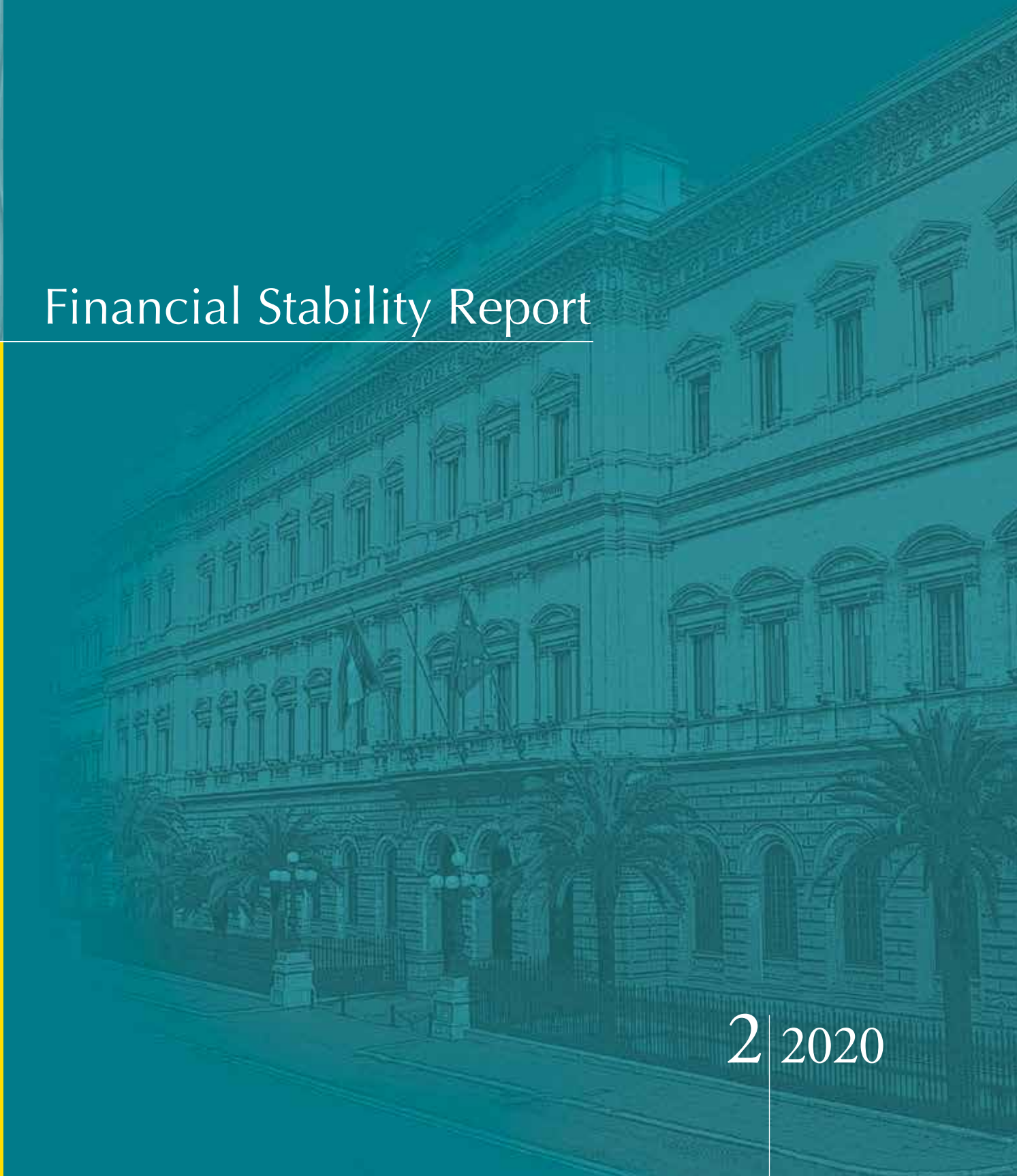
BANCA D'ITALIA
EUROSISTEMA

Financial Stability Report



November 2020

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SYMBOLS AND CONVENTIONS

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

In the tables:

– the phenomenon does not exist;

.... the phenomenon exists but its value is not known;

.. the value is nil or less than half of the final digit shown;

:: not statistically significant;

() provisional.

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

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

OVERVIEW

The recovery in economic activity in Europe and Italy during the summer was greater than expected, underlining the economy's capacity to recover and the effectiveness of the monetary, fiscal and supervisory support measures. However, the risks to financial stability owing to the macroeconomic situation have increased since the resurgence of the pandemic. This situation is affecting the outlook for growth, which will depend on the effectiveness and decisiveness of economic policy interventions.

Financial market conditions have improved greatly in Italy, as in the other European countries, and the tensions recorded in the spring have almost completely subsided. This is thanks above all to the effects of the pandemic emergency purchase programme (PEPP) and to the improved expectations generated by the European Council's agreement on Next Generation EU. This programme will make it possible to provide considerable support to economies by making full use of the EU's budget and lending capacity.

Italy's public debt remains sustainable, also bearing in mind the temporary nature of the expansionary fiscal measures; however, if it remains at high levels, it leaves the country exposed to future risks stemming from financial market tensions or from new macroeconomic shocks. A path for reducing debt could come from a combination of relaxed funding conditions, effective measures to support growth and a gradual fiscal adjustment consistent with the macroeconomic situation.

The economic policy measures adopted so far – including broader wage supplementation, debt moratoriums, tax payment deferrals, grants, and guarantee schemes for new loans – have helped to mitigate the economic consequences of the pandemic for firms and have amply met their liquidity needs. Nevertheless, the Italian economy will have to address the risks connected with the increase in the indebtedness of non-financial corporations and with the gradual lifting of the support measures. In the current climate of uncertainty, removing these measures too soon is to be avoided, as doing so could also hinder firms that are able to survive the crisis. Looking ahead, the effective implementation of measures designed to strengthen firms' capital and rebalance their financial structure can help to mitigate the risks.

Households' financial conditions were affected by the fall in disposable income. The repercussions, especially for financially vulnerable households, were contained by the low interest rates, the debt moratoriums and other support measures. The risks stemming from the sector remain limited and the share of debt of vulnerable households remains low.

The main risks for Italian banks stem from the possible deterioration in credit quality and a further decline in profitability. The rate of new non-performing loans has remained very low up until now, benefiting from the government measures on credit and the guidance of the supervisory authorities on the use of the flexibility for loan classification. In the first half of this year, most banks increased their provisions on performing loans, in anticipation of a deterioration in credit quality, and profitability was severely affected as a result. During the same period, capital adequacy improved for both significant and less significant banks, thanks in part to the capitalization of the profits from the 2019 financial year that, in accordance with the recommendation of the supervisory authorities, were not distributed.

The average solvency ratio of Italian insurance companies fell below the levels observed at the end of 2019; nevertheless, it is still well above the minimum requirements. The benefits arising from the increase in portfolio securities prices and from the limitation of dividend distribution only partly offset the decrease in own funds generated by the drop in interest rates. The pandemic led

to a reduction in profitability, especially in the life sector. The liquidity position of insurance companies remains stable, despite the overall decline in premium income.

Net subscriptions of Italian open-end investment funds have turned positive since April, following the emergence of tensions in March. The risks to financial stability stemming from alternative and property funds remain low. For both types of funds, the potential risks connected with investment in illiquid assets are mitigated by regulations requiring them to be set up as closed-end funds.

1 MACROECONOMIC RISKS AND RISKS BY SECTOR

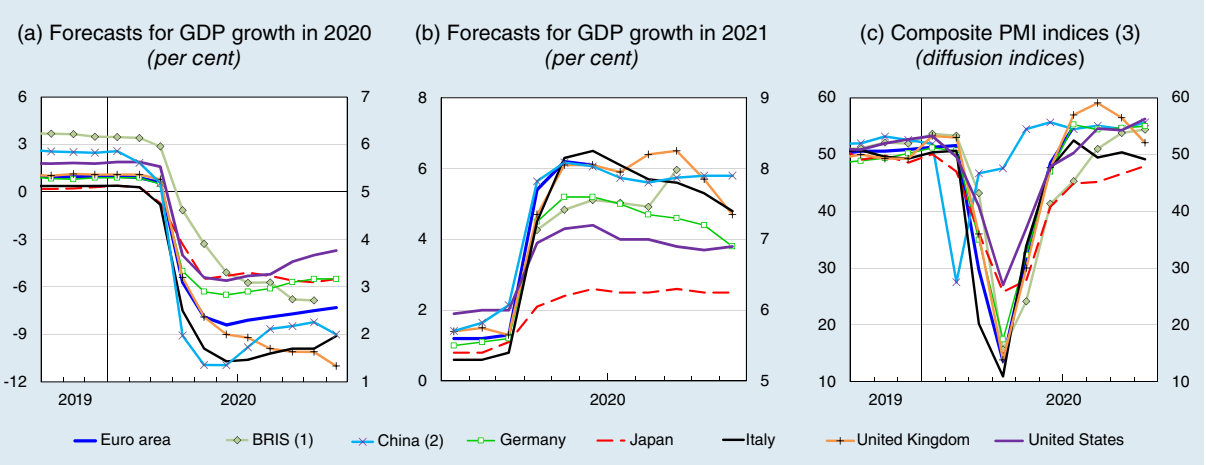
1.1 MACROECONOMIC RISKS

Global risks and euro-area risks

The resurgence of the COVID-19 pandemic is increasing the macroeconomic risks, which had abated over the summer thanks to the slowdown in infection and to the effects of the economic policies for countering the recession. The growth projections published by Consensus Economics only indicate a partial recovery in 2021, following the contraction in GDP in the current year (Figures 1.1.a and 1.1.b). The expectations for world growth in 2021 formulated in October by the International Monetary Fund are slightly worse than those from June (down from 5.4 to 5.2 per cent) and are based on the assumption of the gradual lifting of social distancing measures over the next year. The purchasing managers' index (PMI), a leading indicator of cyclical conditions, is consistent with a weakening of the recovery in almost all the major countries (Figure 1.1.c).

Figure 1.1

Growth expectations
(monthly data)



Sources: Based on data from Consensus Economics, ISM, Markit and Refinitiv.
(1) Average of the forecasts for Brazil, Russia, India and South Africa (BRIS), weighted on the basis of each country's GDP (IMF, *World Economic Outlook Database*, October 2017). – (2) Right-hand scale. – (3) Composite diffusion indices of economic activity in the various sectors based on purchasing managers' assessments (PMI). Values greater (lower) than 50 are compatible with an expansion of (contraction in) foreign demand.

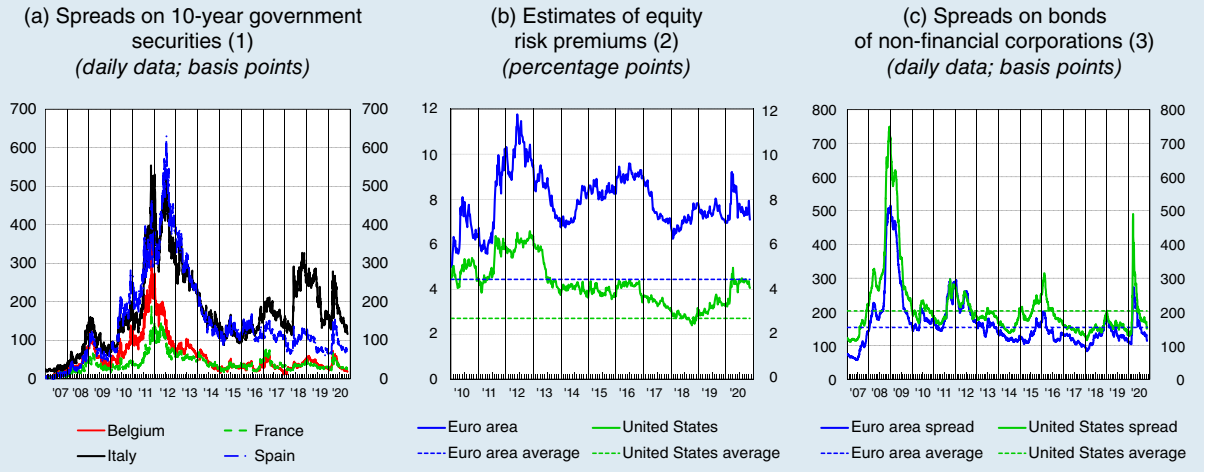
The risk of a marked increase in the number of cases accompanied by new containment measures, the uncertainty about the renewal of economic stimulus measures in some countries and the rekindling of trade tensions between the United States and China all weigh on the outlook for global growth. The progress made in creating a vaccine could have a favourable effect on the medium-term outlook, especially if its effectiveness and distribution times are confirmed.

Financial market conditions in the euro area have improved considerably since the spring. This is due to the monetary policy, fiscal and regulatory measures that have limited the impact of the pandemic. A particularly important contributory factor was the 'Next Generation EU' programme, through which the European Union will be able to borrow up to €750 billion, to be used as loans and grants to Member States, especially those hit hardest by the spread of infection.

The tensions that occurred on the government securities markets in March and April have gradually subsided. Spreads and market liquidity have returned to the levels observed prior to the health emergency (Figure 1.2.a), in part thanks to the emergence of the positive effects of the pandemic emergency purchase programme (PEPP) launched by the European Central Bank.

Figure 1.2

Risk premiums on government securities, shares and bonds



Sources: ICE Bank of America Merrill Lynch and Refinitiv.
(1) Differences between the yields on the benchmark 10-year government bonds of the countries in the key and those of the corresponding German Bund. – (2) For the S&P 500 (US) and Datastream EMU Total Market (euro area) indices, ratio of the 10-year moving mean of average earnings per share to the value of the stock index (both at constant prices). We deduct from the resulting ratio, which is an estimate of the expected real return on stocks, the real return on inflation-indexed 10-year government bonds to obtain an estimate of the equity risk premium. The dashed lines indicate the averages of the risk premiums from 1993 to 2019. – (3) Spreads refer to BBB-rated bonds issued by non-financial corporations. The dashed lines indicate the averages of the spreads from 2000 to 2020.

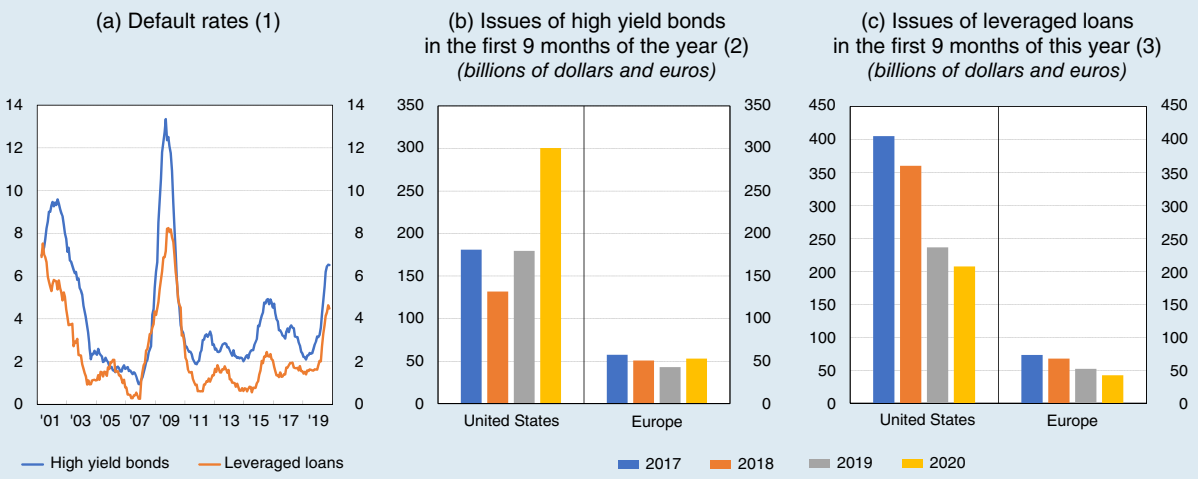
The main stock indices have recorded marked increases, albeit with considerable differences between countries and industrial sectors. Prices in the United States reached their highest level in November, in line with the expectations that profits will return to 2019 levels next year, boosted in part by the depreciation of the dollar. In the euro area, where a slower revival in firms' profitability is expected, there has only been a partial recovery in equity prices. The rise in valuations in all the main areas has been favoured by the reduction in risk-free rates and is far more pronounced in the sectors less affected by the crisis, such as technology and consumer goods. Investors have instead continued to penalize those sectors whose profitability has been most hit, including energy and finance. Based on our estimates, equity risk premiums are still above their long-term average values (Figure 1.2.b), helping to limit the risks of overvaluation. Nevertheless, the stock market valuations are exposed to changes in expectations for the evolution of the pandemic and for support policies, and to the risk that the current forecast of a rapid recovery in corporate profits may not be fulfilled.

The improvement in the conditions of the financial markets has also affected private debt markets. Spreads on corporate bonds have fallen slightly below their historical average, both in the investment grade sector (Figure 1.2.c), and in the high yield sector, despite the number of

downgrades remaining high, and default rates increasing significantly (Figure 1.3.a). Some ratings agencies expect the incidence of defaults to continue rising over the next few months, though it will remain lower than the level recorded during the financial crisis of the last decade, and then begin falling from the middle of 2021 in a scenario in which the pandemic is under control. The placement of new loans to heavily indebted firms, which had almost come to a standstill in March during the most serious phase of market turbulence, has resumed strongly in the high yield bond sector (Figure 1.3.b) and more slowly in leveraged loans (Figure 1.3.c). The smooth functioning of the primary markets, together with low interest rates, partly offsets the risks generated by firms' growing indebtedness; the latter are nevertheless exposed to the possibility of sudden decreases in credit supply on the part of investors, whose propensity to provide loans is particularly reactive to market conditions.

Figure 1.3

Default rates and gross issuance by heavily indebted firms



Sources: Moody's and Standard & Poor's.
(1) Number of issuers defaulting during the year in relation to the total number of issuers. – (2) Gross bond issues made in the first 9 months of each year indicated. Issues made in the United States are in billions of US dollars and those made in Europe are in billions of euros. – (3) Gross issues of leveraged loans classified as institutional loans in the first 9 months of each year indicated.

The profitability of European Union banks declined considerably in the first half of this year, although it remained positive on average; this was due above all to the sizeable loan loss provisions for performing loans in anticipation of a deterioration in asset quality. The capital adequacy of banks, measured by the ratio of the highest loss-absorbing capital to risk-weighted assets, nevertheless improved, also thanks to the decisions to limit the distribution of profits to shareholders, as recommended by the supervisory authorities. The resilience shown by EU banks during the most serious phase of the crisis was reflected in the performance of their credit default swap (CDS) spreads, which remained relatively low on average. Banks' stock prices have instead only recouped a small part of the heavy losses recorded in the first half of the year; they are paying the price of an extremely slow recovery in profitability, which was already deemed unsatisfactory before the crisis (see *Financial Stability Report*, 2, 2019). Looking ahead, the low profitability is one of the main vulnerabilities of the EU banking system and limits its capacity to withstand adverse scenarios, in which there could be a significant deterioration in asset quality.

On 31 December, the transition period established by the agreement for the United Kingdom's withdrawal from the EU will expire; this could generate risks for continuity in the provision of banking and financial services to European customers by British banks operating in the EU and for

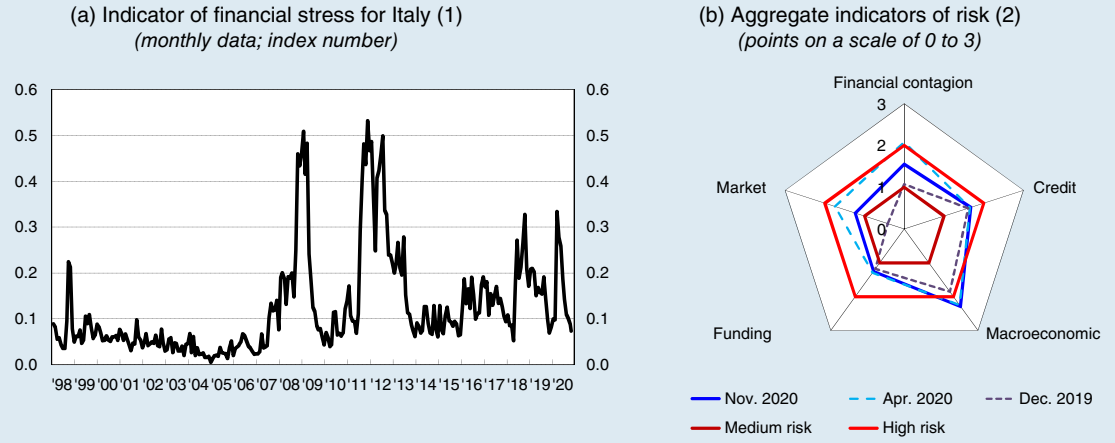
the relative safeguards for protection and transparency. Any stipulation of a trade agreement[1] between the two areas would not affect the financial services sector, since the political declaration attached to the withdrawal agreement has established that equivalence regimes and the national rules for market access by third countries will be applied to these services. To continue operating after 31 December 2020, British banks will therefore have to either obtain the necessary supervisory authorizations or transfer their activities to other banks located in the EU.

Macrofinancial conditions in Italy

The risks to financial stability in Italy remain high, especially since the re-emergence of the pandemic. The marked upturn in economic activity in the summer bore witness to the economy's capacity to recover and the effectiveness of the support measures. Thanks to the measures for stabilizing the economy, financial market conditions have improved compared with six months ago and the tensions recorded in the spring have abated (Figure 1.4.a). Financial contagion risks in the banking sector have declined (Figure 1.4.b), and the yield spread between ten-year Italian securities and the corresponding German Bund has narrowed to less than 120 basis points after reaching a peak of 280 basis points in March. The yields on Italian government bonds are currently negative for those with maturities of up to three years. Purchases of Italian government securities by foreign investors have returned to growth after the fall recorded in the first half of the year (see Section 2.1).

Figure 1.4

Synthetic indicators of risks for financial stability



Source: Based on Refinitiv data (1) The index ranges from 0 (minimum risk) to 1 (maximum risk). For further details, see A. Miglietta and F. Venditti, 'An indicator of macro-financial stress for Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 497, 2019. – (2) For the methodology to calculate the aggregate indicators, see L. Bonato, G. Cascarino and F. Franceschi, 'The Bank of Italy's systemic risk dashboard for the Italian financial system: a technical note on the aggregation of risk indicators', Banca d'Italia, Notes on Financial Stability and Supervision, 21, 2020. Values between 0 and 1 indicate low risk, between 1 and 2 medium risk and between 2 and 3 high risk.

Nevertheless, over the next few months, the new wave of infections and the resulting reactivation of containment measures could increase the uncertainty about the timing and soundness of the recovery. The professional forecasters polled in November by Consensus Economics expect GDP to fall over the year by just over 9 per cent, a better figure than that projected in June, and then to increase by around 4.8 per cent in 2021, in line with the recovery forecast on average for the euro

[1] In the absence of an agreement, trade relations between the two areas will be governed by the rules of the World Trade Organization, and tariffs and non-tariff barriers will be applied to the trade of goods and services.

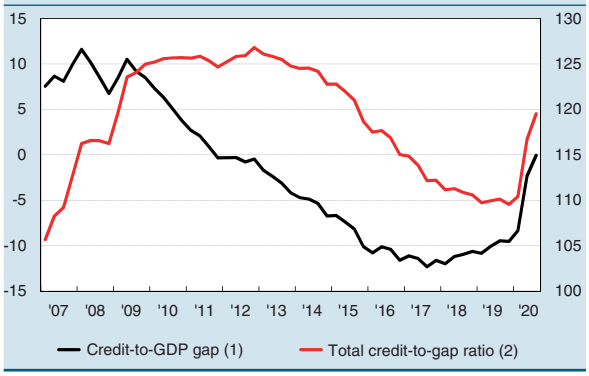
area. Looking ahead, the Italian economy, like those of the other main European countries, will have to address the risks connected with the increase in firms' indebtedness – which will impact banks' asset quality – and the effects of removing the temporary support measures for households and firms.

Italy's financial cycle measurements are influenced by the effects of the pandemic crisis and by the measures adopted to sustain the flow of lending to the economy and to avert the risk of a credit crunch. Bank loans have increased markedly, driven by the expansion in public guarantees to meet firms' greater liquidity needs. The difference between the credit-to-GDP ratio and its long-term trend (credit-to-GDP gap; Figure 1.5) was practically nil in the third quarter of the year, owing both to the growth in loans and to the unprecedented fall in GDP. However, the risks of an excessive and prolonged expansion of the financial cycle appear limited: the growth in lending to firms – which has remained steady in Italy since the summer too, in contrast to what has been observed in some of the leading European economies – should peter out considerably in 2021.

Figure 1.5

Total credit in relation to GDP and deviation from the trend

(quarterly data; percentage points and numbers)



Sources: Based on Bank of Italy and Istat data.
(1) For the methodology used to calculate *the credit-to-GDP gap,* see P. Alessandri, P. Bologna, R. Fiori and E. Sette, 'A note on the implementation of a countercyclical capital buffer in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 278, 2015. – (2) Right-hand scale.

The expansionary measures adopted to counter the economic effects of the pandemic are temporary and do not call into question the sustainability of Italy's public finances. However, the high level of public debt continues to be a source of vulnerability for the future because it could leave Italy more exposed to risks stemming from tensions in the financial markets or from new economic shocks. Relaxed financial conditions, an increase in medium-term growth helped by interventions financed via the Next Generation EU programme – provided their quality is guaranteed – and a gradual budget adjustment (when the macroeconomic conditions make this possible) could all bring the debt-to-GDP ratio back to pre-pandemic levels in the space of a decade. This path is not dissimilar to that set out by the Government in the recent Update to the 2020 Economic and Financial Document.[2] Achieving this result will be easier the more that economic policy is oriented towards recouping the structural lags in Italy.[3]

In the Update and in the 2021 Draft Budgetary Plan, the Government has revised its estimates and objectives for the public finances: the debt-to-GDP ratio is expected to rise by more than 23 percentage points this year, to 158.0 per cent, owing to the impact of both the worsening macroeconomic outlook and the expansionary measures approved since early March. With the budgetary package, the Government is planning a further stimulus. In the policy scenario and the current legislation scenario, the debt-to-GDP ratio is expected to decrease gradually to 151.5 and 154.1 per cent respectively in 2023: in the former case, the fall is more pronounced because of the expansionary effects of the budgetary package and the use of resources from the Next Generation EU programme.

[2] For further details, see 'Preliminary hearing on the Update of the 2020 Economic and Financial Document'. Preliminary testimony on the Update to the 2020 Economic and Financial Document', by E. Gaiotti, before the Chamber of Deputies, Rome, 12 October 2020. On this topic, see the box 'Growth in Italy after COVID-19: long-term assessments', Chapter 4, *Annual Report for 2019*, 2020.

[3] For further details, see 'Covid shock, debito pensionistico e debito pubblico', speech by Governor I. Visco at the webinar 'Gli Stati generali delle pensioni', Milan, Bocconi University, 4 November 2020.

The capacity of the Italian economy to handle the shock caused by the pandemic is strengthened by a number of factors: the low indebtedness of households (see Section 1.2), the high average residual maturity of government securities (see Section 2.1), the increase in the extent of banks' capital adequacy (see Section 2.2), the low liquidity risks in the asset management industry (see Section 2.3), and the net international investment position being close to balance (see Table A1 in Selected Statistics).

