub-category of global systemic importance, even though based on data referring to 31 December 2021, the group is not automatically identified as a G-SII.

Cont.

cont. **Table A12**

Macroprudential capital buffers in the countries of the European Economic Area (1)

(per cent)

	Countercyclical capital buffer (CCyB)				Capital buffer for global systemically important institutions (G-SIIs)		Capital buffer for other systemically important institutions (O-SIIs)		Systemic risk buffer (SyRB)	
	Date of entry into force	Current rate	Fully phased-in date	Fully phased-in rate	Date of entry into force	Description	Date of entry into force	Description	Date of entry into force	Description
Liechtenstein	1 July 2019	0.00					27 May 2022	3 banks: 2.00	1 May 2022	1.00 (2)
Lithuania	1 Apr. 2020	0.00	1 Oct. 2023	1.00 (3)			1 Jan. 2023	4 banks: 1.00-2.00 (4)	1 July 2022	2.00 (2)
Luxembourg	1 Jan. 2021	0.50					1 Jan. 2023	6 banks: 0.50		
Malta	1 Jan. 2016	0.00					1 Jan. 2023	4 banks: 0.25-2.00 (4)		(2)
Norway	31 Mar. 2023	2.50					1 Jan. 2023	3 banks: 1.00-2.00	31 Dec. 2022	3.00-4.50 (2)
Netherlands	1 Jan. 2016	0.00	25 May 2023	1.00 (3)	1 Jan. 2023	1 bank: 1.00	1 Jan. 2023	5 banks: 1.00-2.50		
Poland	1 Jan. 2016	0.00					16 Dec. 2022	10 banks: 0.25-2.00		
Portugal	1 Jan. 2016	0.00					1 Jan. 2023	7 banks: 0.25-1.00 (4)		
Czech Republic	1 Apr. 2023	2.50 (3)					1 Oct. 2021	6 banks: 0.50-2.50		
Romania	17 Oct. 2022	0.50	23 Oct. 2023	1.00			1 Jan. 2023	9 banks: 0.50-2.00	1 Jan. 2023	0.00-2.00
Slovakia	1 Aug. 2020	1.00	1 Aug. 2023	1.50			1 Jan. 2023	6 banks: 0.25-2.00		
Slovenia	1 Jan. 2016	0.00	31 Dec. 2023	0.50			1 Jan. 2023	6 banks: 0.25-1.25	1 Jan. 2023	0.50-1.00 (2)
Spain	1 Jan. 2016	0.00			1 Jan. 2023	1 bank: 1.00	1 Jan. 2023	4 banks: 0.25-1.00		
Sweden	29 Sept. 2022	1.00	22 June 2023	2.00 (3)			1 Jan. 2023	4 banks: 1.00	29 Dec. 2020	3 O-SIIs: 3.00
Hungary	1 Jan. 2016	0.00	1 July 2023	0.50			29 Apr. 2022	7 banks: 0.25-1.00 (4)		

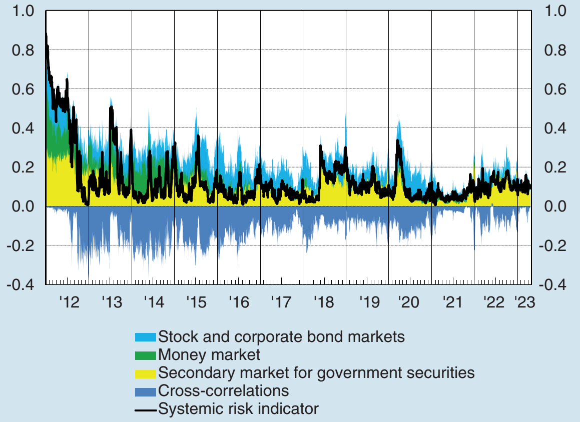
Sources: ESRB and macroprudential supervisory authorities.

