

ASSESSMENT OF RISKS TO THE FRENCH FINANCIAL SYSTEM

DECEMBER 2020



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Overview

Emergency measures deployed by fiscal, monetary and supervisory authorities curbed the impact on financial stability of the economic shock unleashed by the Covid-19 pandemic and the spring lockdown. The ensuing upturn in activity over the summer was interrupted when fresh restrictions were introduced across much of Europe during the autumn. Unlike in March, however, this did not trigger increased market volatility or financing difficulties. Financial system participants, including investors, borrowers and issuers, appear to be benefiting from a decrease – albeit from elevated levels – in the factors of uncertainty that have been present until now, thanks to the prospects for an improved health situation, but also because of the commitment by central banks and governments to keep financing conditions and fiscal support expansionary beyond the end of the crisis.

Accordingly, financing on financial markets for private issuers, notably non-financial corporations and banks, has recovered, with interest rates and liquidity getting back to pre-crisis levels, although lower-rated companies continue to be subject to higher credit risk premiums. Similarly, sovereign debt yields are at record lows. These developments caused the losses seen in the first part of the year on equity markets to be wiped out, and stocks recently surged back to higher levels, breaking records in some cases, most notably American indices. These movements may seem at odds with current levels of economic activity and could constitute a source of vulnerability, materialising in a sharp and sudden fall in asset values in the event of a new adverse shock. Two thematic chapters address these questions specifically: one considers the reasons for the high valuation levels, while the other examines weaknesses observed in March and April on short-term funding markets in euro for non-financial corporations (NFCs), due in particular to reliance on money market funds.

Developments since March have also exacerbated pre-existing vulnerabilities with potential systemic importance to the French financial system.

A key vulnerability concerns the deterioration in the financial situation of NFCs. While the second wave of the virus and the measures required to curtail its spread had a weaker overall impact on companies, they further accentuated differences in individual net debt trajectories, with growth prospects varying widely across different sectors of activity. By complicating the repayment of debts taken out in the spring to cope with the treasury shock due to the first lockdown, a muted recovery could severely impact the financial situation of the weakest companies, i.e. those carrying the most debt and/or hardest hit by the shock. In a slow recovery scenario, a substantial increase in NFC defaults could depress bank earnings through increased losses and provisions for corporate credit risk. Consolidation of NFC liabilities, through steps to strengthen capital, looks necessary to promote a macroeconomic rebound. A thematic chapter is devoted to questions relating to NFC debt.

The sharp run-up in government debt, linked to the need to extend support measures, could crimp fiscal leeway further out, especially if growth remains weak for a protracted period. This could potentially undermine confidence in sovereign credit quality. Investor confidence, as reflected in

the French government's ability to issue debt at a negative average interest rate in 2020, coupled with the Eurosystem's securities purchasing programmes alleviate these concerns in the short term.

The reduced profitability of financial intermediaries is another major area of concern. This decline has been underway for several years and is continuing, driven by a combination of structural and cyclical factors: banks are having to contend not only with a structural decrease in their net interest margin in the low interest rate environment, which is spreading and looks set to last, but also with a cyclical increase in the cost of risk amid rising corporate credit risk. The protracted low interest rate environment is likewise undermining the profits of insurance institutions. However, French banks boast extremely stable solvency ratios, while for insurers they have seen a notable downtrend, from historically high solvency ratios in both cases. This financial strength is a factor of resilience that is supporting the economic recovery through solid momentum in lending to businesses.

Given the scale of public support, the situation of households does not raise major concerns for the stability of the financial system at this stage. Easing credit standards for housing loans in recent years have played a part in weakening the situation of households, but measures taken by France's Haut Conseil de Stabilité Financière (HCSF – High Council for Financial Stability) in December 2019 and in 2020 are aimed at stopping the slippage.

The crisis has further increased the need for digital transformation among financial institutions, which also represents a new source of risk. Changes to business models in this regard need to be stepped up, under the dual constraints of fierce competition and thin profits. This assessment looks particularly at two risks associated with digitalisation. Specifically, it considers the cyber-risk that affects all financial institutions directly. But there is also a separate chapter on the consequences for financial stability of a pronounced depreciation in commercial real estate connected with more widespread use of remote working practices and the rise of retail e-commerce.

There is international consensus among financial authorities that challenges related to climate change pose serious risks to the financial system. They are calling for swift action, notably through the development of measurement capabilities, stress testing and standardisation of climate risks to improve the comparability of non-financial data.

Matrix of risks to the financial system in December 2020

1. Risks linked to indebtedness

The gross debt of NFCs, which increased sharply in the spring, is expected to stay elevated for as long as the health crisis lasts. While a parallel increase in saving has allowed net debt to remain stable since March, this may conceal growing divergences in NFCs' financial situations. The deterioration in NFC solvency varies across sectors and will be shaped by the speed of the recovery: so far, it remains partly contained by support measures for companies. However, this deterioration is set to continue to affect the cost of risk and hence to adversely impact banks' profitability and potentially solvency levels as well, although these are high and solid for now. Steps to shore up the capital of viable companies will be necessary to support investment and promote a sustainable economic recovery.

The extension of fiscal support measures in connection with the second wave of the pandemic, together with automatic stabilisers, will continue to exacerbate national public deficits, now joined by the new joint debt issues by European Member States.

Given their debt levels, households will continue to face high repayment costs. If unemployment increases substantially, household solvency could deteriorate.



2. Market risks

Thanks to the rapid and massive intervention of central banks and fiscal support measures, European stock indices are more or less back to their pre-crisis levels, with additional support from the decrease in health and associated macroeconomic uncertainties. Nevertheless, factors of weakness persist, related to the strength and pace of the economic recovery, compounded by the dispersion of sector and regional performances. An adverse shock could trigger a sharp fall in asset prices, accompanied by outflows from open-ended funds, or even a new liquidity shock, with potentially destabilising effects for the real economy.



3. Risks of persistently low interest rates for financial institutions

While beneficial to borrowers, the persistent and widespread low interest rate environment continues to act as a drag on:

- the profitability of banks, whose lending returns are being hurt by the flatter yield curve and the increased cost of credit; over 2020 and 2021, however, the terms under which banks can obtain refinancing from the Eurosystem (negative rates of as low as -1%), coupled with interest rate tiering, should mitigate these effects;
- life insurers' asset-liability management and solvency constraints are increasing, while returns on their asset portfolios continue to shrink gradually.



4. Risks linked to structural changes

Digitalisation is accelerating with the crisis, forcing established financial firms to make swift and structural changes to their business models, against a backdrop of sustained competition. The need to recognise climate issues in order to support the transition to a low-carbon economy is also growing increasingly urgent. There is a continued risk that the financial sector could be weakened by an insufficient or delayed response to each of these structural challenges. With the pandemic driving an upturn in remote working and e-commerce, commercial real estate market developments are a new area to watch.



 Systemic risk  High risk  Moderate risk

The colour represents the level of risk based on an expert assessment reflecting the probability that the risk will materialise and its potential systemic impact. The arrow indicates how risk is expected to develop over the next six months.

1. Cross-cutting analysis of the risks to financial stability

1.1 A fragile and differentiated economic recovery reliant on fiscal and monetary support measures

Support measures saw the economy record a mixed rebound in the third quarter of 2020 after an unprecedented decline

Lockdown measures linked to the Covid-19 pandemic caused economic activity around the world to contract to a degree not seen since the Second World War, with the IMF projecting that the global economy will shrink by 4.4% in 2020. Advanced and emerging economies alike are set to record substantial declines in activity, with over 85% of countries likely to post sub-zero growth rates in 2020, according to the IMF.

Table 1.1: Economic heatmap

Monthly values since January 2007



Source: Banque de France, OECD, INSEE, Bloomberg, Banque de France calculations

Most recent update: end-December 2020

Note: For each indicator, the colour indicates where the monthly score sits relative to the indicator's performance since the first quarter of 2000 (except for PMIs, which show the change relative to the previous month). Yellow cells indicate a level close to the indicator's median value since the first quarter of 2000 (except for PMIs, for which yellow designates a value of 50). Red (green) cells show the worst (best) scores for each indicator since the first quarter of 2000. Indicators are monthly and seasonally adjusted. Some indicators, such as industrial production indices, are expressed in volume terms, while others, such as imports, are in value terms.

* Because of partial unemployment schemes, unemployment statistics may appear less impacted by the COVID-19 crisis.

Activity rebounded sharply in the third quarter in the main advanced economies, following an unprecedented collapse in the first half (see Table 1.1). Even so, internationally, the recovery progressed at different paces, even before new restrictions were imposed across much of Europe.

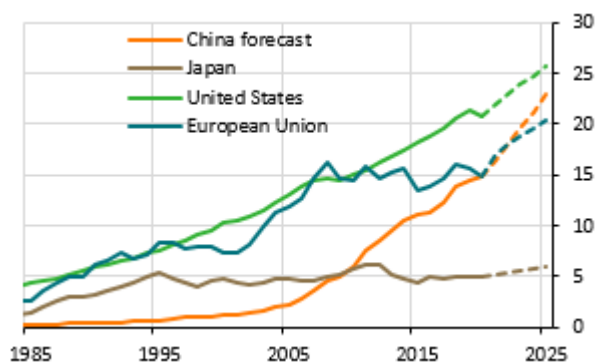
The rebound also featured significant sector differentiation. In France, the sectors with the greatest exposure to social distancing measures, such as the automotive, aerospace and tourism industries, were hardest hit by the economic impact of the pandemic. Data from the Banque de France's sentiment survey published in November suggest that the business climate improved sharply in the spring and summer in the manufacturing sector, helped in particular by the agri-food industry, and also brightened steadily in retail trade, driven by non-face-to-face sales and consumer electronics, and in construction. Conversely, the climate worsened for services (especially those

that cannot be digitalised), with muted activity in accommodation and catering having a particularly negative impact. Accommodation, catering, culture and events have all been hit by a supply-side shock linked to government-ordered shutdowns, coupled with a demand-side shock that will take time to absorb, notably owing to the sharp decrease in tourism flows in 2020.

In the United States, economic activity has held up well so far: 2020 third quarter GDP was just 2.9% below the previous year's level. The Composite PMI reading for November (57.9) suggested that the US recovery was gaining momentum, despite health uncertainties and the impending expiry of support measures.

In China, where new Covid-19 cases remain marginal, the recovery is further advanced, as suggested by the fact that imports in October were 3% above their pre-crisis level. These strong performances should enable China's GDP to equal that of the European Union by the end of 2020.

Chart 1.1: Regional growth forecasts, world
x: time / y: USD trillion



Sources: International Monetary Fund – WEO forecasts October 2020

Continued support measures cushioned the impact of the latest economic contraction linked to the second wave of the virus

The surge in case counts from mid-September saw tighter health measures introduced, with new confinement measures adopted by numerous European countries, including France, which reimposed a lockdown on 30 October. Growth prospects remain uncertain but have been weakened by these developments.

The loss of activity expected for the year-end period is however likely to be less pronounced than in March/April¹, owing to more targeted lockdown measures, which will amplify the cross-sector differences already observed in activity levels.

In its November forecasts, the European Commission estimated that EU GDP will contract by approximately 7.5% in 2020 before bouncing back to expand by 4% in 2021 and 3% in 2022. These estimates are below previous forecasts and imply that production is expected to barely get back to pre-pandemic levels by the end of 2022. In the euro area, the latest projections from the ECB (December) point to a rebound of 3.9% in 2021 (down from 5.0% in September) and 4.2% in 2022 (down from 3.2% in September)², with pre-crisis GDP levels not expected to be exceeded before 2023³.

The speed of the recovery in 2021 and 2022 is expected to vary considerably across countries, reflecting differences in the severity of lockdown measures, as well as economic structures and differences in policy responses to the economic crisis. For France, the European Commission and the IMF are forecasting that GDP will shrink by around 10% in 2020, before partially rebounding to expand by between 5% and 6% in 2021. These estimates are close to those of the Banque de France, which is expecting a rebound of 5% in 2021 and 2022⁴.

Besides uncertainty about a fresh deterioration in the health situation and the continuation of measures to stop the spread of the virus, a major factor of uncertainty for growth concerns the risk of a premature and abrupt withdrawal of fiscal and monetary support measures and the special authorisations introduced to the regulatory

¹ Banque de France, update on business conditions in France at the end of October 2020

² <https://www.ecb.europa.eu/pub/projections/html/index.en.html>

³ ECB, Financial Stability Review, November 2020.

⁴ "Our baseline scenario assumes that the epidemic will not end immediately and that vaccines will only be fully rolled out towards the end of 2021. Under these conditions, activity is only projected to return to its 2019 level in mid-2022, and the recovery will be spread over 2021 and 2022 with GDP growth of around 5% in both of those years. In 2023, growth is projected to remain slightly above 2%, which is still a high rate, albeit less unusual." <https://publications.banque-france.fr/projections-macroeconomiques-decembre-2020>

and supervisory framework for financial institutions. However, the likelihood of this happening in 2021 appears to be waning, for several reasons.

The ECB has confirmed that the temporary authorisations given to supervised institutions to operate below certain buffer levels will be maintained for a sufficiently long period to allow institutions to cope with the impacts of the crisis. The ECB has committed to maintaining these adjustments until at least the end of 2022 for capital buffers (Pillar 2 guidance and capital conservation buffer) and until the end of 2021 for liquidity buffers (LCR). Similarly, the likelihood of a withdrawal is lessened by the extension of most government support measures in France.

An additional source of growth should be provided by the rollout of the French stimulus plan and Europe's EUR 750 billion Next Generation EU programme. Worth around 5% of euro area GDP, this programme is expected to provide a major boost to the European economy. The effects of this are not necessarily well factored in to forecasts at this stage. The programme's central component, the Recovery and Resilience Facility, has the capacity to provide EUR 672.5 billion in subsidies and loans and will help Member States to cope with the economic and social consequences of the Covid-19 pandemic, while at the same time steering them towards environmental and digital transitions. With support coming also from France's EUR 100 billion stimulus plan, which should be 40% financed by Europe, French growth should benefit in parallel from the knock-on effects of stimulus plans simultaneously introduced by our European partners. However, before funds can be released from the European programme, the European and national ratification process needs to be completed.

In reports published in autumn 2020, the IMF also called for continued efforts to support the recovery through strong fiscal measures⁵. With this in mind, the general escape clause for EU fiscal rules has been activated, easing fiscal consolidation constraints at least until the end of 2021.

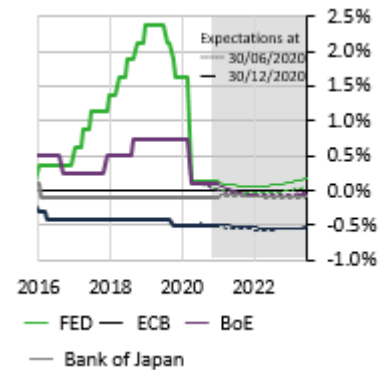
The response to the crisis implies the maintenance of accommodative monetary policies and a prolonged low interest rate environment

Financial conditions in advanced economies are at historically accommodative levels and conditions are expected to remain highly favourable at least until the end of 2022 (Chart 1.2), owing in particular to the magnitude of central bank liquidity provision and securities purchasing measures.

In the euro area, asset purchases under the new Pandemic Emergency Purchase Programme (PEPP) reached a cumulative net amount of EUR 757 billion on 31 December 2020, while amounts allocated under highly favourable conditions via the TLTRO III programme totalled EUR 1.533 trillion in June, September and December, with a net liquidity injection of 1.131 trillion. As a result, the balance sheet of the ECB (US Federal Reserve, Bank of Japan, respectively) swelled considerably over 2020, growing from 43% of euro area GDP at end-March (24% and 109% respectively) to 62% by the end of December (35% and 135% respectively) (Chart 1.3).

Chart 1.2: Policy rates and expectations

x: time / y: %

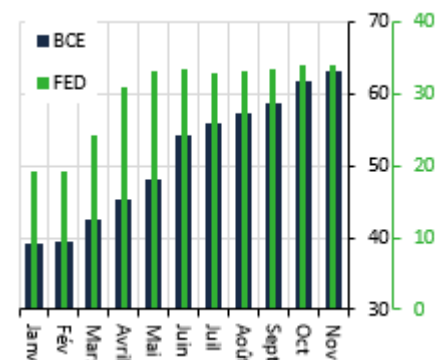


Sources: Bloomberg

Note: expectations are derived from the overnight index swap market. BoE for Bank of England
Most recent value: end-December 2020

Chart 1.3: ECB and Fed balance sheets

x: 2020 / y: % of GDP



Sources: ECB, Bloomberg, Banque de France calculatio
Most recent value: December 2020

⁵ IMF, France: Staff Concluding Statement of the 2020 Article IV Mission, 2 November 2020.

Box 1.1: Stepping up monetary policy support measures

On 10 December 2020, the ECB Governing Council recalibrated its monetary policy instruments. It increased the envelope of the PEPP by EUR 500 billion to a total indicative amount of EUR 1,850 billion and extended the horizon for net purchases under the PEPP to at least the end of March 2022, while the reinvestment of principal payments from maturing securities purchased under the PEPP is extended until at least the end of 2023. The Eurosystem's priority objective is to preserve highly favourable financing conditions for all economic participants, from companies to households and governments.

The conditions of the third series of Targeted Longer-Term Refinancing Operations (TLTRO III) were adjusted (12-month extension to the period during which an additional 50 bps interest rate reduction will apply; total amount that counterparties are entitled to borrow raised from 50% to 55% of their stock of eligible loans). These new conditions⁶ will be made available only to banks that achieve a new lending performance target⁷. Three additional operations will be conducted between June and December 2021.

The set of collateral easing measures adopted on 7 and 22 April 2020 will be extended to June 2022 to ensure that banks can make full use of the Eurosystem's liquidity operations.

Four additional Pandemic Emergency Longer-Term Refinancing Operations (PELTROs) will also be offered in 2021, which will continue to provide an effective liquidity backstop. Furthermore, the Eurosystem repo facility for central banks (EUREP) and all temporary swap and repo lines with non-euro area central banks will be extended until March 2022.

1.2 The crisis has exacerbated existing risks connected with the trend increase in private debt (households and companies) and the sustainability of government debt

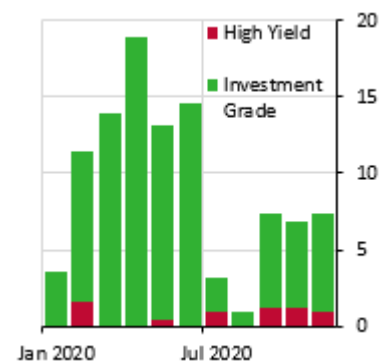
Support measures made it possible to ensure continued business financing, but solvency issues are becoming pressing amid a prolonged economic slowdown

Financing for the economy was maintained by a set of strong measures

The economic shock triggered by the spreading pandemic and health measures led to steep revenue declines for companies, putting pressure on their cash situations. At the start of the health crisis in Europe, non-financial corporations (NFCs) and especially lower rated firms (BBB- and high yield⁸) encountered difficulties in obtaining market financing (Chart 1.4).

Conversely, banks swiftly provided extensive financing: large companies were quickly able to tap into available credit lines, while many very small enterprises (VSEs) and smaller small and mid-sized enterprises (SMEs), which are heavily reliant on bank financing, turned to government support mechanisms⁹: by 18 December, banks had distributed EUR 129.5 billion under the state-guaranteed loan

Chart 1.4: FR NFC bond debt issuance
x: time (months) / y: EUR billion



Sources: Dealogic

Note: NFC for non-financial corporations, see footnote 8 for definitions of high yield and investment grade

⁶ ECB press release on TLTRO, 10 December 2020

⁷ ECB: this new target is linked to the modification of the evaluation period for performance threshold measurement (extract from the press release: "the lending performance threshold that needs to be met in order for a participating counterparty to attain the minimum interest rate on TLTRO III operations over the extended period of reduced interest rates is set at 0% between 1 October 2020 and 31 December 2021. The new evaluation period provides further incentives for banks to maintain the level of credit support that they have provided since the start of the pandemic").