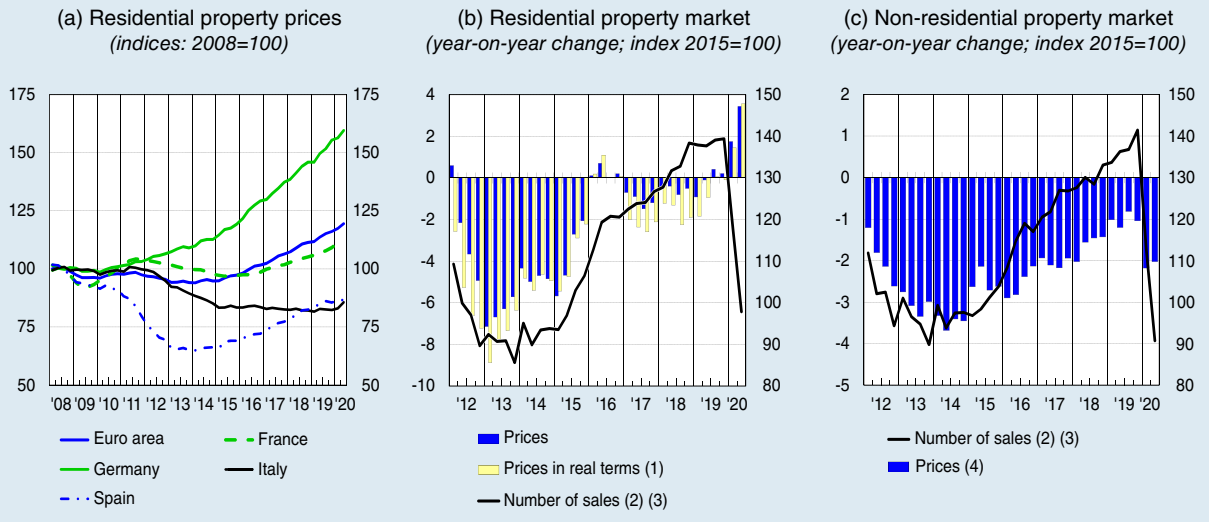
Real estate markets

In the first half of the year, real estate sales in the euro area shrank considerably because of the pandemic and the subsequent government measures to contain infection that limited people's movements. House prices, which are not usually immediately affected by changes in the macroeconomic outlook, have so far continued to rise in almost all economies (Figure 1.6.a). Non-residential property prices have continued to increase in the euro area and in the major countries, with the exception of Italy.

The COVID-19 epidemic has led to a marked fall in transactions in Italy as well, especially in the non-residential sector (Figures 1.6.b and 1.6.c). According to our calculations based on the number of notices published on the digital platform Immobiliare.it, house sales are likely to record a significant, albeit partial, recovery in the second half of the year, in part driven by the demand attributable to households, whose housing needs have changed as a result of the pandemic. The estate agents interviewed for our economic surveys expect the crisis to have a negative effect on house prices over the next few months. The outlook is less favourable in the non-residential sector, owing to both the marked deterioration in the conditions in which firms operate, especially in services, and the reduced need for office space, given the spread of remote working.

Figure 1.6

The property market in Italy and the euro area
(quarterly data)

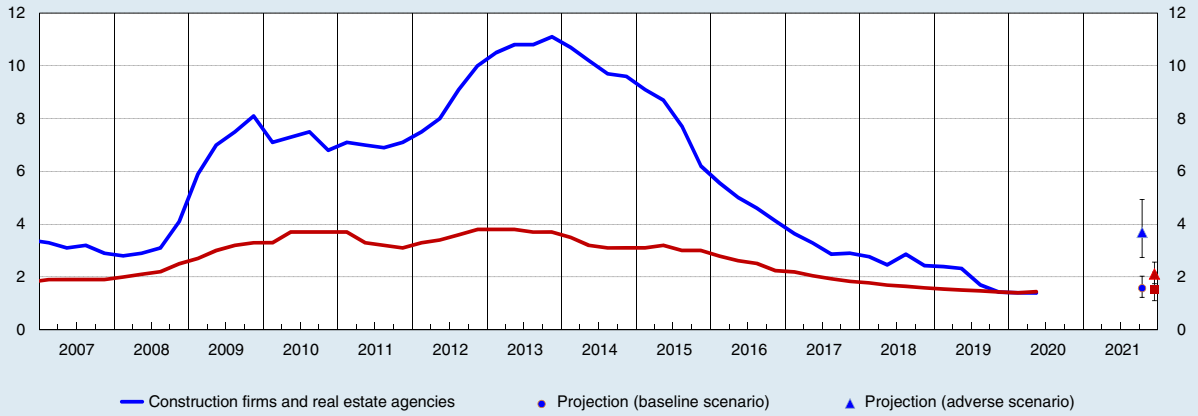


Sources: Based on data from the Bank of Italy, Istat, Osservatorio del Mercato Immobiliare (OMI), Nomisma and Scenari Immobiliari.
(1) Data deflated using the change in consumer prices. Panels (b) and (c) refer to Italy. – (2) Right-hand scale. – (3) Data adjusted for seasonal and calendar effects. –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

The vulnerability of banks stemming from real estate exposures remained low, thanks to the moratorium measures (Figure 1.7; see Section 1.2). Based on our assessments, in the event of a very adverse scenario,[4] the ratio of the annual flow of new non-performing loans, among those granted to firms in the real estate sector, to the capital of Italian banks, is expected to double at the end of 2021 compared with current values, though remaining considerably lower than the peak reached during the euro-area sovereign debt crisis. The increase is likely to be smaller for the indicator for households, whose responsiveness to changes in the fundamental variables is historically limited because of their low level of indebtedness.

Figure 1.7

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



(1) Bank vulnerability is measured by the ratio of the flow of new non-performing loans in the last 4 quarters to the average of the banks' capital and reserves in the same period. For the projections for the 4th quarter of 2021, the graph shows the median and the 10th and 90th percentiles for the two scenarios considered: status quo situation (baseline scenario) and adverse scenario. For the methodology, see F. Ciocchetta, W. Cornacchia, R. Felici and M. Loberto, 'Assessing financial stability risks arising from the real estate market in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 323, 2016, and F. Ciocchetta and W. Cornacchia, 'Assessing financial stability risks from the real estate market in Italy: an update', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 493, 2019.

1.2 HOUSEHOLDS AND FIRMS

Households

With the outbreak of the pandemic, households' financial conditions were affected by the fall in disposable income and the reduction in financial asset prices. The repercussions for vulnerable indebted households were limited by the low interest rates, the debt moratoriums and other support measures. Going forward, the main vulnerability factor for these households is still the weak income trends, which could make debt servicing more costly. However, the risks to financial stability stemming from the household sector remain limited; the share of debt at risk of default remains modest.

[4] The scenario considered assumes a negative shock in the main determinants of banks' vulnerability linked to the real estate sector and similar to that recorded during or shortly after the sovereign debt crisis in Italy. Specifically, it assumes: (a) a significant reduction in loans to households and firms; (b) a considerable fall in house prices and in the number of sales; (c) a sizeable contraction in disposable income and in industrial production; and (d) a marked increase in unemployment.

In the first half of 2020, gross financial wealth declined by 1.3 per cent. The decrease in asset prices registered in the early months of the year was only partially offset by their appreciation between May and June and by the increase in savings. The latter, at a time of uncertainty regarding the economic and epidemiological outlook, turned mainly to low-risk investments, especially bank and postal deposits.[5] According to our estimates, between the end of 2019 and June of this year, even low-liquidity households compressed their consumption more than proportionally to their income and increased the funds readily available to meet their financial needs in the coming months.

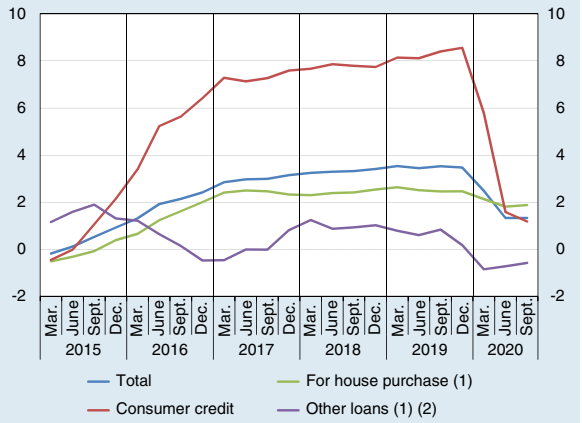
Household indebtedness as a percentage of disposable income, while rising, remained at moderate levels (63.2 per cent in June 2020, from 61.9 per cent at the end of 2019): the marked fall in income was partly offset by the reduction in financial debt resulting from the sharp drop in credit demand (see the box 'Credit supply and demand', *Economic Bulletin*, 4, 2020).

In connection with the negative trends in the property market, mortgage loans for house purchase slowed following the outbreak of the pandemic (to an annualized 1.9 per cent in September, from 2.5 in February; Figure 1.8). The contraction in the growth rate was mitigated by the debt moratoriums, both those enacted by law and those sponsored by the private sector, which reduced the flow of repayments. Following the Eurosystem's monetary policy measures, interest rates on mortgage loans declined to historically very low levels (1.3 per cent). Benefiting from the lower cost of new fixed-rate mortgage loans compared with variable-rate ones (9 basis points on average between April and September), households renegotiated more favourable terms for their mortgage loans and increased their take-up of contracts with a fixed rate for at least ten years. The increase in the stock of fixed-rate mortgage loans with low interest rates is helping to keep the interest rate risk at low levels. The downward trend in the cost of borrowing in real terms could, however, be reversed if the negative inflation dynamics were to take hold in the coming months.

Figure 1.8

Loans granted by banks and financial companies to consumer households

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



Source: Supervisory reports.
(1) The data refer to bank loans only. – (2) Other loans: the most significant categories include current account overdrafts and loans other than those for the purchase, construction and restructuring of individual properties for residential purposes.

After five years of strong growth, credit slowed markedly, to 1.2 per cent in September, from 8.5 per cent at the end of 2019 (Figure 1.8), owing to the impossibility of purchasing durable goods (especially cars) during the period in which non-essential business activity was suspended and to the increase in precautionary saving in the months immediately following the end of that period (see *Economic Bulletin*, 4, 2020). The reduction in the growth rate of indebtedness could continue for the rest of the year: according to the data from the Special Survey of Italian Households conducted in September,[6]

[5] The financial wealth of Italian households is marked by a high share of low-risk, high-liquidity instruments: at the end of the second quarter of 2020, cash and bank and postal deposits accounted for about 35 per cent of financial assets.

[6] Between the end of April and the beginning of May, the Bank of Italy conducted a special survey on a sample of over 3,000 individuals to collect a broad range of qualitative data on their economic situation and their expectations. The survey was repeated in September on a sample of about 2,300 individuals, and featured some additional questions on their future borrowing plans.

only 3.7 per cent of the households interviewed were planning to apply for a consumer loan. The propensity to take on debt to fund current spending or to obtain liquidity was also low among households whose income has decreased owing to the crisis (2.3 per cent).

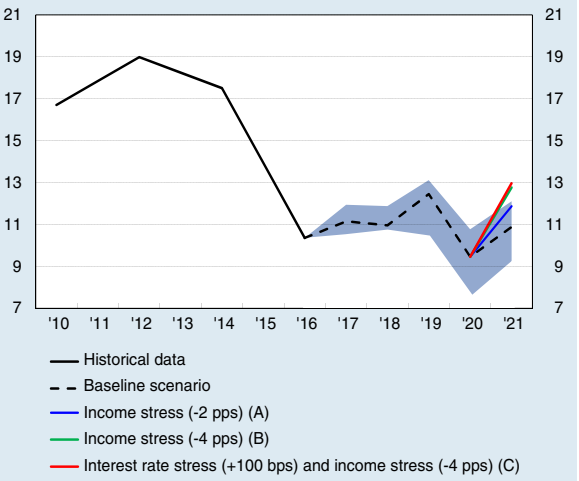
The reduction in income recorded in the first half of 2020 did not translate into a worsening in loan quality: the non-performing loan rate remained largely stable at historically very low levels (0.9 per cent in the third quarter), favoured by the low interest rates and the ample recourse to debt moratoriums, especially in the early months of the pandemic.

Between March and June, more than 90,000 applications for a debt moratorium on loans for house purchase (which draws on the 'Gasparrini Fund'[7]) were accepted, almost 17 times those activated in 2011, during the sovereign debt crisis. Over the same period, more than 430,000 contracts were placed under moratoriums sponsored by the private sector. According to our estimates, the moratorium will expire by the end of this year for about 20 per cent of the 'suspended' debt, before next spring for over 60 per cent, and by the end of 2021 for the remaining share. In the coming months, the main risk factor is household income trends, which could negatively affect the ability to resume the repayment of instalments at the end of the moratorium period. According to the Special Survey of Italian Households, in September, one fourth of the borrowers who reported benefiting from a debt moratorium or planning to do so in future expected that they would not return to pre-crisis income levels in the next twelve months. However, self-employed workers experiencing a significant reduction in turnover, who account for more than one third of the debt that was granted the state-backed debt moratorium, can access the benefits of the Gasparrini Fund for a maximum of 18 months.

The projections of the Bank of Italy's microsimulation model, which are based on a scenario consistent with the latest macroeconomic forecasts, indicate that at the end of 2020, the share of vulnerable households[8] and the ratio of their debts to the total would decrease to 1.8 and 9.5 per cent respectively (Figure 1.9). The widespread participation in the debt moratoriums and the weak credit dynamics, which more than offset the fall in income, would contribute to the reduction. Without the moratoriums, the share of the debt held by vulnerable households would have been 1.4 percentage points higher. In 2021, the share of financially vulnerable households and the share

Figure 1.9

Share of debt held by vulnerable households (1)
(annual data; per cent)



Source: Based on data from the Survey on Household Income and Wealth (SHIW).
(1) Households are considered vulnerable when their debt-service ratio is above 30 per cent and their equivalized disposable income is below the median. The latest SHIW data available refer to 2016. The shaded area represents the interval between the 10th and the 90th percentiles of the probability distribution of the simulations. Compared with the baseline scenario, the assumptions for 2021 are that: (A) the growth rate of nominal income is 2 percentage points lower; (B) the growth rate of nominal income is 4 percentage points lower; and (C) the 3-month Euribor, the 10-year interest rate swap (IRS) and the interest rate on consumer credit are 100 basis points higher and the growth rate of nominal income is 4 percentage points lower.

[7] A solidarity fund for first-home mortgage loans, established by Law 244/2007 and whose functioning was strengthened and expanded by Decree Laws 9/2020, 18/2020 and 23/2020.

[8] For the definition of vulnerable households, see note (1) to Figure 1.9. For further details on the microsimulation model, see C.A. Attinà, F. Franceschi and V. Michelangeli, 'Modeling households' financial vulnerability with consumer credit and mortgage renegotiations', *International Journal of Microsimulation*, 13, 2020, 67-91, also published as Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 531, 2019.

of debt they hold are expected to rise to 2.1 and 10.9 per cent respectively, also owing to the gradual expiry of the moratorium period for payments. Should macroeconomic developments be particularly unfavourable,[9] the share of debt at risk would reach 13 per cent of the total, in any case remaining below the levels recorded during the sovereign debt crisis.

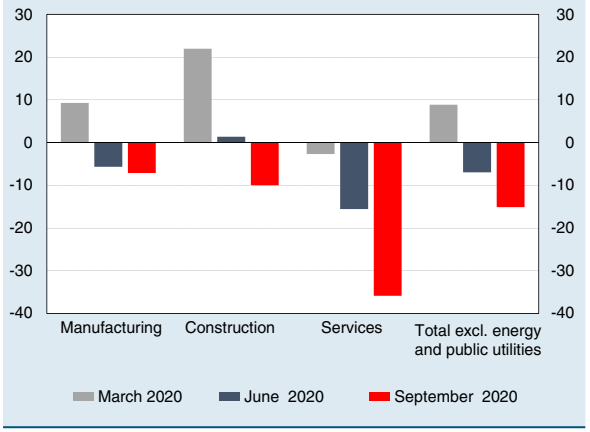
Firms

Firms' economic and financial conditions have worsened since last spring, owing to the impact of the temporary closure of many production activities and the abrupt fall in demand. Liquidity and insolvency risks have been considerably mitigated by the support measures adopted by the Government, by interest rates that continue to be low, and by the strengthening of firms' balance sheets carried out in the last decade. In the medium term, however, the share of debt held by firms impacted by the crisis could rise significantly.

Profitability has been strongly affected by the decline in revenue, against the backdrop of non-discretionary spending. In the first half of 2020, gross operating income fell by 35 per cent (on an annual basis) compared with the first half of 2019. According to the expectations reported in the Bank of Italy's Business Outlook Survey of Industrial and Service Firms conducted in the autumn,[10] the share of firms expecting to close the year with a profit will fall to 51 per cent, from 75 per cent in 2019. Additionally, more than one third of firms are planning to decrease their investment expenditure compared with their initial plans, owing to the uncertain outlook and to the contraction in sales. In a still fragile economic environment, signs of a gradual recovery in production activity have been observed since May, when the infection containment measures were relaxed and owing to the support measures. Production activity strengthened in the third quarter: the recovery was strong in industry, while the outlook remains more uncertain for services (see *Economic Bulletin*, 4, 2020). However, the risks of a slowdown in the recovery in connection with the epidemiological developments in the coming months remain high. In September, analysts revised downward their forecasts of expected profit for listed companies in 2021. The deterioration was significant for the service sector (Figure 1.10).

Figure 1.10

Profits expected by analysts for 2021 (1)
(percentage changes)



Source: Bloomberg.
(1) Changes in the index of profits expected by analysts for 2021. Based on a closed sample, as at March 2020, of 125 listed companies accounting for 95 per cent of the market capitalization of non-financial corporations.

Firms' liquidity needs, fuelled by the reduction in cash flows, were mostly met by the growth in credit and the measures adopted by the Government. According to the data reported in the Business Outlook Survey carried out in the autumn, only 9 per cent of firms in industry and in services deemed their current liquid holdings to be insufficient to be meet their operational needs over for the next six months. The share was considerably higher in the tourism and restaurant sectors. Among the instruments that

[9] Compared with the baseline scenario, this assumes a rise in interest rates of 100 basis points and a reduction of 4 percentage points in the growth rate of nominal income (around one and two standard deviations of the respective yearly variations recorded in the period 2003-19).

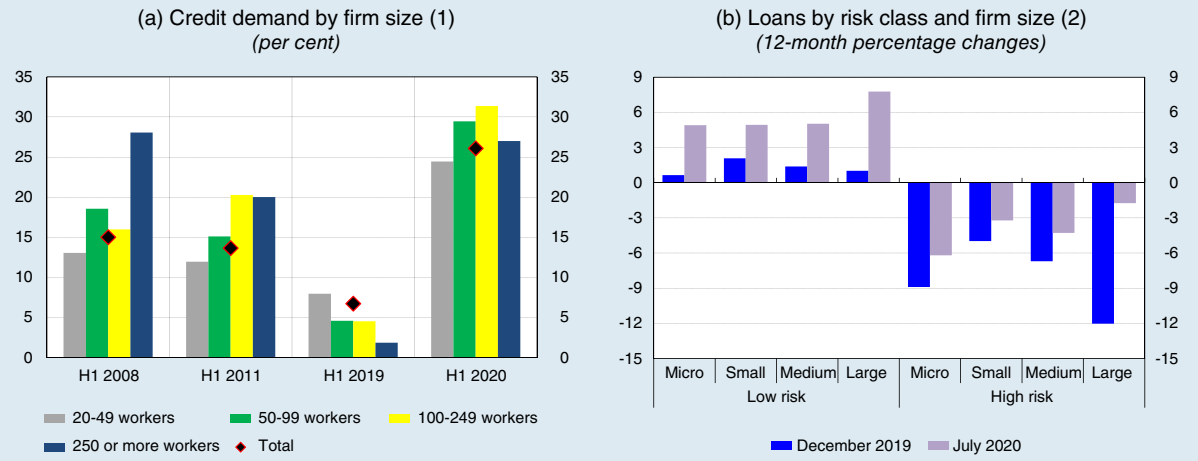
[10] For further details, see 'Business Outlook Survey of Industrial and Service Firms', Banca d'Italia, Statistics Series, 9 November 2020. The shares reported in the text are weighted by the grossing-up factors for firms with 20 or more workers.

could help to meet their financing needs, most of those firms reported that they were planning to take out new bank loans or defer the repayment of their debts.

The rise in the demand for loans in the first half of the year was significant (Figure 1.11.a), also owing to the heightened uncertainty about the economic outlook. This translated into higher demand for financing instruments with longer maturities and an increase in bank deposits (see Section 2.2); liquid assets on firms' balance sheets grew by 8 per cent compared with the end of 2019, to 11.2 per cent of total liabilities in June (10.1 per cent in December 2019). Banks' supply policies remained relaxed thanks to the abundant liquidity injected into the markets by the Eurosystem and other public interventions in support of firms. Bank debt has increased at a strong pace since March, first for medium-large companies and, starting in June after contracting for several years, for smaller firms as well. Overall, it grew by 6.9 per cent in the twelve months ending in September, after holding largely stable in the three years 2017-19. Conversely, debt decreased for the riskiest firms, above all the larger ones, though to a lesser extent than occurred last year (Figure 1.11.b).

Figure 1.11

Credit to firms



Sources: Bank of Italy and Cerved.
(1) Balance between the share of firms that increased their demand for bank loans compared with the previous half-year and the share that decreased it. The data refer to a sample of over 4,000 industrial and service firms that took part in the Bank of Italy's Business Outlook Survey. – (2) The data refer to a sample of over 460,000 limited companies. Loans include those granted by financial companies; they are adjusted for securitizations and include bad loans. Allocation into the risk groups is based on Cerved's CeBi-Score4 indicator. Low (high) risk firms have a score ranging from 1 to 4 (5 to 10).

Firms have made ample use of the financial support measures adopted by the Government since the spring. As regards the debt moratorium provided for by Decree Law 18/2020 ('Cure Italy' decree), it is estimated that, as at 30 October, small and medium-sized enterprises (SMEs) had submitted about 1.3 million applications, almost all of which were accepted (98 per cent). The gross book value of the exposures for which a moratorium was requested totalled €156 billion.[11]

[11] The data on loans covered by the Guarantee Fund for SMEs and those on the debt moratoriums are estimated based on a weekly survey of a large sample of banks (see on the Bank of Italy's website, 'Task force per assicurare l'efficiente e rapido utilizzo delle misure di supporto alla liquidità' ('Task force charged with overseeing the efficient and rapid roll-out of liquidity support measures', document only available in Italian). Based on a calculation of suspended instalments referring to an outstanding debt of €136 billion, it can be estimated that the credit lines and loan instalments benefiting from the moratorium amounted to €40 billion (see the box 'The financial support measures for firms in response to the pandemic', Chapter 7, *Annual Report for 2019*, 2020).

For loans guaranteed by the Guarantee Fund for SMEs, banks received more than 1.4 million applications. The estimated amount of loans disbursed in response to these applications came to about €80 billion, equal to over two thirds of total new loans to SMEs and MidCaps.[12] Further applications for state-backed guarantees (numbering 902 at 11 November), mainly regarding large firms, were submitted to SACE,[13] for loans totalling around €18 billion (of which 16.1 billion actually disbursed).

The rise in debt was facilitated, among other things, by its limited average cost, which remained at historically low levels (1.3 per cent in September). In recent months, the spread between the interest rates on loans for small amounts and those on disbursements of more than €1 million has narrowed, also thanks to the guarantees provided by the Guarantee Fund for SMEs. Going forward, however, the discontinuation of the possibility of obtaining public guarantees and the increased average riskiness of firms could lead to a rise in the cost of new loans.

Large firms also took advantage of the reduction in bond market yields to increase their liquid holdings and lengthen the average maturity of debt. Following the rapid deterioration in financial conditions in March, firms – especially those with sounder balance sheets – began to issue sizeable amounts of bonds again. Between April and September, gross issues reached €25 billion, more than in the comparable period of the previous three years (€21 billion on average).

The objective of the support measures is to avoid the exit from the market of firms whose difficulties are temporary; over the summer, most firms proved able to rebound quickly as the shock abated. However, the weakness of the recovery and the difficulty in accessing credit for smaller firms and for those that will find themselves more indebted once the public support measures expire remain the main risk factors for the business sector in the coming months. These firms could still be in a situation of low profitability and have difficulty repaying their debt or obtaining new credit (see the box 'The impact of the pandemic on the riskiness of firms').

THE IMPACT OF THE PANDEMIC ON THE RISKINESS OF FIRMS[1]

The COVID-19 pandemic and the measures adopted for containing infection have led to an unprecedented fall in production. The support measures introduced by the Government since March[2] have effectively mitigated the increase in firms' liquidity needs and have limited the risk of default.

[1] By Fabio Parlapiano and Gianluca Viggiano.

[2] Decree Law 18/2020 ('Cure Italy' decree), Decree Law 23/2020 ('Liquidity Decree'), Decree Law 34/2020 ('Relaunch Decree') and Decree Law 104/2020 ('August' Decree). For a description of the credit support measures, see the box 'Public intervention in lending to firms', in *Financial Stability Report*, 1, 2020; for the measures to support firms, see the box 'The fiscal policy response to the emergency', in *Economic Bulletin*, 3, 2020. The support measures considered do not include those introduced by Decree Law 137/2020 ('Relief' Decree) and by Decree Law 149/2020 ('Relief bis' Decree).

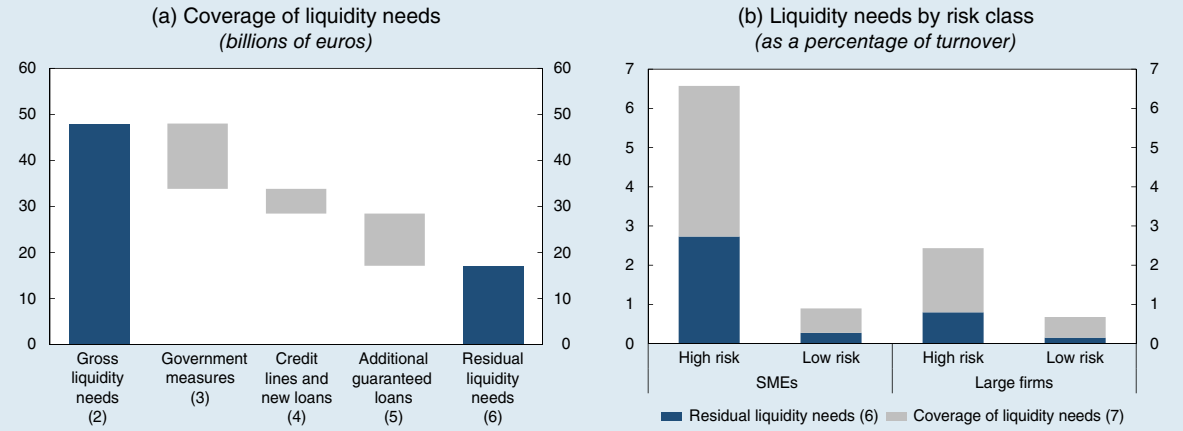
[12] To approximate the total amount of new loans to SMEs and MidCaps (firms other than SMEs with up to 499 employees), a threshold of €1 million was adopted. These loans include those to producer households and were calculated, net of debt renegotiation, based on the period between April and September (25 March was the first day on which the Guarantee Fund accepted the applications received following the enacting of the 'Cure Italy' decree.

[13] SACE is a limited company specialized in supporting Italian firms' exports and internationalization.

The estimates based on a scenario consistent with the macroeconomic forecasts of July[3] – more favourable than those envisaged in March[4] – indicate that, in the absence of the support measures, the marked fall in turnover would have generated total liquidity needs of €48 billion for around 142,000 firms at the end of this year (Figure A, panel (a), first bar). Thanks to the government measures (wage supplementation, debt moratoriums for SMEs, tax payment deferrals and grants to the hardest hit firms), the number of firms with liquidity shortfalls is expected to fall to about 100,000, with liquidity needs of €33 billion (second bar). These needs could be met through an increase in indebtedness and by using public guarantee schemes for bank loans. The use of the margins available in July 2020 on agreed credit lines and the overall growth in loans only to firms with liquidity shortfalls made it possible to cover an additional €5 billion of liquidity needs (third bar). Businesses that meet the eligibility requirements for guarantee schemes could also request €11 billion in loans backed by the Central Guarantee Fund and by SACE (fourth bar). The residual liquidity shortfall would therefore amount to €17 billion (fifth bar) and involve around 32,000 firms; this would mainly be attributable to the riskiest firms that are not always eligible for guaranteed bank loans (see panel (b) of Figure A).