(1) The capital buffers include the capital conservation buffer, equal to 2.5 per cent for all the countries. – (2) Liechtenstein, Lithuania and Slovenia introduced a sectoral SyRB: in Liechtenstein it applies to exposures to natural persons backed by residential properties and to exposures to legal persons backed by commercial properties; in Lithuania it applies to exposures to natural persons that are secured by residential property; in Slovenia the sectoral SyRB is differentiated, set at 1 per cent for exposures to natural persons backed by residential properties and at 0.5 per cent for all other exposures to natural persons. In Norway, the SyRB applies to domestic exposures only and for the institutions that do not follow the advanced IRB approach, the buffer is set at 3 per cent until 31 December 2023, after which it will be set at 4.5 per cent as it is for all the other banks. Malta approved the introduction of a sectoral SyRB applied only to domestic exposures to natural persons backed by residential properties: this measure will be equal to 1 per cent from September 2023 and will be raised to 1.5 per cent from March 2024. – (3) In Lithuania and Sweden the fully-phased in CCyB level is considered to be the neutral level. The Netherlands announced that the increase in the CCyB to 1 per cent will be followed by subsequent increases up to the neutral level set at 2 per cent. In the Czech Republic the current CCyB level is above the neutral rate, appropriate in a context of usual cyclical risks, estimated at 1 per cent. – (4) In Lithuania, for one bank the O-SII requirement will be in effect starting on 1 July 2023. In Portugal, for one bank the relevant O-SII buffer (0.25 per cent) will be applied starting from June 2023. Malta expects to complete the phase-in of the O-SII buffer at a minimum level of 0.50 per cent in January 2026. Hungary expects to complete the phase-in of the O-SII buffer at a minimum level of 0.50 per cent and a maximum level of 2.0 per cent in January 2024.

Figure A1

Indicator of systemic liquidity risk in the Italian financial markets (1)

(daily data; indices: 0=1)



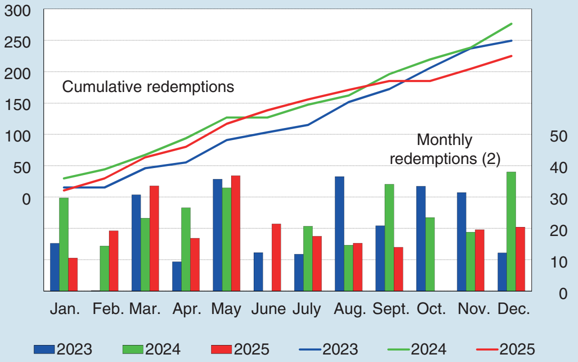
Sources: Based on data from Refinitiv, Bloomberg, Moody's Analytics, MTS SpA, and the Bank of Italy.

(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 range is from 0 (minimum risk) to 1 (maximum risk). The graph also shows the contributions to the systemic risk indicator of the individual markets and the correlations between them. For the methodology used in constructing the indicator, see *Financial Stability Report*, 1, 2014.

Figure A2

Redemptions of medium- and long-term government securities (1)

(monthly data; billions of euros)



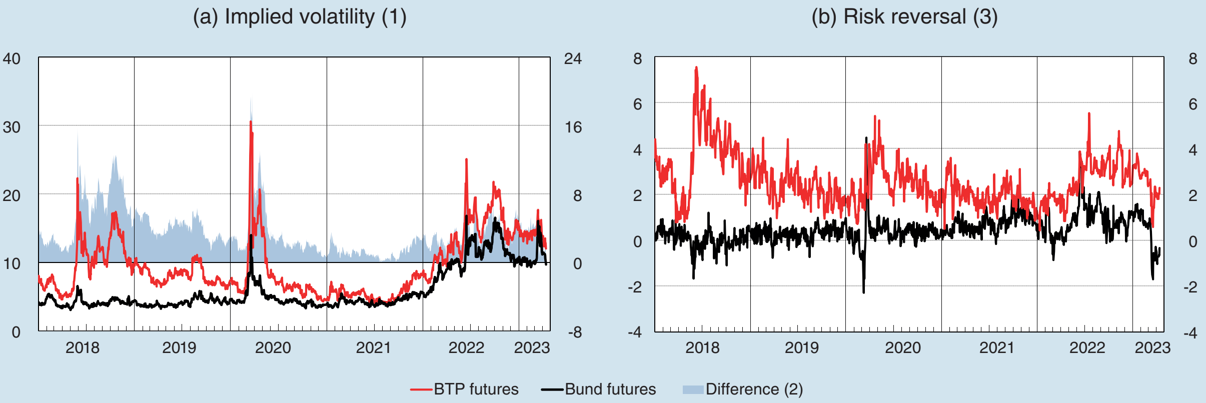
Sources: Based on data from the Ministry of Economy and Finance and the Bank of Italy. Data updated to 31 March 2023.