⁸ The high yield segment refers to issuers/issues rated BB+ and lower while the investment grade segment is for issuers/issues rated BBB- and higher.

⁹ While in March, the increase in loans was primarily driven by lending to large companies and mid-tier firms (EUR 33 billion increase as these companies made heavy use of available credit lines), lending to small and mid-sized enterprises (SMEs) then took over, with extensive use made in particular of the state-guaranteed loan (PGE) scheme. Between March and the end of September, the cumulative net flow of bank credit to NFCs totalled EUR 116 billion, with SMEs alone accounting for EUR 67 billion of this.

(PGE) scheme, out of which 75% for SMEs and VSEs. NFC gross debt (bank loans and debt securities) increased by around EUR 175 billion overall between March and September 2020, compared with just EUR 65 billion over the same period in 2019.

Corporate cash holdings increased in parallel, rising by EUR 174 billion¹⁰.

As a result, the overall net debt of French companies increased only slightly over the period, climbing by EUR 0.3 billion, below the pre-crisis average monthly growth rate of EUR 4 billion recorded between January 2017 and February 2020.

However, the difference between gross and net debt conceals widely different corporate situations (see [chapter on the situation of NFCs](#)) and partly reflects a time lag between incoming and outgoing funds (notably in connection with the postponement of tax and social security payment deadlines), suggesting that net debt will increase in the coming months.

Currently, banks, the non-bank sector and the Eurosystem continue to provide financing to the economy under favourable terms for borrowers.

While bank debt accounted for the lion's share of the increase in gross debt, companies made brisk use of market financing once again from end-March onwards, after a sharp stop during two weeks mid-March. Highly rated companies have issued record amounts of bonds since the start of the year, with issuance concentrated in April, May and June before slackening over the summer.

Meanwhile high yield issues recovered strongly after shutting down in March and April (Chart 1.4). These issues took place under favourable financial conditions. In the euro area, spreads over sovereign securities of the same maturity narrowed, falling from their level at the peak of the crisis to draw closer to pre-crisis readings on both the investment grade and high yield segments (Chart 1.5).

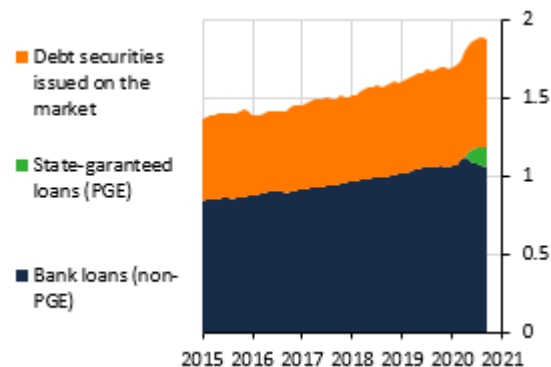
In addition to Eurosystem purchases, the non-bank sector, which includes insurance corporations and investment funds, for example, absorbed a significant portion of the new issuance from the end of March to the end of June (Chart 1.7).

Chart 1.5: Corporate bond spreads
x: time / y: basis points



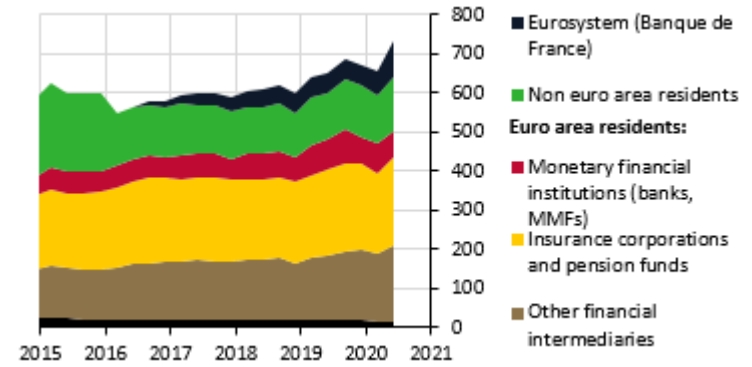
Sources: Bloomberg, ICE Bank of America – Merrill Lynch index
Most recent value: 30 November 2020.

Chart 1.6: Financing methods used by French companies
x: time / y: EUR trillion



Sources: Banque de France (webstat), Ministry of the Economy and Finance
Most recent value: end-September 2020

Chart 1.7: Holders of debt securities issued by French companies
x: time / y: EUR billion



Source: ECB (SHS and SDW), Banque de France calculations
Note: MMF for money market funds
Most recent value: end-June 2020

¹⁰ Banque de France, *Financial situation of households and corporates*, October 2020

NFC rating outlooks remain under threat

Although there was a round of NFC rating downgrades by all the credit rating agencies in 2020, no rated company has defaulted since the outbreak of the crisis.

Obviously, this scope does not capture the many failures of smaller, unrated companies, with over 14,600 SMEs failing between April and September 2020. That said, given the scale of the crisis, the number of failures remains contained, thanks to support measures and the suspension of administrative procedures¹¹.

The number of failures recorded between July and September 2020 was around 40% lower than that observed over the same period in

2018 and 2019, according to Banque de France statistics. The trend also reflects debt moratoria, which were widely used¹². In December, the European Banking Authority reactivated its guidelines on moratoria¹³, which should continue to support the economy. Corrected for seasonal variations, the average number of failures between July and September 2020 increased by 51.9% compared with the average from April to June 2020¹⁴.

While the pace of downgrades slowed over the summer (Chart 1.8), many companies remain at risk, as reflected in the large share of companies assigned a negative outlook or placed under credit watch by the rating agencies.

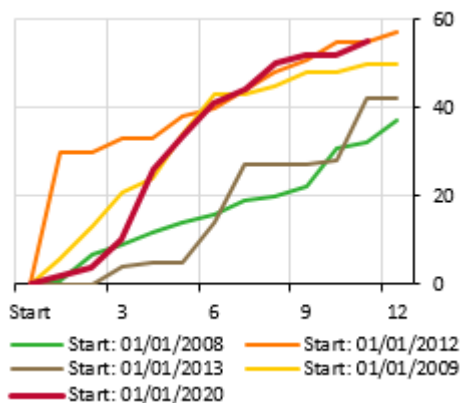
Overall, 27% of NFC bond debt has been assigned a negative outlook at the end of November 2020. A total EUR 196 billion worth of debt, most of it rated either AA (around EUR 72 billion) or A (EUR 82 billion), could therefore be downgraded in the near future. Although the bulk of outstanding debt rated BBB continues to have a stable outlook, 9% has been assigned a negative outlook, meaning that EUR 19 billion worth of debt, out of which EUR 12 billion could be downgraded to speculative grade (Chart 1.9).

A specific [chapter](#) takes a more detailed look at how NFCs are facing up to the health crisis.

The shock to household income remains contained at this stage

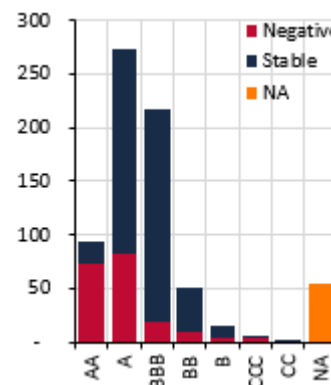
Measures to support households, including partial employment schemes, have safeguarded a large share of household employment and disposable income. Despite this significant support, however, the shock has had

Chart 1.8: Rating downgrades for French listed companies from the start of each crisis.
x: time / y: number of downgrades



Source: Bloomberg, S&P, Moody's, Fitch
Scope: All French companies rated by one of the three credit rating agencies. An aggregate rating is obtained by averaging the ratings from the three agencies and is used in this chart. Note that the number of companies followed by the agencies increases over time. The selected periods correspond to intervals of time featuring weak growth as well as a high number of downgrades.

Chart 1.9: Distribution of French corporate debt by outlook and rating
x: time / y: EUR billion



Source: Banque de France and Bloomberg
Note: Data on outstanding amounts as at end-June; outlook data as at end-November 2020. N/A indicates unrated securities or securities whose ratings were not available in Banque de France database. Outlook refers to the company's outlook

¹¹ Monthly data, adjusted for seasonal and working-day variations, www.banque-france.fr/statistiques/chiffres-cles-france-et-etranger/defaillances-dentreprises/suivi-mensuel-des-defaillances

¹² <https://eba.europa.eu/banks-report-significant-use-covid-19-moratoria-and-public-guarantees>

¹³ <https://eba.europa.eu/eba-reactivates-its-guidelines-legislative-and-non-legislative-moratoria>

¹⁴ www.banque-france.fr/statistiques/chiffres-cles-france-et-etranger/defaillances-dentreprises/suivi-mensuel-des-defaillances

mixed effects and is taking place against the backdrop of a swift increase in the debt levels of French households over recent years.

The heterogeneous effects of the shock on households reflect the shock's uneven impact on different sectors (cf. above) but also different employment situations, as salaried employment was largely protected whereas more precarious forms of employment and self-employed people were harder hit. Thus, while the temporary fall in household consumption due to the first lockdown resulted in a significant increase in household saving (approx. EUR 90 billion at the end of the third quarter of 2020), wealthier households accounted for much of the additional saving. A recent study by the *Conseil d'analyse économique* (CAE – Economic Analysis Committee) estimated that the wealthiest 20% of households accounted for 70% of the additional bank savings set aside as at end-August¹⁵.

Furthermore, the shock is taking place against the backdrop of a rapid increase in household debt, which has caused repayment costs, assessed at both individual and macroeconomic levels (Chart 1.10), to rise rather than fall, despite the decline in interest rates.

The high debt-service-to-income ratio among a substantial proportion of borrowers unquestionably accounts for the significant loan renegotiations seen between March and May 2020, whose primary motivation differed from that of previous rounds of renegotiations. Whereas previously borrowers sought to lock in lower interest rates, renegotiations from spring 2020 onwards were aimed at lowering repayment costs, without renegotiating the interest rate.

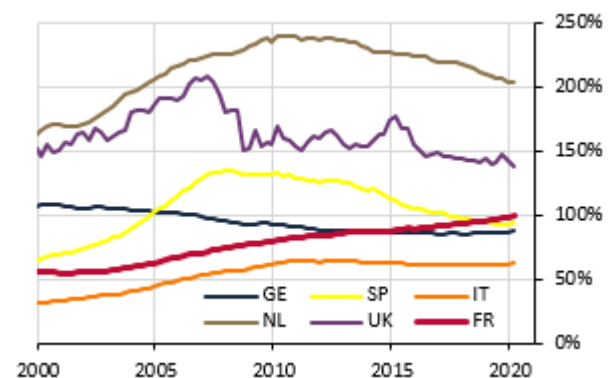
At this stage, and given the scale of government support, the cost of the elevated level of household debt is chiefly macroeconomic, and household credit risk has not, in principle, increased considerably. At end-November 2020, 97,552 excess debt cases had been filed year to date, compared with 132,624 at the same point in the previous year, i.e. a decline of around 26%. Specifically, while the bulk of the decline took place between March and July 2020, the rate at which cases were filed in the autumn of 2020 was still approximately 10% lower than the rate in autumn 2019.

However, households' capacity to repay their debt could be impaired if unemployment were to increase due to an economic slowdown. From a macroeconomic perspective, high repayment costs are a drag on a recovery in household consumption. Household credit risk remains under control: given the consequences (for themselves) of defaulting, households prioritise repaying their debts, by adjusting consumption if need be.

Box 1.2: Recommendations by the *Haut Conseil de Stabilité Financière* (HCSF – High Council for Financial Stability)

Between 2015 and 2019, households' debt increased rapidly (+ 5.3 % year-on-year in 2019 after + 5.7 % in 2018). This strong momentum was in particular bolstered by residential housing loans dynamism (+ 5.8 % in 2018 and + 6.8 % in 2019), which was driven by the decline in interest rates, the income growth of households but also by a gradual but sustained drift in residential housing credit standards (Charts 1.11 and 1.12).

Chart 1.10: Household debt ratio
x: time / y: % of gross disposable income



Sources: Banque de France

Note: GE for Germany, SP for Spain, IT for Italy, NL for the Netherlands, UK for the United Kingdom, FR for France

Most recent value : end-June 2020

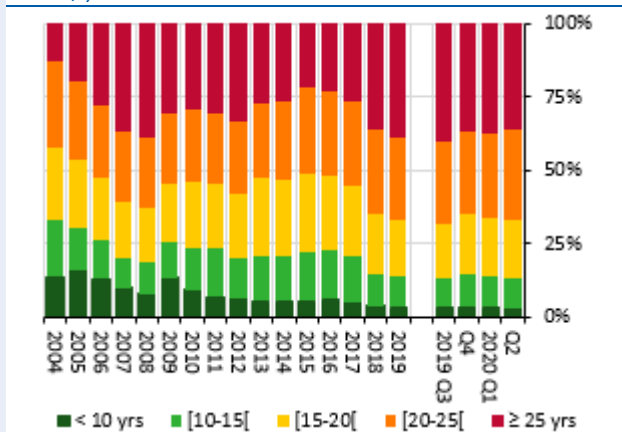
¹⁵ This study uses bank account data, making it possible to conduct a close analysis of the heterogeneous changes in household consumption and savings. For more details, see: <http://www.cae-eco.fr/dynamiques-de-consommation-dans-la-crise-les-enseignements-en-temps-reel-des-donnees-bancaires>

With these households' debt dynamics and in order to prevent the continuing trend of credit terms, the HCSF issued on 20 December 2019 Recommendation No. R-HCSF-2019-1¹⁶ in which it called on credit institutions and financing companies to exercise caution by taking two criteria into account when granting home loans in France:

- (i) The debt-service-to-income ratio (share of the household income dedicated to debt repayment) at origination should not exceed 33% of the disposable income;
- (ii) credit period should not exceed 25 years;

Chart 1.11 : Distribution of maturities at grant

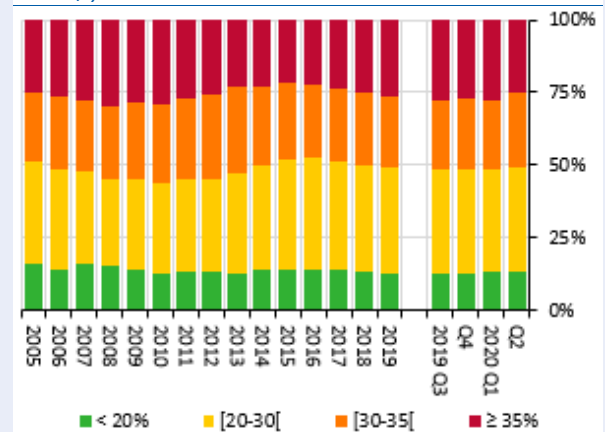
X : time / y : %



Source : Banque de France.

Chart 1.12 : Distribution of the effort rate at grant

x : time / y : %



Source : Autorité de Contrôle Prudentiel et de Résolution (ACPR).

Credit institutions were however allowed flexibility up to 15% of new quarterly loan origination, to grant new loans derogating from these credit conditions.

A year on since the recommendation was issued, the gradual trend in credit standards seen over recent years has curbed: the share of loans with high debt-service-to-income ratios and long credit periods has gradually waned. This change does not seem to have constrained loan granting dynamics: despite credit production (excluding repurchases and renegotiations) temporarily declined in March-April 2020, the rebound seen since May has more than offset this decline and the monthly average production since March stands at the level of the first semester of 2019. In September 2020, new loans production (excluding repurchases and renegotiations) reached a record high level (EUR 19.0 billion) and again in October (EUR 20.2 billion).

Based on the observation of the first year implementation, the HCSF decided to amend the criteria contained in the December 2019 recommendation¹⁷ by (i) allowing two-year grace periods for some loans, (ii) increasing the maximum debt-service-to-income ratio at origination from 33% to 35% while indicating calculation methods, (iii) increasing the flexibility for credit institutions to 20% of the new production excluding repurchases and renegotiations, with greater targeting of first-time buyers.

The economic slowdown and the required extension of support measures have fuelled a sharp increase in government debt

The health crisis prompted France, like most other countries, to implement substantial fiscal measures to cushion the economic impact and foster a subsequent recovery. The European Commission estimated the amount of

¹⁶ https://www.economie.gouv.fr/files/files/directions_services/hcsf/HCSF20191212_R2019_1_Recommandation.pdf

¹⁷ HCSF, press release, 17 December 2020

approved government aid at over EUR 2.190 trillion at the start of June 2020, most of which was provided in the form of state-guaranteed loans and low-rate loans.

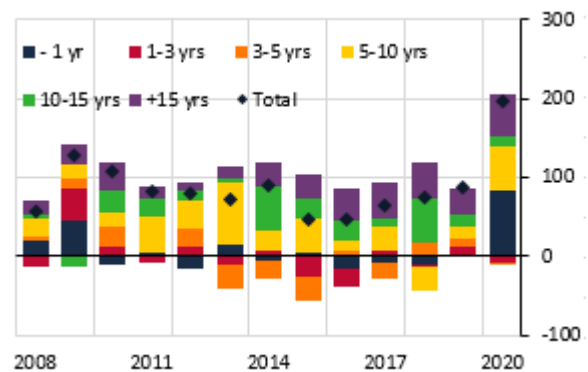
In the euro area, these discretionary measures supported a highly expansionary fiscal stance representing about 4.5% of GDP¹⁸ on average in the European Union, although there were significant disparities across countries (from 1% of GDP in Spain to 7% in Lithuania)¹⁹, potentially reflecting different starting positions in terms of countries' room for manoeuvre. The sharp slowdown in activity in 2020, coupled with these exceptional support measures and the effects of automatic stabilisers, will lead to a severe deterioration in government finances in 2020.

Euro area government deficits climbed to 8.8% of GDP in 2020, up from 0.6% in 2019 and exceeding the record deficit of 6.4% set in late 2009. In almost two-thirds of Member States, deficits are set to continue to exceed 3% of GDP in 2022²⁰. In France, the government (29 December 2020 French finance law for 2021) is forecasting a deficit of 8.5% of GDP in 2021 (compared with 3% in 2019). Forecast for 2020 remains at 11.3% of GDP.

To finance these support measures, Agence France Trésor issued a record amount of net debt in 2020, with an emphasis on short-term issues and issues maturing in five to ten years (Chart 1.13). All in all, euro area governments issued close to EUR 1 trillion in net debt over the first ten months of 2020, according to the European Central Bank²¹.

Chart 1.13: Net debt issuance for France

x: time / y: EUR billion



Sources: Bloomberg, AFT

Most recent value: end-December 2020

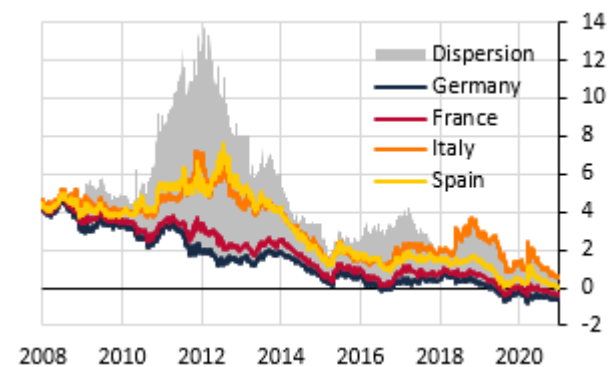
In terms of the debt/GDP ratio, the European Commission is projecting a ratio of 115.9% for France at end-2020, above that of the euro area (101.7%), and 119.4% in 2022 (compared with 102.6% for the euro area)²². On the denominator side, the sharp decline in activity in 2020 accounts for around half the increase in the ratio for Italy, Portugal, Spain and France.

The new restrictions imposed as a result of the second wave of the virus will lead to additional financing needs for stimulus spending. The macroeconomic benefits of these expenditures justify keeping them in place for as long as the effects of the health crisis last, despite the sharp increase in debt.