Figure A

Estimate of firms' liquidity needs in the period July-December 2020 (1)



Sources: Based on data from Cerved Group, the Central Credit Register, the Central Guarantee Fund and SACE.
(1) Estimate of liquidity needs based on a sample of about 730,000 limited companies. Firms' risk classification is based on Cerved's CeBi-Score4 indicator and refers to the 2018 balance sheet (latest data available for the entire sample). Low (high) risk firms have a score ranging from 1 to 4 (5 to 10). – (2) Gross liquidity needs calculated as the sum of the initial cash items availabilities, proxied by those recorded on the 2018 balance sheets, and the cash flow estimated for 2020, without considering government measures. The projection for cash flows at sectoral level was obtained by applying a shock consistent with the macroeconomic forecasts for the value added of firms for 2020 to the turnover for 2018. The operating costs for the financial year were obtained by applying elasticities of costs to revenues estimated for a sample of firms in the years 2010-18. – (3) Estimate of liquidity needs covered by the following government measures: wage supplementation, moratoriums for SMEs, rent subsidies, tax deferrals and grants for firms recording a sizeable decrease in turnover. – (4) Estimate of liquidity needs covered by the margins on credit lines available in July 2020 and by the loans actually disbursed to firms between March and July, including loans backed by public guarantees. – (5) Estimate of liquidity needs covered via loans backed by the Central Guarantee Fund and by SACE that could be applied for from July until the end of the year. The amount of loans is only estimated for firms with liquidity shortfalls and that meet the eligibility requirements for public guarantee schemes. – (6) Estimate of liquidity needs not met after considering government measures and all sources of coverage. – (7) Coverage of gross liquidity needs (see note 2) via government measures, available margins on credit lines, and guaranteed loans.

The growth in indebtedness to cover liquidity needs would translate into an increase in leverage (measured as the ratio of financial debt to the sum of financial debt and equity) of between 1 and 2

[3] For an analysis of the impact of the COVID-19 shock on the liquidity needs of around 730,000 Italian firms, see A. De Socio, S. Narizzano, T. Orlando, F. Parlapiano, G. Rodano, E. Sette and G. Viggiano, 'The effects of the COVID-19 shock on corporates' liquidity needs, balance sheets and riskiness', *Note Covid-19*, Banca d'Italia, 13 November 2020.

[4] Previous estimates of firms' liquidity needs used the projections on turnover for 2020 produced by Cerved Group and indicated a cumulated borrowing requirement of €73 billion between March and July (see the box 'Firms' liquidity needs', in *Financial Stability Report*, 1, 2020).

percentage points, to around 45 per cent.[5] The indicator would nevertheless remain lower than the level reached following the sovereign debt crisis (53 per cent).

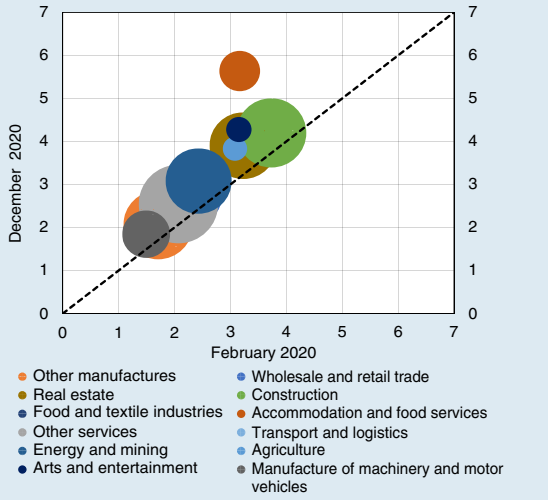
The severity of the recession would also have an impact on firms' net equity, albeit significantly attenuated by the government measures. The share of limited companies with a capital shortfall (equity below the legal minimum) would reach 12.0 per cent at the end of the year, against 6.9 per cent prior to the crisis. Without the support measures introduced so far, the share of companies with a capital deficit would have reached 13.8 per cent. This estimate does not take account of the possible effect of the use of resources from the Next Generation EU programme and of the additional measures approved by the 'Relief' and the 'Relief bis' decrees.

The decline in economic activity will also be reflected in an increase in firms' probability of default. According to the Bank of Italy's In-House Credit Assessment System (ICAS), the average one-year-ahead default probability would rise compared with last February to values from 3.0 to 4.4 per cent; the increase, of up to one percentage point, has been mitigated thanks to the support measures. The rise would be more pronounced in the accommodation and food services sector and in the arts sector (Figure B). The default probabilities would be lower than the maximum reached following the sovereign debt crisis (5.4 per cent on average in 2015). The negative effects of the pandemic are more pronounced in the case of very risky firms (with a default probability higher than 5 per cent). The share of such firms would rise to 16.4 per cent of the total, against 10.0 per cent in February, and they would account for 22.9 per cent of the stock of financial debts, compared with the figure of 12.7 per cent recorded before the pandemic crisis. These estimates do not take account of the measures being finalized or of those in the Next Generation EU programme.

Figure B

Firms' creditworthiness (1)

(average probabilities of default; per cent)



(1) Estimate of the one-year-ahead probability of default based on a sample of about 255,000 firms assessed by the Bank of Italy's In-house Credit Assessment System (ICAS). For each sector, the average probability of default in February is reported, and that estimated as of December 2020, based on expected balance sheet and Central Credit Register data. The size of the circles is in proportion to the debt held by the riskiest firms, namely those with a greater than 5 per cent probability of default.

The set of support measures adopted by the authorities makes it possible for healthy but illiquid firms to avoid exiting the market and to safeguard the production system. However, the ensuing increase in indebtedness might not be temporary and could weigh on the capacity of companies to pay debt servicing costs, also in the medium term, to invest and to compete.

Some of the measures adopted by the Government with the 'Relaunch Decree' may help to reduce the increase in firms' indebtedness. The tax incentives for capital strengthening and the setting up of public vehicle companies that will be able to subscribe for subordinated debt or shares issued by small, medium-sized and large firms are also working in this direction.

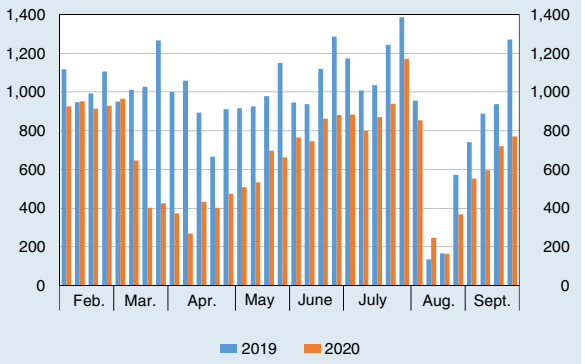
[5] The impact of the crisis on firms' indebtedness and the probability of default was estimated by adopting two different hypotheses on the possibility of meeting liquidity needs. The first hypothesis assumes that firms eligible for public guarantee schemes can obtain new loans within the limits established by the law (25 per cent of turnover or double the costs of personnel, whichever is greater). The second hypothesis instead assumes an unlimited capacity for indebtedness that is not influenced by corporate characteristics.

Since March, the number of firms exiting the market has decreased significantly compared with last year (Figure 1.12), also owing to the freezing of bankruptcies provided for by the 'Liquidity Decree'.[14] Looking ahead, in the absence of further support measures and of a strong recovery in profitability, the number of firm closures appears set to rise, leading to a deterioration in loan quality and risks to financial stability.

The projections of the Bank of Italy's microsimulation model indicate that, in a baseline scenario consistent with the latest macroeconomic forecasts, the share of debt held by vulnerable firms,[15] after increasing significantly in 2020, would decrease to 29 per cent at the end of 2021, nevertheless remaining higher than in 2019 (Figure 1.13). The improvement would be due to a rebound in profitability. Should trends in gross operating income prove unfavourable, the share of debt at risk would rise to 30 per cent of the total.[16] In a particularly adverse scenario, characterized by very negative changes in profitability and in the cost of debt, and in the absence of further support measures, the share would reach 32 per cent, a level nevertheless still below that recorded during previous crises.

Figure 1.12

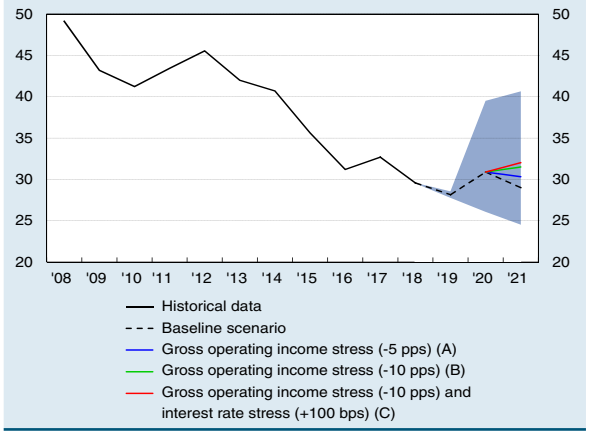
Firm closures (1)
(number of firms)



Source: Based on Infocamere data.
(1) Weekly data on the number of closures other than for compulsory strike-off, considering limited companies and partnerships only.

Figure 1.13

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



Source: Based on Cerved data.
(1) Vulnerable firms are those whose gross operating income is negative or whose ratio of net interest expense to gross operating income exceeds 50 per cent. The definition excludes firms with bad loans. The latest available annual financial statements for the whole sample of firms refer to 2018. The shaded area indicates a confidence interval of 95 per cent around the baseline scenario. Compared with the baseline scenario, the assumptions for 2021 are that: (A) the growth rate of nominal gross operating income is 5 percentage points lower; (B) the growth rate of nominal gross operating income is 10 percentage points lower; and (C) the interest rate is 100 basis points higher and the growth rate of nominal gross operating income is 10 percentage points lower.

[14] Decree Law 23/2020 provided for the inadmissibility of all complaints and petitions relating to declarations of bankruptcy and of state of insolvency filed in the period between 9 March and 30 June 2020.

[15] For the definition of vulnerable firms, see note (1) to Figure 1.13. 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.

[16] Compared with the baseline scenario, the adverse scenario assumes a reduction in the growth rate of nominal gross operating income of 5 percentage points, or about one standard deviation around the yearly variations recorded in the period 2003-19.

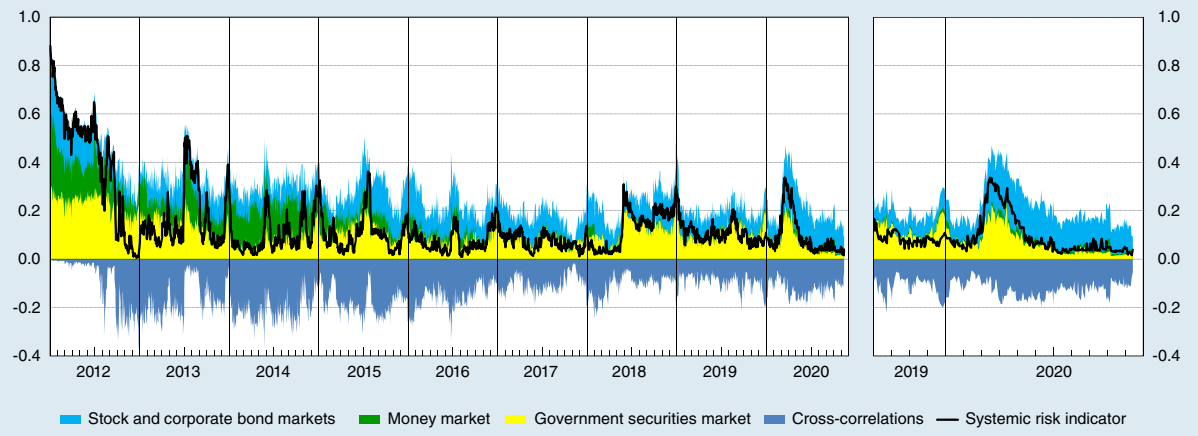
2 FINANCIAL SYSTEM RISKS

2.1 THE MONEY AND FINANCIAL MARKETS

Liquidity conditions in Italy's financial markets have improved since mid-March, benefiting from both purchases of public and private sector securities under the pandemic emergency purchase programme (PEPP) and the expectations generated by the European Council agreement on Next Generation EU. The indicator of systemic liquidity risk returned to the levels recorded at the start of the year (Figure 2.1). Uncertainty linked to the course of the pandemic nonetheless continues to be a significant risk factor for the equity and corporate bond markets: if the health emergency worsens, both markets could be affected by an increase in risk aversion and additional downgrades by rating agencies.

Figure 2.1

Indicator of systemic liquidity risk in the Italian financial markets (1)
(daily data; index ranges from 0 to 1)

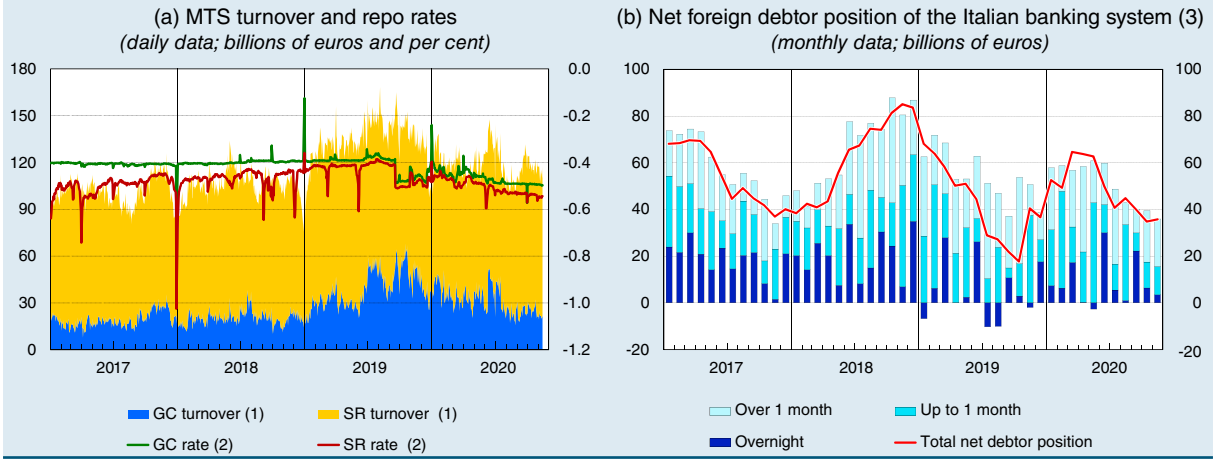


Sources: Based on data from Refinitiv, Bloomberg, Moody's KMV, MTS SpA, e-MID SIM SpA, and the Bank of Italy.
(1) The systemic risk indicator measures the combined risk in the money market, the secondary market for government securities, and the stock and corporate bond markets. The index range is from 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.

Repo trading volumes remained high on the money market notwithstanding the contraction of the general collateral segment (Figure 2.2.a). The overnight repo rate declined from the levels reached at the height of the pandemic crisis, settling close to the Eurosystem deposit facility rate. Italian banks' foreign net debtor position on the MTS repo market gradually diminished following ample recourse to the fourth auction of targeted longer-term refinancing operations (TLTRO III) in June (Figure 2.2.b; see Section 2.2). The average cost of securities lending transactions (*specialness*), which measures the scarcity of securities, remained modest, notwithstanding sizeable Eurosystem purchases, also thanks to the securities lending programmes conducted by the European Central Bank and the Bank of Italy. In April, negotiations started on MTS depo, the new market for the electronic trading of unsecured interbank deposits that has replaced e-MID; for now, trading has been moderate, but the number of participants is growing.

Figure 2.2

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



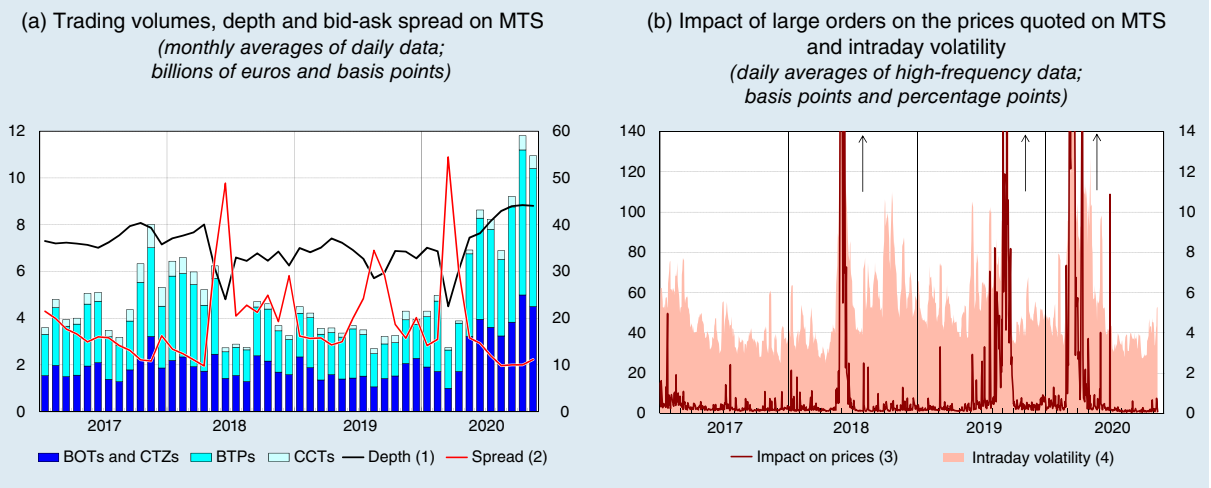
Source: Based on MTS SpA data.
(1) Daily turnover in general collateral (GC) and special repos (SR) on the MTS market by contract settlement date. – (2) Calculated in reference to daily contracts for Italian government securities made on MTS Repo. Right-hand scale. – (3) Calculated on the basis of the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

At international level, work continues on the transition from the current money market benchmark rates (IBOR) to the new risk-free rates. Italy's overall exposure to LIBOR, which is due to be phased out at the end of 2021, is small and concentrated among larger banks.

Following the tensions registered in March, the bid-ask spread on the MTS market has gradually narrowed and the quantities listed by market makers have reached historically high levels; average daily turnover in October was just below €12 billion, more than triple the average recorded in 2019 (Figure 2.3.a).

Figure 2.3

Liquidity indicators on Italian government securities



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

The market's ability to absorb high-value orders was back at levels comparable to those seen at the start of the year and intraday share price volatility diminished (Figure 2.3.b). The improvement in liquidity conditions reflects both the expansionary monetary and fiscal policies launched in response to the pandemic (which bolstered market confidence and supported investor demand), and the increase in activity by primary dealers, spurred by increased government bond issues on the primary market and the Eurosystem purchases.

Between December 2019 and June 2020, the share of Italian government securities held by foreign investors fell from 25.9 to 23.6 per cent, while that of Italian banks rose from 16.9 to 18.6 per cent; foreign investment started to increase again after the summer (see Section 1.1). Variations in portfolios partly reflect the different strategies of investors that operate in this market (see the box 'Investor behaviour in the market for Italian government securities').

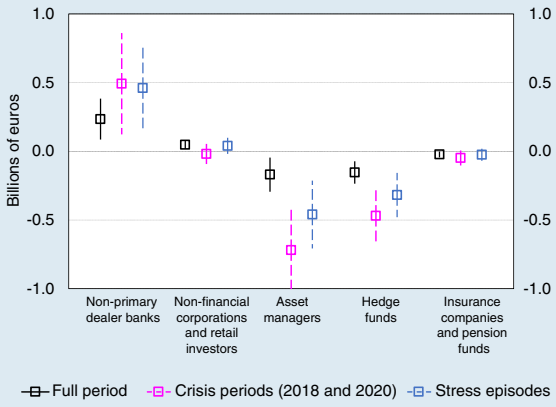
INVESTOR BEHAVIOUR IN THE MARKET FOR ITALIAN GOVERNMENT SECURITIES[1]

In March, the spread of the COVID-19 pandemic had a significant impact on all financial markets, causing abrupt depreciations and reductions in liquidity, including for low-risk assets such as public sector securities. In the Italian government securities market, divestments were concentrated over a small number of days, making it more difficult and onerous for market makers to provide liquidity. Similar dynamics have been observed during previous stress episodes, for example in May 2018. Sizeable sales or purchase flows stimulated by an initial rise or fall in prices can amplify market volatility and lead valuations to diverge from their fundamentals. Since investors' reactions to variations in yields differ based on the sector to which they belong, the ability of a market to absorb external shocks depends on the investor base operating in that market.

For the Italian government securities market, our estimates based on primary dealers' activity indicate that, in normal conditions, after a rise of 10 basis points in yields, asset managers and hedge funds will sell assets worth on average €170 million and €150 million, respectively, in the week that follows. Divestments can more than double during stress episodes (see the figure). Conversely, banks play a countercyclical and stabilizing role: a rise of 10 basis points in yields is followed on average by net purchases amounting to around €230 million in normal market conditions and to more than €450 million during stress episodes. The higher yields offered by securities during periods of declining prices have a positive impact on the profitability of banks, which typically sell securities during phases of normalization or hold them to maturity in their balance sheets. The response of insurance companies, pension funds and other non-financial operators tends to be much more limited.

Figure

Impact of a rise in yields of 10 basis points on net purchases of Italian government securities (1)



Source: Based on data from the *Euro Market Activity Report* (EMAR).
(1) The analysis refers to the period from January 2014 to September 2020. The figure gives for each category of investor the net purchases associated with a 10-basis-point rise in yields, measured for the previous week on the ten-year benchmark. The 'crisis periods' subset includes one-month windows centred on the two days marked by the highest bid-ask spreads in the MTS market (29 May 2018 and 12 March 2020). The 'stress episodes' subset comprises the weeks in which the CDS spreads on Italian government securities registered rises equal to or greater than the last decile of their sample distribution. For each sample and category of investor, the point estimate is given with a confidence interval of 90 per cent. The estimates do not take account of the geographical location of investors.

[1] By Onofrio Panzarino.

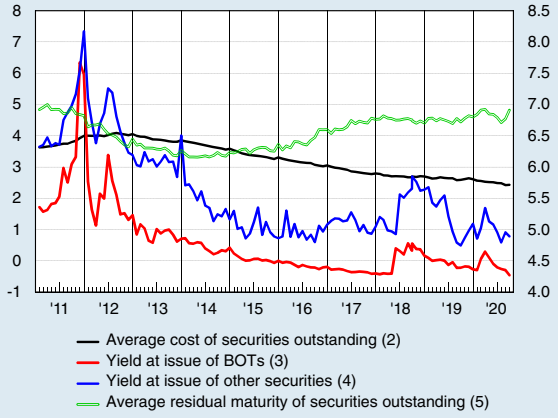
The impact of yield shocks on trading activity could be amplified by the growing use of algorithmic and high-frequency trading strategies, in addition to investors' procyclical behaviour. The widespread adoption of margining practices, motivated by the need to limit credit and counterparty risk, can raise liquidity risk, increasing the funding needs of market participants during the phases in which price variations widen and become more volatile. Moreover, market makers, which in normal market conditions absorb temporary imbalances between the demand and supply of securities, can be less able to fulfil this role in phases of both high volatility and significant divestments. The tensions of last March led the monetary authorities to take action in order to ensure the orderly functioning of the markets (see the box 'Global measures to support financial stability', *Financial Stability Report*, 1, 2020). In April, the ECB temporarily lowered capital requirements to strengthen banks' ability to provide market liquidity through their market-making activities.[2]

[2] ECB, 'ECB banking supervision provides temporary relief for capital requirements for market risk', press release, 16 April 2020.

Public intervention in support of households and firms has substantially increased funding needs on the primary market for government securities for the current year; to meet these needs, the Government has increased the average amounts at auction and has broadened the range of instruments at its disposal.[1] Loans under the new European recovery and economic aid programmes could lower the volume of government securities to be placed on the market in 2021 by more than €20 billion.[2]

Figure 2.4

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



Sources: Based on Ministry of Economy and Finance and Bank of Italy data. (1) Data at 30 October 2020. – (2) Weighted average of the yields at issue of government securities outstanding at end of month. – (3) Weighted average of the yields at issue of all the BOTs placed during the month, by settlement date. – (4) Weighted average of the yields at issue of securities other than BOTs and indexed securities that were placed during the month, by settlement date. – (5) End-of-period values weighted by the outstanding securities. Right-hand scale.

The PEPP and the European Council agreement on Next Generation EU have helped to ease financing conditions in the primary market for government securities: despite the greater amounts at issuance, in the last quarter the bid-to-cover ratio in auctions was on average above the levels recorded at the start of the year. Yields at issue fell by around 100 basis points compared with the peaks reached between April and May, entering negative territory for maturities of up to three years and reaching historic lows for the majority of offerings; the average cost of securities outstanding benefited as a result, reaching 2.4 per cent at the end of October (Figure 2.4). The average residual maturity of outstanding securities was equal to 6.9 years at the end of the same month, in line with the data for March; long-term issuances, including those made by placement syndicates, have offset the increase in the shorter-term debt that occurred at the outbreak of the pandemic emergency.

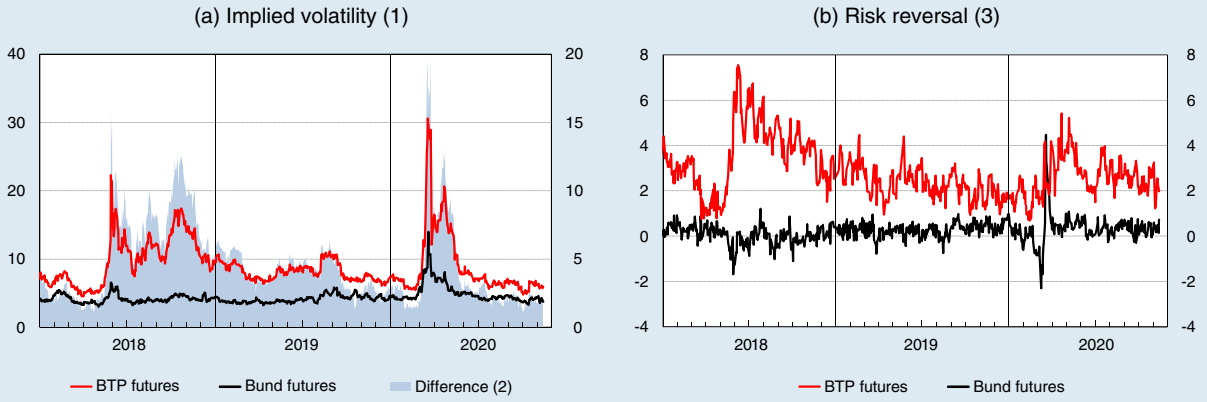
[1] These include a new facility reserved to specialists for the issue of off-the-run securities via the MTS platform and two issues of BTP Futura, a new category of securities dedicated to retail investors.

[2] The estimate is based on the information available on the European instrument for temporary Support to Mitigate Unemployment Risks in an Emergency (SURE), and on the scenarios underpinning the Next Generation EU programme presented by the Government in its Update to the 2019 Economic and Financial Document published on 5 October.

In the market for options on euro-area government securities, the cost of insuring against price variations, measured by implied volatility, progressively declined, reaching levels close to those preceding the health emergency (Figure 2.5.a). The difference between the relative price of options that protect against a fall in futures prices on Italian and German government securities, compared with those that profit from a rise in it (risk reversal), has decreased since April, reaching levels slightly above the average for 2019 (Figure 2.5.b).