(1) Government securities (including those placed in the international markets) with maturity at issue of more than one year. Excludes the tranches issued by the Ministry of Economy and Finance to establish its own securities portfolio to be used exclusively for repos. Redemptions of indexed BTPs are not revalued for inflation. – (2) Right-hand scale.

Figure A3

Futures on 10-year BTPs and Bunds, implied volatility and risk reversal

(daily data; percentage points)


(a) Implied volatility (1)

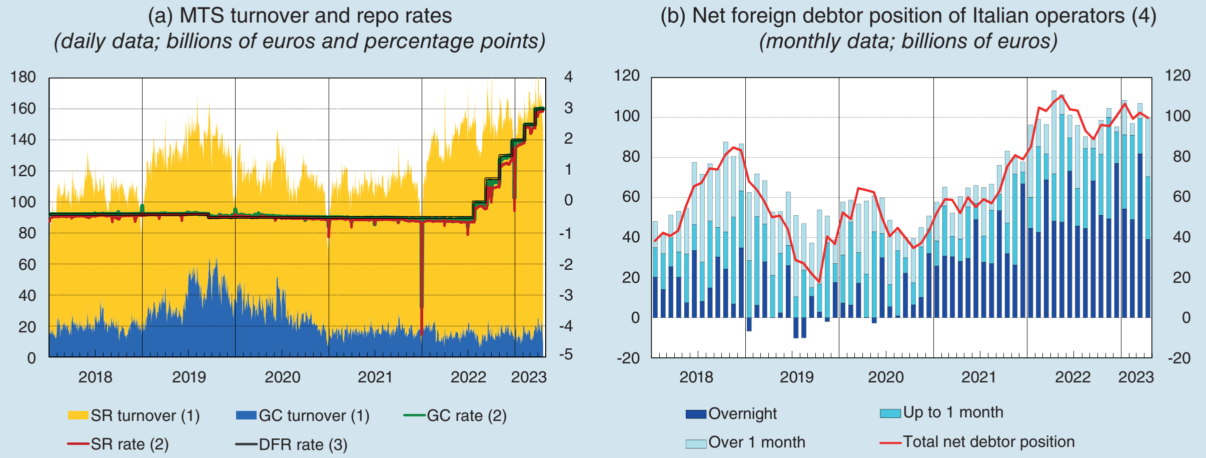
(b) Risk reversal (3)

Source: Based on Bloomberg data.

(1) Implied volatility in the prices of at-the-money options on 10-year BTP and Bund futures with maturity at 30 days. – (2) Right-hand scale. – (3) Difference between the implied volatility of put and call option prices on active 10-year BTP and Bund futures with the same relative change in the strike price in relation to the underlying price (moneyness) and with the same residual maturity (1 month).