In the short term, the risks linked to this use of debt look low. For one thing, debt refinancing is currently taking place at record low rates, including for the euro area's most highly indebted countries; euro area sovereign debt benefits from the presence of the Eurosystem on the secondary market, the hunt for yield by investors, and the success of the first shared European debt issues, worth EUR 39.5 billion, which are intended to finance partial

Chart 1.14: Yields on 10Y debt, euro area countries

x: time / y: %



Source: Bloomberg

Notes: Dispersion excludes Greece

Most recent value : end-December 2020

¹⁸ This does not include tax deferrals and public guarantees.

¹⁹ [European Commission, European Economic Forecast, Autumn 2020.](#)

²⁰ European Commission, *op.cit.*

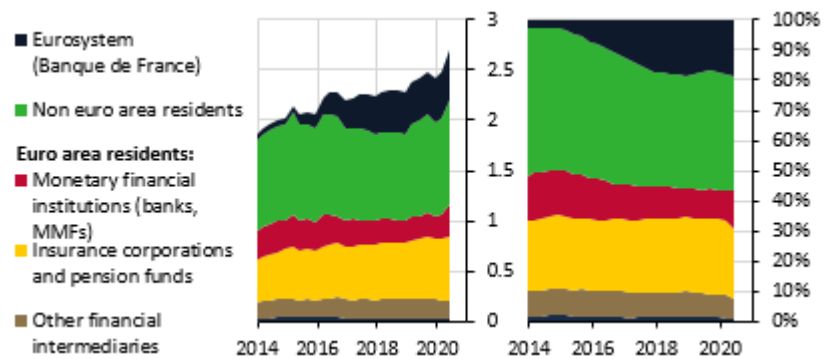
²¹ [ECB, Financial Stability Review, November 2020.](#)

²² European Commission, *op.cit.*

unemployment arrangements and which have seen strong demand among investors²³.

Yields on euro area country sovereign bonds continued to decline despite the increase in debt, and the dispersion of yield spreads between countries also narrowed (Chart 1.14). The weighted average rate for French medium- and long-term issues over the first three quarters of the year came to -0.11%, compared with 0.11% in 2019 and an average of 1.63% over 2009-2017. France's public finances should continue to benefit, in the short and medium term at least, from low interest rates, with a favourable impact on debt dynamics, provided the interest rate at issuance remains lower than the average growth rate of the economy.

Chart 1.15: Holders of French government debt
x: time / y: EUR trillion and %



Sources: ECB (SHS, SDW), Banque de France calculations

Notes: Holdings of government debt (including central government and various general government entities including social security and local authorities) by type of agent. The Eurosystem's holdings are proxied by considering only the Banque de France. Detail for certain categories:

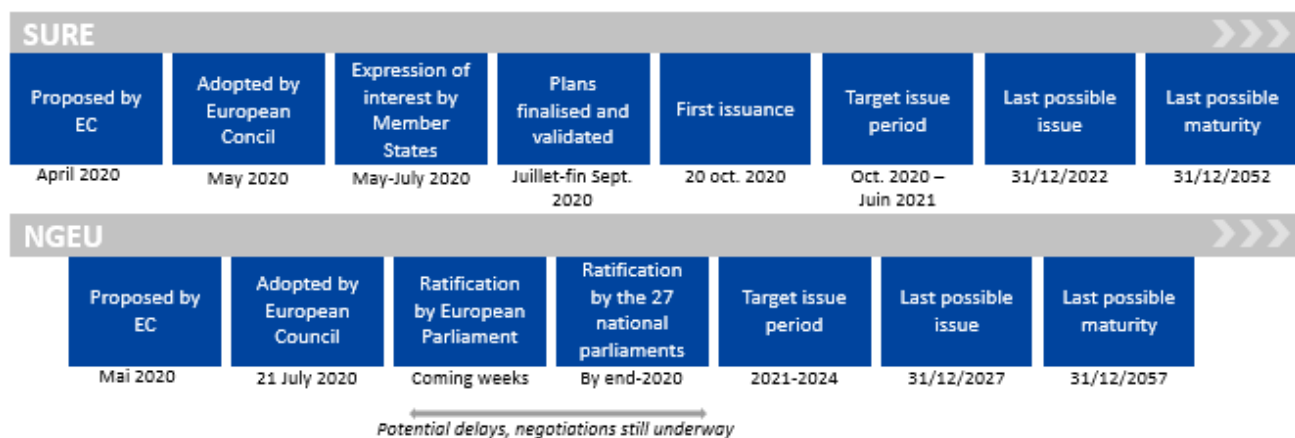
- Other financial intermediaries: Financial participants other than monetary financial institutions, insurers and pension funds. These are chiefly non-money market CIS;
- Other residents: In particular general government, NFCs and households.

Most recent value: end-June 2020

Furthermore, this additional debt is essentially borne by the Banque de France under Eurosystem purchasing programmes and, to a lesser extent, by French banks and insurers, and then by the rest of the world (Chart 1.15), which limits the risk of volatility in holdings.

In addition, the fiscal support mechanisms adopted at European level, including the Recovery and Resilience Facility (RRF), are bolstering the area's overall fiscal strength by particularly targeting the countries that have been hardest hit by the pandemic, through subsidies and loans at favourable terms. Forthcoming shared debt issues under the SURE programme and Recovery Fund will make the European Union one of the largest debt issuers in Europe over the coming years (Chart 1.16). These shared debt issues will make it possible to access market resources at advantageous rates. Whatever happens, they will remain a shared financial burden for European taxpayers, who will be responsible for repaying them.

Chart 1.16: Timeline of SURE and Next Generation EU (NGEU) programmes
x: time / y: programme



Source: Banque de France

²³ Under the Support to Mitigate Unemployment Risks in an Emergency (SURE) programme, the European Union has issued EUR 39.5 billion in three rounds since mid-October across five maturities (5Y, 10Y, 15Y, 20Y and 30Y) and with yields at issue between France and Germany for equivalent maturities. Demand has been exceptionally high (EUR 522 billion)

Still, the sharp increase in government debt necessarily raises the question of longer-term sustainability. Higher debt increases long-term vulnerability to rate increases or economic shocks. In particular, with reduced fiscal leeway, Member States may be constrained in their ability to respond to new shocks, and the effects caused by a shock to the real economy would be much more pronounced. Moreover, in the event of a prolonged weak economic recovery, debt could increase because the primary balance is incompatible with a sustainable decrease in debt (tax revenues are too weak to initiate the decline). Finally, the increased debt stock exposes France to a sovereign rating downgrade and a reduction in credit quality resulting in higher interest rates that would push up the debt burden.

Sovereign debt must also be monitored because of its significant interactions with banking risks, as well as with the business sector (see above). Contingent liabilities linked to guaranteed loans could further increase sovereign debt levels if the economic situation deteriorates and these guarantees are called in²⁴.

The maximum at-risk amount looks to be relatively modest when compared against total government debt. However, materialisation of these risks could add to the existing pressures on fiscal strength. In the event of a shock to the economy, there is the risk of a loop in which a sovereign downgrade and the parallel increase in bank risk (caused by the higher cost of company risk and the fall in the value of sovereign debt) feed off and strengthen each other.

1.3 The sharp rebound on financial markets makes some markets vulnerable to the risk of a correction

The apparent market disconnect can be partially explained by a number of factors

Massive support measures and better than expected macro data for the third quarter of 2020 fuelled a pronounced improvement in risk sentiment on markets. From the summer onwards, US and to a lesser extent European equity markets rebounded sharply from their March troughs, with US markets actually hitting record highs.

These valuation levels may seem at odds with current macroeconomic conditions, with major uncertainties hanging over the recovery. Corporate earnings, although better than expected overall, are declining, while a fresh round of rating downgrades cannot be ruled out.

However, a number of factors can explain the disconnect, notably in connection with the decline in sovereign yields of low-risk countries. In other words, equity market gains are partly attributable to the prolonged low interest rate environment following the March shock. A detailed analysis of valuation levels is provided in the [chapter that explores the potential disconnect between financial markets and the real economy](#).

In addition, investors appear to be discriminating between sectors according to their resilience to the consequences of Covid-19. A portion of the rebound and the outperformance of some indices may therefore be attributed to the index share of tech companies (over 25% of the S&P 500 for example), which have been far less severely impacted by the crisis. In contrast, tech has a much smaller weighting in French equity indices.

However, these are partial factors and explain only some of the increase, while other indicators point to excessive risk-taking.

²⁴ The Draft Finance Act assumes a potential gross loss of 4.5% of PGE loan amounts (not including gains associated with the state guarantee, for which a charge is billed). In the event of a more adverse economic shock and increased default probabilities, a more stressed estimate could see losses rise to as much as 6.2% of PGE loan amounts.

On bond markets, for example, risk premiums on the HY segment have fallen significantly from their peak in mid-March in Europe and in the United States, drawing closer to their pre-crisis levels, in spite of fairly elevated default rate projections for the segment and the risk of tighter credit conditions.

In the event of a shock, high asset valuation levels could amplify the impact on financial stability.

A sudden decrease in asset prices, in a context of high volatility, could create substantial liquidity needs, notably to honour increased margin calls under centrally and non-centrally cleared transactions. This is particularly the case for margin requirements connected with investors' exposures to equity futures or over-the-counter derivatives, but also to commodity and interest rate futures or over-the-counter derivatives.

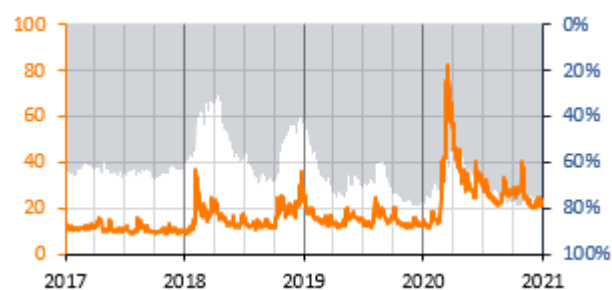
Margin calls in this regard were significant last spring and have the potential to create atypical and potentially destabilising liquidity requirements. The risk of liquidity stress could affect banks, although they are unlikely to be severely impacted given their cash holdings.

However, the issue could be more problematic in terms of the impact on the non-bank financial intermediation sector and particularly on funds and insurers, as well as NFCs, which may also be exposed to this type of product, given their smaller liquidity reserves (much smaller in the case of NFCs).

Following a period during which risks were reduced in March, the European non-bank financial sector has begun taking on more credit and liquidity risks in recent months, through a resumption of inflows into euro area investment funds.

Chart 1.17: Speculative position on volatility

x: time / y (left): VIX in basis points / y (right): percentage of investors expecting the VIX to remain stable (reverse scale)



Sources: ECB, Bloomberg. Banque de France calculations.
Most recent value: end-December 2020

Funds have raised their exposures to instruments with longer maturities and to lower rated company debt, while the cash holdings of bond funds are back to pre-crisis levels.

A liquidity shock could force them into fire sales of financial assets in order to obtain liquidity, procyclically exacerbating additional asset depreciation.

These developments expose investment funds to significant outflows in the event of new turbulence and make it all the more important to address the sector's structural vulnerabilities, which are described in the [chapter that analyses the disruptions to non-bank financing](#).

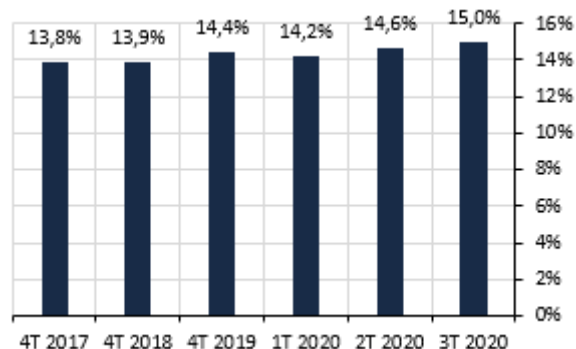
1.4 The continued crisis environment is undermining the profitability of banks and insurers, which nonetheless have sound solvency positions.

The Covid-19 crisis has strengthened expectations that the low interest rate scenario will persist for a long time. This presents a major structural challenge for French financial intermediaries.

French banks have solid solvency and liquidity positions.

The average CET1 solvency ratio of France's six main banking groups continued to improve from the already historically high levels recorded at the start of 2020 (Chart 1.18). By the end of September 2020, the average ratio had continued to increase thanks to the combined effects of full retention of 2019 earnings and support measures implemented at the supervisory level, including the CRR “quick fix” package and the extended IFRS 9 transition period. Note that the decline in risk weighted assets (RWA) between the first and third quarters (Chart 1.20) also had a positive impact on the CET1 ratio.

Chart 1.18 : CET1 ratio of the six main French banking groups
x: time / y: %



Sources : ACPR

Finally, leverage ratios fell in the first and second quarters before evening out in the third; the leverage ratio was more impacted than the CET1 ratio as the increase in balance sheet size was primarily due to assets enjoying a low or zero risk weighting, such as central bank reserves and government bonds, plus state-guaranteed claims to a lesser extent.

Banks also boast a solid liquidity position. Issues of various types of bank debt recovered strongly from April 2020 onwards, totalling EUR 49.1 billion at end-September, compared with EUR 48.6 billion in the same period of 2019. These issues carried an average yield of 0.53%, which compares favourably with the average yield in 2019 (0.81%). The stress that initially appeared in late February when primary bond markets shut down and yields at issuance increased was thus quickly alleviated.

Moreover, the highly favourable conditions offered through refinancing operations in euro with the Eurosystem led to major uptake by banks. Demand for 3M and 3Y LTROs carried out on 25 March 2020 amounted to EUR 194 billion; under the 3Y TLTRO carried out in June (September), EUR 1,308 billion (EUR 174 billion) was allotted to 742 institutions in the euro area. The most recent TLTRO III to date (December 2020) amounted to EUR 50.4 billion, which was allotted to 156 institutions, for an injection of EUR 37 billion net of repayments and maturities. In total, allotted amounts through targeted long term refinancing operations (TLTRO III) at highly favourable conditions accounted for EUR 1,533 billion in June, September and December, which represents a net liquidity injection of EUR 1,131 billion.

Following the health crisis, the aggregate total assets of French banks have increased, while risk-weighted assets remain roughly the same

The total assets of France's six main banking groups increased by 14% between end-2019 and September 2020, rising from EUR 7.895 trillion to EUR 8.005 trillion (Chart 1.19). The increase was mainly attributable to:

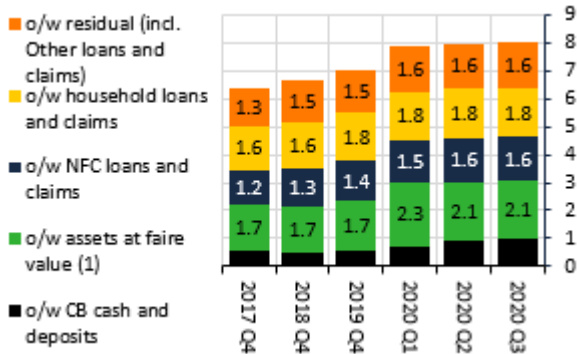
- an increase in central bank cash holdings and sight deposits, which rose by 72% from EUR 590 billion to EUR 1.014 trillion and now account for 13% of total assets, versus 8.4% at the start of the year;
- Assets at fair value (through profit and loss or equity)²⁵ climbed by 18%, rising from EUR 1.743 trillion to EUR 2.050 trillion, with the trading book accounting for 83% of this;

²⁵ Government securities, private sector bonds, equities, derivatives (except hedging derivatives): all Available For Sale financial instruments prior to IFRS 9

- NFC loans and claims rose by 8% to EUR 1.552 trillion (a EUR 116 billion increase, which can be linked to the EUR 120 billion in PGE loans distributed in the same period), while household loans and claims were up by 2%. This is the logical corollary to the increase in companies' bank debt.

Chart 1.19: Total assets of France's six main banking groups

x: time / y: EUR trillion

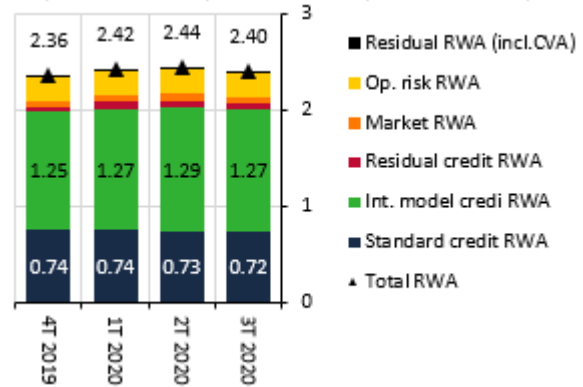


Sources: Autorité de Contrôle Prudentiel et de Résolution (ACPR)

Note: (1) assets at fair value (through profit and loss or equity)

Chart 1.20: Risk-weighted assets (RWA) of France's six main banking groups

x: year / y: EUR trillion



Sources: Autorité de Contrôle Prudentiel et de Résolution (ACPR)

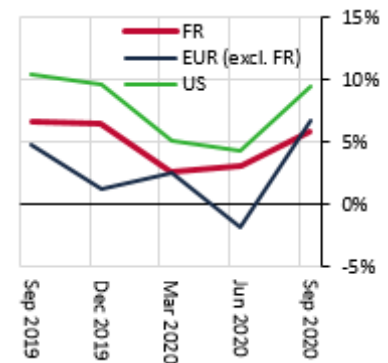
However, when total assets are risk-weighted, the increase in risks borne by French banks looks smaller. Over the first nine months of 2020, between increased volumes and the initial downgrades to the quality of exposures, the risk-weighted assets (RWA) of France's six main banking groups rose by a maximum of 2.9% (end-June) (Chart 1.20). This increase was mitigated by several measures, including the provision of PGE loans and the Capital Requirements Regulation (CRR) "quick fix" package, which lowered risk weights for SME loans. Note, however, that at constant exposure levels, the deterioration in the financial position of NFCs could result in an increase in related RWA.

Meanwhile, banks' net earnings are declining

The aggregate net banking income of France's four largest banking groups²⁶ stood at EUR 90.9 billion at end-September 2020, down 3.9% compared to September 2019. Despite a 3.4% reduction in management expenses, net earnings fell by around 62% to EUR 11.6 billion, owing to the increased cost of risk. Over the first nine months, annualised RoE fell in France to 5.9% (-0.7 pp), and to 9.4% in the United States (-1 pp), and raised to 6.7 % in Europe excluding France (+2 pp) (Chart 1.21).

Chart 1.21: Annualised quarterly RoE

x: time / y: %



Sources: ACPR

Note: RoE for Return on Equity

A structural decrease in the net interest margin (NIM) of French banks in the low interest rate environment

Conversely, banks are using the low rate environment to refinance at lower rates, notably through Eurosystem refinancing operations, while also benefiting from the tiering mechanism set up in late 2019, which allows a portion of deposits held with central banks to be exempt from the effects of negative interest rates. The fact that the combined effect of tiering and refinancing rates could reach -1% mitigates the cost borne by banks linked to

²⁶ BNPP, Société Générale, BPCE, Crédit Agricole Group

monetary policy implementation and arising from the sharp increase in excess reserves, which earn interest at the deposit facility rate of -0.5%. Net Interest Margins were down over the first nine months of the year 2020.

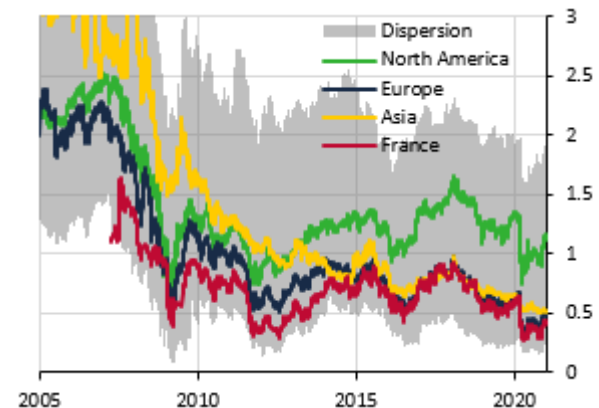
A cyclical increase in banks' cost of risk

Owing to the persistent low interest rate environment, the run-off of outstanding loans agreed earlier at higher rates will continue to depress banks' average return on assets. The crisis has also led to an increase in bank deposits, reflecting both precautionary savings and reduced consumer spending during the lockdown. Most of this is non-interest bearing, with a minimum return of 0%. If rates are negative, an increase in funds earning 0% could place an additional drag on the net interest margin.