Figure 2.5

Futures on 10-year BTPs and Bunds, implied volatility and risk reversal
(daily data; percentage points)

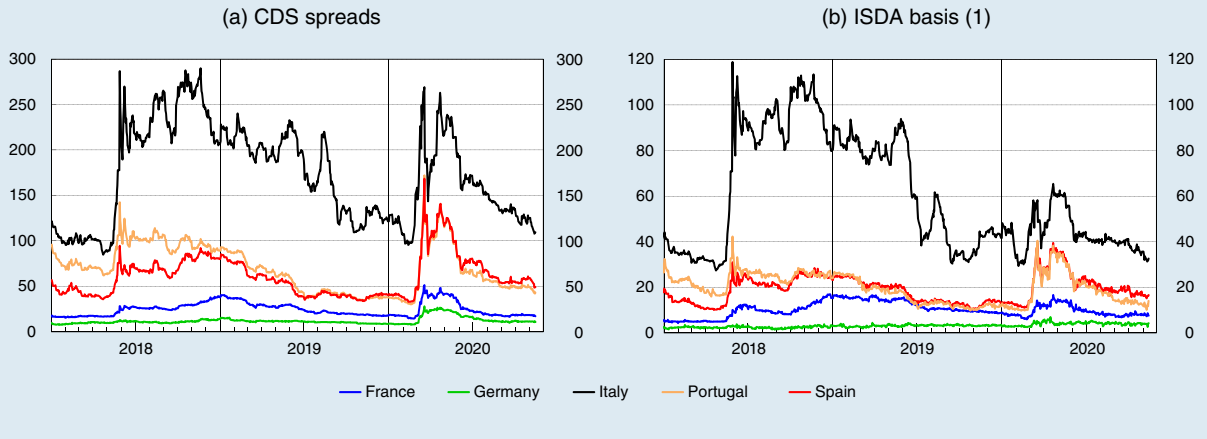


Source: Based on Bloomberg data.
(1) Implied volatility in the prices of at-the-money options on 10-year BTP and Bund futures with maturity at 30 days. – (2) Right-hand scale. – (3) Implied volatility spreads of put and call option prices on active 10-year BTP and Bund futures with the same relative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

The insolvency risk premium on Italian government securities recorded in the market for credit default swaps (CDS) returned to levels close to those recorded prior to the pandemic (Figure 2.6.a).

Figure 2.6

Market for sovereign credit default swaps (CDS)
(daily data; basis points)



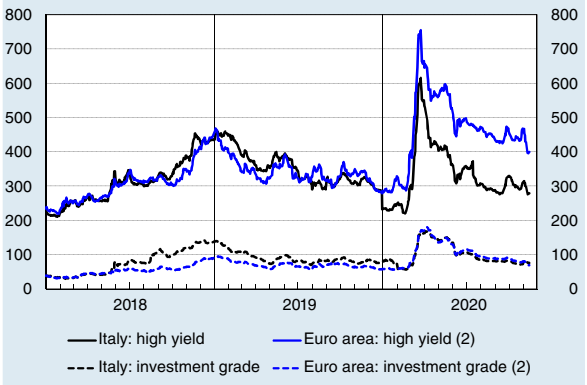
Source: Based on Bloomberg data.
(1) The International Swaps and Derivatives Association (ISDA) is an organization of participants in the market for OTC derivatives. The ISDA basis measures the difference between CDS spreads on 5-year US dollar contracts under the 2014 and the 2003 ISDA Definitions.

A similar trend was apparent for the difference between the premium on CDS contracts that offer protection against the risk of debt redenomination and that on contracts with no such provision (ISDA basis; Figure 2.6.b).

In the corporate sector bond market, the spread between the bonds issued by Italian firms and the risk-free rates approximated by the risk-free interest rate curve (asset swap spread) narrowed compared with the highs reached at end-March (Figure 2.7). For the segment with lower credit ratings (high yield), spreads returned to pre-pandemic levels for Italian firms, while they remain higher on average for firms across the euro area. This difference in the indices is mostly ascribable to variations in the sectoral composition of bond markets (see the box 'Trends in the spreads and ratings of bond issuers in Italy and in the euro area').

Figure 2.7

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



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

TRENDS IN THE SPREADS AND RATINGS OF BOND ISSUERS IN ITALY AND IN THE EURO AREA[1]

The advance of the pandemic throughout the euro area and consequent restrictive measures adopted by governments triggered marked increases in corporate bond yields and downward revisions of issuers' credit ratings.[2] The downgrades were less widespread than analysts' expectations before the summer, in part thanks to the support measures adopted by the monetary and fiscal authorities.

In the investment grade segment, the difference between the asset swap spreads of Italian bond issues and those of other euro-area countries remained small. The spreads of Italian corporate high-yield (or speculative grade) bonds recorded markedly lower increases than the average for the other euro-area countries, including during the period when the rate of infection was especially pronounced in Italy. This discrepancy is mostly ascribable to the different sectoral composition of the indices in the two geographical areas. Italy's indices are, in fact, highly concentrated in utilities for investment grade and in telecommunications for speculative grade bonds; these are sectors that by virtue of the activities carried out have been less hard hit by the pandemic than others.

The health emergency also led to a significant revision of firms' earnings prospects and consequently of rating agency assessments at global level. From early March to end-October, about 7 per cent of the nominal value of Italian securities outstanding (issued by seven companies, equal to 18 per cent of the sample), had their credit rating cut by one of the three main agencies (Moody's, Standard & Poor's and Fitch Ratings), compared with 15 per cent in the other euro-area countries (85 companies, equal to 24 per cent of the sample; see panel (a) of the figure). The average rating of the Italian companies, weighted by the amounts issued, is equal to BBB; that of the other euro-area

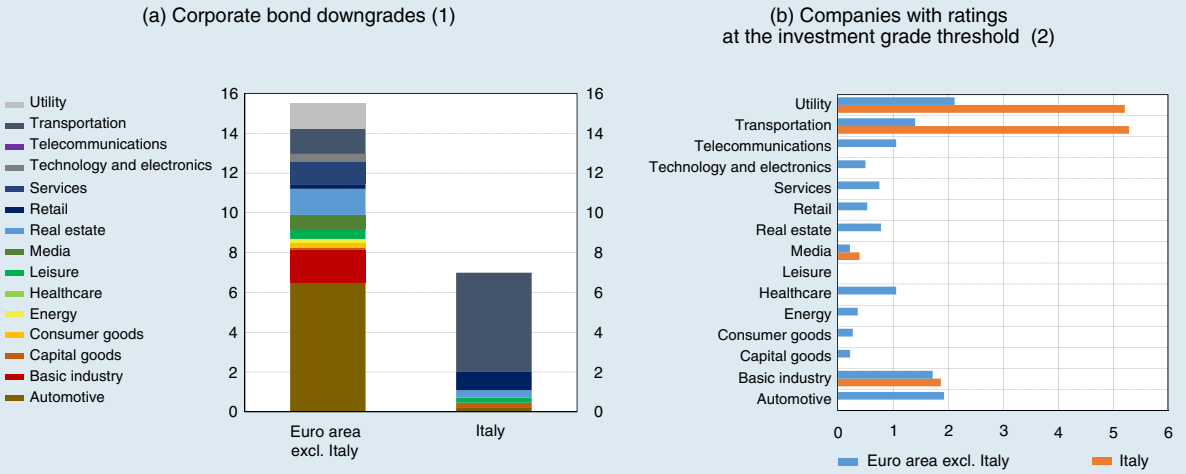
[1] By Simone Letta and Federica Orsini.

[2] The calculations set out in this box are based on a sample of 1,934 corporate bonds issued by 395 non-financial corporations in the euro area, for a nominal total amount of €1,316 billion. The securities are included in the ICE BofA euro corporate investment grade and ICE BoFA euro corporate high yield indices, largely representative of total bond issues traded in the markets. The subset of Italian firms comprises 157 securities of 38 issuers, for a nominal total amount of €108 billion.

countries is BBB+.[3] In Italy, credit rating cuts mostly affected the transportation sector, while in the other euro-area countries more than 40 per cent of the downward revisions involved securities issued by automotive companies.

Figure

Credit ratings of bond issuers in the euro area
(percentage share of total issues)



Source: Based on ICE Bank of America Merrill Lynch (BofAML) data.
(1) Downgrades that occurred from 2 March to 30 October 2020 as a share of the total nominal value of the issues in the investment and speculative grade segments. – (2) The figure shows the nominal value of corporate bonds with a BBB- rating as a share of the total nominal value of the bonds in the investment grade segment (BBB- and higher). Data at 30 October 2020.

From early March until the end of October, the nominal amount of issues downgraded from investment grade (rated BBB- or higher) to speculative grade (BB+ or lower), known as 'fallen angels', came to around €1.4 billion in Italy (1.3 per cent of the total investment and speculative grade issues). This compares with €21.5 billion recorded in the other euro-area countries (1.7 per cent of the total). The share of issues with a BBB- rating, i.e. those closest to fallen angel status, came to around 13 per cent of total investment grade bonds both in Italy and in the other euro-area countries.[4] For Italy, these issues mostly refer to the utility sector, already close to the investment grade threshold before the pandemic, and the transportation sector, hit by a number of downgrades in recent months as a result of poorer earnings prospects owing to the health emergency and to the restrictions on movement adopted by governments (see panel (b) of the figure). In the rest of the euro area, the issues that risk becoming speculative grade comprise the automotive and basic industry sectors, already heavily hit by downgrades in recent months.

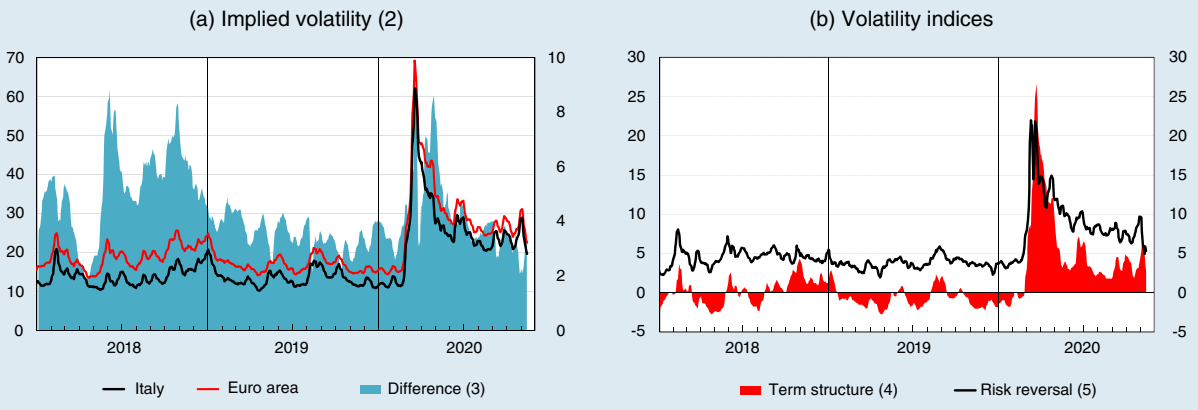
[3] The box refers to synthetic ratings assigned by ICE, calculated as the average of the assessments assigned by Moody's, Standard & Poor's and Fitch Ratings.

[4] An investment grade rating from at least one of the four rating agencies accredited by the Eurosystem (Moody's, Standard & Poor's, FitchRatings and DBRS Morningstar) is one of the pre-conditions that corporate bonds must meet in order to be accepted as collateral in monetary policy operations or in the Eurosystem asset purchase programmes (corporate sector purchase programme, CSPP, and pandemic emergency purchase programme, PEPP). To mitigate the effects of the downgrades by the rating agencies, on 22 April 2020 the ECB Governing Council decided to freeze at 7 April 2020 the eligibility of the securities that could be pledged as collateral in monetary policy operations in the event of rating cuts (as far as BB).

Implied volatility in the equity markets declined from the exceptionally high levels recorded in March and April, but remains above those registered at the start of the year in both Italy and the euro area (Figure 2.8.a).[3] The cost of protection against sharp falls in share prices (risk reversal) and the volatility spread between two- and twelve-month options (Figure 2.8.b) testify to the ongoing uncertainty about the outlook for share prices in the coming months.

Figure 2.8

Equity market indicators (1)
(daily data; percentage points)



Source: Based on Bloomberg data.
(1) 5-day moving averages. – (2) Volatility implied by the prices of 2-month options on the Italian FTSE MIB index and, for the euro area, the Euro Stoxx 50 index. – (3) Difference between the implied volatility of 2-month options on the Italian and euro-area stock market indices. Right-hand scale. – (4) Difference between the implied volatility on 2- and 12-month options on the Italian FTSE MIB index. – (5) Difference between the implied volatilities of put and call options on the Italian stock market index with the same delta (0.25) and the same maturity (2 months). The indicator measures the relative price of the options that protect against a fall in the stock index compared with those that profit from a rise in it.

Cassa Compensazione e Garanzia SpA (CC&G) restored its contribution to the default funds[4] to pre-pandemic levels and slightly reduced margin requirements in the equity segment, while leaving unchanged those on positions in Italian government securities (Figure 2.9). Higher margins attenuate the risk that the guarantees requested of operators suddenly increase after a volatile phase, leading to a rise in liquidity needs. The importance of avoiding procyclical changes in margins was recalled in the recommendations issued last May by the European Systemic Risk Board (ESRB); aimed at the competent national authorities for the supervision of the central counterparties (CCPs), the recommendations also underline the need to limit delays in the redistribution of margins collected on an intraday basis and to strengthen the liquidity stress tests conducted by the CCPs themselves.

The third stress test exercise conducted by ESMA on the overall resilience of the European CCPs concluded positively in July. For the first time, the exercise considered the impact of the cost of liquidating the most highly concentrated positions, employing a scenario comparable in terms of severity to the one that occurred in the markets during the tensions registered last March. For Cassa di Compensazione

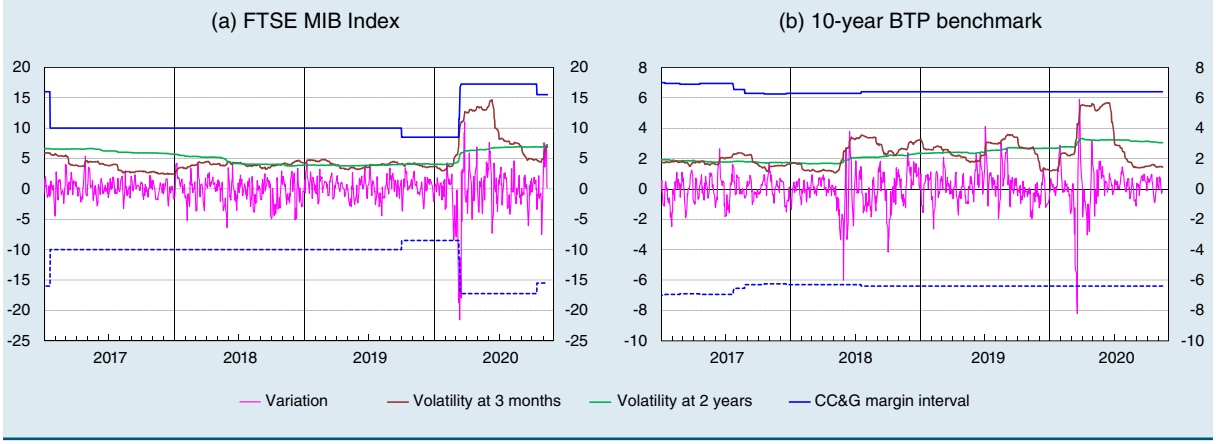
[3] In light of the normalization of market conditions, in May, Italy's Companies and Stock Exchange Commission (Consob) decided to suspend the temporary ban on holding net short positions on shares traded on Italy's regulated market (see *Financial Stability Report*, 1, 2020). Consob's decision was taken in concert with those of the competent supervisory authorities in Austria, Belgium, France, Greece and Spain, which during the most acute phase of the crisis had introduced similar bans on short selling. Meanwhile, the decision by the European Securities and Markets Authority (ESMA) to require notification of new net short positions when they reach the threshold of 0.1 per cent of share capital was extended.

[4] Default funds are mutual guarantee funds established through direct payments by participants to the central counterparties (CCPs). In the event of non-compliance by one or more participants, they are used to absorb any losses not covered by the initial margins.

e Garanzia SpA (CC&G), modest risks emerged, notwithstanding an increase in the concentration of resources paid in by the participants (margins and default funds).

Figure 2.9

Margins applied by CCPs and volatility of the financial instruments (1)
(daily data; per cent)



Sources: Based on data from Bloomberg, Refinitiv and CC&G.
(1) Variation in the price of the benchmark 10-year Italian government bonds (BTPs) over a 5-day horizon and in the price of futures on the FTSE MIB Index over a 3-day horizon. The volatility indicators are based on the value-at-risk (VaR) methodology and calculated with reference to a period of 3 months and of 2 years with a confidence interval of 99 per cent. The margins for BTPs are those referring to the respective duration bucket. The broken lines, which are mirror images of the margins, indicate the adequacy of the margin requirements to cope with the negative price fluctuations actually recorded in the market.

2.2 BANKS

The main risks for Italian banks stem from the likely deterioration in credit quality and a further decline in profitability. The non-performing loan rate has remained very low up until now by historical standards, benefiting from the government measures to support credit and the guidance of the supervisory authorities on the use of the flexibility allowed under the rules for classifying loans, which aim to reduce the potentially pro-cyclical effects of an increase in credit risk. In anticipation of a deterioration in loan quality, in the first half of this year most intermediaries began to increase their provisions on performing loans with profitability severely affected as a result. The capital adequacy, however, improved, thanks in part to the capitalization of undistributed profits from the 2019 financial year.

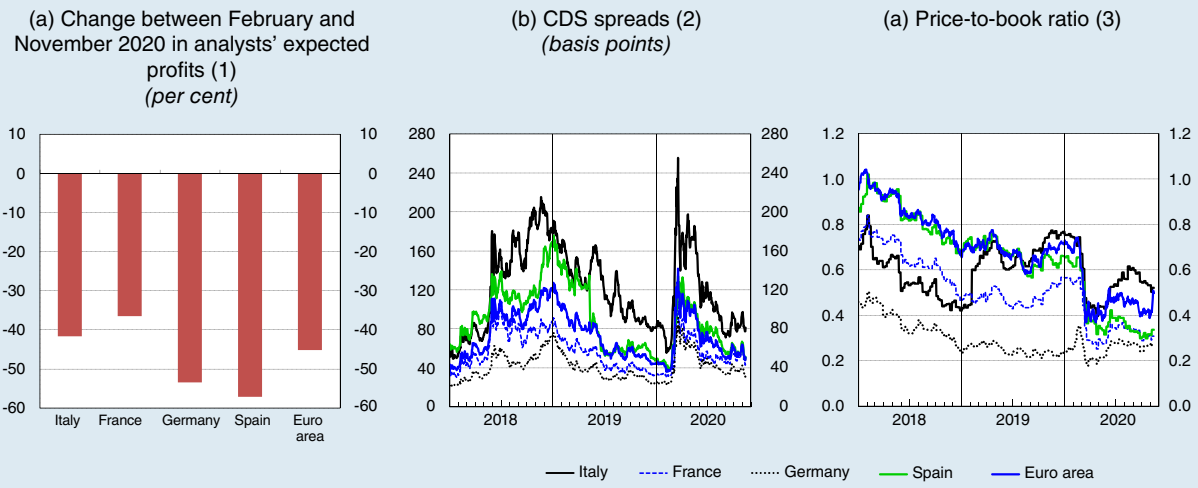
Funding conditions remain relaxed owing to the increase in deposits by households and firms and to the abundant liquidity injected by the central banks. The significant growth in credit – fostered by the economic support measures introduced by the Government, the Eurosystem's expansionary monetary policy, and the measures adopted by supervisory authorities – met firms' increased need for liquidity. The growth in lending does, however, increase banks' exposure to credit risk. The impact on profitability will depend on how the economy performs in the coming months; not delaying a prompt recognition of expected losses is critical to maintaining the confidence of customers and investors in banks' balance sheets. Looking ahead, the deterioration in credit quality could affect above all intermediaries with coverage ratios that are much lower than the system average.

The decrease in banks' earnings expected by analysts continued, falling by 40 per cent between February and November (Figure 2.10.a). With the gradual easing of tensions on international bond markets, the insolvency risk premiums measured by the prices of credit default swaps (CDS) have

declined, however they are still above the levels observed at the end of February (Figure 2.10.b). The reduction in risk premiums has spurred an increase in the price-to-book ratio (Figure 2.10.c).

Figure 2.10

Italian listed banks: an international comparison



Sources: Based on data from CMA and Refinitiv.
(1) Net profit estimates for the next 12 months, in euros. The data refer to the banks listed on the FTSE Italy Banks, FTSE Germany Banks, FTSE France Banks, FTSE Spain Banks and Euro STOXX Banks. The data for euro-area banks do not include Italian banks. – (2) Simple average of 5-year CDS spreads. The data refer to the following sample of banks: for Italy, UniCredit and Intesa Sanpaolo; for France, BNP Paribas, Société Générale and Crédit Agricole; for Germany, Deutsche Bank and Commerzbank; for Spain, Banco Santander and Banco Bilbao Vizcaya Argentaria. – (3) For the banks included in the sample, see note (1).

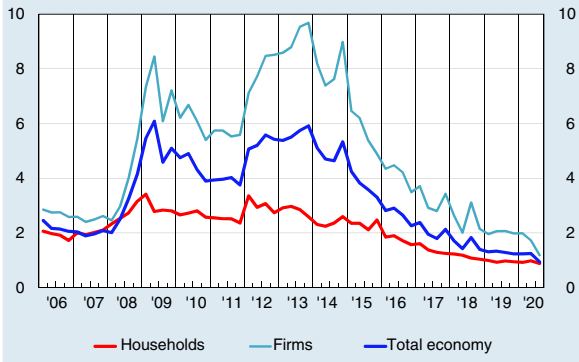
Asset risk

Between March and September, loans to firms grew by about €58 billion, while those to households were basically stable (See Section 1.2). The new loans benefited from the broad programme of public guarantees, which at the end of September had reached €90 billion. One fifth of the value of the guarantees regarded loans for small amounts that are entirely guaranteed by the State. At the end of September, the ratio of public guarantees to total business loans by banks was equal to 11.2 per cent.[5]

In the third quarter, the ratio of new NPLs to total performing loans to households remained stable, at around 1.0 per cent; the ratio for loans to firms fell by 0.5 percentage points to 1.2 per cent (Figure 2.11). The performance of the NPL rate is mainly attributable to the effects of the

Figure 2.11

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 at the end of the previous quarter net of adjusted NPLs. Data seasonally adjusted where necessary.

[5] The number refers to the guarantees issued by the Guarantee Fund for SMEs and by SACE in accordance with Article 13 of Decree Law 23/2020 ('Liquidity Decree').

legislative moratoriums and private payment suspensions, the income support measures for households and business activity, and the flexibility allowed under the rules for classifying loans (see the box 'Measures adopted by the supervisory authorities and effects on banks', in *Financial Stability Report*, 1, 2020). At the end of September, the shares of loans to households and firms that benefited from the moratoriums and payment suspensions equalled, respectively, 15 and 23 per cent. A portion of the value of the loans subject to a legislative moratorium, which at the end of September represented 60 per cent of total loans suspended, is backed by a subsidiary state guarantee.

Since the start of the pandemic, there has been a rise in performing loans for which a significant increase in credit risk has been observed (moving from Stage 1 to Stage 2 of the IFRS 9 accounting standard). In the first half of the year, Stage 2 performing loans rose by almost one fourth. The ratio of performing loans to all loans (including NPLs) went from 8.1 to 9.6 per cent, gross of loan loss provisions (Table 2.1).

Table 2.1

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

	Significant banks (2)					Less significant banks (2)					Total (1)				
	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)	Gross exposures	Net exposures	Gross percentage share	Net percentage share	Coverage ratio (2)
								June 2020 (3)							
Loans (4)	**1,805**	**1,737**	**100,0**	**100.0**	**3.7**	**207**	**200**	**100**	**100**	**3.4**	**2,255**	**2,172**	**100.0**	**100.0**	**4.0**
Performing	1,695	1,685	93,9	97.0	0.6	193	192	92.9	95.7	0.5	2,117	2,105	93.9	96.9	0.6
of which: Stage 2 (5)	192	185	10.6	10.7	3.3	14	13	6.6	6.6	3.4	216	209	9.6	9.6	3.5
Non-performing	110	52	6.1	3.0	52.6	15	9	7.1	4.3	40.8	138	67	6.1	3.1	51.4
Bad loans (6)	55	20	3.0	1.1	63.8	8	4	3.7	1.9	49.5	70	27	3.1	1.2	62.0
Unlikely to pay (6)	51	29	2.8	1.7	42,8	6	4	3.0	2.0	34.4	62	36	2.7	1.7	41.9
Past-due (6)	4	3	0.2	0.2	25.1	1	1	0.5	0.4	12.0	6	4	0.3	0.2	24.3
								December 2019							
Loans (4)	**1,750**	**1,679**	**100,0**	**100.0**	**4.0**	**203**	**195**	**100**	**100**	**4.0**	**2,178**	**2,091**	**100.0**	**100.0**	**4.0**
Performing	1,633	1,625	93,3	96.8	0.5	187	186	91.8	95.1	0.5	2,031	2,021	93.3	96.7	0.5
of which: Stage 2 (5)	150	145	8.6	8.6	3.4	13	12	6.4	6.4	3.2	176	170	8.1	8.1	3.5
Non-performing	117	54	6.7	3.2	53.7	17	10	8.2	4.9	43.1	147	70	6.7	3.3	52.4
Bad loans (6)	61	21	3.5	1.3	65.2	8	4	4.0	2.0	54.3	77	28	3.5	1.3	63.6
Unlikely to pay (6)	52	30	3.0	1.8	42,3	8	5	3.7	2.5	34.9	65	38	3.0	1.8	41.3
Past-due (6)	4	3	0.2	0.2	25.7	1	1	0.5	0.4	11.8	5	4	0.2	0.2	24.4

Source: Supervisory reports, on a consolidated basis for banking groups and on an individual basis for the rest of the system.
(1) The total includes subsidiaries of foreign banks that are not classified as either significant or less significant Italian banks and account for about 11 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 initial recognition. Starting in June 2020, there are new supervisory reports available on exposures broken down by risk stage in accordance with IFRS 9. For the purposes of comparing the data, the Stage 2 performing exposures include all loans subject to IFRS 9 and not just those recorded in the portfolio at amortized cost (see Financial Stability Report, 1, 2020). – (6) The non-performing loan sub-categories reflect the Bank of Italy's un-harmonized definition, which flanks the harmonized one used at European level. The definition adopted by the Bank of Italy allows for a distinction between exposures, in descending order of risk: bad loans, unlikely to pay, and non-performing past-due and/or overdrawn exposures, consistent with the definitions used in the past.

In anticipation of a deterioration in credit quality, in the first six months of this year half of the banks (which hold around 75 per cent of NPLs) raised the coverage ratio for total performing loans by at least 5 basis points (a value equal to one tenth of the average ratio for the system). The increase in loan

loss provisions was particularly significant for some large intermediaries and was driven by the rise in loans classified as Stage 2. Several banks, among both significant and non-significant institutions, report coverage ratios for total performing loans that are well below the banking system average (equal to 0.6 per cent; Table 2.1). In addition, while for the significant banks a correlation has been observed between degree of exposure to the sectors hardest hit by the pandemic and the increase in the coverage ratios, a similar relationship does not obtain for smaller banks (see the box 'The effects of the pandemic on banks' exposure to credit risk'). Therefore, for some intermediaries, the scaling back of the public support measures adopted to address the economic effects of the pandemic containment measures could mean that they will have to considerably increase their loan loss provisions.

THE EFFECTS OF THE PANDEMIC ON BANKS' EXPOSURE TO CREDIT RISK[1]

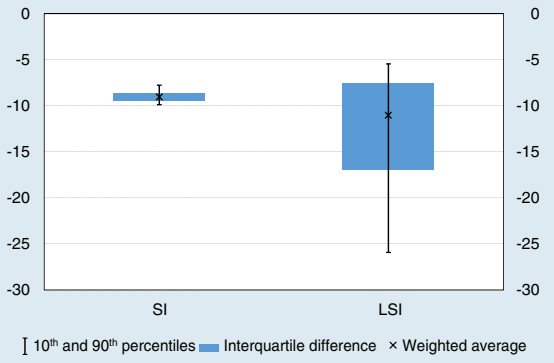
The crisis caused by the pandemic has had differing impacts on various sectors of economic activity because of the different levels of restrictions introduced to cope with the public health emergency. The overall riskiness of banks' exposures therefore also depends on the sectoral composition of their asset portfolios.