Figure A4

Repo turnover, rates and net debtor position on the MTS market

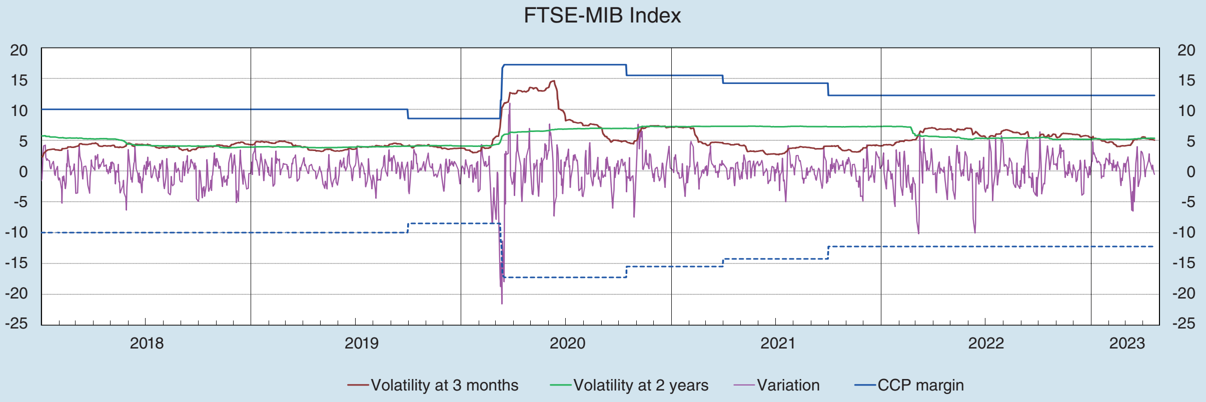


Source: Based on MTS data.
(1) Daily turnover in general collateral (GC) and special repos (SR) on the MTS market by contract settlement date. – (2) Calculated in reference to daily contracts for Italian government securities made on MTS Repo. Right-hand scale. – (3) Eurosystem deposit facility rate. – (4) Calculated on the basis of the cash value of the outstanding contracts on the MTS repo market; monthly averages of daily data for total net position; for the breakdown by maturity, end-of-period data. Starting in May 2021, the indicator reflects repo trading conducted by the Ministry of Economy and Finance on the MTS Repo market.

Figure A5

Margins applied by central counterparties and volatility of financial instruments (1)

(daily data; per cent)

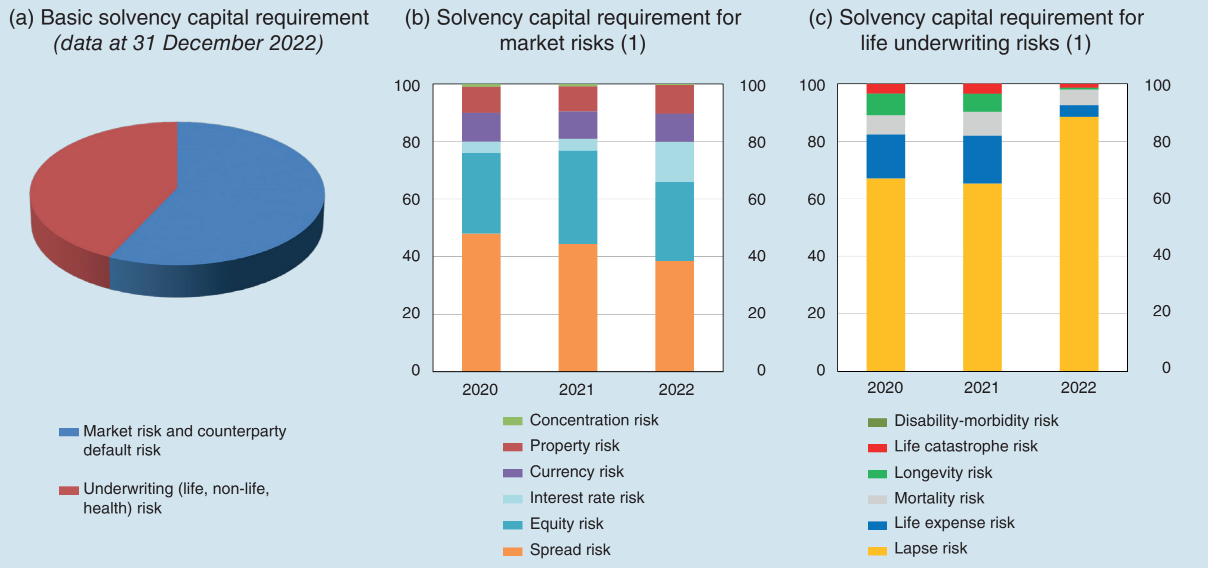


Sources: Based on data from Bloomberg, Euronext Clearing and Reuters.
(1) 3-day variation on the FTSE-MIB index. The volatility indicators are based on the value-at-risk (VaR) methodology and calculated with reference to a period of 3 months and 2 years with a confidence interval of 99 per cent. The dashed line, which is the mirror image of the continuous line, indicates the adequacy of the margin requirements with respect to the negative price fluctuations actually recorded in the market.

Figure A6

The main sources of risk in the solvency capital requirements

(per cent)



Source: IVASS.

(1) The data only consider those companies (76 undertakings representing 60 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.