Deteriorating macroeconomic prospects pushed up the cost of risk, which undermined banks' earnings over the first nine months of the year. Over that period, the cost of risk stood at EUR 11.5 billion, EUR 6.2 billion higher than in the same period in 2019, during which the cost was admittedly at a record low level (Box 1.3). The increase in the cost of risk was partly driven by corporate banking activities (EUR 2 billion increase), which were hit by provisioning for several large defaults, and by retail banking in France (EUR 1.6 billion increase).

The cost of risk could continue to affect banks' accounting and prudential indicators in the short and medium term (Chart 1.22) owing to the tightening of health measures. The increased cost of risk contributed to the fall in pre-tax earnings, which were down by 34.3% compared with the first nine months of 2019.

Chart 1.22: Price-to-book ratios in different regions
x: time / y: units



Sources: ECB, Bloomberg.

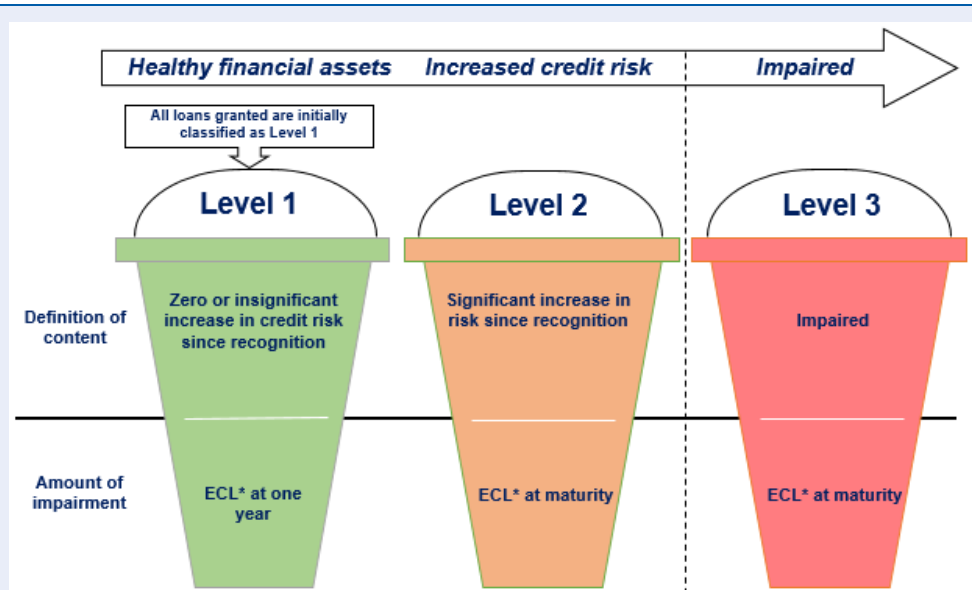
Note: Price-to-book (PB) is a market ratio based on:
(1) the price at which the company currently trades on the stock market; price per share or market capitalisation can both be used for this.
(2) book value, i.e. the value of the company's own funds as recorded on the balance sheet.
Most recent value: end-December 2020

Box 1.3: Provisioning by France's six main banking groups (BNPP, GCA, SG, BPCE, GCM, LBP) in Q3 2020, based on FINREP disclosures

The quarterly cost of risk fell sharply in Q3 compared with the first two quarters of 2020 (EUR 3 billion, after EUR 3.6 billion and EUR 5.9 billion in Q1 and Q2 respectively), but remains above pre-crisis levels. Over nine months, the cost of risk rose by a cumulative 100% compared with the same period in 2019.

After sharp movements in the second quarter, there was a halt in asset transfers from Stage 1 to Stage 2 of IFRS 9²⁷. The increase in the ratio of non-performing loans (NPLs) mainly concerned NFCs (from 3.7% in March to 4.0% in September). The ratio was "diluted" by the surge in outstandings (denominator) over the period, linked in particular to the allocation of PGE loans. NFC NPLs actually increased by over EUR 5 billion, or 10%. Reflecting dimmer macroeconomic prospects, provisioning ratios continued to increase for performing loans (Stages 1 and 2), while falling further for Stage 3 assets (impaired) to reach 51.7%, or 2.2 pp less than in December 2019.

²⁷ Since IFRS 9 on financial instruments came into force on 1 January 2018, European institutions have been required to anticipate the recognition of credit losses using an expected loss accounting model. Financial instruments have to be classified into three stages: **Stage 1** means that the asset's risk has not increased significantly since recognition, while **Stage 2** means that the asset has seen its credit risk increase significantly but is not considered to be impaired (**Stage 3**). Expected losses must be calculated over 12 months for Stage 1 instruments and across the entire maturity period for Stage 2 and 3 instruments.



Because of quality differences between credit portfolios, the implementation flexibilities built into IFRS 9 and supervisory recommendations aimed at preventing the standard from exerting a procyclical effect, it is hard at this stage to assess the provisioning approaches of French banks. Historically, French banks have had a lower cost of risk than their European and US counterparts, with more significant smoothing during the 2008 crisis, for example, which can be attributed in particular to quality differences between credit portfolios and which makes it tricky to conduct cross-country provisioning comparisons. Business support measures, significant uptake of the PGE scheme and moratoria, plus social security nets for households also lessen loan loss experience. The intrinsic quality of portfolios may vary due to factors such as sector breakdown, credit standards, percentage of residential housing loans and housing loan guarantees.

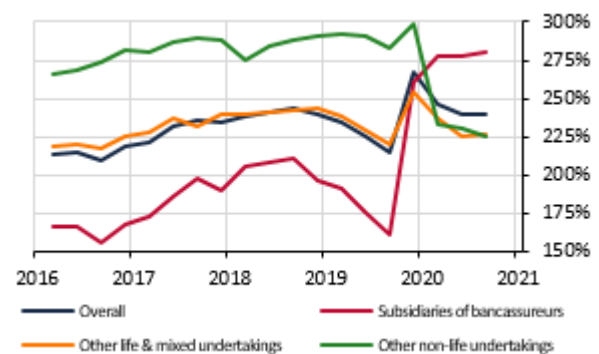
Caution is needed on the coming quarters:

- o The latest lockdown, although less strict and less damaging to economic activity than the one in the springtime, could nevertheless raise the cost of actual risk (Stage 3 assets) as well as for performing loans (Stages 1 & 2) if banks lower the growth assumptions used to calculate expected losses.
- o Leading indicators, such as the increase in renegotiations of loans that are still classified as performing, or in the share of loans for which payments are more than 30 days overdue, suggest that transfers to Stages 2 and 3 could happen going forward, automatically resulting in further increases in provisions.

Insurers have solid capital requirement coverage ratios, despite the low level of interest rates and the health crisis

With interest rates already at historically low levels, equity market volatility and increased corporate bond spreads temporarily impacted the capital and solvency of life and non-life insurers. At the aggregate level, insurers have sufficient own funds to cover capital requirements, but the average coverage ratio did decline significantly with the crisis, falling from 267% to 239% between the end of 2019 and the end of September 2020 (Chart 1.23).

Chart 1.23: Insurers' capital requirement coverage ratio
x: time / y: %

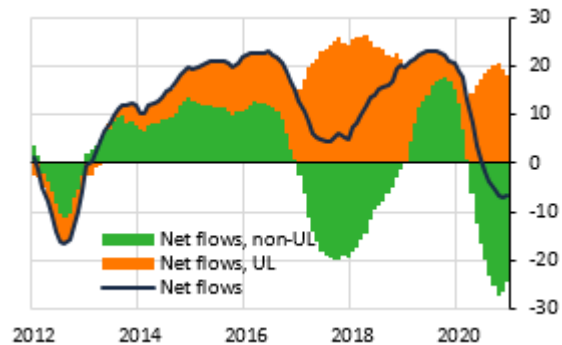


Sources: ACPR

Impact of the low interest rate environment and the health crisis on life insurance: retail investors are prioritising safety and liquidity

The prolonged low rate environment is forcing life and mixed insurers to rethink their models. Until now, life insurance has been popular among French retail investors, especially non-unit-linked products that offer a capital guarantee and are redeemable at any time, typically without charge. In response to the decline in interest rates that has undermined their financial income, insurers have built up alternative unit-linked (UL) product ranges that offer investors the opportunity to earn higher returns in return for bearing market risk. The public authorities have however urged professionals to be extremely transparent when dealing with retail investors.

Chart 1.24: Net cumulative life insurance flows (12-month period)
x: time / y: EUR billion



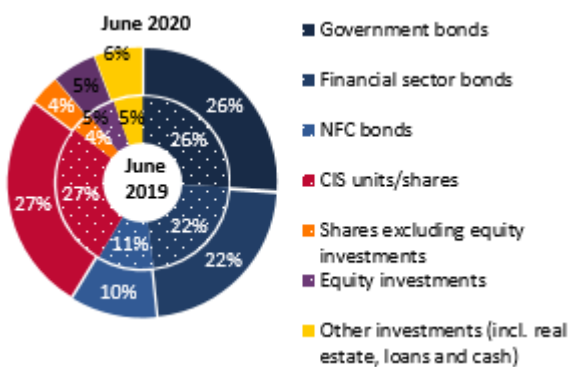
Sources: ACPR

In 2020, as the lockdown prompted French households to set aside additional savings, insurers faced net outflows, approximately EUR 6.5 billion between January and September on redeemable products (i.e. non-unit-linked and unit-linked products). These outflows result from strong net outflows on non-unit-linked products (EUR -23.8 billion²⁸), in a very low interest rate environment and net inflows on unit-linked products (EUR +17.2 billion) (Chart 1.24). Outflows peaked during the lockdown months of March, April and May at around EUR 4 billion per month.

Insurers invest mainly in highly-rated securities

Market volatility due to the Covid-19 crisis poses an additional risk to life insurers, whose profitability was already being hurt by the prolonged low interest rate environment. The decline in financial income caused by the decrease in income on fixed income assets is having a big impact on life insurers' earnings. The average return on assets (RoA) fell from 3.5% to 2.6% between 2013 and 2019.

Chart 1.25: Decomposition of insurers' assets

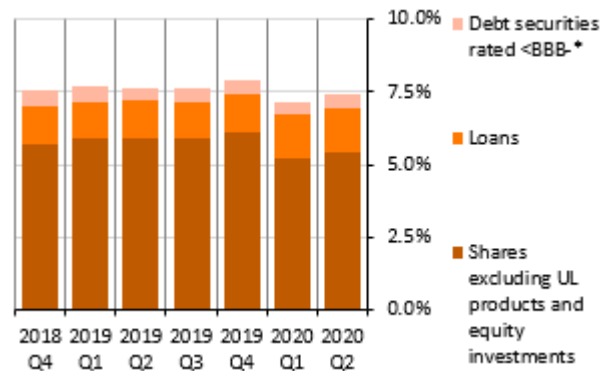


Sources: ACPR France

Note: the chart does not take into account the look-through approach of OPC

Chart 1.26: Breakout of risky investments

x: time / y: %



Source: ACPR

Note: Rating applies to bonds, structured securities and guaranteed securities

However, despite a decline in asset returns in recent years, insurers have made few changes to their overall asset allocation and continue to prioritise safe and liquid investments, such as sovereign bonds (26% of investments

²⁸ Net inflows/outflows figures after taking into account net arbitrage between products.

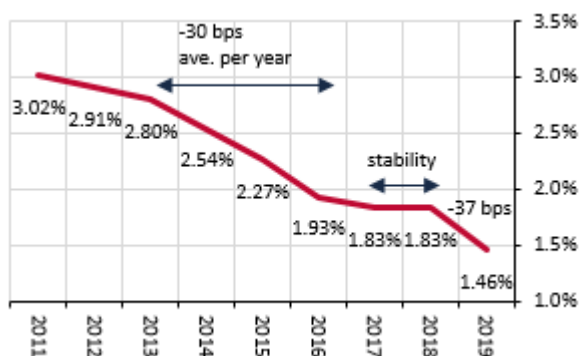
before application of the look-through approach), financial sector bonds (22%), NFC bonds (10%) and shares (4%) (Chart 1.25).

As a result, the proportion of the riskiest assets – shares excluding UL products (where insurance policyholders bear the risk) and equity investments, credits and low-rated debt securities – remained stable at the beginning of the crisis at around 8%. Furthermore, the share of liquid, high-rated investments equips insurers to cope in the current setting with potential delays in collecting business contributions for the death & disability sector in particular or an increase in life insurance surrenders.

Revaluation of contracts is decreasing and provisions have been set aside

Chart 1.24: Revaluation rate

x: time / y: %

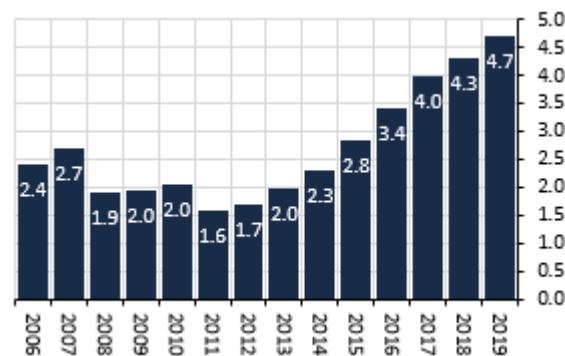


Sources: ACPR

Note: bps for basis points, ave. for average

Chart 1.25: Allocation to profit-sharing reserves (PSRs)

x: time / y: %



Source: ACPR

The decline in ROA is offset by various measures with regard to insurers' euro-denominated liabilities. The first measure is the decrease in revaluation rates attributed each year to policyholders on their euro-denominated products. The annual return on these contracts is a factor of competition between insurance entities. This reduction has been accompanied by an increase in profit-sharing reserves (PSRs), which allow life insurers to smooth the revaluation of contracts over time. The total amount in PSRs stands at 4.7% of mathematical reserves (insurers' liabilities), which is equivalent to three full years of revaluation.

Now, more than ever, insurers are being forced to rethink their business models. As part of this, they are developing new retirement insurance products and diversifying into other lines of business, such as health insurance, which is occupying a growing place in the business of some life insurers.

1.5 Structural developments could be the source of new risks

Promoting better recognition of climate risk

There is international consensus among financial authorities that climate risk is a financial stability risk (see Box 1.4) requiring swift action, notably through measurement and stress testing. However, the ability to measure climate risks and conduct stress tests is blocked by obstacles, which must be removed. It is critical to promote and implement disclosure and standardised reporting of climate risks to improve the comparability of non-financial data.

Need to standardise climate risk reporting

The Task force on Climate-related Financial Disclosures (TCFD) launched by the FSB in 2015 to establish recommendations on transparency by companies in their climate-related financial disclosures set out in the "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures" (June 2017) 11

recommendations for financial reporting by companies and investors on risks and opportunities related to climate change, which are organised around four pillars (governance, strategy, risk management, indicators and metrics).

By September 2020, 1,440 organisations representing market capitalisation of USD 12.6 trillion had given their backing to the TCFD, which published its third status report in October 2020.

Box 1.4: First report by a US authority on climate risk management

On 9 September 2020, the Climate-Related Market Risk Subcommittee of the Market Risk Advisory Committee of the Commodity Futures Trading Commission (CFTC)²⁹ published a report calling on US financial regulators to recognise that climate change poses serious risks to the US financial system and urging them to move urgently and decisively to measure, understand and address these risks. This official stance, which is unprecedented for a US federal agency, reflects a determination to be more involved in current international work on the issue, notably through the Network for Greening the Financial System (NGFS), which the CFTC called on US regulators to join (Recommendation 4.6).

In the CFTC's view, financial markets will only be able to channel resources efficiently to activities that reduce greenhouse gas emissions if an economy-wide price on carbon is in place at a level that reflects the true social cost of those emissions (Recommendation 1). Existing legislation already provides US financial regulators with wide-ranging and flexible authorities that could be used to start addressing financial climate-related risk now. Insufficient data and analytical tools to measure and manage climate-related financial risks remain a critical constraint.

The CFTC offers several ambitious recommendations, notably covering stress tests and climate disclosures:

- Working closely with financial institutions, regulators should undertake climate risk stress testing as is being undertaken in other jurisdictions and as recommended by the NGFS. (Recommendation 6.6)
- Financial regulators should support the development of US-appropriate standardised and consistent classification systems or taxonomies for physical and transition risks, exposure, sensitivity, vulnerability, adaptation and resilience, spanning asset classes and sectors, in order to define core terms supporting the comparison of climate risk data and associated financial products and services. To develop this guidance, the United States should study the establishment of a standards developing organisation (SDO) composed of public and private sector members. (Recommendation 5.2)
- Regulators should require listed companies to disclose Scope 1 and 2 emissions³⁰.
- The United States should consider integrating climate risk into fiscal policy, particularly for economic stimulus activities covering infrastructure, disaster relief or other federal rebuilding.

Most of the first attempts at standardising climate-related non-financial disclosures have come from US entities, such as CDP, CDSB, GRI, SASB³¹... These may become established as global reference frameworks for climate reporting. Set up by non-governmental organisations, these private entities offer reporting frameworks to record and/or disclose corporate sustainability performances. SASB, GRI and CDP, especially, have begun comparing their frameworks with TCFD recommendations with a view to promoting greater harmonisation.

²⁹ The report does however state in its preamble that: "The views, analyses, and conclusions expressed [...] reflect the work of the Subcommittee on Climate-Related Market Risk of the MRAC, and do not necessarily reflect the views of the MRAC, the Commodity Futures Trading Commission or its staff, or the US Government."

³⁰ The Greenhouse Gas Protocol is a global framework for categorising greenhouse gas (GHG) emissions. There are three scopes. Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from purchased energy (electricity, steam, heat and cooling) generated by external entities. Scope 3 emissions encompass all other indirect emissions across the value chain, including both upstream and downstream.

³¹ the Climate Disclosure Project (CDP), the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB)

In France, Article 173 of the Energy Transition for Green Growth Act introduced an innovative non-financial reporting system. It provides for increased transparency obligations for investors concerning the integration of environmental, social and governance (ESG) criteria in their investment strategies, including recognition of climate risk and the resources implemented to support and promote the energy transition.

Article 29 of the Energy and Climate Act adopted on 8 November 2019 expands these non-financial reporting obligations to include biodiversity-related risks. French public interest companies with over 500 employees are also subject to the European Non-Financial Reporting Directive (NFRD, in force as of 1 January 2018), which requires them to publish a non-financial report on (i) their social performance, (ii) environment protection and (iii) the quality of their governance (ESG criteria)³².

Within Europe, the European Commission has tasked the European Financial Reporting Advisory Group (EFRAG) with considering the question of shared non-financial reporting language for Europe, with a view to drawing up standards that will enable companies to report all of their environmental, social and governance (ESG) data using the same format.

A task force began working on this project in September 2020 and is due to report on the content and structure of this proposed body of European standards on 31 January 2021. This initiative, which is part of the Commission's Green Finance strategy, illustrates Europe's determination to continue to lead the way in regulating and standardising climate-related risks.

Internationally, the International Financial Reporting Standards (IFRS) Foundation has notably proposed the creation, under its auspices, of a standardisation board for climate-related disclosures, which would operate alongside the International Accounting Standards Board (IASB). This proposal, which was published on 30 September 2020, is the subject of a consultation running until 31 December 2020. For the European Union, one of key issues connected with this initiative is to promote dialogue and effective coordination with the work being done by EFRAG, in order to retain a decisive influence on standards that will eventually be applied in Europe and to adjust international standards to reflect Europe's ambitions.