The increase in the credit risk of business loan portfolios can be proxied by the average expected change in turnover in 2020 in the various branches of economic activity, weighted by the respective bank exposures.[2] Based on this indicator, firms with loans from Italian banks would suffer a weighted average reduction in turnover of 9.0 per cent. There would be a slightly lower fall (8.8 per cent; Figure A) for firms with loans from Significant Institutions (SIs), while it would be 10.9 per cent for those financed by Less Significant Institutions (LSIs). For the latter category of financial intermediaries, there is also a wide dispersion around the average values due to the lower sectoral diversification of the loan portfolios.

Figure A

Expected change in the turnover of firms with loans from Italian banks (1)

(per cent)



Sources: Individual supervisory reports and calculations on forecasts of changes in turnover (see De Socio et al, 2020, op.cit.).
(1) Change in the weighted average for bank exposures. The graph includes banks and banking groups with a share of loans to non-financial corporations greater than 10 per cent of their assets.

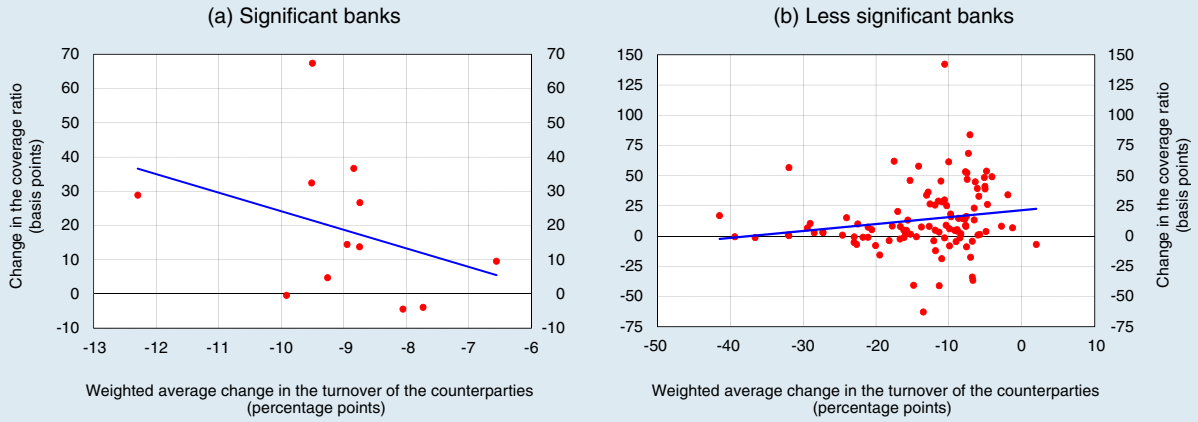
In anticipation of a worsening in credit quality, banks have increased their provisions for performing loans: in the first half of the year in particular, the coverage ratio for loans to firms rose by 13 basis points, to 0.83 per cent. The increase was greater for SIs (15 basis points), which nevertheless started from lower coverage ratios (0.69 per cent, against 0.82 per cent for LSIs). For SIs there was also quite a marked correlation between the increase in the coverage ratio and the expected riskiness of loan portfolios, contrary to what was found for LSIs (Figure B).

[1] By Antonio Ilari and Maurizio Magnani.

[2] A. De Socio, S. Narizzano, T. Orlando, F. Parlapiano, G. Rodano, E. Sette and G. Viggiano, 'Gli effetti della pandemia sul fabbisogno di liquidità, sul bilancio e sulla rischiosità delle imprese', *Note Covid-19*, Banca d'Italia, 13 November 2020 (only in Italian).

Figure B

Expected change in the turnover of firms with loans from Italian banks and change in the coverage ratio (1)



Sources: Individual supervisory reports and calculations on forecasts of changes in turnover (see De Socio et al, 2020, op.cit.).
(1) Change in the weighted average for bank exposures. The graph includes banks and banking groups with a share of loans to non-financial corporations greater than 10 per cent of their assets.

For loans to firms that benefit from moratoriums, the average expected reduction in turnover in 2020, weighted by the respective bank exposures (11.9 per cent), would be greater than that referring to total loans. For this category of loans, the increase in the coverage ratio over the six months has been greater (32 basis points). In this case, a correlation with the expected riskiness of loan portfolios, albeit a weak one, is observed for LSIs too.

Prompt recognition of the losses expected on loan portfolios is also important in light of the introduction of a prudential backstop approach for writing down NPLs. At the end of June 2020, about €240 billion of performing loans to firms (over a third of the total) had been granted after the introduction of this approach.[3] Of these, around two thirds were not backed by guarantees eligible under the prudential backstop rules. If they are then classified as NPLs, they should be entirely written down over the following three years. In the first six months of the year, the increase in the coverage ratio for these positions averaged 24 basis points, greater than that observed for total performing loans to firms, equal to 13 basis points.

[3] The estimates were made using data from the AnaCredit archive, which collects individual reports from a sample of about 250 credit institutions; the survey identifies all the credit relationships in which a bank's exposure to an individual debtor is equal to or greater than €25,000 (see the Bank of Italy's website 'Collection of granular credit data').

By international standards, Italy's significant banks registered an increase in loans to households and firms classified as Stage 2 in line with the euro-area average (28 per cent); their share of total lending rose to 13 per cent, compared with 10 per cent on average for the euro area. The coverage ratio for total performing loans via-à-vis the same counterparties rose to a similar extent to that observed for the euro area on average (13 basis points), still almost one tenth of a point higher than the total for Europe's significant banks.

For the Italian significant groups, the coverage ratio for loans to households and firms that benefited from the moratoriums and payment suspensions, whose creditworthiness is subject to greater uncertainty, is equal to 1.3 per cent. This is a much higher figure than the average of all performing loans to these

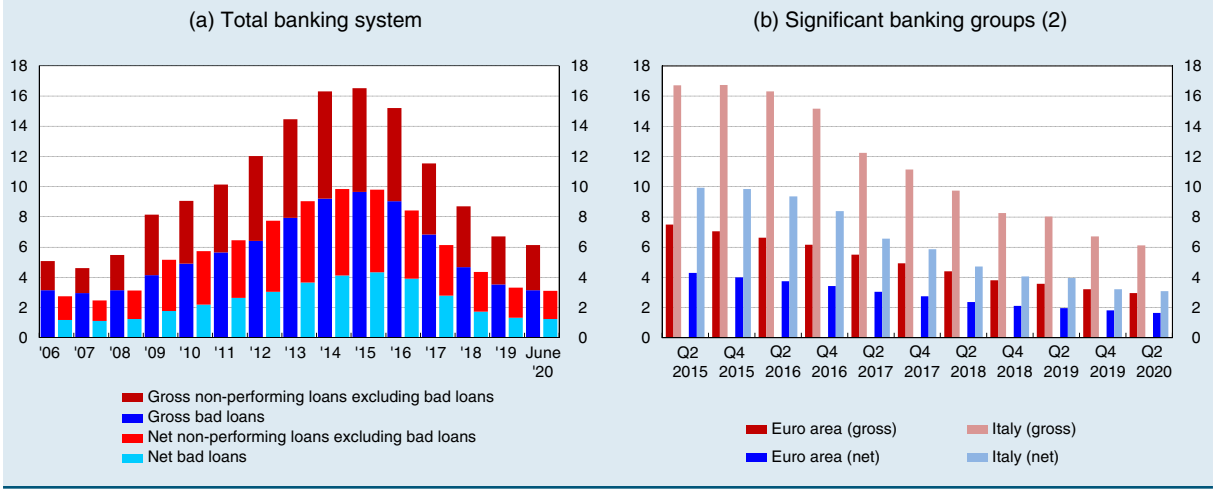
sectors (0.77 per cent), but two tenths of a point lower than the total for the euro area's significant banks (1.5 per cent).

At the end of June, the stock of NPLs net of loan loss provisions had fallen to €67 billion (€138 billion gross of provisions), 4 per cent less than in December 2019. The ratio of NPLs to total loans (including interbank and central bank exposures) also fell to 3.1 per cent (Figure 2.12.a). The coverage ratio had declined to 51.4 per cent, from 52.4 per cent registered at the end of 2019, owing to the disposal of bad loans that were heavily written down. In the first six months of the year, around €6 billion were sold; the operations concluded in the subsequent months or that are expected to be completed by the end of 2020 amount to just under €24 billion. Overall, disposals will exceed the targets set at the start of the year, benefiting from extraordinary operations and from the incentives introduced by Decree Law 18/2020 ('Cure Italy' decree) that permit banks to convert a portion of deferred tax assets into tax credits against NPL sales.

In June, the ratio of net NPLs to total loans for Italy's significant banking groups was 1.4 percentage points higher than that of the euro-area significant banks (the differential was 5.8 points at the end of 2015 (Figure 2.12.b).

Figure 2.12

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) Loans to customers, credit intermediaries and central banks. Includes banking groups and subsidiaries of foreign banks; excludes branches of foreign banks. Ratios are calculated net and gross of provisions. The data for June 2020 are provisional. – (2) The perimeter of significant banks and less significant banks differs between the dates indicated in the figure: in June 2019, with the reform of the cooperative banking sector, Cassa Centrale Banca became the 12th banking group classified as significant for supervisory purposes; 143 cooperative credit banks (BCCs) have joined the ICCREA group, which was already classified as significant before the reform.

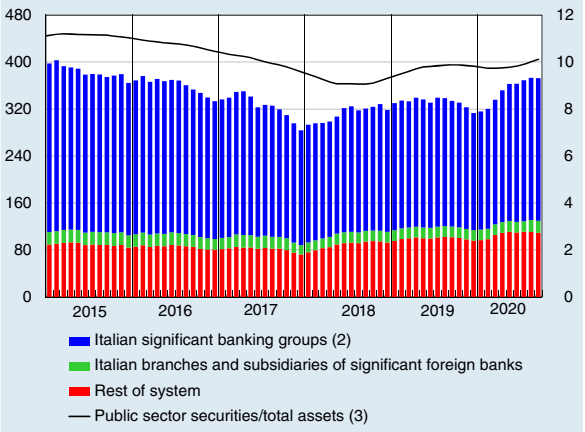
During the most acute phase of the pandemic, banks significantly increased the stock of government securities in their portfolios (Figure 2.13). Between March and May, net purchases of Italian government and other euro-area public sector securities amounted to €47 billion and €5 billion, equal to 15 and 8 per cent respectively of the amount held at the end of February. Investment continued at a slower pace also in the following months. At the end of September, Italian public securities held by Italian banks equalled 11.0 per cent of their assets, up 1.6 percentage points from February, while those issued by other euro-area countries amounted to 2.2 per cent of assets, half a percentage point higher.

According to our simulations, based on the banks' capital positions and the duration of individual securities in the portfolio at 30 September 2020, a parallel increase of 100 basis points in the sovereign yield curve would lower the common equity tier 1 ratio (CET1 ratio) by 27 basis points on average (26 basis points for significant banks and 34 basis points for less significant banks).[6] This is due to the high share of securities allocated to the portfolio of assets valued at amortized cost (61.1 per cent for significant banks and 78.4 per cent for less significant banks).

The impact on banks' capital of a decrease in government portfolio securities prices may be further mitigated by the prudential filter introduced last June, which will remain in place until the end of 2022.[7] The changes to the regulations make it possible, for exposures to general government only, to neutralize the impact of unrealized losses on the CET1 ratio.

Figure 2.13

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



Source: Supervisory reports.
(1) All public sector securities, including those issued by local 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 repurchased self-issued bonds. Right-hand scale.

In addition to the traditional risks for bank assets, in recent years supervisory authorities have placed greater emphasis on losses that could arise due to climate change. Extreme natural events and the transition to a low-carbon economy can be a source of market volatility and have a significant impact on the risks, including credit risk, to which banks are exposed (see the box 'The banking system's exposure to climate-related financial risks'). Awareness of how phenomena associated with climate change can affect their business may help intermediaries to manage the relative risks in their own governance systems and strategies, thereby helping to improve their performance.

THE BANKING SYSTEM'S EXPOSURE TO CLIMATE-RELATED FINANCIAL RISKS[1]

Climate change can be associated with increases in the intensity and frequency of natural phenomena and extreme weather events, which in turn can affect economic activity (*physical risk*). At the same time, more ambitious climate polices, such as the European Union's recent decision to cut emissions further by 2030, can lead to a significant reduction in the value of the activities relating to the use, conversion and transport of fossil fuels (*transition risk*). Both risks are significant for the financial system since they can impair the ability of households and firms to meet their financial obligations, also following a fall in the value of the assets posted as collateral for loans. Two recent analyses provide

[1] By Ivan Faiella, Luciano Lavecchia and Francesca Rinaldi.

[6] On the one hand, the estimates do not take into consideration government securities held by foreign subsidiaries and by the insurance component of Italian banking groups (the amount of which in some cases is significant), and on the other, they do not take account of factors that could mitigate the impact, such as the existence of hedging operations and the tax effects.

[7] It was introduced with the 'quick-fix' package in Regulation EU No 575/2013 (Capital Requirements Regulation or CRR) published in the Official Journal of the EU on 26 June 2020. The package was passed with the goal of guaranteeing that banks and financial intermediaries will have the capacity to provide credit to the economy and of ensuring maximum synergy between the public economic stimulus measures adopted by national governments and the European harmonized prudential regulations.

initial assessments of the Italian banking system's exposure to the credit risk associated with climate change.

The first assesses exposure to physical risk.[2] Lending to households and firms is initially broken down at provincial level. The provinces are classified using an indicator that measures the expected impact of climate change in Italy based on a specific scenario;[3] the provinces with above average values for the indicators are considered to be at high risk.

The second study instead measures exposure to transition risk based on the composition of business lending by sector of economic activity.[4] Two indicators in particular are defined: the first measures the carbon intensity of loans based on the ratio of greenhouse gas emissions to the amount of bank loans disbursed to each sector; the second identifies the sectors most at risk based on their relative weight in terms of emissions and loan amounts.

At the end of 2018, the last year for which data on greenhouse gas emissions are available, the share of loans to firms exposed to transition risks stood at between 38.5 and 52.4 per cent (between 7.5 and 10 per cent of total assets), depending on the indicator considered. Compared with Spain and the Netherlands, the only countries for which comparable studies are available, these values appear higher than the exposure of Spanish firms[5] (estimated at about one quarter of total loans to non-financial corporations) but lower than the levels recorded for the Netherlands,[6] where the banking sector's exposure amounted to almost 13 per cent of its total assets.[7]

Table

Exposure to climate-related financial risks of loans to non-financial corporations in 2018
(per cent)

	Transition risk (1)		**Total**
Physical risk (2)	No	Yes	
No	33.9	37.2	**71.1**
Yes	15.3	13.6	**28.9**
Total	**49.2**	**50.8**	**100.0**

Sources: Based on Eurostat, the Ministry for Environment, Land and Sea Protection, and supervisory reports.
(1) Total loans to sectors most at risk in terms of emissions and credit, based on the relative contribution of each carbon-critical sector. – (2) Total loans disbursed in the provinces at high physical risk defined as those for which the climate impact indicator reports higher than average values.

[2] A. Abdullahi Hassan, E. Bonaccorsi di Patti, I. Faiella and F. Rinaldi, 'L'esposizione del credito ai rischi climatici in Italia. Una valutazione del rischio fisico', Banca d'Italia, *mimeo*, 2020.

[3] In particular, the effects of the Representative Concentration Pathway 4.5 (RCP 4.5) scenario are taken into account for the period 2021-50, when trends in growth of emissions could lead to the concentration of greenhouse gases stabilizing by 2100. The methodology for calculating the indicator is described in J. Mysiak, S. Torresan, F. Bosello, M. Mistry, M. Amadio, S. Marzi, E. Furlan and A. Sperotto, 'Climate risk index for Italy', *Philosophical Transactions of The Royal Society A: Mathematical Physical and Engineering Sciences*, 376, 2018, 1-17.

[4] I. Faiella and L. Lavecchia, 'The carbon footprint of Italian loans', *Journal of Sustainable Finance & Investment*, Sept., 2020, 1-19, also published in Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 557, 2020.

[5] M. Delgado, 'Energy transition and financial stability. Implications for the Spanish deposit-taking institutions', Banco de España', *Financial Stability Review*, 37, 2019.

[6] R. Vermeulen, E. Schets, M. Lohuis, B. Kölbl, D.J. Jansen and W. Heeringa, 'The heat is on: a framework for measuring financial stress under disruptive energy transition scenarios', DNB Working Paper, 625, 2019.

[7] These comparisons ought to be considered with caution owing to the different methodologies adopted to identify the sectors most exposed to transition risk.

The share of loans to clients resident in provinces at high physical risk amounted instead to 28 per cent for households and 29 per cent for Italian firms. This last figure appears in line with the findings of a previous study, which estimated that around one fifth of loans were disbursed to firms operating in areas at high risk of flooding.[8]

In the case of firms, it is also possible to estimate the overall exposure to both types of risk: at the end of 2018, some 37 per cent of loans were exposed to transition risk only, 15 per cent to physical risk alone and 14 per cent to both (the remaining 34 per cent was exposed to neither; see the table).

These measures are useful for assessing the exposure to risks driven by climate change but do not allow us to estimate the impact of these changes. For an assessment of the effective credit risk for banks, it is in fact necessary to combine the data on exposure with the likelihood of a disaster occurring (in the case of physical risk) or of a significant change in climate policy (in the case of transition risk); it is also necessary to take into account how much of the exposure banks would be able to recover if these events occurred.

[8] I Faiella and F. Natoli, 'Natural catastrophes and bank lending: the case of flood risk in Italy', Banca d'Italia, Questioni di Economia e Finanza (Occasional Papers), 457, 2018.

Refinancing risk and liquidity risk

The increase in the liquidity reserves held in the form of bank deposits by non-financial corporations (see Section 1.2) was reflected in the rise in the ratio of deposits by firms to banks' total funding. Between February and September, it increased by 2.2 percentage points for significant banks and by 1.2 percentage points for less significant ones (to, respectively, 16.0 and 15.1 per cent; Table 2.2).

Table 2.2

Main assets and liabilities of Italian banks (1)
(levels and percentage changes)

Assets			Liabilities		
	Stocks (shares)	12-month percentage changes (1)		Stocks (shares)	12-month percentage changes (2)
Loans to Italian residents (2)	43.6	3.6	Deposits of residents in Italy	42.5	9.1
Debt securities (3)	15.2	12.7	Deposits of non-residents	8.3	-13.4
External assets	13.2	6.6	Bonds (8)	6.2	-6.1
Claims on the Eurosystem (4)	6.2	107.8	Liabilities vis-à-vis the Eurosystem (4)	10.8	56.6
Claims on central counterparties (5)	2.0	-25.0	Liabilities towards central counterparties (5)	2.1	-21.5
Equity shares and participating interests	1.9	13.1	Capital and reserves	9.9	2.8
Claims on resident MFIs (6)	9.0	9.0	Liabilities towards resident MFIs (9)	8.7	9.3
Other assets (7)	8.9	-9.7	Other liabilities (10)	11.4	0.0

Source: Individual supervisory reports. Excludes Cassa Depositi e Prestiti SpA.
(1) Data as at September 2020. Excludes liabilities to other banks resident in Italy. – (2) Adjusted for reclassifications, value adjustments and exchange rate variations for balance sheet items reported in currencies other than the euro. – (3) Only repos, representing foreign funding via central counterparties. – (4) Includes the accounts with the Eurosystem for monetary policy operations; see Tables 3.3a and 3.3b in 'Banks and Money: National Data', Banca d'Italia, Statistics Series. – (5) Only repos. – (6) Includes bonds issued by resident MFIs and loans to resident MFIs. – (7) Includes: cash, money market fund units, derivatives, movable and immovable goods, and some minor items. – (8) Excludes bonds held by resident MFIs. – (9) Includes bonds held by resident MFIs and deposits of resident MFIs. – (10) Includes derivatives, deposits with a maturity above 2 years held by vehicle companies and some residual items.

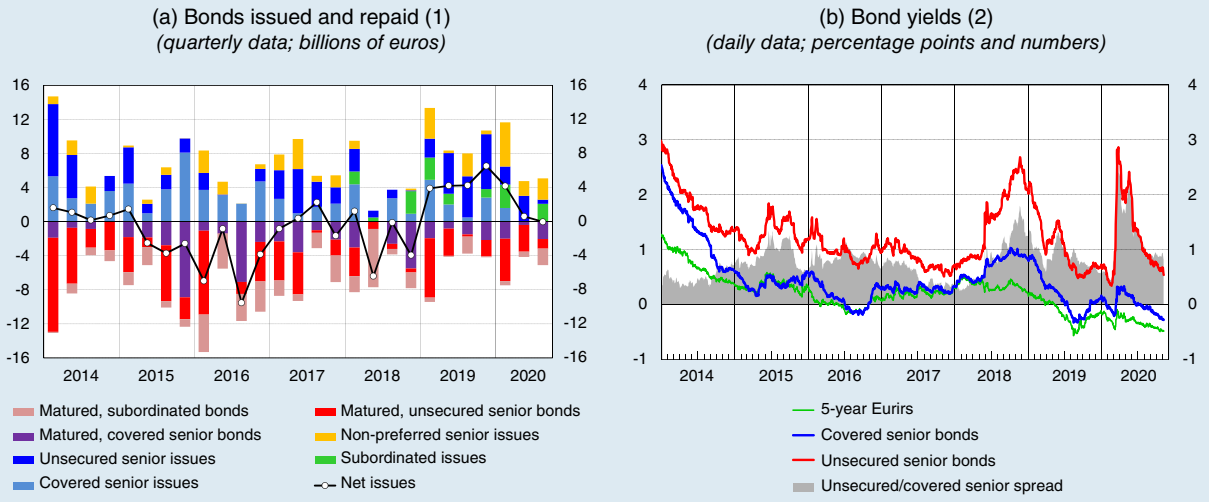
The funding gap, i.e. the difference between the value of the loans and retail funding, expressed as a percentage of loans, fell by 2 percentage points, reaching its lowest level since 2006 (-6.8 per cent).

In June, the net stable funding ratio (NSFR), which will be a binding requirement for European banks in 2021, stood at an average of 121 per cent for the Italian significant banks; none of these banks had a ratio below 100 per cent, the regulatory minimum.

Thanks to the growth in deposits and to the abundant resources made available by the Eurosystem, recourse to the wholesale bond market by banks was limited, despite the improvement in funding conditions. In the second and third quarters of the year, gross issues, totalling around €10 billion and attributable mainly to larger intermediaries, offset almost entirely the maturing securities (Figure 2.14.a). The average yield on 5-year bonds returned to levels just above those observed at the end of February (Figure 2.14.b); investors' demand for securities was in some cases greater than the amounts to be placed.

Figure 2.14

Bank bonds placed on international markets



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

In the first half of 2020, the ratio between the resources held that can satisfy the minimum requirement for own funds and eligible liabilities (MREL) and the risk-weighted assets (RWAs) of the significant banks rose by an average of 1 percentage point to 26 per cent, benefiting from the placement of new securities during the period. Bond issues continued even into the third quarter, during which four significant banks issued bonds capable of satisfying the subordination component of the MREL in the amount of around €5 billion, a figure just above that observed in the same period of 2019. Overall, the eligible instruments held are, as of now, sufficient to satisfy the new MREL targets, which will enter into force in 2022. The Bank of Italy and the Single Resolution Board (SRB) monitor securities issues by banks that are lagging in building up the liabilities needed to ensure compliance with the requirement by the end of the transitional period (1 January 2024). As for the less significant banks for which the crisis management strategy chosen by the Bank of Italy is the national insolvency procedure, the MREL target essentially coincides with the capital requirements, which is consistent with the approach followed by the SRB.

During the period between the end of March and the end of September, the average liquidity coverage ratio (LCR) for the banking system as a whole stood at 208 per cent, up 28 percentage points, compared with a regulatory minimum of 100 per cent (Table 2.3). The increase in the ratio is largely explained by the growth in liquidity held in the form of central bank reserves; one contributory factor was the increase in retail funding. The net liquidity position was rising for all categories of banks.

Table 2.3

Liquidity indicators of Italian banks (1)
(per cent)

	LCR (2)	Net liquidity position at 1 month (3)	Net liquidity position at 3 months (3)
Significant banks	192.0	22.0	21.2
Less significant banks	339.7	23.9	23.5
Total banking system	**207.6**	**23.2**	**22.6**

Sources: Supervisory reports, on a consolidated basis for banking groups and on an individual basis for banks not belonging to a group.
(1) At September 2020. – (2) The liquidity coverage ratio is calculated as the ratio between total high-quality liquid assets and total net cash outflow over a 30-day period, see Basel Committee, 'Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools', Bank of International Settlements, January 2013. – (3) The net liquidity position is equal to the ratio of the sum of highly liquid assets and net outflows within the time horizon indicated to the total value of the assets.

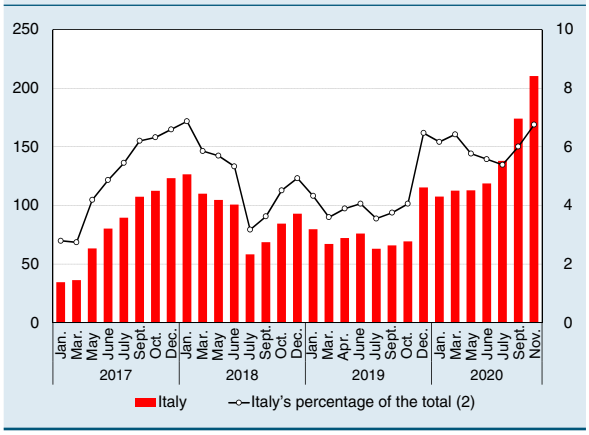
Based on the situation in June, in the event of a severely adverse scenario, with very substantial outflows of deposits and shocks to the value of highly liquid assets, banks would be able to maintain a positive average liquidity position for a period of three months (survival period); a similar exercise conducted at the start of the year yielded less favourable results. Among other things, the measures taken by the European Central Bank, in particular the revision of the collateral framework envisaging an increase in the valuation of the assets eligible as collateral for Eurosystem refinancing operations, have contributed to strengthening the banking system's liquidity profile.

In September, the amount of Eurosystem refinancing obtained by counterparties operating in Italy rose by €107 billion compared with March, to €367 billion, as a result of large-scale recourse to the TLTRO III auctions. The banks took advantage of the more favourable conditions both in terms of interest rates and of the amounts available and participated in the series of pandemic emergency longer-term refinancing operations (PELTROs) introduced last April as part of the monetary policy measures adopted in response to the health emergency.