Digitalisation of the economy poses a risk to financial stability

The potentially systemic dimension of cyber-risk is increasing as the pace of digital transformation accelerates

The crisis is accelerating the need for financial institutions to change their business models, notably in terms of taking their activities and service offerings digital. However, constraints on bank profitability could crimp the investment capabilities that need to be deployed in this regard, against a backdrop of competition from fintechs and especially bigtechs. It is crucial for financial institutions to be able to free up the financial leeway required to cope with these necessary changes.

Further, the ongoing digital transformation of economies is leading to an increase in functional interdependencies between information systems, in the risks associated with operational problems in this area, and in the scope for cyber-attacks, amid growth in areas ranging from data volumes and user numbers to connected devices, apps and mobile connections. Significant interconnectedness of systems and networks increases the risk that cyber-incidents could spread swiftly and widely, making cyber-risk harder to assess and mitigate.

Growth in the outsourcing of services to a handful of specialist firms (in cloud computing, for example), while helping to raise the average level of security, is also tending to increase the systemic impact of incidents, which could now affect larger numbers of financial participants simultaneously. These developments are compounded

³² The report includes a description of ESG policies and the risks identified by companies according to their business model plus key non-GAAP performance indicators.

by the growing sophistication of cyber-attacks, whose effectiveness is correlated with lower security system maturity and the obsolescence of assets supporting essential business functions³³.

On a more cyclical level, the health crisis has accelerated large-scale technology adoption and poses a major challenge by requiring financial activities to make a massive switch to remote work and non-face-to-face service delivery. This sudden, sweeping change contains risks but has taken place in an environment of controlled cyber-risk, with attacks not reaching a systemic level at this stage.

Not all cyber-incidents pose a threat to financial stability. The European Systemic Risk Board (ESRB) has developed a conceptual framework and applied it to a range of historical and hypothetical scenarios to examine whether and how a cyber-incident could become a source of systemic risk for the financial system. The report published in this regard finds that a large-scale cyber-incident affecting the financial sector could under certain circumstances create disturbances that might have serious adverse consequences for the markets and the real economy. Major financial losses (actual or expected) and a significant decline in confidence in the financial system are identified as critical factors³⁴. Since crises could present prime opportunities for cyber-attackers to maximise the impact of an attack on confidence in the financial system, extra vigilance is needed in today's environment.

Among the various workstreams being conducted by authorities nationally and internationally to contain cyber-risk, projects include the identification of cyber-vulnerabilities, channels to mitigate the impacts of a major cyber-incident, and the definition of best practices for financial institutions in cyber-incident response and recovery³⁵.

Several recent exercises, including the Eurosystem's TITUS and UNITAS exercises and the G7 Cross Border Coordination Exercise organised in June 2019 by the Banque de France during France's presidency of the G7, have helped to strengthen the operational capacity of financial authorities and the main affected participants (banks, payment systems, market infrastructures, other public authorities) to deal with a large-scale cyber-incident affecting the financial sector and to identify several areas of improvement, which are currently being implemented. Within Europe, the draft DORA regulation proposed by the European Commission will set down in binding legislation a European framework for digital operational resilience, covering areas including third-party risk management and information sharing between financial institutions and with supervisors and overseers.

³³ As regards the banking sector, see the ECB's report on the SREP IT Risk questionnaire: www.bankingsupervision.europa.eu/ecb/pub/html/ssm.aroutcomesrepiriskquestionnaire202007~9ed9aaa17d.en.html#toc7

³⁴ [European Systemic Risk Board, Systemic cyber risk, February 2020.](#)

³⁵ The Financial Stability Board (FSB) published a report entitled "[Effective Practices for Cyber Incident Response and Recovery](#)" in October 2020. Work is also underway on cyber-incident management within the European Systemic Risk Board.

2. How non-financial corporations have been affected by the shock caused by the health crisis

After increasing steadily over the past 15 years, the debt of French non-financial corporations (NFCs) has leapt by EUR 185 billion since the outbreak of the health crisis. The financial position of French companies had already been flagged in recent years as a point to watch from a financial stability perspective. The rapid run-up in the financial debt of NFCs, partly to offset the collapse in cash flows due to the lockdown, has now exacerbated this vulnerability.

However, the increase in debt is taking place in a highly unusual environment and also reflects the cautious stance adopted by many companies. While the overall situation of NFCs will remain lastingly affected by the impact of the shock suffered in recent months, a swift reduction in uncertainty coupled with efforts to strengthen capital should allow some firms to deleverage and restart projects that they have put on hold. Conversely, if the health crisis persists and/or the recovery is sluggish, the weakest and most indebted companies could see their financial positions worsen significantly.

2.1 Pre-existing vulnerabilities

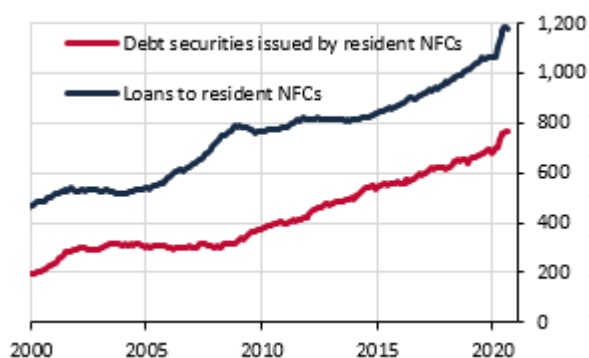
An upward trend in debt

Debt dynamics were already a source of concern

The financial debt of French NFCs totalled EUR 2.207 trillion at the end of 2019, including EUR 1.536 trillion in credit, of which EUR 1.090 trillion loaned by resident banks, and EUR 671 billion in securities (see Chart 2.1), and was equivalent to 173% of NFC value added. Debt has been on an upward growth trend since the mid-2000s, and while the debt-to-value added ratio of French NFCs was just below the euro area average at the start of the period, it is now around 40 points higher (see Chart 2.2).

Chart 2.1: NFC debt

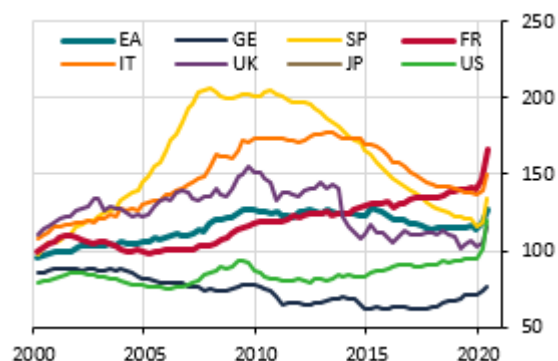
x: / y: time / EUR billion



Source: Banque de France (monetary statistics)

Chart 2.2: NFC debt-to-value added ratio

x: / y: time / %



Source: Eurostat (quarterly accounts)

Note: Ratio of NFC financial debt (loans and debt securities) to cumulative NFC value added over the four previous quarters.

Over the long run, and although cross-country comparisons need to be treated with caution (see Box 2.1), this upward trend contrasts with developments in our main European partners. French NFCs did not deleverage during the financial crisis (2007-2008) or during the euro area crisis (2011-2012), unlike some of their peers, which did experience a period of deleveraging (in some cases forced to do so by a credit crunch).

The level and especially the growth rate of French NFC debt have thus become a concern from a financial stability perspective.

Box 2.1: Cross-country comparisons of NFC financial debt

Cross-country comparisons of NFC macroeconomic debt are delicate exercises. Conceptually, the scope used for debt can range from a narrow view (bank loans only) to a very broad one (all NFC liabilities except shares). From a practical perspective, the data used are taken from national financial accounts and are generally prepared on a parent company basis (entity by entity). As a result, they are not usually consolidated, unlike the indicators published in group annual reports. These conventional and methodological differences lead to very different results³⁶. **To avoid double counting entities within a single group, only consolidated debt is meaningful.**

In terms of scope, debt statistics typically consider two financial instruments defined by national accounts manuals: loans (AF4) for all institutional sectors and debt securities (AF3)³⁷.

Chart 2.3: Scopes of consolidation

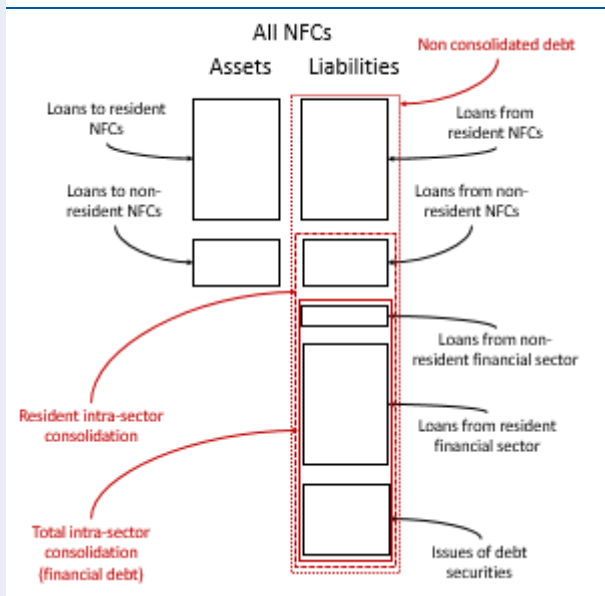
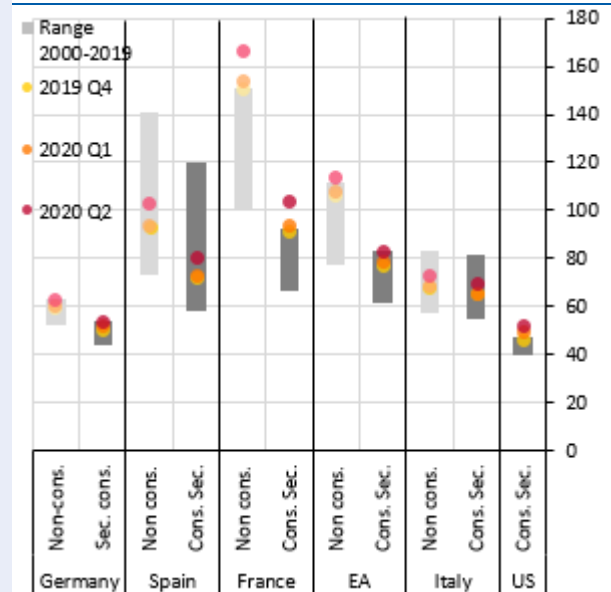


Chart 2.4: Consolidated and non-consolidated NFC debt as a ratio of value added

x: country / y: debt (in VA points)



Source: Banque de France based on national accounts and financial accounts

Note: EA for euro area, US for United States

Non-cons. for non-consolidated, Sec. cons. for consolidated by sector
The consolidated measure is in bold, while the non-consolidated measure is lightly shaded

Using non-consolidated debt has the major drawback of not reflecting the true financial exposure of the NFC sector (see Chart 2.3) and of depending on group organisational approaches, which may vary significantly from one country to another depending on the institutional framework, without having any economic or financial effect. Thus, the measurement of non-consolidated debt will differ depending on whether a subsidiary finances itself directly from a bank or gets funding from its parent company, which itself takes out a bank loan for this purpose. In the second case, the loan amount is counted twice (once for the parent and

³⁶ Among institutions that produce company debt indicators, the OECD uses total liabilities (excluding shares). The Bank for International Settlements (BIS) and the International Monetary Fund (IMF) present total liabilities in the form of loans and debt securities. As part of its Macroeconomic Imbalance Procedure (MIP), the European Commission uses consolidated debt by sector. The Banque de France publishes a debt indicator that is closest to group consolidation.

³⁷ Trade credit (accounts receivable and accounts payable, AF8) are not included, for two reasons. First, their amounts are only known with a lag. Second, these transactions generally appear on the asset and liability sides in roughly equivalent amounts. Derivative products (AF7) are generally marginal and may raise valuation issues. Finally, including technical reserves (AF6) is not meaningful for economies where companies do not themselves pay employee pensions.

once for the subsidiary) but this double-counting is economically meaningless and would be neutralised if the parent consolidated its subsidiary.

Since national accounts distinguish resident sectors and the non-resident sector (rest of the world), two levels of consolidation may be considered. First is resident intra-group consolidation (also called sector consolidation). Next, intra-group consolidation can be extended to include loans by resident NFCs to non-resident NFCs belonging to the same group by excluding these specific transactions with the rest of the world (loans between affiliates or cross-border loans). In this case, we obtain total intra-sector consolidation equivalent to group consolidation under corporate accounting systems.

The consolidation effect may vary between countries. It is strongest in France (-62 points of GDP in Q1 2020, see Chart 2.4). In Italy, the effect is worth 3 points of GDP. The United States does not provide a non-consolidated measure, so the effect cannot be measured for this country. The relative position is modified as a result and France, which has the highest non-consolidated gross debt, draws closer to other euro area countries and falls below the USA and Japan.

The size of the consolidation effect depends partly on the way that the country's industrial system is organised: a strong presence for groups with many subsidiaries (as in France) tends to increase the difference between non-consolidated and consolidated measures. It also depends greatly on the sources used and the statistical treatment of holdings by national accountants. **Overall, an indicator of consolidated debt by sector more effectively reflects the actual financial exposure of NFCs and makes cross-country comparisons more reliable by eliminating measurement biases.**

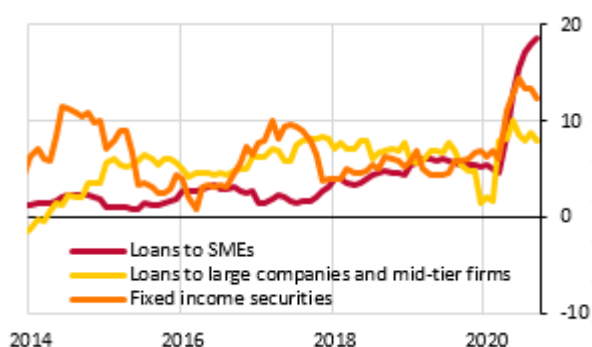
Different trends and positions

Beyond the macroeconomic developments, different trends are at work.

Growth in debt (loans and securities) among mid-tier firms and large companies exceeded that of outstanding loans to small and mid-sized enterprises (SMEs) through to 2017 (5.8% year-on-year average increase for mid-tier firms and large companies compared with 2.4% for SMEs between the end of 2013 and the end of 2017). But in 2018-2019 the two populations saw comparable growth rates (5.1% and 4.8% respectively, see Chart 2.5).

Chart 2.5: Debt growth rate (year-on-year), by company size

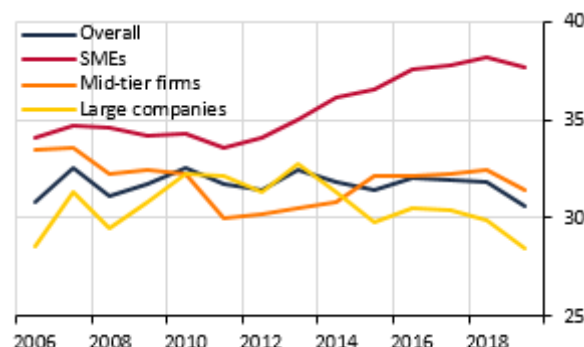
X: time / y: %



Source: Banque de France (company statistics and monetary statistics)

Chart 2.6: Equity/total liabilities, by company size

x: time / y: %



Source: Banque de France (company statistics)

Over the last decade, growth in outstanding loans to SMEs has been systematically slower than that of their shareholders' equity, with the result that their financial base has become stronger. The share of equity in total liabilities increased by four percentage points to reach 38% in 2019³⁸. Conversely, the average equity/liabilities

³⁸ Banque de France (company statistics)

ratio for mid-tier firms has remained relatively stable and stood at 31% in 2019, while among large companies, the ratio increased until 2013 before falling in recent years to reach 28% in 2019³⁹ (see Chart 2.6).

Moreover, these averages conceal significant disparities, which have tended to increase in recent years. The best capitalised 25% of SMEs (mid-tier firms and large companies respectively) have an equity/total liabilities ratio of over 67% (53% and 44% respectively) while the worst capitalised 25% have a ratio of less than 30% (23% and 20% respectively).

While the trends differ, the situation of French companies does not look more worrying than that of their foreign counterparts (notably given their different starting points). By way of an illustration, a comparison of French listed companies with listed companies in advanced economies suggests that debt levels (balance sheet share of debt) are consistent with standards in the sector (although the debt/income ratio in some sectors is driven by a handful of companies and therefore may appear elevated)⁴⁰.

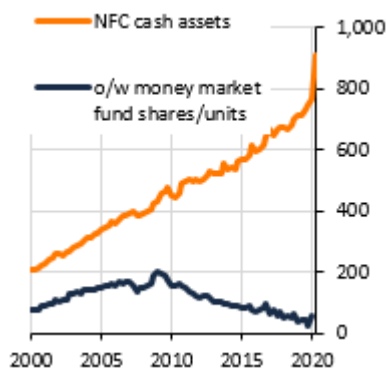
The need to get the debt dynamics of a few weaker companies under control

More cautious cash management and the more multinational nature of French companies account for half of the increase in gross debt at most

The growth in (gross) financial debt observed in recent years (EUR 510 billion between the end of 2013 and the end of 2019) can be partly attributed to more cautious cash management by companies. NFC cash holdings increased by EUR 189 billion over the same period, rising by 5.0% a year on average (see Chart 2.7).

Chart 2.7: NFC available cash (deposits and holdings of money market funds – MMFs)

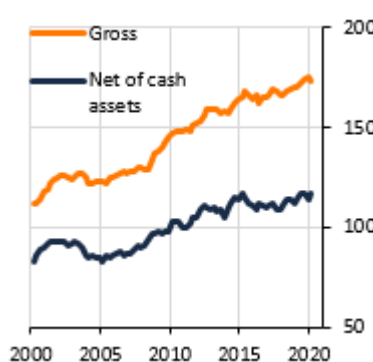
x: time / y: EUR billion



Source: Banque de France (quarterly financial accounts)

Chart 2.8: NFC gross debt and debt net of cash assets as a ratio of NFC value added

x: time / y: %

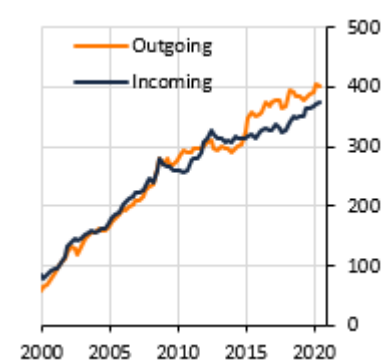


Source: Banque de France (quarterly financial accounts) and INSEE (quarterly national accounts)

Note: Value added is calculated on a cumulative basis over the previous four quarters.

Chart 2.9: Incoming and outgoing intra-group loans

x: time / y: EUR billion



Source: Banque de France (quarterly financial accounts)

The ratio of cash to value added rose by 7.0 points as a result⁴¹. Accordingly, the ratio of NFC net financial debt to value added climbed by just 8.2 points, as compared with a 15.2-point increase for gross financial debt (see Chart 2.8).

³⁹ For a detailed analysis of the change in the financial position of companies, see also: Gaignon (M.) (2020), “Les PME ont abordé la crise de la Covid-19 avec une structure financière renforcée”, Bulletin de la Banque de France, No. 232/1, November-December and Bureau (B.) and Py (L.) (2021), “Quelle est la situation des entreprises non financières à la veille de la crise sanitaire?”, Bulletin de la Banque de France (forthcoming).

⁴⁰ Corporate debt in France, in [France: Selected issues](#), IMF, Country Report No. 18/244 (2018) and [France Financial Sector Assessment Program Technical Note Nonfinancial Corporations](#), IMF, Country Report No. 19/321 (2019).

⁴¹ In parallel, NFCs modified the composition of their cash holdings, with a preference for bank deposits. Money market fund holdings were cut by EUR 146 billion between the end of 2009 and the end of 2019 to EUR 42 billion, while bank deposits climbed by EUR 414 billion over the same period. The share of money market funds in cash assets shrank from 39.5% to 5.7%. On this point, see also [chapter 1](#) and [chapter 3](#).

The fact that French companies – especially large ones – often tend to have a multinational scope is put forward as another reason for the higher overall gross debt of French NFCs. This factor may well influence the level of debt but is unlikely to have materially influenced debt dynamics in recent years. Intra-group loans by French NFCs to non-resident NFCs, i.e. outgoing intra-group loans, increased by EUR 101 billion between the end of 2013 and the end of 2019, while intra-group financing received from abroad, i.e. incoming intra-group loans, rose by EUR 61 billion, for a net change in intra-group financing of EUR 40 billion, or less than 10% of the increase in gross financial debt.

Growing disparities and emergence of a population of potentially at-risk companies

Ultimately, over the more recent period, some companies, especially mid-tier firms and large corporations, have taken advantage of the low interest rate environment to optimise their funding costs, in some instances by adjusting their financing structure and stepping up their use of debt⁴². As a result, beyond the overall trend towards an acceleration in (gross and net) debt, disparities have also tended to increase in recent years.

In May 2018, the HCSF responded to the risk that a population of financially weakened companies might develop (high level of debt to equity and elevated share of income allocated to interest expense)⁴³ by introducing a measure aimed at limiting the consequences for the French banking sector of a potential incident involving one or more of these companies and at decoupling the health of financial institutions from that of NFCs⁴⁴, especially since a default among this population could have severe macroeconomic consequences⁴⁵.

To protect the core financial system from the consequences of a systemic default, the European Union introduced a limit on large exposures in 2013: specifically, an institution's exposure to a single counterparty may not exceed 25% of its capital⁴⁶. Responding to the rapid increase in debt among French companies, and especially among the largest firms, as well as to the concentration of the banking system⁴⁷, the HCSF tightened these requirements further in 2018, lowering the maximum exposure of a systemically important French bank to an “at-risk” company⁴⁸ to 5% of capital⁴⁹.

The amount of debt concerned by this measure has held steady at around EUR 200 billion over the last decade. However, the gradual increase in the leverage of large companies has made this at-risk debt more sensitive to an income or interest rate shock⁵⁰.

The health crisis has rekindled the debate on heavily indebted companies, the risk that they generate for financial stability and government commitments towards them. In France, several very large companies received state guarantees⁵¹ as part of the rollout of the PGE scheme. On the banking side, the significant increase in outstanding bank loans since the start of the crisis has strengthened the role played by the HCSF's measure, fostering greater diversification among the lenders of very large companies⁵².

⁴² Charasson-Jasson (H.) (2019), [“The increasing reliance of large French groups on debt: a financing strategy that has its limitations”](#), Bulletin de la Banque de France No. 226/4, November-December.

⁴³ Couaillier (C.), Henricot (D.), Idier (J.) (2020), [“Do highly indebted large corporations pose a systemic risk?”](#), Banque de France Eco Notepad, Post No. 147.

⁴⁴ This measure supplemented the increases to the countercyclical buffer rate in June 2018 and March 2019 aimed at strengthening the resilience of bank financing on a cross-cutting basis.

⁴⁵ Mouabbi (S.) (2020), [“What if large firms were to go bust?”](#), Banque de France Eco Notepad, Post No. 155.

⁴⁶ See Article 395 of Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013.

⁴⁷ France's banking system is characterised by the presence of four international banks designated as having global systemic importance by the Financial Stability Board, representing half the euro area total. France's six largest groups accounted for 81% of the EUR 8.671 trillion in assets held by the French banking system in 2019 – [“Les chiffres du marché français de la banque et de l'assurance 2019”](#), ACPR.

⁴⁸ Two criteria are used to identify a company as “at-risk”: a net debt ratio of over 100% and an interest coverage ratio of less than three. These criteria are used to capture a company's probability of default and loss given default.

⁴⁹ [Decision No. D-HCSF-2 of 11 May 2018 on the major exposures of systemically important institutions](#)

⁵⁰ See [Charasson-Jasson \(2019\)](#) and [Couaillier Henricot and Idier \(2020\)](#).

⁵¹ [EUR 5 billion for Renault](#), [EUR 4 billion for Air France](#).

⁵² The HCSF measure limiting bank exposures to at-risk counterparties was extended for a year by [Decision No. D-HCSF-2020-3 of 30 June 2020](#).

2.2 The activity and cash shocks linked to the first wave of the Covid-19 epidemic were overcome through a substantial increase in additional debt

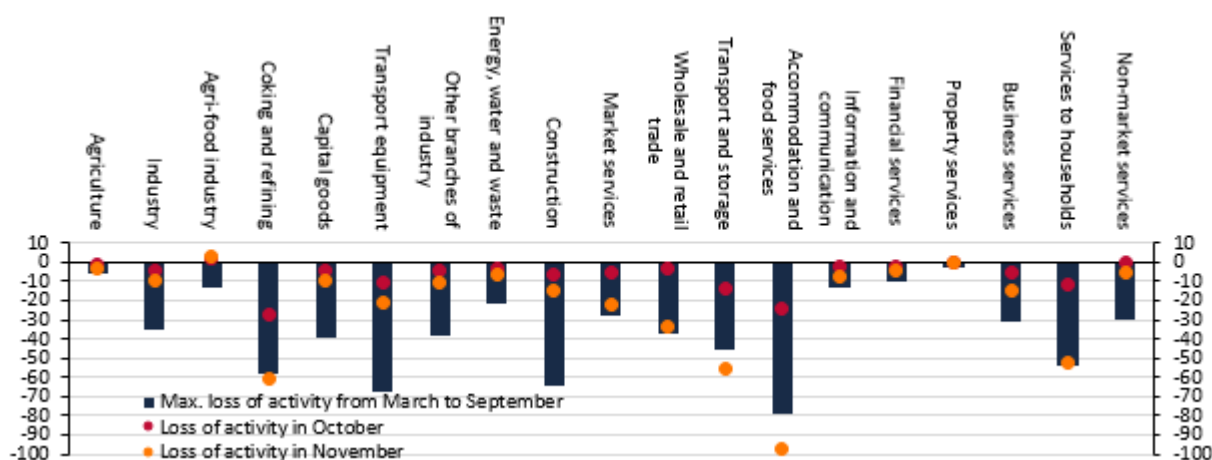
A sharp shock with very uneven effects across sectors

The decline in activity led initially to a cash shock

Activity contracted sharply in the spring amid the global health crisis and the measures to contain the virus's spread. Reduced demand for goods and services and disruptions to production and logistics chains triggered a steep fall in revenues for many companies (see Chart 2.10).

Chart 2.10: Decline in activity by sector during the health crisis

x: sectors / y: shock as a % relative to 2019



Source: Banque de France (estimate based on monthly business surveys).

Note: Decline in activity over a two-week period compared with the same period in 2019; the maximum shock corresponds to that observed at the end of March/start of April.

The decline in activity put a strain on company cash reserves. The hard lockdown in the spring caused a cash shock equal to around three weeks of revenues for 62% of companies^{53,54} or approximately EUR 160 billion (see Table 2.1 and Chart 2.11).

Faced with the shock, companies endeavoured to ensure that commitments giving rise to expected inward cash flows (e.g. outstanding accounts receivable) were honoured and to minimise adjustable outgoing cash flows (e.g. delaying settlement of accounts payable, deferring or cancelling investment projects, deferring dividend payments⁵⁵, etc.).

In this latter case (minimising outgoing cash flows), company decisions could have microeconomic⁵⁶ and also potentially macroeconomic ripple effects⁵⁷.

⁵³ Assuming a relatively simple but realistic adjustment to company behaviour (see below): dividend payments cancelled or deferred, investment spending lowered in line with the reduction observed at the macroeconomic level.

⁵⁴ For 38% of companies, the decline in activity due to the lockdown had a positive effect on cash holdings. These included firms whose accounts receivable structurally exceed accounts payable: in net terms, the settlement of trade credit favoured them and their cash reserves increased. For these companies, the challenge will come when activity restarts, because their working capital requirements will increase again strongly.

⁵⁵ Suspending dividend payouts to shareholders may be a way for the company to retain resources linked to prior earnings. Conversely, for groups with an internal capital market (i.e. earnings typically circulate smoothly and cash is managed centrally), intra-group dividend payments can help to absorb the shock.

⁵⁶ The cash gains associated with delays in settling accounts payable translate immediately into a cash shortfall for the supplier that had been counting on settlement of the corresponding receivable.

⁵⁷ This is because companies' intermediate consumption and investment correspond to the activity of other companies: the effects of individual adjustments aimed at limiting outgoing cash flows following a decline in activity are transmitted further up the production chain.

Table 2.1: Change in cash holdings following the shock, before and after support measures

EUR billion	Decline in cash, after support measures		Cash restored thanks to support measures		No decline in cash Measures not used	
	Initial shock (S1)	After support (S2)	(S1)	(S2)	(S1)	(S2)
Change in cash assets, o/w	-142	-110	-14	15	127	127
CICE	-12	-12	4	4	9	9
Interest charges and corporation tax	-16	-13	-5	-3	-18	-18
Dividend	-39	-39	-5	-5	56	56
Investment	-50	-50	-14	-14	-49	-49
Number of LUs considered	93 571		62 610		94 848	
% of LUs considered	37%		25%		38%	

Source: Banque de France (Fiben company data), Banque de France estimate

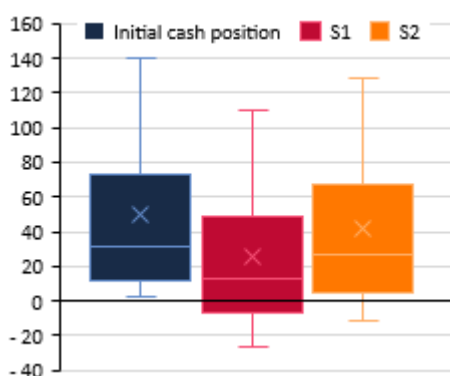
Notes: the simulation covers the first half of 2020 for the population of legal units (LU) observed in Fiben; assumptions of adjustments to company behaviour are calibrated to obtain an aggregate impact close to the macroeconomic impact: dividend payments are reduced; the decline in investment is proportionate to the shock to value added. CICE: tax credit for competitiveness and employment

The shock was cushioned by government support schemes and debt

To mitigate these adverse effects and the squeeze on cash, the government introduced mechanisms to compensate for losses, introducing flexibility on charges (through the partial unemployment furloughing scheme, for example) and providing direct compensation for a portion of losses, along with cash management mechanisms aimed at limiting outgoing cash flows (tax and social security payment deferrals) or accelerating inflows (early payment of tax credits). In the first half, government support measures made it possible to reduce the financing requirements resulting from the shock by around EUR 85 billion (about half through loss compensation measures and the other half through cash management measures, see Box 2.3)⁵⁸.

Chart 2.11: Estimated cash shock and impact of government support measures

x: scenarios / y: cash holdings by number of days of revenues



Source: Banque de France (Fiben company data), Banque de France estimate

Chart 2.12: Monthly change in the (gross) debt and cash holdings of NFCs

x: time / y: EUR billion



Source: Banque de France (monetary statistics)

These measures proved to be effective, enabling over two-thirds of companies hit by a negative cash shock during lockdown, i.e. 25% of all firms, to keep their cash holdings at an operational level. The 37% of companies for which government schemes could not offset the entire shock had financing requirements of around EUR 110 billion and borrowed to honour their commitments⁵⁹. They drew on confirmed credit lines, where these were available. Beyond that, they took out new loans and/or issued new debt securities on the bond market once it reopened

⁵⁸At the same time, landlords granted rent adjustments while loans were subject to moratoria (around EUR 20 billion in deferred payments).

⁵⁹The additional debt enabled them to cope with a cash gap of around EUR 50 billion and to restore their cash holdings to an operational level. Accordingly, the net debt of these companies rose by just EUR 50 billion over the period.

and also, a little later and to a smaller extent, on the commercial paper market (see the [chapter on the potential disconnect between markets and the real economy](#)).

The increase in gross debt (EUR 156 billion between March and June, EUR 175 billion at end-September and EUR 185 billion at end-October, see Chart 2.12) nevertheless exceeded the financing requirement caused by the cash shock (approx. EUR 110 billion at end-June).

In addition to the cash shock linked to the downturn in activity, demand for financing was also fuelled by the highly uncertain environment: as a precaution, some companies borrowed to increase their available cash reserves. For these companies, the increase in debt gave rise to an equivalent increase in cash, which has not yet been consumed (their net debt therefore remains unchanged).

This precautionary borrowing, which could stand at around EUR 60 billion, is worth identifying as such, since reduced uncertainty, for example about the availability of an effective vaccine and the timetable for a large-scale vaccination campaign, should prompt companies to reduce their additional cash and simultaneously deleverage in the same amount.

Stage-guaranteed loans (PGE scheme) and the Eurosystem's ultra-accommodative monetary policy ensured that these additional financing needs, whatever their reasons, could be met without difficulty. Judging by the ultimately contained increase in accounts payable and receivable and the fairly small number of company failures so far, the immediate cash shock has been absorbed overall: the vast majority of companies have been able to meet their payment commitments, enabling smooth settlement of all trade credit flows while ensuring that, when the recovery comes, companies have the cash needed to support the rebound in activity.

Beyond the cash shock, the income shock will have longer-lasting effects on the financial position of NFCs

If activity had rebounded sharply after the lockdown was lifted, the increase in debt that took place during confinement could have been quickly repaid⁶⁰. But an income shock prevented swift repayment and played a part in undermining the financial position of NFCs (increase in net debt, see Box 2.2). The income shock can be estimated at EUR 97 billion for all NFCs during the first half. Half of the shock was offset by measures targeting income (including the partial employment scheme, see Box 2.3), with the result that the gross operating surplus of all NFCs fell by just EUR 49 billion and their financing requirement increased by only EUR 40 billion. As financial assets and liabilities showed matching changes, this suggests that the financing need was primarily met by an increase in non-financial debt (e.g. tax and social security liabilities⁶¹).

All in all, the potential increase in the (net, financial and non-financial) debt of companies linked to the first-half shock is estimated at between EUR 40 billion (overall financing requirement of NFCs, corresponding to an increase in total net financial and non-financial debt) and EUR 60 billion (increase in net financial and non-financial debt of companies hit by an adverse cash shock⁶²), with the speed of the economic recovery determining how long the increase lasts as well as its impact on companies' activity and solvency levels.

The international dimension of shocks linked to the Covid-19 pandemic

Another significant aspect of the shock for large companies and mid-tier firms in France concerns the fact that many of these are multinational businesses. International revenues account for 51% of the total consolidated revenues of these multinational firms⁶³. This direct international presence supplements and may even be an

⁶⁰ The additional debt linked to trade credit would have been wiped out by a return of activity to normal levels. The additional debt linked to the coverage of insufficiently adjustable charges would have required an above-trend rebound to be completely repaid.

⁶¹ The financing requirement could also have been covered by capital increases and asset disposals, but no major unplanned transactions were observed.

⁶² This estimate, like the other statistics reported below, extrapolates the findings of the simulation to all companies.

⁶³ Dauré (N.) (2019), "[83% of the Total Turnover Outside France is Concentrated within 160 French Multinational Enterprise Groups](#)", INSEE Focus No. 174.

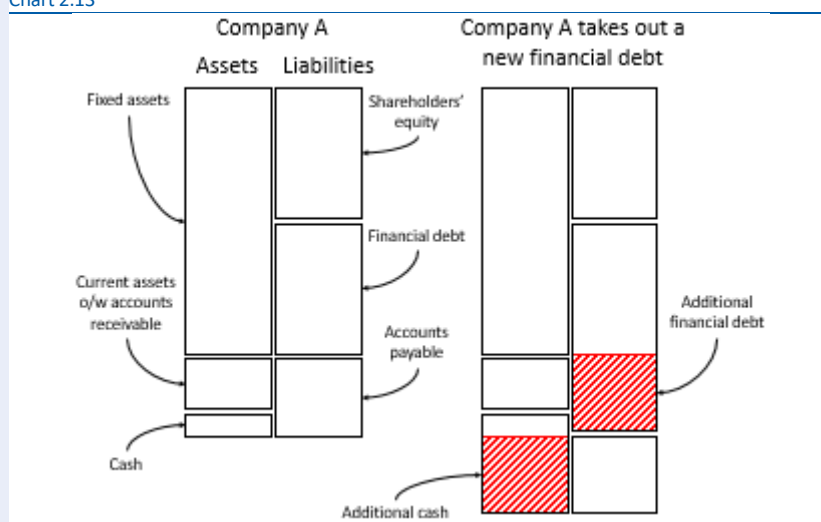
alternative to exporting activities, but, over and above the economic impact felt by all companies doing business internationally (simultaneous decline in activity and contraction in world demand), this presence also resulted in an operational and financial shock that was magnified when local support mechanisms were inadequate and the liquidity shock followed by financing needs at foreign subsidiaries were passed on to the group's lead company in France⁶⁴.

Furthermore, while the brisk recovery in China at the end of the first half of 2020 was good news for companies operating on that market, activity remains sluggish in most economies. The global scale of the pandemic and its synchronous nature mean that having international reach has not been a proven factor of resilience in the current crisis.

Box 2.2: NFC gross and net financial debt

A number of factors have contributed to the remarkably parallel growth in the gross financial debt and cash assets of NFCs since March (increases of EUR 185 billion and EUR 177 billion respectively at end-October). In the first place, the twin increases reflect an accounting equality: when Company A takes out a new financial debt, the lender makes available an equivalent amount of cash assets to it and its account is credited with the corresponding deposits (see Chart 2.13).

Chart 2.13



If Company A then uses the cash to settle accounts payable, its accounts payable decrease and its deposits are reduced in the same amount. For Company A, everything happens as if a financial debt had replaced the debt owed to its supplier (B). A's total debt is unchanged but its financial debt has increased and its financial debt net of cash has also increased (see Chart 2.14). Conversely, from B's point of view, its total assets are unchanged but an increase in cash assets has replaced its claim on A (see Chart 2.15).

Overall, for the companies, financial debt and cash have increased in parallel (net debt remains stable) but A's financial position has worsened (increased net financial debt) while B's has improved.

⁶⁴ Another aspect of the Covid-19 shock linked to the international activities of French companies corresponds to the reverse situation of French companies under foreign control (see "[Intermediate-Sized Enterprises Account for 45% of Total Employment Under Foreign Control in France](#)", Anne-Lise Duplessy, INSEE Focus No. 167, 2019) whose financing might be affected by the position of the company at the head of the foreign group. However, like all companies doing business in France, these French subsidiaries have access to government schemes to help them absorb the shocks, such that being controlled by a foreign group is likely to be a secondary factor in the context of the health crisis.

Company A can also use its cash to settle expenditures vis-à-vis other institutional sectors (e.g. pay wages to households, rents, interest, taxes or social security contributions)⁶⁵. A will then record a loss and the decline in deposits held in assets is reflected in a corresponding decrease in the company's net financial worth (i.e. a decrease in shareholders' equity, Chart 2.16).

In this case, A's financial position worsens and its net financial debt goes up. The fact that net debt has been more or less stable since March suggests that measures taken to cushion the shock of the health crisis managed to prevent a net outflow of deposits to other institutional sectors (incoming and outgoing cash flows balanced each other).