The initiatives undertaken by the Eurosystem led to a considerable increase in the liquidity reserves deposited with the Bank of Italy in excess of the reserve requirements, equal on average to €210 billion during the maintenance period which ended at the start of November (Figure 2.15). The costs associated with the liquidity held in the reserve account are limited owing to the new remuneration system for banking reserves, which exempts part of the excess liquidity holdings (€104 billion for the entire system during the maintenance period

Figure 2.15

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



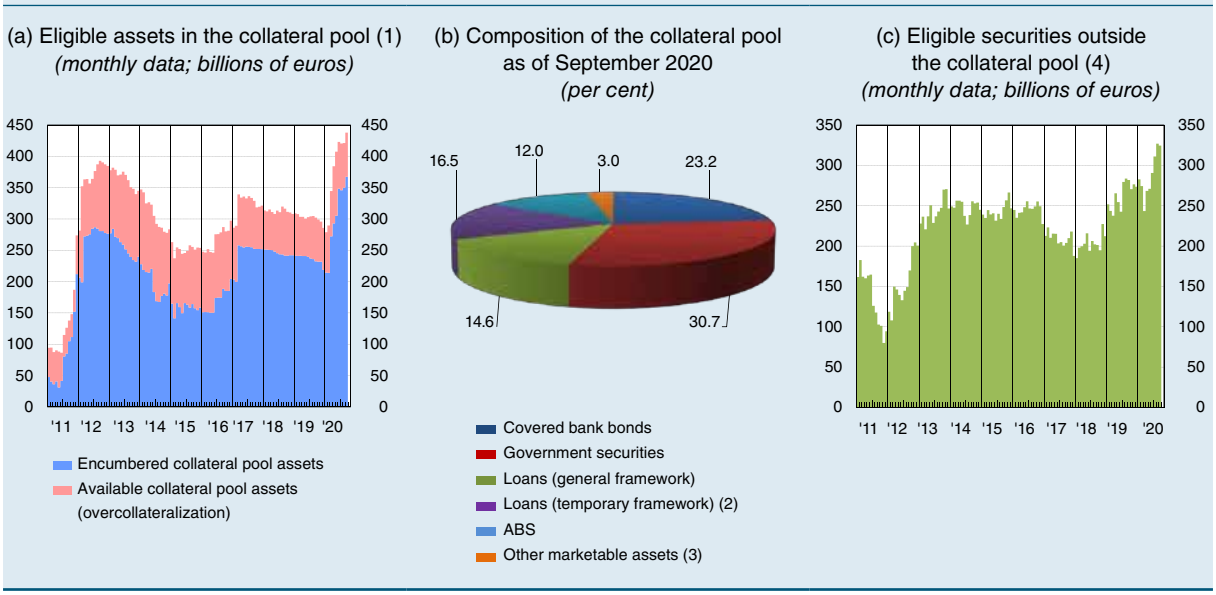
Sources: Based on ECB and Bank of Italy data.
(1) The data indicated on the x-axis refer to the month ending each maintenance period. Excess liquidity is calculated as the sum of banks' average reserve balances, net of the reserve requirement, plus average recourse to the deposit facility. – (2) Right-hand scale.

that ended at the start of November)[8] from the payment of the negative rate, and to the expectation of a more favourable remuneration for intermediaries on funds obtained through TLTRO III operations during the period from June 2020 to June 2021.

Given the increased recourse to refinancing, the assets used as collateral for Eurosystem refinancing operations rose by €93 billion to €438 billion between March and September (Figure 2.16.a). The increase in collateral was supported to a considerable extent by extraordinary measures to relax the eligibility requirements and the risk control framework, adopted starting in April in response to the health emergency (see the box 'The collateral easing measures adopted by the ECB and the Bank of Italy in response to the COVID-19 emergency'). These measures have focused mainly on bank loans that could be offered as collateral, in order to support the flow of credit to the real economy. Bank loans, whose share of the total collateral pool is 31 per cent (Figure 2.16.b), are currently the main class of assets provided by Italian counterparties, with the largest portion being credit granted under the temporary additional credit claims framework.[9] The asset encumbrance ratio rose to 28.5 per cent (26.4 per cent at the end of 2019).

Figure 2.16

Eligible assets of the Italian banking system



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

[8] Based on this system, part of banks' excess reserves, calculated as a multiple of the minimum reserve requirement, is exempt from the payment of the negative deposit facility rate (currently equal to -0.50 per cent). The ECB's Governing Council initially set the maximum amount of the reserves that are exempt at six times the minimum reserve requirement for each bank; the interest rate for the exempt tier is equal to 0.00 per cent. Both parameters can be changed.

[9] 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).

THE COLLATERAL EASING MEASURES ADOPTED BY THE ECB AND THE BANK OF ITALY IN RESPONSE TO THE COVID-19 EMERGENCY[1]

From April onwards, the European Central Bank (ECB) and the Bank of Italy have adopted extraordinary and temporary easing measures to respond to the economic crisis caused by the COVID-19 pandemic, with a view to increasing the availability of assets that can be used as collateral for Eurosystem refinancing operations, by relaxing the eligibility and risk control criteria:

a) the Governing Council of the ECB decided a general reduction of the valuation haircuts by a fixed factor of 20 per cent for all eligible collateral assets (securities and credit claims) and diminished both the additional haircuts for own-use covered bonds and the markdowns for securities valued at a theoretical price. Moreover, a further and permanent haircut reduction was applied to credit claims only. These measures have led to an increase of €40 billion in the value after haircuts of the collateral pledged by Italian counterparties;

b) the minimum rating thresholds for securities accepted by the Eurosystem were lowered. This measure has had a limited impact on the collateral pool so far, but strengthened the ability of Italian banks to access central bank funding, should the securities in their portfolios be downgraded by rating agencies;

c) the Bank of Italy extended its additional credit claims (ACC) framework to include, effective from 25 May 2020, loans backed by the public guarantees provided under Decree Law 23/2020 ('Liquidity Decree') by SACE and by the Guarantee Fund for SMEs. This measure has so far led to an increase in the value after haircuts of the pledged collateral of about €3 billion;

d) as of 17 June 2020, under the ACC framework, Italian counterparties are allowed to pledge as collateral homogeneous portfolios that are made up of consumer loans granted to households. As at 1 October, thanks to this measure, Italian counterparties had increased by almost €700 million the value after haircuts of their pledged collateral;

e) as part of the expansion of national ACC frameworks decided by the Governing Council of the ECB on 7 April 2020, the Bank of Italy further amended its ACC framework as follows:[2] (a) it widened the scope of the In-house Credit Assessment System (ICAS); (b) it introduced new approaches for the evaluation of the credit quality of borrowers; and (c) it expanded the category of loans that may be included in ACC portfolios. The objective was to enable counterparties to pledge as collateral loans to small firms or to borrowers for which a credit rating was not previously available. This measure has led to an increase in the value after haircuts of the pledged collateral of about €3 billion.

The new measures introduced as part of the expansion of the Bank of Italy's ACC framework make available a sizeable additional volume of eligible loans that may be pledged as collateral, should the economic situation deteriorate. A thorough assessment of the overall impact of the collateral expansion measures adopted by the Bank of Italy, in particular those relating to loans backed by public guarantees and to consumer loans portfolios, will be possible in the coming months, once Italian counterparties have completed the necessary changes to their internal IT systems for the selection and management of loans and portfolios pledged as collateral. At present, the expansion of the ACC framework has led to an increase of €5 billion in the collateral value after haircuts of loans pledged by small and medium-sized banks, which accounts for 23 per cent of the overall increase generated by the recent measures. For large banks, these figures amount to €2 billion and 7 per cent respectively.

[1] By Paola Antilici and Luigi Russo.

[2] P. Antilici, G. Gariano, F. Monterisi, A. Picone and L. Russo, 'Le misure di espansione delle attività a garanzia delle operazioni di politica monetaria dell'Eurosistema in risposta all'emergenza da Covid-19', COVID-19 Notes, Banca d'Italia, 10 June 2020 (only in Italian).

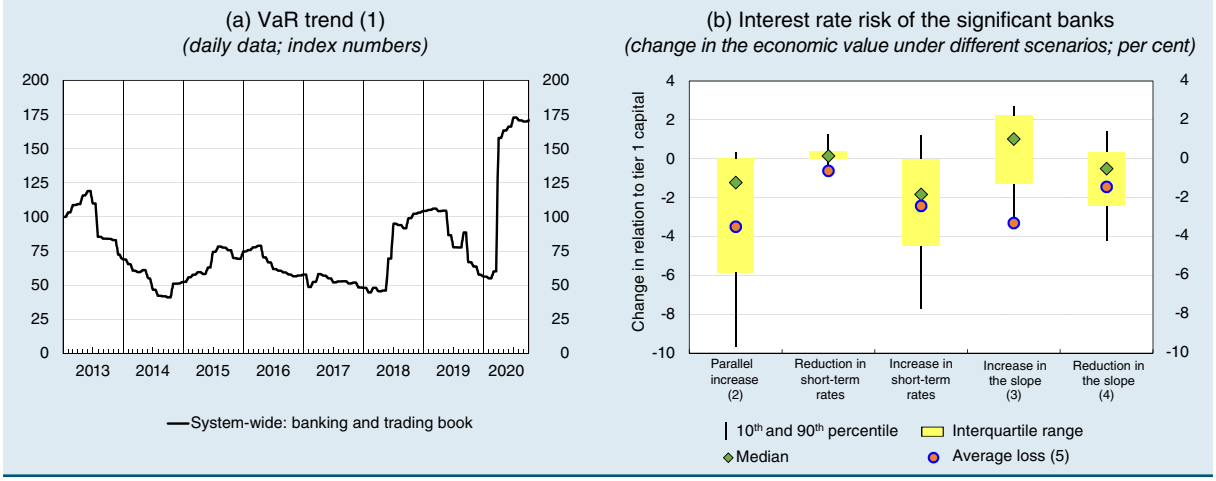
The volume of assets that can be used as collateral to obtain Eurosystem financing remains high. Italian banks have around €325 billion in securities eligible for use as collateral available outside the collateral pool (see Figure 2.16.c), of which 90 per cent are government securities.

Market risk and interest rate risk

Our estimates indicate that in the first nine months of the year, the Value at Risk (VaR) for the entire securities portfolio (both banking and trading books) of the banks was on average around 55 per cent higher than the average registered in 2019 (Figure 2.17.a). Around 80 per cent of the higher level of risk is due to the increased volatility of securities prices in conjunction with the outbreak of the pandemic, while the remaining part is due to the increase in exposures to Italian and foreign government bonds.

Figure 2.17

Italian banks' exposure to market risk and interest rate risk



Sources: For VaR, based on data from supervisory reports, the securities registry database and Refinitiv; for interest rate risk, Short Term Exercise (STE) data at 30 June 2020 relating to 12 significant banking groups.
(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 relating to the banking system as a whole is calculated using granular data on the stock and the characteristics of the assets in the portfolio of each Italian bank at the end of every month, taking account of the changes in risk factors over the last 250 business days. – (2) Increase of 200 basis points along the entire risk-free yield curve. – (3) A reduction in short-term rates and an increase in long-term rates. – (4) An increase in short-term rates and a reduction in long-term rates. – (5) Average of the changes in economic value, weighted by tier 1 capital, calculated by taking account of only those banks with negative changes under each scenario.

The exposure of Italian significant banking groups to interest rate risk remains moderate overall and far below the thresholds set out in the EBA Guidelines.[10] Based on the data for June, under the various interest rate scenarios considered in the EBA Guidelines[11] the weighted average reduction in the value

[10] The exposure to interest rate risk for prudential purposes is calculated by the banks based on EBA guidelines (see EBA, 'Guidelines on the management of interest rate risk arising from non-trading book activities', July 2018). The results are sent to the supervisory authorities for use in the Supervisory Review and Evaluation Process (SREP). The supervisory authorities may adopt measures if, in the scenarios considered, the losses exceed 20 per cent of total capital or 15 per cent of tier 1 capital.

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

of the banking book[12] would be between 0.6 and 3.5 per cent of tier 1 capital (Figure 2.17.b). In the (at present) very unlikely event of an upward parallel shift of 200 basis points in the yield curve, the average loss would be 3.5 per cent of tier 1 capital.

Capital and profitability

In June, CET1 ratio was equal on average to 14.8 per cent of RWAs, 80 basis points higher than at the end of 2019.

The increase was seen for both significant and less significant banks[13] (respectively 80 and 120 basis points, to 14.8 and 17.4 per cent). As for the former, the largest contribution was made by the inclusion of undistributed dividends in the capital for 2019[14] and the positive effect of a number of extraordinary operations carried out by a significant banking group.[15] For the less significant banks, the capital strengthening process was driven by the capital increase carried out by one of the leading groups and by the overall reduction in RWAs, due to government measures to promote access to credit by households and firms and to the recent revision of the prudential regulations.[16]

At the end of June, the gap between the average capital ratio of significant banks in countries participating in the Single Supervisory Mechanism (SSM) and that of Italian significant banks was essentially nil.

The pandemic affected banks' profitability in the first six months of the year. The rise in loan loss provisions, which grew by 52.6 per cent, had a considerable impact; this increase largely reflected that in expected losses on performing loans caused by the worsening macroeconomic scenario, consistent with the application of IFRS 9.

The return on equity (ROE), net of extraordinary components, fell by 8.2 per cent to 2.9 per cent. Revenues decreased by 4.7 per cent. For the first time since 2016, even net fee income fell, primarily because of the market decline in March and April. Operating expenses, net of non-recurring costs related to the early termination of employment contracts, decreased by 8.6 per cent, mainly as a result of the decline in other administrative expenses. The decrease in indirect staff costs also contributed, influenced by the spread of remote working. This drop was furthered by the reduction in advertising expenses, legal and consulting services, and costs associated with real estate expenses. Looking ahead, benefits could be derived through aggressive measures aimed at making permanent the decrease in costs registered in the first half of the year.

[12] The average reduction is calculated by only taking account of banks registering a reduction in the value of the banking book.

[13] The figure referring to the banking system also includes the subsidiaries of foreign intermediaries, which represent around 9 per cent of total assets. The CET1 ratio for the subsidiaries of foreign banks was equal to 12.0 per cent, up 40 basis points from the end of 2019.

[14] In line with the ESRB's recommendations of 27 May 2020, the ECB and the Bank of Italy, for significant and less significant banks, respectively, extended until 1 January 2021 the recommendations to: (a) not distribute dividends for the financial years 2019 and 2020 (including the distributions of reserves) and not make any irrevocable commitment to pay out dividends for the same financial years; (b) not make share buybacks aimed at remunerating shareholders.

[15] Specifically, this refers to the transition to IFRS 9 and to the reduction of a significant stake in a foreign intermediary.

[16] The decrease in RWAs, which occurred despite the increase in total assets, is mainly due to the decline in credit risk and, in particular, to the standardized enterprise and retail portfolios. These latter presumably benefited from a larger share of loans with government guarantees and from measures to revise the prudential rules to address the COVID-19 emergency relative to the SME Supporting Factor.

2.3 INSURANCE COMPANIES AND THE ASSET MANAGEMENT INDUSTRY

Insurance companies

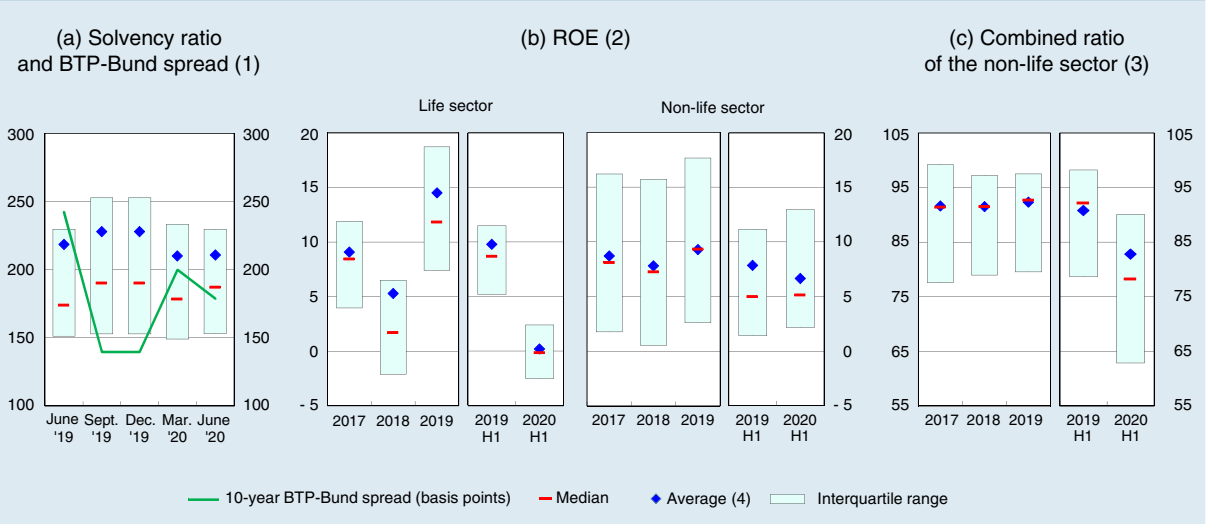
The solvency ratio of Italian insurance companies, as well as of European ones, continues to be affected by both the increase in the risk premium of equity and bonds triggered by the pandemic, and by the further drop of the risk-free interest rate curve observed since March.

The average solvency ratio fell to 211 per cent in June, from 235 per cent at the end of 2019.[17] Nevertheless, it is still well above the minimum requirement (Figure 2.18.a) and in line with European values. Since the second quarter of this year, the government bond spread has started to decline in comparison with the peak observed in March, when restrictive measures were set to cope with the public health emergency. The resulting increase in bond prices and the limitation of insurance companies' dividend distribution did not, however, completely offset the negative effects on own funds generated by the drop of the risk-free interest rate curve.[18]

Based on data at 30 June 2020, our estimates indicate that a further 20-basis-point parallel downward shift in the risk-free interest rate curve would bring it to values similar to those of August 2019 (the lowest recorded in the last four years). This would lead to a slight decrease in the value of the own funds held to cover capital requirements, of 2 per cent on average. The European Central Bank's new purchase programme to cope with the pandemic's effects (see Section 1.1) has been successful in mitigating the volatility of the spreads on government bonds.

Figure 2.18

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



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

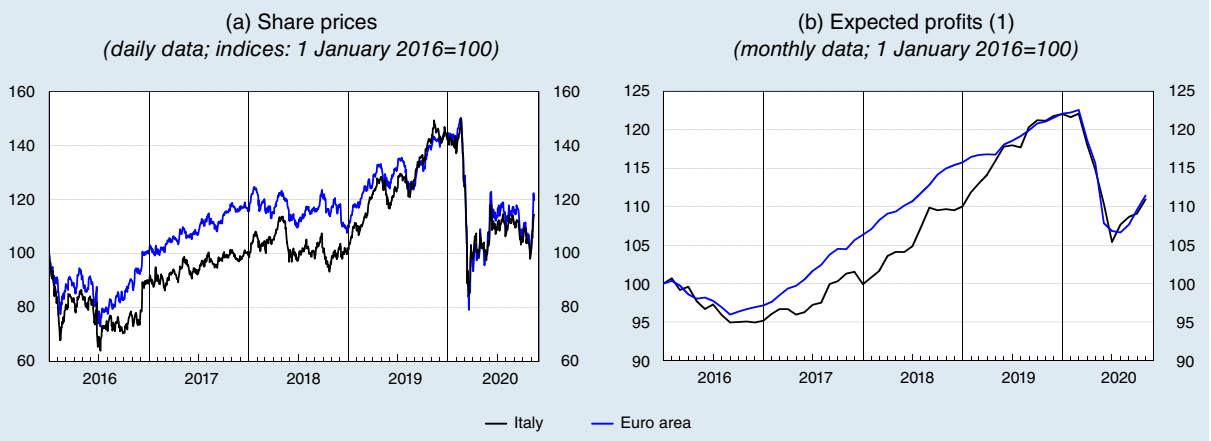
[17] For the definition of the solvency ratio, see note (1) to Figure 2.18. The regulations require a ratio of 100 per cent or more.
[18] In particular, the solvency ratio benefited from a seven percentage point increase due to the limits on 2019's dividend distribution.

Profitability is being affected by the pandemic. Return on equity (ROE) for the life sector was broadly reduced to zero in the first half of 2020, as a result of significant asset depreciation. ROE also decreased in the non-life sector compared with the first half of 2019, although to a lesser extent than in the life sector (Figure 2.18.b). In the non-life sector, the drop in share prices was partly offset by the sharp fall in claims, reflected in an improvement in the combined ratio (Figure 2.18.c).

Analysts' expected profits for the Italian and European markets have decreased and insurance companies' share prices have shown signs of a deterioration, remaining below the levels observed at the end of last year (Figure 2.19).

Figure 2.19

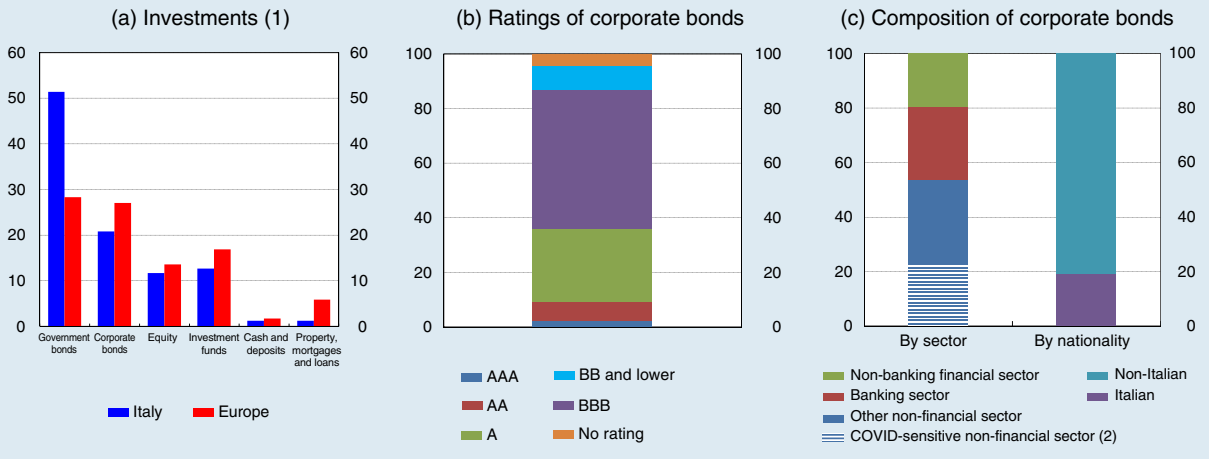
Italian and euro-area insurance companies



Source: Calculations based on Refinitiv data.
(1) Average of expected earnings per share in the 12 months following the reference date of 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, Società Cattolica Assicurazioni and UnipolSai. For the euro area, the data refer to the leading companies included in the Datastream euro-area insurance sector index.

Figure 2.20

Insurance company investments
(data at 30 June 2020; per cent)



Sources: IVASS and EIOPA.
(1) The data for Europe, as at 31 March 2020, refer to the European Economic Area. – (2) These are non-financial bonds in the main sectors hit by the COVID-19 pandemic.

Last June, investments with the risk being borne by Italian insurance companies were still concentrated in government bonds to a much greater extent than European insurance companies (51 per cent against 28 per cent; Figure 2.20.a). Investment in corporate bonds (21 per cent) mainly included securities issued by foreign firms and non-financial entities; less than a quarter of these belong to sectors badly hit by the pandemic (Figure 2.20.c).[19]

About 27 per cent of the market value of corporate bonds on the balance sheets of Italian companies is A-rated and a larger share (51 per cent) is BBB-rated (Figure 2.20.b). The potential losses in the event of a downgrading of these bonds would reflect negatively on own funds (see the box 'Effects of possible rating downgrades of corporate bonds held by the insurance sector').

EFFECTS OF POSSIBLE RATING DOWNGRADES OF CORPORATE BONDS HELD BY THE INSURANCE SECTOR[1]

The COVID-19 pandemic has led to the emergence of the risk of widespread downward revisions of corporate bond ratings. The European Systemic Risk Board (ESRB) published an analysis of the impact on the assets of European insurance companies of potential downgrading of corporate bonds with A and BBB ratings to the high yield category (fallen angels), based on 2019 balance sheet data.[2] The Italian Insurance Supervisory Authority (IVASS) replicated the study for the Italian insurance industry, using March 2020 data.

This exercise evaluated the impact of two alternative scenarios, considering reductions of both the prices and the ratings of corporate bonds and differentiating between the extent of the downgrades (medium severe and severe cases). In both cases, two possible reactions by insurers to a downgrade of their corporate bonds to fallen angel status were considered: in one case, under the severe behavioural scenario, the companies were assumed to sell one fifth of their downgraded bonds, and in the other case, under the extreme behavioural scenario, to sell all their fallen angels.[3]

For the Italian insurance market, the study estimated that in the medium severe case and in the severe case, the share of the fallen angels would be 15 and 27 per cent respectively of the nominal value of corporate bonds and that Italian insurance companies would sell between €4.5 billion and €39.6 billion of bonds according to whether a large quantity or the entire portfolio of downgraded bonds were sold. For the European insurance sector, the ESRB estimated that in the two scenarios, the fallen angels would represent 10 and 17 per cent of the nominal value of corporate bonds and that European companies could react by selling between €18.5 billion and €165 billion of bonds.

Following these shocks, the excess of assets over liabilities (EAOL) of Italian insurance companies would decrease more than that of European undertakings (in Italy, the EAOL would be reduced by 10 and 13 per cent, respectively, in the medium severe and the severe cases, and by 4.9 and 6.9 per cent in Europe). The difference is largely due to the higher percentage of BBB-rated corporate bonds in Italian insurance companies' portfolios (the category immediately preceding the high yield one).

The study made a simplified estimate of the impact on the EAOL of asset losses due to downgrades, without taking account of the mitigating effects of the loss-absorbing mechanisms and of the relative changes in liabilities. As is the case for the European exercise, the results do not therefore provide an estimate of the impact on insurers' solvency position.

[1] By Federica Pallante (IVASS).

[2] ESRB, 'A system-wide scenario analysis of large-scale corporate bond downgrades. An ESRB technical note', July 2020.

[3] For euro-area corporate bonds, in the medium severe case, a downgrading of 25.2 per cent and 3.1 per cent is assumed, respectively, for bonds with BBB and A ratings; in the severe case, the percentages rise to 45.3 per cent and 12.3 per cent.

[19] The main sectors hit by the pandemic were: accommodation, food and beverage services; warehousing and transportation; and manufacturing (see ECB, *Economic Bulletin*, 5, 2020).

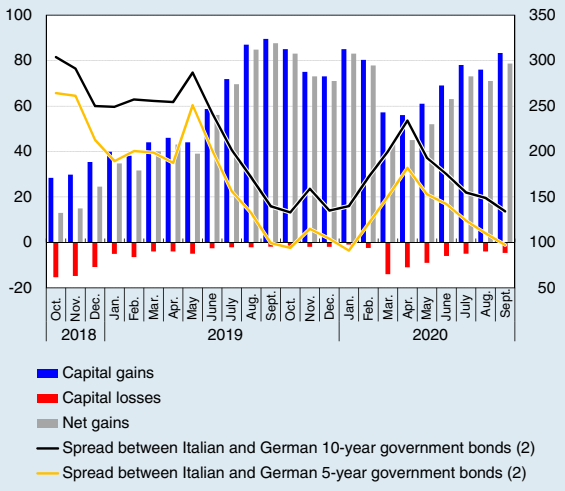
The growth in securities prices, that began in the second quarter of this year, led to an increase in insurance companies' net unrealized gains, which in September reached values higher than those observed at the end of 2019 (Figure 2.21).

The effects of financial market turbulence, during the first wave of the pandemic, confirm that Italian insurance companies, as well as European companies, are more exposed to market risk (64 per cent of the basic solvency capital requirement at the end of 2019) than to the technical risks of the insurance sector (Figure 2.22.a). The largest market risk component is the exposure to changes in bond spreads (Figure 2.22.b).

The liquidity position of the insurance sector remains stable: between March and May, the measures to limit the virus spreading led to a large fall in premium income and a reduction in surrenders (see the box 'Launch of liquidity risk monitoring in the insurance sector'). The ratio of surrenders to premium income, an indicator of potential liquidity problems for life insurance companies, remained at its historically low levels (41 per cent in September 2020; Figure 2.23).