Chart 2.14

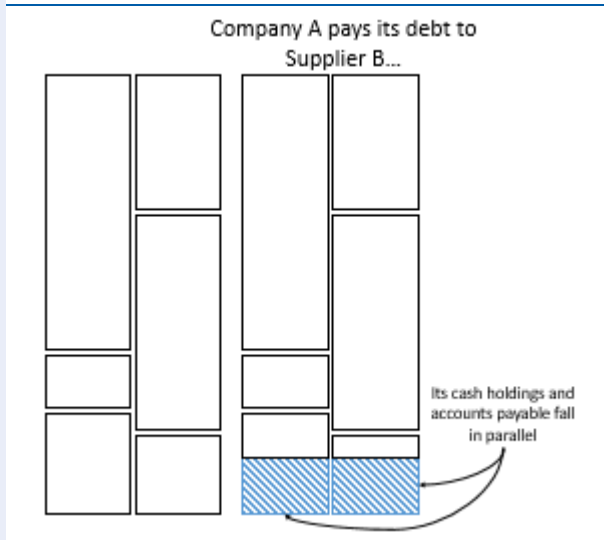
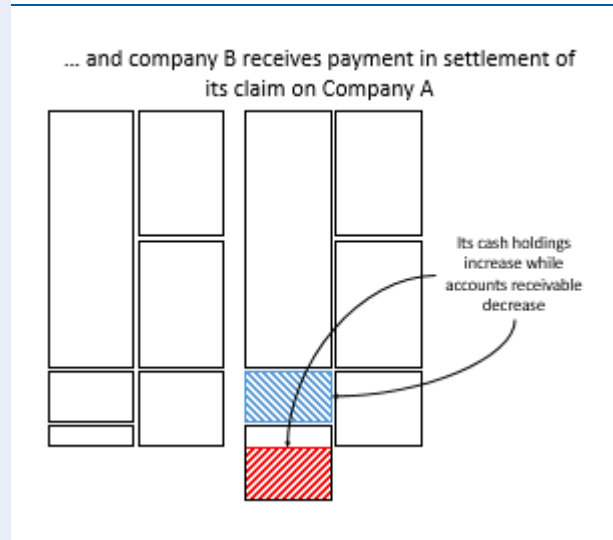


Chart 2.15



In practice, the balance between outgoing and incoming cash flows was also obtained through the introduction of moratoria on tax and social security payments, financial debts and rents. In this case, cash was preserved but debt (especially non-financial debt) increased while net financial worth declined (Chart 2.17).

Chart 2.16

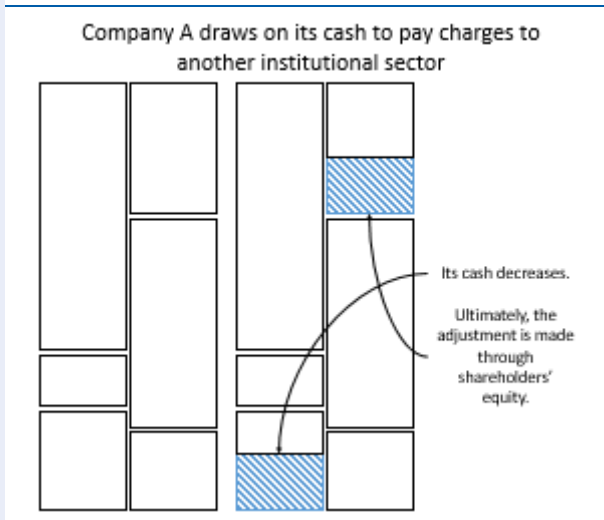
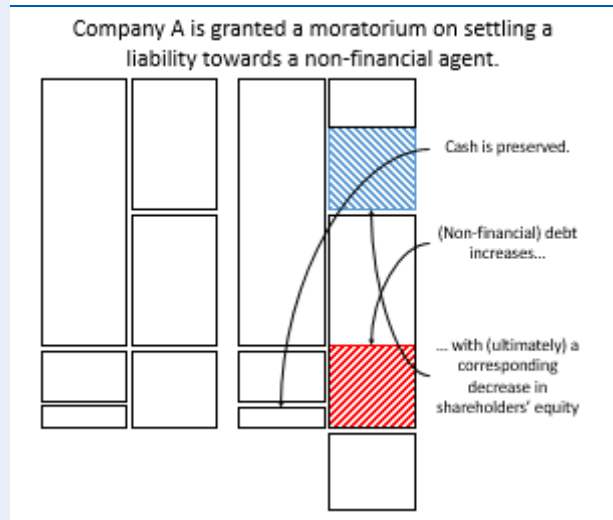


Chart 2.17



⁶⁵ Some of the measures introduced by the government were precisely intended to limit these payments, either by taking change of expenses (e.g. under the partial unemployment scheme) or by encouraging deferrals (deferrals of tax and social security payments, moratoria on financial debts, rent deferrals, etc.).

The fact that the net financial debt of companies as a whole has remained more or less stable overall reflects:

- an increase in cash financed by financial debt (precautionary reserves) – in this case net debt is unchanged;
- the settlement of trade credit, whereby financial debt replaces non-financial debt for companies that were (net) debtors previously – the net debt of these companies as a whole is unchanged, but the diversity increases;
- balanced cash flows vis-à-vis other institutional sectors – with a neutral effect on the financial position of companies as a whole, except moratoria, which contribute to an increase in net (particularly non-financial) debt⁶⁶.

Strengthen shareholders' equity to promote a swifter recovery

Widely contrasting situations, including some genuinely fragile positions

More than the (ultimately limited) increase in net debt among companies as a whole, the main risk lies with the growing disparity of situations that companies are in. The pre-existing diversity of companies' financial positions, in terms of their shareholders' equity and cash⁶⁷, has combined with the uneven impact of the shock, especially from a sector perspective.

While in principle the size of the shock suffered was largely independent of companies' starting positions (see Chart 2.18), a sub-population of companies that were initially healthy and successful now carry an additional and lasting debt burden, while other firms that were weaker initially were also severely disrupted.

Strengthen shareholders' equity to restore the debt capacity of successful companies

In the first case (initially successful and healthy companies facing significant debt), there is a risk that persistently high debt could constrain the firm's future growth. Currently, investment and hiring plans have been postponed because of the elevated uncertainty and the need to preserve cash flows (see Chart 2.19). The recovery will benefit from these projects being carried out as soon as possible.

But if companies are too heavily indebted, the current postponements could lead to cancellations, which may be more significant in situations where a firm is facing a debt overhang and prioritises putting its resources towards paying down debt⁶⁸. This type of trend could take on a macroeconomic dimension if slacker investment curtails the activity of suppliers, for example. Accordingly, it is vital to restore balance to debt/equity ratios in order to ensure a sustainable recovery in investment. Given the additional debt built up, an estimated EUR 50 billion in additional equity is needed to restore prudent ratios at companies that were in a sound position before the crisis⁶⁹.

⁶⁶ Cash may also have been bolstered through sales of assets to other institutional sectors. If the additional cash is kept, the company's financial position stays the same. If it is drawn on to cover cash flows, the financial situation worsens, with a corresponding decline in shareholders' equity.

⁶⁷ Bureau (B.) and Py (L.) (2021), "Quelle est la situation des entreprises non financières à la veille de la crise sanitaire?", Bulletin de la Banque de France (forthcoming).

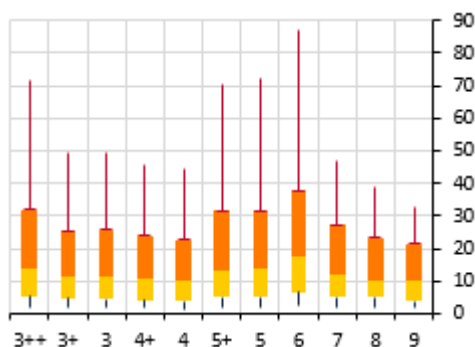
⁶⁸ On this topic, see Kalemlı-Ozcan (S.), Laeven (L.) and Moreno (D.) (2019), "[Debt Overhang, Rollover Risk, and Corporate Investment: Evidence from the European Crisis](#)", ECB Working Paper Series, No. 2241 and Popov (A.), Barbiero (F.) and Wolski (M.) (2018), "[Debt overhang and investment efficiency](#)", ECB Working Paper Series, No. 2213.

⁶⁹ This corresponds to the increase in shareholders' equity as a substitute for gross debt needed to maintain the company's previous debt/equity ratio. The increase is measured only for companies that were in a sound financial position before the shock. This selective approach ensures that equity is provided to companies whose viability is sufficiently certain (which would seem to be a key criterion for the appropriateness of such an investment).

A portion of this requirement should be covered in the usual manner. Listed companies can conduct a capital increase on the markets. The recapitalisation of the French subsidiaries of foreign groups is primarily a question for the lead company, which is often itself a listed company. Meanwhile, private equity firms can naturally play a role in strengthening the capital of companies in which they are already shareholders.

Chart 2.18: Increase in gross debt linked to the lockdown as a function of companies' financial positions

x: credit score assigned by the Banque de France in 2019 / y: increase in gross debt needed to restore cash position after the first half (expressed in days of revenues)

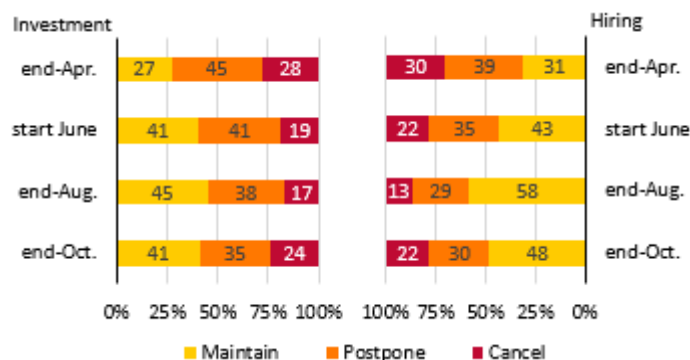


Sources: Banque de France (Fiben company data), Banque de France estimate

Note: the companies under consideration are those that, despite support mechanisms, were unable to restore their cash positions after the shock.

Chart 2.19: Company investment and hiring plans

x: % of respondents / y: survey period



Source: Bpifrance Le Lab/ Rexecode (quarterly surveys of SMEs/VSEs)

However, we estimate a need of around EUR 20 billion for unlisted mid-tier firms and SMEs that do not usually open up their capital. For these firms, steps to strengthen equity or provide quasi-equity may be backed by public resources, while also involving private sector participants that are capable of making the necessary selection of investments and offering long-term support. This is the aim of schemes such as the new “Relance” (Relaunch) label, which seeks to raise between EUR 10 billion and EUR 20 billion, to be invested partly in the equity and quasi-equity of French companies (listed companies and unlisted mid-tier firms and SMEs), and the state-backed equity loan programme, which is intended to provide between EUR 10 billion and EUR 20 billion in quasi-equity to unlisted mid-tier firms and SMEs (see also Box 2.3).

In each case, the equity contribution is designed to support the (partial) deleveraging of the company or to enable the firm to complete new investment projects that it could not have debt-financed without running the risk of further destabilising its balance sheet. In this respect, it is important to stress the importance of the selectiveness of these contributions. Their macroeconomic effectiveness is critically dependant on targeting healthy companies with genuine growth prospects.

An equity contribution will be ineffective if provided to companies that were already weakened before the crisis or whose outlook has been lastingly damaged by the health crisis. The right solution for these companies is swift and orderly restructuring of liabilities, while the most compromised firms should be liquidated, allowing all stakeholders to rebound.

2.3 The second wave and the measures needed to stop the spread caused a smaller shock but also accentuated differences

The shock linked to the second wave has not been as deep, but has had a severe impact on some sectors

Cash positions are deemed to be satisfactory overall, even if a short-term improvement is not expected

After a sharp deterioration in the spring, companies reckoned that cash positions were more or less in line with normal levels by the start of the fourth quarter, although the situation remained poor in market services (see Charts 2.20 and 2.21). In fact, 50% of company executives felt that they had sufficient cash to cope with the crisis, while 36% believed that the difficulties could be overcome⁷⁰ (these assessments are partly based on having precautionary cash holdings, see above). Conversely, companies are gloomier about the future: business prospects are once again on a downward trajectory⁷¹ and companies expect their cash positions to worsen⁷². As a result, companies appear to be emphasising “defensive” financial strategies aimed at deleveraging and/or boosting cash levels.

The effects of the health measures introduced in the autumn are more concentrated in a few sectors

This is the setting in which the second lockdown took place. Unlike the lockdown introduced in mid-March, the second lockdown was less unexpected, while companies were able to draw on experience gained in the spring to quickly adjust to business constraints. In each sector, the loss of activity owing to the lockdown imposed in early November was smaller than during the spring lockdown (see Chart 2.22) while stricter measures were imposed for a shorter period.

However, some sectors remain severely affected and continue to record major income losses. In their case, government intervention is currently taking the form of measures targeting income, to allow them to mitigate their losses, rather than cash management measures that could lead to a debt increase that might not be sustainable given the prospects.

Chart 2.20: Cash position, by sector

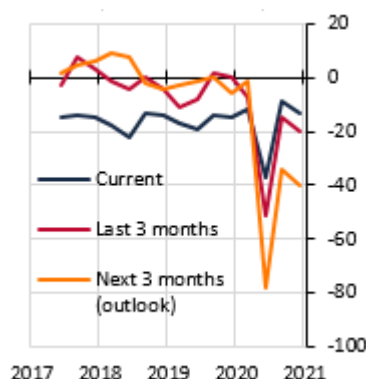
x: time / y: balance of opinion



Source: Banque de France (monthly business survey)

Chart 2.21: Assessment of cash level, recent change and prospects

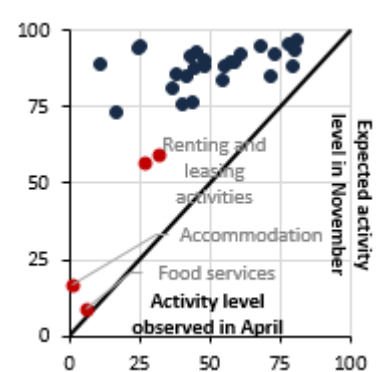
x: time / y: balance of opinion



Sources: Bpifrance Le Lab/ Rexecode (quarterly surveys of SMEs/VSEs)

Chart 2.22: Comparison of activity levels observed during the first lockdown and expected during the second

x: level of activity observed in April (as a %) / y: level of activity forecast in November (as a %)



Source: Banque de France (monthly business survey)

Note: Activity levels are the average of responses within a given sector, as a percentage of a level considered to be normal.

⁷⁰ SME Cash, Investment and Growth survey ([Quarterly survey by Bpifrance Le lab – Rexecode](#), November 2020)

⁷¹ [Update on business conditions at the start of December, Banque de France, 14 December 2020](#)

⁷² Quarterly survey by Bpifrance Le lab – Rexecode, November 2020 (op. cit.)

Overall, the second wave of the epidemic in France and Europe is weighing on the recovery and the financial positions of companies, with more marked sector differences. However, given that previous activity levels were already lower and that the decline in activity was less drastic, the cash shock was smaller than during the first lockdown, while relatively high levels of cash made it easier to deal with.

The pace of the economic recovery will be crucial to default risk going forward

As things stand, the health crisis has weakened the positions of a large percentage of the population of French NFCs, which got through with the cash shock in the spring by taking on additional debt, before being faced with a more conventional economic slowdown (i.e. presenting the features of a recession). This took place at a time when emerging pockets of risk were already a concern from a financial stability perspective. Accordingly, the risk linked to company debt is now at unprecedented levels.

However, this risk is lower than suggested by the level of gross (financial) debt (part of which is due to precautionary behaviour) as the increase in net (financial) debt has been more measured. The increase in non-financial debt in connection with deferrals of tax and social security payments must also be taken into account, however. The risk is moreover contained by massive public support mechanisms that compensated for a portion of the losses. Ultimately, a major increase in failures has been avoided, even if their number has been rising in recent months (see Charts 2.23 and 2.24).

Chart 2.23: Number of weekly failures

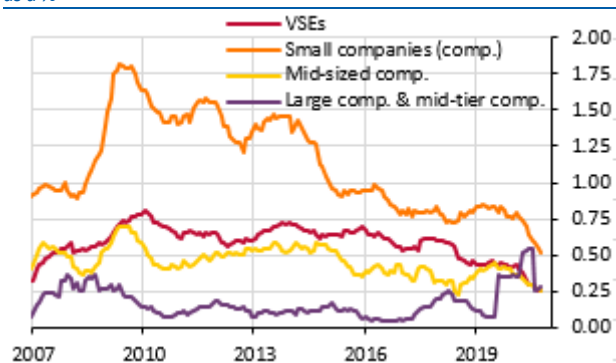
x: time / y: number of failures (thousands)



Source: Banque de France (company statistics)

Chart 2.24: Economic significance of failures, by company size

x: time / y: share of failures in terms of drawn credit (12-month cumulative) as a %



Source: Banque de France (company statistics)

Future developments in default risk remain uncertain, however, with two possible paths: a fairly swift recovery would minimise losses and enable additional debt to be paid back more quickly; conversely, if activity is depressed for a prolonged period, the situation could worsen quickly, with government support mechanisms unable to contain the risk. Accordingly, the effectiveness of the government response, and especially its necessary selectiveness, is critical.

Box 2.3: Business support measures put in place during the health crisis

The Emergency Act of 23 March 2020 to cope with the Covid-19 epidemic and the supplementary budget act passed on the same day introduced support measures to help companies deal with the economic consequences of the health crisis and the measures needed to prevent the virus's spread. The different schemes were subsequently adjusted and stepped up in response to developments in the health situation and the continuation of measures that were introduced to fight the pandemic but that had an adverse impact on business activity, such as government-ordered shutdowns.

The measures implemented so far can be grouped into six broad categories, with measures in the seventh category (aimed at strengthening businesses' capital) set to be deployed in 2021.

1. Partial activity scheme

France's partial activity furloughing scheme was strengthened from March onwards. It works like this: the employer pays the employee a partial activity benefit to replace his/her salary, while the government pays the employer a fixed allocation that is proportionate to the remuneration of furloughed employees (84% of net salary, 70% of gross salary). This benefit is subject to a floor (minimum hourly rate of EUR 8.03) and a ceiling (4.5 times the minimum wage).

On 1 June, the share paid by the government was switched from 100% to 85% of the benefit paid by the employer to the employee. Since then, companies have been reimbursed 60% of the gross salary instead of 70%. Companies in some sectors directly affected by government-ordered shutdowns will continue to have partial activity benefits paid in full by the government and UNEDIC, the entity that looks after unemployment benefits in the private sector, until 31 December 2020.

This measure enabled companies whose business was shut down or slowed by lockdown measures to lower their wage bills without laying off staff. Meanwhile, employees received benefits while keeping their jobs and staying ready to start work again when health conditions permitted.

With a cost to taxpayers of EUR 30 billion, this scheme played an extremely significant role in cushioning the economic blow by directly lowering the wage costs associated with business restriction measures.

When the stimulus plan was launched, the initial furloughing scheme was rounded out to include a long-term partial activity scheme (APLD). Under the APLD, companies facing a long-term reduction in activity may reduce their employees' hours and receive an allowance for non-worked time in return for making various commitments, including commitments to keep employees on. A collective agreement must be signed in order to be eligible for this scheme.

2. Deferral of tax and social security payments

Adjustments were made to the collection of direct taxes and social security contributions to preserve company cash holdings.

Working on a case by case basis, tax authorities granted struggling companies deferrals on the payment of direct taxes (such as corporation tax, CET business tax) excluding VAT. At the same time, corporate tax credits and VAT credits were paid out more quickly. Companies eligible to have one or more tax credits refunded in 2020, such as the CIR R&D tax credit or the CICE competitiveness and employment tax credit, could ask to have the balance of the available credit refunded early, after making applicable deductions against corporation tax due in respect of 2019, without waiting for the tax return to be filed. A measure allowing carryback receivables relating to corporation tax losses to be refunded immediately was also implemented.

Likewise, the URSSAF social security and employment agency network introduced exceptional measures to grant extra payment time to pay social security contributions, without late payment penalties or increases.

Deferrals of tax and social security payments provided cash assistance worth EUR 38 billion, while early refunds of tax credits amounted to EUR 14 billion.

3. Other cash management measures

In addition to tax and social security deferrals, the government also facilitated the introduction of debt and rent payment moratoria.