Figure 2.21

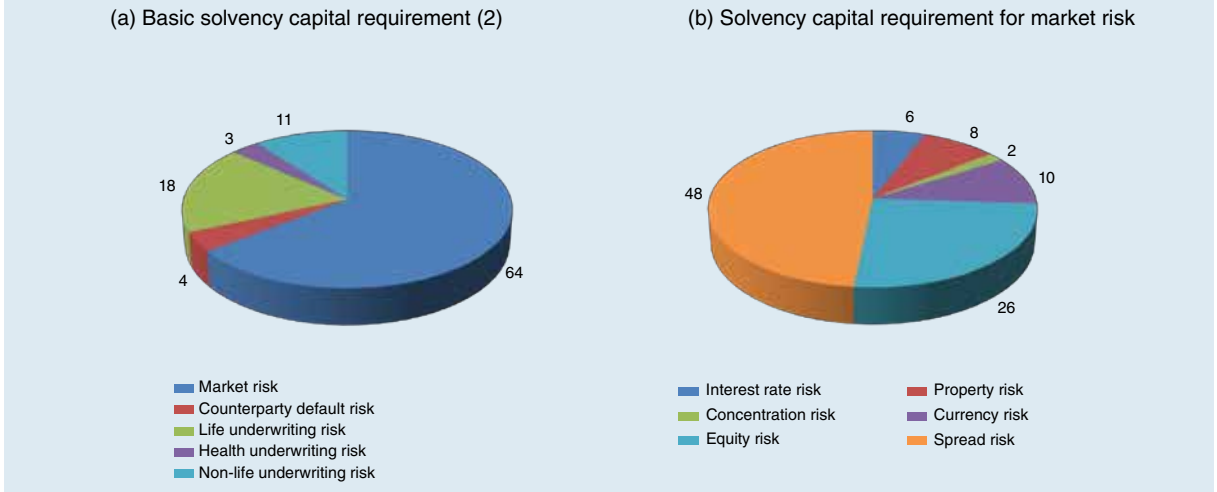
Unrealized gains and losses (1)
(monthly data; billions of euros and basis points)



Sources: IVASS and calculations based on Refinitiv data.
(1) The 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.

Figure 2.22

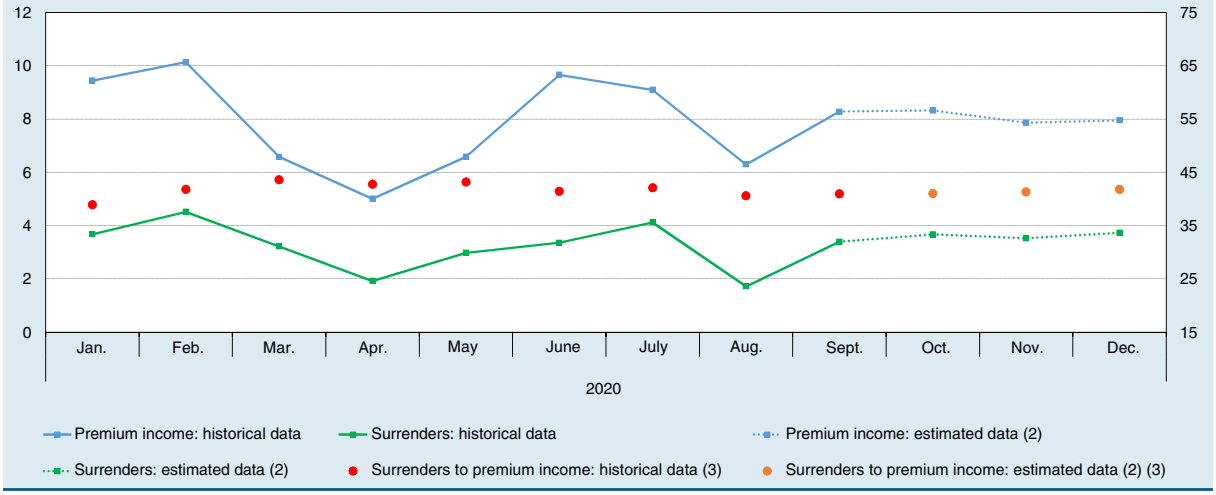
The main sources of risk in the solvency capital requirements (1)
(data at 31 December 2019; per cent)



Source: IVASS.
(1) The data only refer to those companies that calculate their solvency capital requirement (SCR) using the standard formula (83 entities representing 58 per cent of total assets). The standard method used for calculating the spread risk does not set capital requirements for exposures to an EU state that are denominated and funded in the domestic currency. – (2) The basic solvency capital requirement (BSCR) is calculated by aggregating the market risk, counterparty default risk and underwriting risks (life, non-life and health) modules. The final SCR is determined by adding an operational risk module to the BSCR and taking account of the loss-absorbing capacity of technical provisions and deferred taxes.

Figure 2.23

Premium income and surrenders in the life insurance sector (1)
(monthly data; billions of euros and per cent)



Source: IVASS.
(1) This indicator is calculated as the ratio of surrenders to premium income. Cumulative data. – (2) Data estimated by insurance companies involved in the liquidity risks monitoring exercise. – (3) Right-hand scale.

LAUNCH OF LIQUIDITY RISK MONITORING IN THE INSURANCE SECTOR[1]

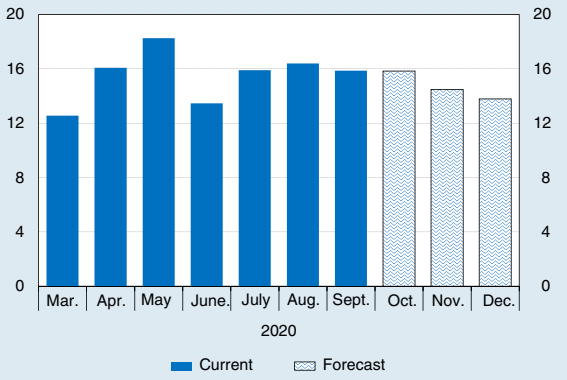
The International Association of Insurance Supervisors (IAIS), in its insurance core principles (ICPs) has drawn up specific safeguards against liquidity risks.[2]

In June 2020, with the spread of the COVID-19 pandemic, the European Insurance and Occupational Pensions Authority (EIOPA) launched a monthly monitoring exercise, in close cooperation with European national authorities. Starting in March 2020, this study considered current and forecast liquidity positions (at 30 and at 90 days) of around 200 European insurance companies (55 of which Italian).[3]

The analysis showed that during the observation period, Italian companies' total cash holdings remained broadly stable.

Figure A

Current and forecast net liquidity position (1)
(billions of euros)



Source: IVASS.
(1) The data for October and December refer to 30 and 90-day projections made by the insurance companies in September 2020; the data for November refer to 90-day projections made in August 2020.

[1] By Silvia Sacco (IVASS).
[2] IAIS, 'Insurance core principles and common framework for the supervision of internationally active insurance groups', November 2019.
[3] The Italian sample includes: 12 composite insurance companies, 34 life insurance companies and 9 non-life insurance companies. In terms of premium income, they represent the entire life sector and about 80 per cent of the non-life sector.

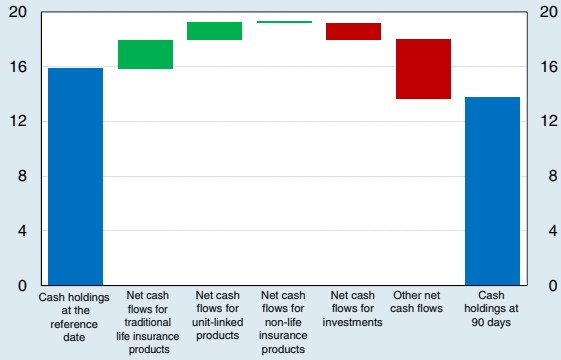
The forecast net liquidity position risks at one and three months, estimated by Italian insurance companies in September, remained low (Figure A).[4] The breakdown of cash flows expected by companies in the following 90 days shows that the technical cash flows relating to life and non-life sector insurance are positive. The main expected outflows involve asset purchases and operating expenses (see panel (a) of Figure B).

The degree of liquidity of insurance company assets, measured by the liquid asset ratio, also remained stable (see panel (b) of Figure B).[5]

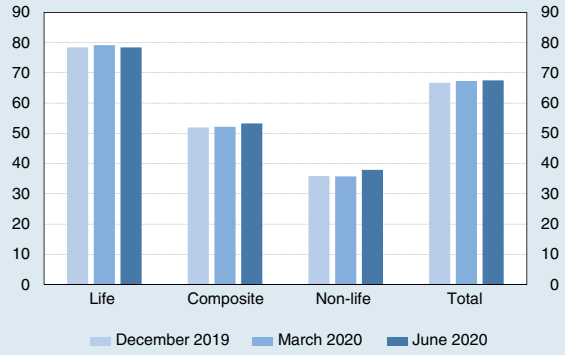
Figure B

Liquidity positions of Italian insurance companies (1)

(a) Breakdown of net cash flows and liquidity position at 90 days (2)
(data at 30 September 2020; billions of euros)



(b) Liquid asset ratio
(per cent)



Source: IVASS.
(1) Data refer to the sample of the liquidity monitoring. (2) Changes contribute positively/negatively (green bar/red bar) to cash holdings at the reference date, determining the 90-day forecast. For the life-sector, net cash flows distinguish traditional life insurance products from unit-linked products.

[4] The forecast net liquidity position is given by the difference between inflows and outflows in the reference period. It is calculated including cash holdings at the beginning of the period as well. Insurance companies made assumptions on their expected cash holdings, assuming, in the life sector, a contraction of premium income and overall stability of redemptions and a slight increase in both premium income and claims in the non-life sector.

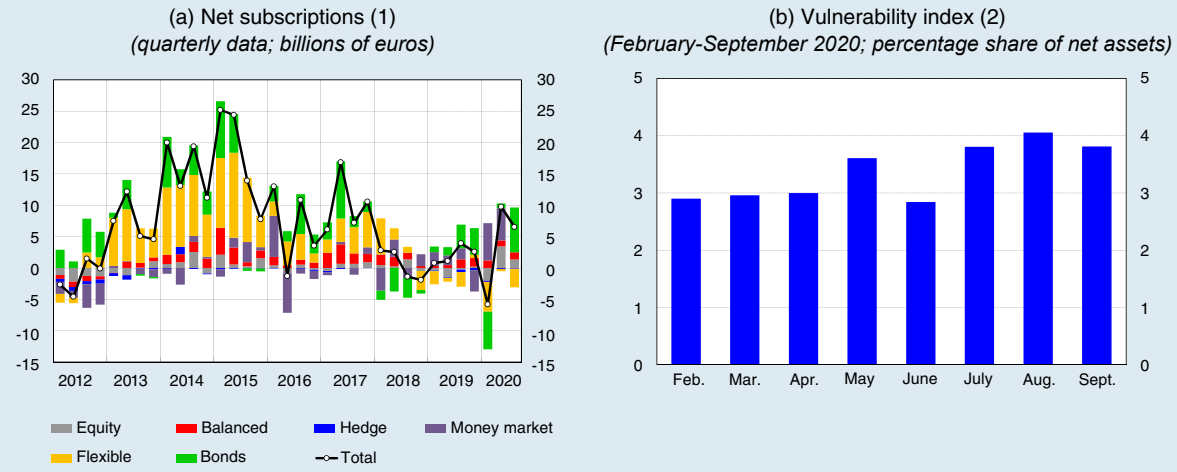
[5] Liquid assets are calculated for the different asset categories by applying haircuts consistent with the banking sector rules set by Commission Delegated Regulation (EU) 2016/322 (10 February 2016).

The asset management industry

Following large outflows in the first quarter of this year, net subscriptions of Italian open-end investment funds have turned positive since April (Figure 2.24.a), after conditions improved on the financial markets. Net subscriptions have been positive since the start of the year in all the main sectors, except for flexible and hedge funds. In the second quarter, growth in subscriptions was reflected in renewed investment on the part of Italian open-end funds, especially in the sectors of investment grade bonds and shares in other investment funds (see the box 'The investment choices of institutional investors after the start of the pandemic').

Figure 2.24

Italian open-end investment fund indicators



Sources: Supervisory reports, Assogestioni, and ECB (Centralised Securities Database).
(1) Funds based in Italy and abroad, run by asset management companies belonging to Italian groups. The data on the money market segment for Q1 and Q2 of 2016 and for Q1 of 2018 reflect several large transactions by institutional investors. Provisional data for Q3 2020. – (2) Ratio of the net assets of funds with a liquidity risk indicator of less than 1 to total sector net assets. 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 the 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 December 2020 (high yield and emerging country funds - 14 per cent; Euro area - 32 per cent; United States and global - 28 per cent; mixed funds - 32 per cent).

THE INVESTMENT CHOICES OF INSTITUTIONAL INVESTORS AFTER THE START OF THE PANDEMIC[1]

The investment decisions of non-bank institutional investors can have a significant impact on the stability of the financial system, to the extent that they contribute to increasing or dampening market volatility, especially during periods of financial stress. In the first quarter of this year, the spread of the pandemic led to a fall in prices in the main markets, considerable outflows of financial resources from investment funds, and a decrease in premium income for insurance companies. All this incentivized a rebalancing of portfolios towards lower-risk assets with higher-liquidity.

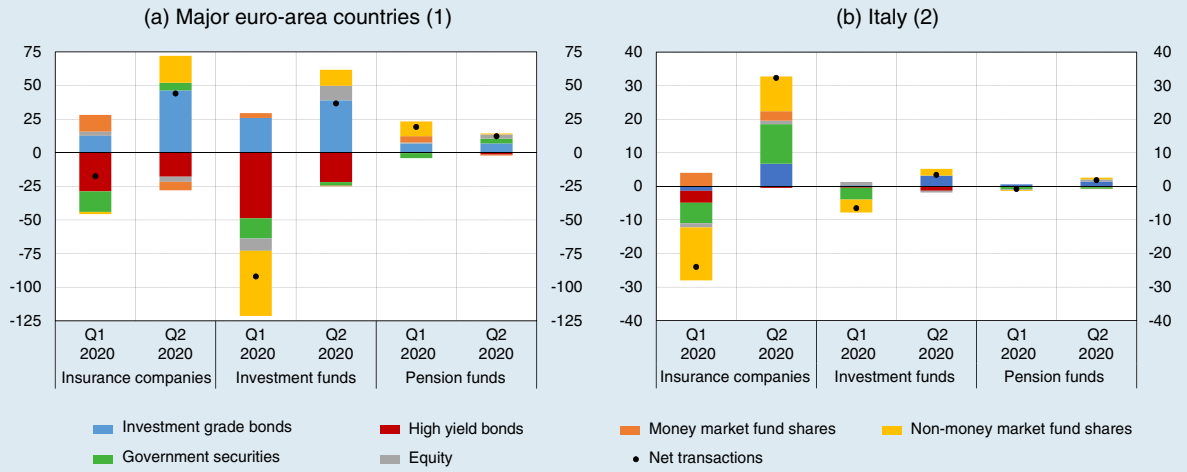
An analysis of the securities portfolio of non-bank intermediaries (insurance companies, investment funds and pension funds) based in the major euro-area countries shows that during the first quarter of 2020 the investors analysed made net sales of securities totalling about €90 billion (see panel (a) of the figure)[2], the highest amount since the fourth quarter of 2011. Disposals were especially significant in the segments of high-yield or non-rated bonds, non-money market funds and government securities (€78 billion, €39 billion and €34 billion, respectively), while disposals were more limited in relation to equity (€5 billion). Sizeable net purchases were instead recorded in the investment grade bond segment and for money market funds (€45 billion and €21 billion, respectively).

Owing to the large amount of redemptions, investment funds are the segment that recorded the most sales (€92 billion, €7 billion for Italian funds; see panel (b) of the figure). These funds account for almost two thirds of the sales of high-yield or non-rated bonds made by non-bank intermediaries[3] and about half of

[1] By Federico Apicella and Raffaele Gallo.
[2] The sales were concentrated in March, at the height of the crisis.
[3] Sales of corporate bonds were high also on the part of money market funds as a whole, especially following the tensions on the commercial paper market.

Figure

Net purchases of securities in the first and second quarter of 2020
(billions of euros)



Source: Based on ECB data (Securities Holdings Statistics and Centralised Securities Database).
(1) The sample comprises non-bank intermediaries based in Austria, France, Germany, Greece, Italy, the Netherlands, Portugal and Spain. – (2) For Italian investment funds, investment in money market fund shares is included under investment in non-money market fund shares owing to data confidentiality regulations.

the sales of government securities. Insurance companies also made sizeable disposals (€18 billion), though this accounts for a small share of their securities portfolio (0.3 per cent). Pension funds instead made positive net asset purchases for €19 billion and did not record sizeable sales in the major sectors considered in the analysis, confirming this segment's tendency not to amplify market volatility during crisis periods.

In the second quarter, following the improvement in financial market conditions (see Sections 1.1 and 2.1) and the increase in funding in all the main segments, the intermediaries analysed made total net purchases of securities amounting to €93 billion. Positive net purchases were recorded in all the sectors examined, with the exception of high-yield and non-rated corporate bonds and of money market fund shares. The share of investment in lower-risk securities rose further, presumably owing to the persistent uncertainty about the economic consequences of the health emergency.

In recent months there have been no serious problems regarding Italian open-end investment funds' liquidity management. The degree of liquidity (7.1 per cent in September) is still high by historical standards.[20] The share of vulnerable funds (those with a liquidity risk indicator of less than one) has increased since February, but is still low in relation to total sector net assets (3.8 per cent; see Figure 2.24.b).[21] Exposure to liquidity risk deriving from changes in margin requirements on derivatives is also limited (see the box 'The liquidity risk connected with the use of derivatives by Italian open-end investment funds', *Financial Stability Report*, 1, 2020). Borrowing remains low, within the limits set by Italian legislation.[22] There are ample lines of credit available.

[20] 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.

[21] This 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 2 to Figure 2.24).

[22] 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.

The money market funds segment – that, at global level, was one of the hardest hit by the crisis triggered by the pandemic – did not record any liquidity problems in Italy. Italian money market funds, which account for 1 per cent of total fund net assets, invest almost exclusively in short-term government bonds and, differently from European funds, they are not significantly exposed on the commercial paper market, whose volatility has increased during the current crisis. Furthermore, in Italy there are no money market funds active at this time. These funds, because of the criteria adopted to assess the value of the portfolio, tend to keep the value of the shares stable, in normal times, and are therefore more exposed to the risk of high demand for redemption on the part of subscribers in the event of market tensions (constant net asset value funds or low volatility net asset value funds).[23]

Last May, the European Systemic Risk Board (ESRB) approved a recommendation on the liquidity risks of investment funds in which it asked the European Securities and Markets Authority (ESMA) to verify, in coordination with the national authorities supervising the markets, the level of preparation of fund managers for possible adverse shocks.[24] To this end, the authorities conducted a survey of a sample of funds that the ESRB considers most exposed to liquidity risk. As regards funds managed by Italian firms, the survey covered eight funds that invest in corporate debt.[25]

The survey results show that, among the Italian funds that invest in corporate debt, the shock linked to the public health emergency led to relatively low outflows overall: on average less than 2 per cent of the net asset value, on a weekly basis, in the period of the highest market volatility. Compared with the funds of other European countries, Italian funds have less exposure in high yield instruments, structured products and subordinated debt. Furthermore, they did not record any difficulties in the valuation of assets, despite the reduction of liquidity for portfolio securities.

Following the tensions on the financial markets caused by the effects of the pandemic, a small number of European funds (0.4 per cent of total sector net assets) activated additional liquidity tools. The main measures adopted were the suspension of redemptions, the introduction of 'gates' for the extension of redemptions, and swing pricing.[26] No Italian fund managers have activated these instruments.[27]

The risks to financial stability stemming from alternative funds remain low. This segment includes funds specialized in purchasing mini-bonds and those investing in corporate risk capital, financing directly or buying credit from other financial intermediaries. It accounts for 9 per cent of the total sector net assets of Italian funds. The potential risks connected with investment in illiquid assets, which characterize this type of fund, are mitigated by regulations requiring them to be set up as closed-end funds.

Decree Law 34/2020 (the 'Relaunch Decree') introduced a new category of PIRs (long-term individual savings plans), referred to as 'alternative PIRs', to encourage the growth of funds that invest mainly in financial instruments issued by Italian SMEs. The fiscal benefits included in the PIR legislation have been extended to savings plans that invest at least 70 per cent of their total asset value in financial instruments, including unlisted ones, issued by companies that are not on the FTSE

[23] A stable redemption value may create the expectation that money market fund shares will be risk-free assets. As a result, there may be an increase in redemptions when the market value of the fund's shares declines in periods of stress and the subscribers fear that these shares may no longer be redeemed at nominal value.

[24] ESRB, 'Recommendation of the European Systemic Risk Board of 6 May 2020 on liquidity risks in investment funds'.

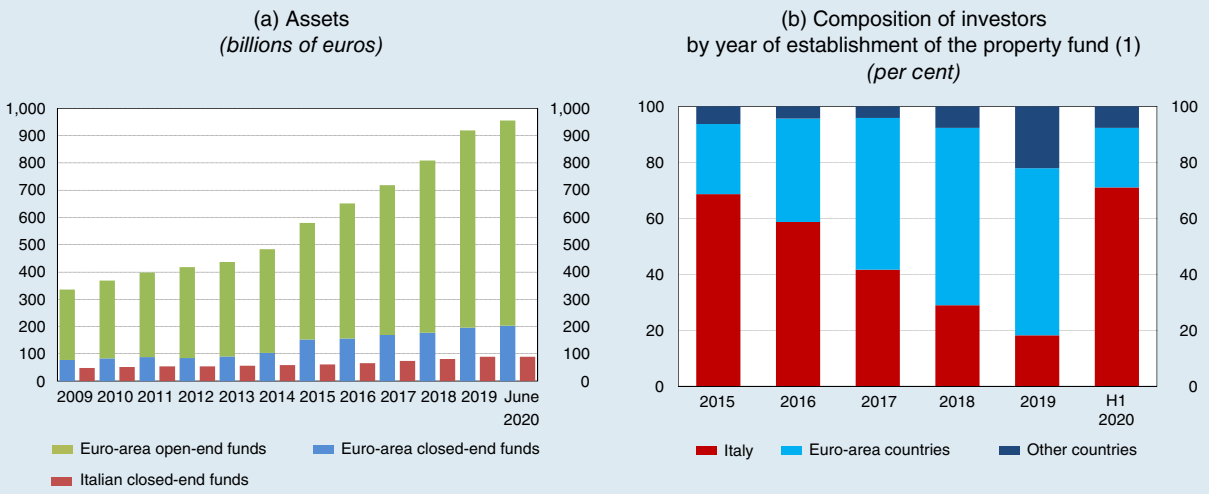
[25] In other jurisdictions, the survey also looked at open-end property funds. In Italy, property funds are required to be set up as closed-end funds and, as a result, they are less exposed to liquidity risk.

[26] The use of 'gates' allows the redemption dates to be postponed whenever the demand exceeds a predefined threshold. Swing pricing allows the value of a fund's assets to be adjusted up or down according to the prevalence of subscriptions or redemptions on a given day.

[27] The entire Italian investment fund industry has abstained from activating these instruments - not only those in the sample involved in the ESRB survey.

Figure 2.25

Property funds



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

MIB and FTSE Mid Cap indexes on the Italian stock exchange (Borsa italiana) or on equivalent indexes.[28] Compared with ordinary PIRs, the cap on the amounts that qualify for fiscal benefits and the portfolio concentration constraints are less stringent.[29] The constraints on the composition of portfolios of alternative PIRs could lead to a significant exposure towards illiquid assets; nevertheless, the requirement under Italian law for funds to be set up as closed-end if they are investing more than 20 per cent of their assets in financial instruments that are not traded on regulated markets helps to reduce liquidity risk. The regulations for the first investment funds that comply with the rules for alternative PIRs have been approved, but none are in operation as yet.

The property fund segment was negatively affected by the effects of the pandemic. In the first half of 2020, the long expansionary phase under way since 2013 was interrupted and total sector assets remained at the levels recorded at the end of 2019 (around €88 billion; Figure 2.25.a). Investment was low and concentrated in the provinces of Milan and Rome; that made by foreign investors declined (Figure 2.25.b).

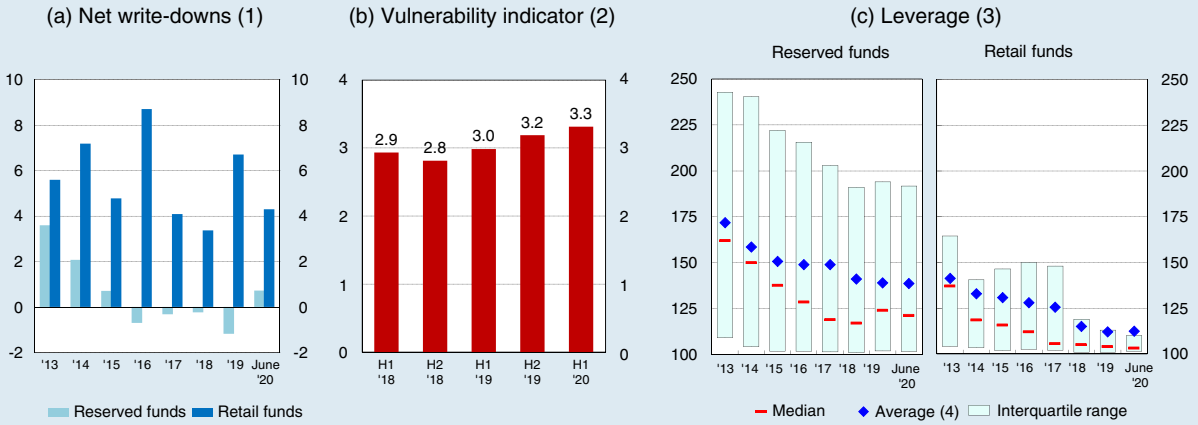
The rules requiring them to be set up as closed-end funds have protected property funds from the liquidity risks that have emerged in relation to open-end funds issued in some European countries. Nevertheless, closed-end property funds are exposed to the risk that, at maturity, the valuation of the property portfolio by independent experts and entered on the books may diverge significantly from market values, because property is illiquid by nature and many different criteria can be used for the estimates. Since the first half of this year, the economic difficulties have been reflected in an increase in portfolio write-downs (Figure 2.26.a). In June 2020, only 3.3 per cent of the total net assets of the

[28] The fiscal incentive consists in the total exemption of investments from both capital gains tax on PIRs and inheritance tax. In order to qualify for the fiscal benefits, the financial instruments included in long-term investment plans must be held by investors for a minimum of five years (see the box 'Individual savings plans' in *Financial Stability Report*, 2, 2017).

[29] The limit on the concentration of investments in the same company has been raised from 10 to 20 per cent. Moreover, the fiscal benefits for each person are applied to amounts of up to €300,000 per year and €1.5 million overall - the previous limits were €30,000 per year and €150,000 for ordinary PIRs.

Figure 2.26

Main indicators for Italian property funds
(per cent)



Sources: Supervisory reports and calculations based on data from Istat and Osservatorio del Mercato Immobiliare (OMI).
(1) Ratio of 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 net assets held by property funds for which we estimate that the difference between the book value of assets and the market value of properties is greater than net assets. For each fund, we calculate the difference between the fund's cumulative net write-downs in relation to its assets and the cumulative variations of a theoretical price index for the properties in the portfolio. This index is calculated as the weighted average of the price indices for properties (split into residential and commercial) by 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 of establishment of each fund 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 established 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.

funds analysed were estimated to have a difference between the book value and the market value of the properties greater than net assets (Figure 2.26.b).

The risks to financial stability stemming from property funds remain limited overall. Funds with negative net assets, all reserved to professional investors, account for just under 2 per cent of the sector's net assets. Financial leverage has remained stable, at historically low levels (Figure 2.26.c). The overall exposure of the financial system to this sector is limited (around 1 per cent of total loans).

3 MACROPRUDENTIAL MEASURES

Macrofinancial indicators in Italy are being affected by the pandemic crisis and the adoption of numerous measures by the authorities to promote the flow of liquidity to firms. In the third quarter of 2020, the difference between the credit-to-GDP ratio and its long-term trend (credit-to-GDP gap; see Section 1.1) was virtually nil, owing to strong growth in loans (driven by the expansion of public guarantees) but also to the sharp fall in GDP at the denominator. The other economic indicators are also heavily influenced by the measures to counter the crisis, but signal the underlying weakness of the macrofinancial cycle. In the labour market, where the increase in the unemployment rate was curbed by exceptional recourse to social safety nets, conditions remain fragile (see *Economic Bulletin*, 4, 2020). The non-performing loan rate benefited from both the government measures to support credit and guidance from the supervisory authorities on the margins of flexibility allowed under the rules for classifying loans (see Section 2.2).

Against this backdrop, the Bank of Italy has maintained its countercyclical capital buffer (CCyB) at zero per cent for the last two quarters of 2020 as well (Table 3.1).[1]

Table 3.1

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

Date	Decision	Capital requirement *(per cent)*
25.9.2020	Setting of the CCyB rate for the fourth quarter of 2020	0.00
26.6.2020	Setting of the CCyB rate for the third quarter of 2020	0.00
25.6.2020	Identification by Italy of material third countries	–

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

Last June, the Bank of Italy identified Russia, the United States and Switzerland as 'material third countries' for the Italian banking system, for the purpose of applying the countercyclical capital buffer.[2]

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

2 With a view to fostering uniformity in the decisions of the individual Member States as regards the application of a countercyclical capital buffer on their banks' exposures with countries outside the European Economic Area ('third countries'), the ESRB issued Recommendation ESRB/2015/1. This calls on national authorities to: (a) identify, on an annual basis, the third countries to which each jurisdiction has material exposures; (b) monitor the risks stemming from excessive credit growth in those countries; and (c) inform the ESRB of cases in which they consider the CCyB set by those countries not to be appropriate. Based on these reports or as a result of its own monitoring, the ESRB can recommend Member States to set a harmonized CCyB for their exposure to the third countries concerned. More specifically, the three States were selected by applying the methodology used by the ESRB to identify, on an annual basis, the third countries to which the banking system for the entire European Economic Area has significant exposure (defined as equal to or greater than 1.0 per cent of its total exposures).

Direct supervision of the risks of these three countries is carried out by the ESRB, which has included them among those of systemic importance for the entire European Economic Area.[3] Unlike last year, Turkey, to which the Italian banking system's exposure declined sharply in the early months of this year, was not among the group of countries identified as material.

No later than 1 December 2020, the Bank of Italy will publish its decisions on the banking groups identified as systemically important institutions at domestic level (O-SIIs) for 2021 and on the relative capital buffers. Before the end of the year, it will also publish its decision on the identification of global systemically important institutions (G-SIIs) and on the relative capital buffers for 2022. For 2020, the Bank of Italy identified UniCredit, Intesa Sanpaolo, Banco BPM and Monte dei Paschi di Siena as O-SIIs;[4] UniCredit was identified as a G-SII[5] (see *Financial Stability Report*, 1, 2020).

To support banks' ability to lend even when faced with the negative effects of the pandemic on the real economy, the authorities in several European countries have approved the immediate, full or partial, release of the existing macroprudential capital buffers. Overall, the amount of resources made available following the release of the capital buffers[6] was nonetheless limited (around €20 billion; see the box 'The macroprudential measures adopted in the European Union in response to the spread of COVID-19', *Financial Stability Report*, 1, 2020). In line with the release of the CCyB by a number of European countries, the Czech Republic and Slovakia recently reduced their countercylical capital buffers by a further 0.5 percentage points (they currently stand at 0.5 and 1.0 percentage points, respectively; see Table A9 in *Selected Statistics*). Among the EU countries with countercyclical capital buffers that are still positive are Bulgaria and Luxembourg, which recently confirmed their respective buffers at 0.5 and 0.25 percentage points respectively. Luxembourg also announced that it would increase its buffer to 0.5 percentage points starting on 1 January 2021.

[3] The European Economic Area comprises Iceland, Liechtenstein and Norway, in addition to the countries of the European Union. Starting on 1 January 2020, the macroprudential instruments envisaged under Directive 2013/36/EU (Capital Requirements Directive, CRD IV) and Regulation 2013/575/EU (Capital Requirements Regulation, CRR) are also applicable in these countries.

[4] The additional capital buffer for 2020 is equal to: 0.75 per cent for UniCredit; 0.56 per cent for Intesa Sanpaolo; 0.13 per cent for Banco BPM and Monte dei Paschi di Siena.

[5] For 2020, the UniCredit Group is required to maintain an additional capital buffer of 1.00 per cent of its total risk-weighted exposures. In accordance with European legislation, the UniCredit Group will have to apply either the G-SII or the O-SII requirement, whichever is the higher.

[6] The CCyB, O-SII buffer and systemic risk buffer (SyRB).

SELECTED STATISTICS

CONTENTS

Table A1

Financial sustainability indicators

(per cent of GDP, unless otherwise specified)

	GDP (1) *(annual growth rate)*		Characteristics of public debt (2)				Primary surplus (2)	S2 sustainability indicator (3)	Private sector financial debt (4)		External position statistics (5)	
			Level		Average residual life of govt. securities *(years)*	Non-residents' share *(% of public debt)*			Households	Non-financial firms	Current account balance	Net International investment position
	2020	2021	2020	2021	2020	2020	2020	2018	2020	2020	2020	2020
Italy	-10.6	5.2	161.8	158.3	6.8	35.1	-9.4	2.1	43.6	73.0	2.9	-1.5
Germany	-6.0	4.2	73.3	72.2	5.9	52.8	-7.6	2.2	56.4	62.8	6.7	71.6
France	-9.8	6.0	118.7	118.6	7.8	58.0	-9.5	0.2	65.7	166.7	-1.3	-25.7
Spain	-12.8	7.2	123.0	121.3	7.5	55.6	-11.7	1.8	60.6	102.7	1.5	-77.5
Netherlands	-5.4	4.0	59.3	61.1	7.5	47.3	-8.2	2.8	103.2	158.5	9.4	102.6
Belgium	-8.3	5.4	117.7	117.1	10.0	65.8	-9.7	4.8	65.3	159.1	0.6	44.7
Austria	-6.7	4.6	84.8	84.3	10.4	79.3	-8.9	2.3	52.0	97.6	3.0	12.7
Finland	-4.0	3.6	67.9	68.6	6.3	95.2	-6.8	3.6	67.9	124.2	0.3	-0.8
Greece	-9.5	4.1	205.2	200.5	....	....	-6.0	....	56.4	57.3	-3.2	-160.1
Portugal	-10.0	6.5	137.2	130.0	6.4	57.8	-5.3	-0.3	66.0	101.5	-0.5	-102.8
Ireland	-3.0	4.9	63.7	61.3	10.8	72.3	-4.9	2.9	36.3	199.5	-5.5	-176.0
Euro area	-8.3	5.2	101.1	100.0	....	....	-8.7	1.8	60.4	115.0	2.2	-0.1
United Kingdom	-9.8	5.9	108.0	111.5	14.8	39.4	-15.5	4.3	84.5	78.2	-2.0	-23.0
United States	-4.3	3.1	131.2	133.6	5.8	29.1	-16.7	....	75.2	78.3	-2.1	-62.7
Japan	-5.3	2.3	266.2	264.0	8.2	12.1	-13.9	....	59.3	105.3	2.9	73.2
Canada	-7.1	5.2	114.6	115.0	5.4	23.2	-19.8	....	101.7	118.8	-2.0	50.5

Sources: IMF, ECB, BIS, European Commission.
(1) IMF, *World Economic Outlook*, October 2020. – (2) IMF, *Fiscal Monitor*, October 2020. – (3) European Commission, *Fiscal Sustainability Monitor 2019*, January 2020. 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 Q2 2020; data for the United Kingdom and non-European countries are from BIS statistics and refer to the end of Q1 2020. – (5) The data refer to Q2 2020. Data for the euro area countries are from ECB, Statistical Data Warehouse; data for the United Kingdom and non-European countries are from IMF, Data Warehouse.

Table A2

Italian banks' non-performing loans and guarantees by counterparty sector (1)
(billions of euros; per cent; June 2020)

	Gross exposures	Share of total gross loans (2)	Net exposures	Share of total net loans (2)	Collateral (3)	Personal guarantees (3)	Coverage ratio for unsecured loans
				Firms (4)			
Non-performing customer loans	91	13.2	41	6.5	43	19	62.9
of which: manufacturing	17	9.3	7	4.0	5	4	63.8
construction (5)	24	33.5	11	18.2	13	4	64.9
services	43	11.9	21	6.1	22	9	61.4
of which: bad loans	47	6.8	16	2.5	21	12	74.6
of which: manufacturing	9	4.7	3	1.5	3	3	77.3
construction (5)	13	17.4	5	7.7	6	3	71.9
services	22	6.2	8	2.3	10	6	74.6
				Consumer households			
Non-performing customer loans	23	4.5	13	2.6	15	1	65.4
of which: bad loans	11	2.2	5	1.0	7	1	76.7
				Total (6)			
Non-performing customer loans	120	7.8	57	3.9	60	20	62.4
of which: bad loans	60	3.9	22	1.5	28	13	74.8

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 December 2019 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 A3

Exposures of Italian groups and banks to foreign residents by counterparty sector (1)
(billions of euros; per cent; June 2020)

	Public sector	Banks	Financial corporations	Households and firms	Total	Per cent of total exposures reported to the BIS (2)	Per cent of total exposures (3)
Euro area (excluding Italy)	168.9	72.3	46.6	206.7	494.6	8.9	18.2
Other industrialized countries	39.8	21.1	29.9	36.4	127.1	1.1	4.7
of which: United Kingdom	0.2	10.0	16.5	5.9	32.6	1.6	1.2
Emerging and developing countries	59.3	16.5	4.8	89.9	170.6	3.9	6.3
Europe	44.9	8.1	3.7	76.9	133.6	14.2	4.9
of which: Russia	1.0	2.9	0.5	16.0	20.5	23.6	0.8
Turkey	0.4	2.8	0.7	2.1	6.0	4.7	0.2
Africa and the Middle East	11.6	2.3	0.4	6.1	20.4	3.7	0.8
Asia and Pacific	1.7	3.7	0.8	3.9	10.0	0.5	0.4
Central and South America	1.1	2.4	0.0	3.1	6.6	0.7	0.2
of which: Argentina	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	0.1	2.2	0.0	0.6	2.9	1.0	0.1
Mexico	0.3	0.0	0.0	1.7	2.0	0.7	0.1
Offshore centres	0.4	0.2	2.1	5.6	8.3	0.3	0.3
Total	**268.4**	**110.1**	**83.5**	**338.5**	**800.5**	**3.2**	**29.5**
Memorandum item							
Energy-exporting emerging and developing countries (4)	8.6	4.8	0.6	19.3	33.3	6.3	1.2

Source: Consolidated supervisory reports for banking groups, individual supervisory reports for the rest of the system.
(1) On-balance-sheet exposures to 'ultimate borrower', gross of bad loans and net of provisions. Does not include BancoPosta and Cassa Depositi e Prestiti. As of 31 December 2019 it includes the exposures of jointly controlled non-resident banks and financial corporations. – (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 2019. – (3) The denominator refers to total exposures to residents and non-residents. – (4) Includes: Algeria, Angola, Azerbaijan, Bahrain, Bolivia, Brunei, Chad, Colombia, Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, Qatar, Russia, Saudi Arabia, Sudan, Timor Leste, Trinidad and Tobago, Turkmenistan, United Arab Emirates, Venezuela, Yemen.

Table A4

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

(millions of euros; per cent)

	Italy (2)			Euro area		
	Stocks	Net purchases	Share of total assets (3)	Stocks	Net purchases	Share of total assets
2012	322,686	90,128	8.9	1,251,226	213,410	3.8
2013	375,081	45,331	10.9	1,313,179	46,354	4.3
2014	383,645	-4,299	11.0	1,370,728	6,792	4.4
2015	364,361	-20,898	10.6	1,295,539	-67,495	4.2
2016	333,329	-26,646	10.0	1,205,130	-89,282	3.89
2017 – Jan.	336,266	6,586	10.0	1,198,661	1,496	3.9
Feb.	339,458	2,996	10.0	1,201,775	1,902	3.8
Mar.	349,081	10,286	10.1	1,205,394	4,622	3.8
Apr.	350,322	2,508	10.2	1,201,813	-3,846	3.8
May	341,318	-9,751	10.1	1,194,047	-8,922	3.8
June	323,068	-19,751	9.5	1,160,056	-33,965	3.7
July	326,959	3,629	9.6	1,150,184	-10,258	3.7
Aug.	325,690	-1,361	9.7	1,155,126	3,749	3.7
Sept.	319,447	-5,658	9.5	1,144,864	-7,585	3.7
Oct.	309,543	-11,993	9.2	1,120,116	-21,698	3.6
Nov.	295,727	-14,557	8.7	1,108,684	-13,849	3.6
Dec.	283,734	-9,649	8.5	1,074,168	-31,628	3.5
2018 – Jan.	293,267	9,483	8.7	1,094,905	20,592	3.6
Feb.	295,690	2,591	8.9	1,092,268	-1,692	3.6
Mar.	296,365	-1,311	8.8	1,083,121	-13,458	3.5
Apr.	298,592	2,074	8.8	1,073,878	-9,494	3.5
May	307,126	22,572	9.0	1,085,979	30,517	3.5
June	321,700	12,693	9.5	1,093,859	4,581	3.5
July	324,557	3,727	9.7	1,088,853	-3,398	3.5
Aug.	317,692	559	9.5	1,078,814	359	3.5
Sept.	320,687	-334	9.5	1,073,697	-9,145	3.5
Oct.	323,906	5,530	9.7	1,068,237	-2,849	3.4
Nov.	328,468	1,879	9.9	1,073,916	2,522	3.4
Dec.	318,441	-15,491	9.7	1,054,143	-26,687	3.4
2019 – Jan.	330,049	9,380	10.0	1,086,006	28,727	3.4
Feb.	334,307	6,472	10.1	1,104,028	21,349	3.5
Mar.	333,046	-3,476	9.9	1,094,497	-13,304	3.4
Apr.	339,415	6,267	10.1	1,086,941	-8,084	3.4
May	336,450	-936	10.0	1,094,951	9,073	3.3
June	330,770	-11,365	9.8	1,071,522	-32,205	3.3
July	339,340	3,277	10.0	1,085,098	5,424	3.3
Aug.	338,508	-4,867	9.9	1,084,151	-7,732	3.2
Sept.	333,948	-6,104	9.7	1,085,046	-1,957	3.2
Oct.	330,790	-2,154	9.6	1,064,178	-18,524	3.2
Nov.	323,092	-4,505	9.5	1,048,164	-10,878	3.1
Dec.	313,293	-9,807	9.4	1,030,977	-16,546	3.2
2020 – Jan.	315,837	-881	9.5	1,027,943	-9,501	3.1
Feb.	320,171	6,873	9.5	1,037,552	13,049	3.1
Mar.	335,699	19,784	9.9	1,084,610	55,093	3.1
Apr.	351,981	18,988	10.3	1,158,270	77,913	3.3
May	362,747	7,712	10.5	1,214,418	49,823	3.5
June	363,134	-3,014	10.3	1,224,174	3,964	3.5
July	369,127	3,147	10.9	1,210,059	-18,104	3.4
Aug.	373,068	4,562	11.1	1,222,787	10,433	3.5
Sept. (4)	372,540	-2,930	11.0	1,226,232	-776	3.5

Sources: Individual supervisory reports and ECB.

(1) The data on net purchases refer to the whole period; the data on stocks and share of total assets refer to the end of the period. Purchase amounts are shown net of variations in market prices; holdings are shown at market value. All public sector securities are counted, including those issued by local government authorities. – (2) Cassa Depositi e Prestiti SpA is excluded. – (3) The 'total assets' series does not include bond repurchases. – (4) Preliminary data.

Table A5

Italian banks' bonds by holder and maturity (1)
(millions of euros; September 2020)

	Maturity						Total
	by 2020	by 2021	by 2022	between 2023 and 2024	between 2025 and 2029	beyond 2030	
Households (2)	2,741	9,446	10,495	13,977	17,420	382	54,461
of which: senior non-preferred bonds	–	–	3	21	34	2	60
subordinated bonds	721	1,303	1,604	990	3,468	135	8,222
Banks in the issuer's group (3)	741	2,348	3,857	5,086	9,295	2,349	23,676
of which: senior non-preferred bonds	–	–	–	37	23	–	60
subordinated bonds	22	60	60	461	266	234	1,102
Other Italian banks	1,135	3,674	5,491	8,645	8,072	462	27,478
of which: senior non-preferred bonds	–	–	64	425	788	16	1,293
subordinated bonds	82	55	38	103	711	64	1,054
Other investors	7,823	18,230	31,122	41,493	61,763	15,777	176,209
of which: senior non-preferred bonds	–	–	684	2,152	4,147	717	7,700
subordinated bonds	867	1,264	1,913	3,634	11,652	6,231	25,561
Total	**12,439**	**33,699**	**50,965**	**69,201**	**96,550**	**18,971**	**281,823**
of which: **senior non-preferred bonds**	–	–	751	2,636	4,991	735	9,113
subordinated bonds	1,692	2,683	3,615	5,187	16,097	6,664	35,938

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

Table A6

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

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

	2014	2015	2016	2017	2018	2019	2020	
							March	September
Total	**283.5**	**253.7**	**297.3**	**321.2**	**310.5**	**285.8**	**344.6**	**437.9**
Government securities	119.8	97.6	88.8	105.8	78.0	68.1	115.8	134.4
Local and regional government securities	2.9	2.6	1.7	1.9	1.3	0.5	1.5	0.7
Uncovered bank bonds	10.4	5.8	5.3	5.4	5.0	3.3	3.5	5.1
Government-guaranteed bank bonds	15.0	0.4	0.3	1.3	2.5	1.0	0.5	0.6
Covered bonds	49.8	46.4	76.3	76.8	91.3	86.1	91.0	101.4
Non-bank bonds	1.0	2.5	3.0	3.0	4.3	3.7	4.6	4.4
Asset-backed securities	40.0	35.5	44.0	49.9	49.7	47.7	45.2	52.6
Other marketable assets	0.4	0.6	0.8	2.8	1.3	1.8	2.0	2.4
Non-negotiable assets (bank loans)	44.3	62.4	77.1	74.3	77.1	73.6	80.5	136.3

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

Table A7

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

		Significant groups			Less significant groups		
		Cumulative cash flow(2)	Counterbalancing capacity	Liquidity indicator (3)	Cumulative cash flows (2)	Counterbalancing capacity	Liquidity indicator (3)
2017 –	Jan.	-2.1	14.2	12.1	-5.2	19.3	14.1
	Feb.	-2.4	14.8	12.4	-5.3	19.3	14.1
	Mar.	-1.5	13.6	12.1	-2.9	17.6	14.7
	Apr.	-0.3	13.0	12.7	-5.0	20.6	15.6
	May	-0.4	13.7	13.3	-4.1	19.5	15.4
	June	-0.4	14.0	13.6	-3.5	18.8	15.3
	July	0.0	13.5	13.5	-3.7	18.6	14.9
	Aug.	0.0	13.9	13.9	-3.4	18.8	15.4
	Sept.	0.6	13.5	14.1	-2.7	18.9	16.2
	Oct.	0.5	13.2	13.7	-1.1	18.1	17.0
	Nov.	1.0	13.4	14.4	-0.7	17.3	16.6
	Dec.	0.2	13.5	13.7	-0.7	16.8	16.1
2018 –	Jan.	0.8	12.1	12.9	-0.5	16.1	15.6
	Feb.	0.3	13.2	13.5	-1.0	16.7	15.8
	Mar.	0.6	13.5	14.1	-2.0	18.7	16.7
	Apr.	0.7	13.5	14.2	-3.0	19.9	16.8
	May	-0.2	14.1	13.9	-5.3	21.3	16.0
	June	-1.2	14.1	12.9	-5.5	20.7	15.2
	July	-1.3	13.9	12.5	-4.3	20.0	15.7
	Aug.	-0.9	13.9	13.0	-5.2	20.8	15.6
	Sept.	-0.2	13.7	13.5	-5.9	21.9	16.0
	Oct.	-0.1	13.4	13.3	-4.9	20.5	15.6
	Nov.	0.1	13.5	13.6	-4.7	20.0	15.2
	Dec.	0.1	13.6	13.7	-5.9	20.2	14.3
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	0.0	15.9	16.0	-5.3	19.8	14.5
	July	0.5	16.0	16.5	-3.9	19.8	15.9
	Aug.	0.7	16.3	17.1	-3.5	20.4	16.9
	Sept.	1.6	16.6	18.3	-3.6	21.0	17.4
	Oct.	1.6	16.7	18.3	-3.2	20.7	17.6
	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.	-0.5	22.6	22.2	-3.6	25.1	21.5
	Oct.	-0.1	21.4	21.3	-2.9	23.9	20.9

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 (supervised directly by the ECB) and for a sample of less significant banks (supervised by the Bank of Italy in cooperation with the ECB). On prudential grounds it is assumed there is no rollover of maturing obligations towards institutional counterparties. – (2) Calculated as the (positive or negative) difference between outflows (negative sign) and inflows (positive sign). Outflows include maturing obligations towards institutional clients and bank estimates of expected retail customer outflows. – (3) Calculated as the (positive or negative) difference between the holdings of freely available assets eligible for use as collateral for Eurosystem refinancing operations (counterbalancing capacity) and cumulative expected net cash flows over the next 30 days.

Table A8

Main macroprudential instruments for the banking sector (1)

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

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

Table A9

Macroprudential capital buffers in the countries of the European Economic Area

(per cent)

COUNTRIES	Combined buffer requirement (CBR) (1)	Capital conservation buffer (CCoB)	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	Rate	Date of entry into force	Description	Date of entry into force	Description	Date of entry into force	Description
Austria	2.50-4.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	9 banks: 1.00-2.00	1 Jan. 2019	13 banks (includes 7 O-SIIs): 1.00-2.00
Belgium	2.50-4.00	2.50	1 Apr. 2020	0.00			1 Jan. 2020	8 banks: 0.75-1.50		
Bulgaria	6.00-7.00	2.50	1 Apr. 2020	0.50			1 Jan. 2020	8 banks: 0.50-1.00	15 Oct. 2019	3.00 (2)
Cyprus	2.50-3.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	6 banks: 0.25-1.00		
Croatia	4.00-5.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	7 banks: 0.50-2.00	6 Sept. 2019	1.50 or 3.00 (3)
Denmark	2.50-5.50	2.50	12 Mar. 2020	0.00			30 June 2020	7 banks (4)	1 Jan. 2019	7 O-SIIs: 0.50-3.00
Estonia	2.50-4.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	4 banks: 1.00-2.00		
Finland	2.50-4.50	2.50	16 Mar. 2015	0.00			6 Apr. 2020	3 banks: 0.50-2.00		
France	2.50-4.00	2.50	1 Apr. 2020	0.00	1 Jan. 2020	4 banks: 1.00-1.50	1 Jan. 2020	6 banks: 0.25-1.50		
Germany	2.50-4.50	2.50	1 Apr. 2020	0.00	1 Jan. 2020	1 bank: 2.00	1 Jan. 2020	12 banks: 0.50-2.00		
Greece	2.50-3.00	2.50	1 Jan. 2016	0.00			1 Jan. 2020	4 banks: 0.50		
Ireland	2.50-3.50	2.50	1 Apr. 2020	0.00			1 lug. 2020	6 banks: 0.50-1.00		
Iceland	2.50-7.50	2.50	18 Mar. 2020	0.00			8 Apr. 2020	3 banks: 2.00	8 Apr. 2020	8 banks (includes O-SIIs): 3.00 (2)
Italy	2.50-3.50	2.50	1 Jan. 2016	0.00	1 Jan. 2020	1 bank: 1.00	1 Jan. 2020	4 banks: 0.13-0.75		
Latvia	2.50-4.50	2.50	1 Feb. 2016	0.00			27 Nov. 2019	4 banks: 1.25-2.00		

Source: ESRB.
(1) For each bank, the CBR is equal to the sum of the CCoB, CCyB, G-SII and O-SII buffers, and the SyRB, pursuant to Article 128(6) of CRD IV. Where a group, on a consolidated basis, is subject to the following buffers, only the highest buffer shall apply in each case: (a) a G-SII buffer and an O-SII buffer; (b) a G-SII buffer, an O-SII buffer and a systemic risk buffer (SyRB), pursuant to Article 131(14) of CRD IV. Where the SyRB applies only to domestic exposures, that SyRB shall be cumulative with the O-SII or G-SII buffer pursuant to Article 133(5) of CRD IV. – (2) The SyRB applies only to domestic exposures. – (3) In Croatia, for credit institutions whose share of assets in the total assets of the national financial sector is lower than 5 per cent, the SyRB rate amounts to 1.5 per cent, for credit institutions whose share of assets in the total assets of the national financial sector is equal to or higher than 5 per cent, the SyRB is equal to 3 per cent. – (4) The O-SII buffers are not applied.

Table A9 *cont.*

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

COUNTRIES	Combined buffer requirement (CBR) (1)	Capital conservation buffer (CCoB)	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	Rate	Date of entry into force	Description	Date of entry into force	Description	Date of entry into force	Description
Liechtenstein	2.50-4.50	2.50	1 July 2019	0.00			1 Jan. 2020	3 banks: 2.00	1 Jan. 2020	6 banks (includes O-SIIs): 1.00-2.00
Lithuania	2.50-4.50	2.50	1 Apr.2020	0.00			31 Dec. 2020	3 banks: 0.50-2.00		
Luxembourg	2.75-3.75	2.50	1 Jan. 2020	0.25			1 Jan. 2020	8 banks: 0.50-1.00		
Malta	2.50-4.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	4 banks: 0.06-2.00		
Norway	6.50-8.50	2.50	13 Mar. 2020	1.00			26 June 2019	2 banks (5)	1 July 2016	3.00 O-SIIs: 5.00
Netherlands	2.50-5.00	2.50	1 Jan. 2016	0.00	1 Jan. 2020	1 bank: 1.00	23 Apr. 2020	5 banks: 1.00-2.00	23 Apr. 2020	3 O-SII: 1.50-2.50
Poland	2.50-3.50	2.50	1 Jan. 2016	0.00			14 Oct. 2019	9 banks: 0.10-1.00		
Portugal	2.50-3.25	2.50	1 Jan. 2016	0.00			1 Jan. 2020	6 banks: 0.19-0.75		
United Kingdom	2.50-4.50	2.50	11 Mar. 2020	0.00	1 Jan. 2020	3 banks: 1.00-2.00	1 Jan. 2020	15 banks (4)	30 July 2019	6 O-SIIs: 1.00-2.00
Czech Republic	3.00-6.00	2.50	1 July 2020	0.50			1 Jan. 2020	6 banks (4)	1 Jan. 2019	5 O-SIIs: 1.00-3.00
Romania	2.50-4.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	9 banks: 1.00-2.00	1 Jan. 2019	1.00-2.00
Slovakia	3.50-5.50	2.50	1 Aug. 2020	1.00			1 Jan. 2020	5 banks: 0.50-1.00	1 Jan. 2020	3 O-SIIs: 1.00 (2)
Slovenia	2.50-3.50	2.50	1 Jan. 2016	0.00			1 Jan. 2020	7 banks: 0.25-1.00		
Spain	2.50-3.50	2.50	1 Jan. 2016	0.00	1 Jan. 2020	1 bank: 1.00	1 Jan. 2020	5 banks: 0.25-1.00		
Sweden	2.50-5.50	2.50	16 Mar. 2020	0.00			1 Jan. 2020	4 banks: 0.00-2.00	1 Jan. 2015	3 O-SIIs: 3.00
Hungary	2.50	2.50	1 Jan. 2016	0.00			1 July 2020	8 banks: 0.00		

Source: ESRB.
(1) For each bank, the CBR is equal to the sum of the CCoB, CCyB, G-SII and O-SII buffers, and the SyRB, pursuant to Article 128(6) of CRD IV. Where a group, on a consolidated basis, is subject to the following buffers, only the highest buffer shall apply in each case: (a) a G-SII buffer and an O-SII buffer; (b) a G-SII buffer, an O-SII buffer and a systemic risk buffer (SyRB), pursuant to Article 131(14) of CRD IV. Where the SyRB applies only to domestic exposures, that SyRB shall be cumulative with the O-SII or G-SII buffer pursuant to Article 133(5) of CRD IV. – (2) The SyRB applies only to domestic exposures. – (4) The O-SII buffer is not applied. – (5) For the two banks identified as O-SIIs, a higher SyRB applies instead of the O-SII buffer.