From March onwards, banks provided companies, on request, with a six-month moratorium (12-month in some sectors) on loan repayments to cope with the crisis. Two million companies made use of these moratoria through to the end of September 2020, making it possible to defer EUR 20 billion in repayments. Loan amounts subject to moratoria (in compliance with EBA guidelines) granted by French banks as at 30 September 2020 totalled EUR 262.7 billion. In addition, companies experiencing difficulties can negotiate to reschedule their debt and, if necessary, apply for credit mediation to facilitate these discussions.

During the first lockdown, some landlords granted deferrals on rent payments. However, these measures were not implemented universally and still less uniformly. More recently, a tax credit was introduced to support forgiveness of rent arrears. Other moratoria, on utilities payments for example, were introduced in some cases.

4. Subsidies

In addition to cash management measures, the government also introduced three types of subsidies.

Initially, subsidies targeted the smallest firms. At the outbreak of the health crisis, the central government and regions set up a solidarity fund to help small enterprises, micro-entrepreneurs, self-employed people and people providing professional services stay in business. With an initial budget of EUR 7 billion, the fund provided fixed amount allowances conditional on a decrease in sales (component 1). The solidarity fund was then increased by the regions (in addition to the introduction of local schemes) and topped up by the central government to raise the total allocation to EUR 20 billion. The fund also received private-sector contributions.

Claims were also cancelled in some cases. Social security contributions were cancelled for SMEs in some sectors that were hard hit by health measures as well as for VSEs subject to government-ordered shutdowns. Cancellation of tax claims may also be sought on a case by case basis if company difficulties cannot be addressed by a settlement plan aimed at spreading out or deferring payment of accumulated tax debts.

As part of the 2021 Finance Bill, a tax credit was introduced to encourage landlords to cancel a portion of the loans owed by tenant companies that are subject to government shutdowns or particularly affected by health restrictions. The tax credit covers up to 50% of the cancelled amount.

In addition, sector-specific plans were introduced, providing for specific subsidies worth several hundred million euros.

The stimulus plan, meanwhile, included support for investment and/or hiring and measures to lower company taxes (specifically production taxes).

5. Government guarantees to facilitate financing

The main guarantee scheme was the state-guaranteed loan (PGE) scheme introduced in March 2020, which allowed companies to obtain cash loans of up to three times their revenues or twice their annual wage bill,

with the state guaranteeing between 70% (large companies) and 90% of the amount. The loan, which has an initial term of one year, can be subsequently paid off over a period of up to five years. Under the budget act, up to EUR 300 billion in PGE loans can be granted. At 4 December 2020, EUR 128 billion in PGE loans had been granted by banks (40% to VSEs and 35% to SMEs other than VSEs).

Other financing schemes were implemented besides the PGE. These included the CAP/CAP+ supplementary public credit insurance schemes for the domestic market and the Cap Francexport and Cap Francexport + schemes for export credit insurance. The state guaranteed total financing of EUR 15 billion under the various schemes, providing continuous coverage for companies notified of coverage reductions or cancellations for certain customers. Steps were also taken in partnership with factoring companies to boost factoring-based financing.

Finally, several billion euros were made available through specific mechanisms, including increased resources for France's Economic and Social Development Fund (FDES), low interest loans and repayable advances.

6. Other administrative measures

The health emergency also led to adjustments to the rules applicable to struggling companies. The usual timeframes for commencing or concluding judicial proceedings (conciliation, rescue, recovery and liquidation) were lengthened.

7. Measures to strengthen equity

More recently, measures have been introduced or are being discussed to strengthen the shareholders' equity of some companies. These include the state-backed equity loan or subordinated bond mechanism provided for in the 2021 Budget Bill, which should make it possible to provide between EUR 10 billion and EUR 20 billion in quasi-equity for company investment projects, enabling firms to invest, hire and grow their business. Another example is the Relaunch label introduced in October 2020: it aims to support fund raising by investment or private equity vehicles planning to invest in the equity or quasi-equity of listed and unlisted SMEs and mid-tier firms and offers private equity funds the opportunity to underwrite an equity guarantee.

3. Disruptions to non-bank financing

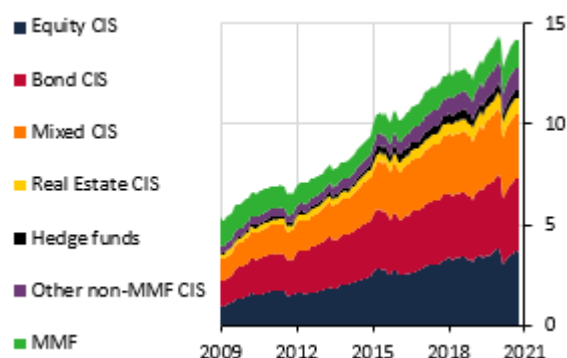
Non-Bank Financial Intermediation (NBF⁷³) is defined as financial intermediation involving entities and activities (fully or partially) outside the regular banking system⁷⁴. NBF is a key source of financing for the real economy. It competes with other funding sources, such as loans and bonds, and provides complementary resources to those supplied by banks to support economic activity. NBF participants thus play a vital role within the mechanism that finances the real economy, but they can also be a source of systemic risk if they fail, either directly through the financing that they supply or indirectly via the services they provide to other financial intermediaries and through interconnectedness. By the end of 2019, the global NBF sector⁷⁵ had grown to USD 200.2 trillion, as compared with total global financial assets of USD 404.1 trillion (i.e. approximately 49%)⁷⁶.

3.1 Rapid growth for collective management in the euro area as a whole, mainly stable in France

In contrast with the US situation, European financing is still heavily based on the traditional banking channel. However, since the 2008 financial crisis, NBF has expanded considerably in the euro area (Chart 3.1), outpacing growth in bank-based financing.

Chart 3.1: Soaring increase in collective management in the euro area

x: time / y: assets under management, EUR trillion

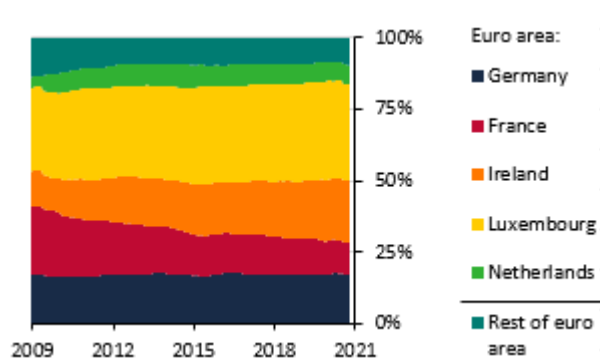


Source: European Central Bank (SDW), Balance Sheet Items (BSI) and Investment Funds Balance Sheet Statistics (IVF) data. Most recent value: 31/10/2020.

Note: Assets under management, all currencies, in the euro area, mainly Germany, France, Ireland, Luxembourg and the Netherlands. CIS for collective investment schemes

Chart 3.2: Decrease in France's share of the euro area market (all currencies)

x: time / y: percentage of assets under management



Source: European Central Bank (SDW), Balance Sheet Items (BSI) and Investment Funds Balance Sheet Statistics (IVF) data. Most recent value: 31/10/2020.

In particular, collective investment schemes (CIS) have seen substantial growth⁷⁷ in the euro area since 2009, owing to the combined effects of brisk inflows (74% cumulative increase since 2009) and significant valuation

⁷³ Financial Stability Board (FSB), Global Monitoring Report on Non-Bank Financial Intermediation (2019): <https://www.fsb.org/wp-content/uploads/P190120.pdf>.

⁷⁴ The FSB identifies three aggregation levels in NBF:

1. Monitoring universe of non-bank financial intermediation (MUNFI): all financial institutions that are not central banks, banks or public financial institutions.
2. Other financial intermediaries (OFIs): a subset of the NBF sector, comprising all financial institutions that are not central banks, banks, public financial institutions, insurance corporations, pension funds, or financial auxiliaries.
3. Narrow measure of NBF: a subset of entities of the NBF sector that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks.

⁷⁵ All financial institutions that are not central banks, banks or public financial institutions. In particular, insurance corporations, pension funds, investment funds and other financial corporations.

⁷⁶ The annual report of the Financial Stability Board on non-bank financial intermediation provides details of the methodology used to compile these statistics: <https://www.fsb.org/2020/12/global-monitoring-report-on-non-bank-financial-intermediation-2020/>

⁷⁷ Holdings of funds within funds were not measured but may partially account for this growth. Since a consolidated view is not taken, this growth includes some double-counting of outstanding fund units.

effects (26%), with net asset value climbing to EUR 14.2 trillion at the end of September 2020⁷⁸, including EUR 12.8 trillion for non-money market CIS⁷⁹ and EUR 1.4 trillion for money market CIS (Chart 3.1). By way of comparison, the total outstanding loans of euro area banks stood at EUR 21.2 trillion at the same date.

The European collective management market is largely concentrated with five countries of domicile – Germany, France, Ireland, Luxembourg and the Netherlands – which together make up over 90% of net asset value in the euro area (Chart 3.2). In France, however, the collective management market has not grown as briskly as in other European countries (especially Ireland and Luxembourg, which are financial centres that also manage large amounts of USD- and GBP-denominated funds), as assets under management have risen less strongly over the last decade (Chart 3.2). As a result, France’s market share has shrunk.

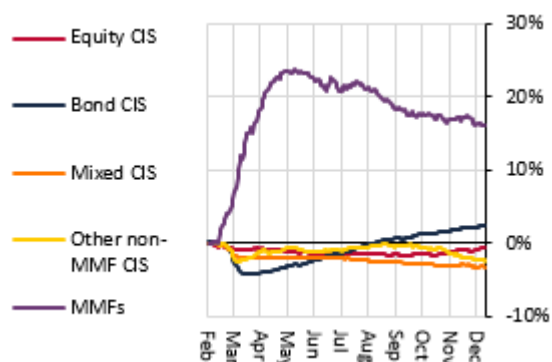
3.2 Impacts of the Covid-19 crisis: difficulties on the commercial paper market

On the collective management market

Fears linked to the health situation started to spread to various financial market segments in late February via the collapse in equity prices, sovereign bond yields and commodity prices. Widespread lockdowns and tumbling oil prices marked the onset of more sustained stress from mid-March. Investors responded by switching exposures between various asset classes in a bid to contain risk levels.

Chart 3.3: Global flight to safety

x: time / y: fund cumulative flows since 19 February as a % of AUM at that date

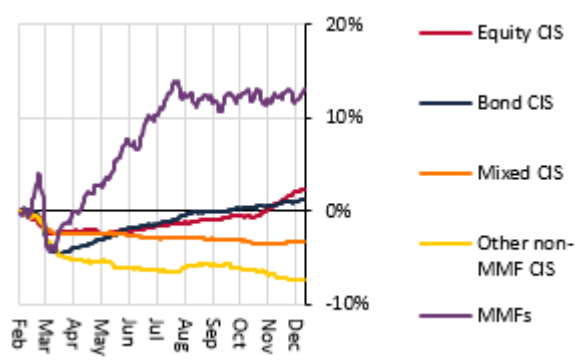


Source: Lipper. Most recent value: 29/12/2020. Cumulative flows as a % of AUM at 19 February 2020. International scope. Lipper data are taken from a commercial database that provides a partial but relatively representative picture of the market.

Note: CIS for collective investment schemes

Chart 3.4: Different behaviours on European CIS segments

x: time / y: fund cumulative flows since 19 February as a % of AUM at that date



Source: Lipper. Most recent value: 29/12/2020. Cumulative flows as a % of AUM at 19 February 2020. European scope only. Lipper data are taken from a commercial database that provides a partial but relatively representative picture of the market.

Note: CIS for collective investment schemes

Asset reallocations were rapidly observed as flows moved out of funds investing in assets considered to be risky and into funds made up of safe-haven assets (Chart 3.3). As a result, bond funds that could be considered as risky recorded large outflows from investors in March (Charts 3.3 and 3.4). Nevertheless, bond funds invested in sovereign bonds had a relative stability over the period since they are considered to be safer and hence attractive during times of financial market stress. Funds invested in corporate bonds, meanwhile, saw substantial redemption requests, especially in the high yield segment⁸⁰. But even assets considered to be low risk, such as

⁷⁸ The benchmark statistics for the euro area are taken from the ECB’s publicly accessible Statistical Data Warehouse: <https://sdw.ecb.europa.eu/>

⁷⁹ Non-money market funds are classified based on principles governed by ECB Regulation 1073/2013 concerning statistics on the assets and liabilities of investment funds and supplemented by ECB Guideline 2014/15 on monetary and financial statistics and the Manual on investment fund statistics. Example of bond funds: investment funds (IFs) whose assets are primarily invested in debt securities. The criteria for classifying investment funds as bond funds are derived from the public prospectus, fund rules, instruments of incorporation, established statutes or by-laws, subscription documents or investment contracts, marketing documents, or any other statement with similar effect.

⁸⁰ The ratings issued by credit rating agencies are grouped into two categories: higher ratings (BBB- and higher) are referred to as investment grade, while lower, riskier ratings (BB+ and lower) are called high yield.

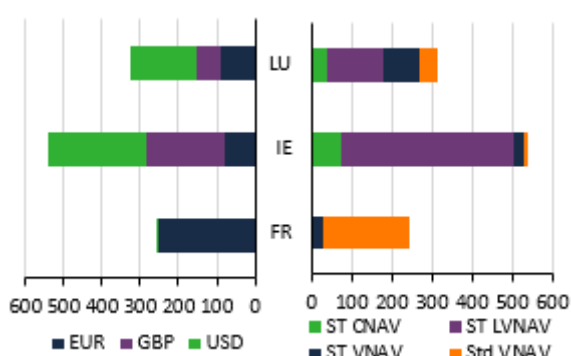
sovereign bonds and money market instruments, ended up coming under strain as well. Investors sold a portion of these securities to boost their cash holdings, so adding in their turn to the pressures on bond funds overall.

At-end November, French corporate bond funds were still showing net outflows since the start of the Covid-19 shock (-4% of net asset value), while by October, Irish and Luxembourg funds were once again recording net inflows on a year-to-date basis⁸¹.

Specific analysis of impacts on money market funds

Chart 3.5: Heterogeneity of European MMFs

x: EUR billion / y: country



Source: EPFR. AUM at 31/12/2019. EPFR data are taken from a commercial database that provides a partial but relatively representative picture of the market.

Note: LU for Luxembourg, IE for Ireland, FR for France, ST CNAV for Short Term Constant Net Asset Value, ST LVNAV for Short Term Low Volatility Net Asset Value, ST VNAV for Short Term Variable Net Asset Value, Std VNAV for Standard Variable Net Asset Value

In this setting, the money market fund (MMF) segment recorded the most pronounced flows.

To understand these movements, two main MMF classes need to be identified (Box 3.1):

- funds with (potentially) variable NAV⁸², i.e. variable net asset value (VNAV) funds and low volatility net asset value (LVNAV) funds, cf Chart 3.5;
- and constant net asset value (CNAV) funds⁸³. VNAV MMFs chiefly hold short-term negotiable debt securities⁸⁴, i.e. negotiable European commercial paper (NEU CP) issued by banks or non-financial corporations (NFCs). CNAV MMFs almost exclusively hold public debt.

Turmoil on financial markets had contrasting consequences for these two broad classes of MMF⁸⁵. CNAV MMFs were seen as safe havens as these funds are mainly invested in government debt securities.

In fact, CNAV MMFs are mainly (over 92% of assets) USD-denominated funds that invest in US sovereign debt. US-domiciled government MMFs, and, to a lesser extent CNAV funds in Europe, recorded substantial inflows as a result of the abovementioned flight-to-safety (Chart 3.6); US government funds took in the equivalent of EUR 1.080 trillion in cumulative flows between end-February and the start of May 2020, i.e. eight times more than outflows from US VNAV funds (prime funds investing in corporate debt).

Accordingly, confidence in government MMFs during times of stress, which was previously observed in 2008⁸⁶, was apparent once again in March 2020 during the Covid-19 crisis. Conversely, the assets of VNAV MMFs (see Box 3.1), even those of very short maturity, were affected by a fall in the value of debt securities.

⁸¹ Source: Autorité des Marchés Financiers (BIO).

⁸² Some MMFs have constant NAV as long as the constant NAV is sufficiently close to the market NAV. For simplicity's sake, these funds are counted as VNAV funds as market NAV can vary.

⁸³ CNAV funds are authorised to use the amortised cost method to value their units. According to Article 2 of Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds, the "amortised cost method" means a valuation method which takes the acquisition cost of an asset and adjusts that value for amortisation of premiums or discounts until maturity.

⁸⁴ Since the reform of 2016 aimed at modernising the negotiable debt securities market. This reform is written into Decree 2016-707 of 30 May 2016 and an Order of 30/05/2016 reforming negotiable debt securities. The term NEU CP replaces the terms commercial paper for non-financial issuers and deposit certificates for bank issuers.

⁸⁵ See also the thematic note published by the International Organization of Securities Commissions (IOSCO) entitled "Money Market Funds during the March-April episode" <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD666.pdf>

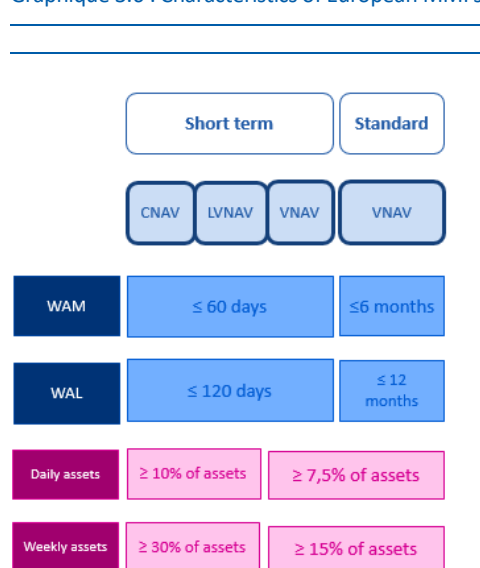
⁸⁶ The massive wave of redemptions affecting MMFs observed in September 2008 was concentrated with prime funds, whose assets under management contracted by more than 15 % in the week following the failure of Lehman Brothers. Over the same period, inflows into government funds more than offset the outflows from prime funds. See McCrabe (2010), *The Cross Section of Money Market Fund Risks and Financial Crises*.

In addition, the shock linked to the pandemic initially affected the real economy and hence the NFCs that, in France, play an important role not only as investors in VNAV MMFs⁸⁷ but also as issuers whose products are held by these MMFs⁸⁸. These MMFs saw substantial outflows owing to three factors:

- increased cash requirements of NFCs (in anticipation or by cautiousness), evidenced by a “dash-for-cash” (Chart 3.6),
- a fall in the value of securities issued by NFCs and poor market liquidity,
- and more marginally, investor fears.

Box 3.1: Typology of European and US MMFs

Graphique 3.6 : Characteristics of European MMFs



Source: Banque de France. EU MMF Regulation.

Note: WAM for Weighted Average Maturity and WAL for Weighted Average Life

Standard/short-term
VNAV
Variable net asset value fund

- Units of a VNAV MMF are issued or redeemed at a value corresponding to the net assets of the fund divided by the number of units in circulation (“market net asset value per unit”, as defined in Article 30 of the MMF Regulation).

Short-term
LVNAV
Low volatility net asset value fund

- LVNAV funds seek to offer investors the characteristics of a CNAV (constant net asset value) fund, as long as the constant net asset value per unit or share does not deviate from the market net asset value per unit or share by more than 20 basis points. If this threshold is exceeded, the fund will issue and redeem its units or shares at a price that is equal to the market net asset value per unit or share, like for a VNAV MMF.

Short-term
CNAV
Public debt constant net asset value fund

- These funds must invest at least 99.5% of their assets in public debt, reverse repurchase agreements secured with government debt, or cash. Units of CNAV funds are issued or redeemed at a constant net asset value per unit (“CNAV per unit”).

Source: Banque de France, based on AMF⁸⁹

A money market fund can take the form of an undertaking for collective investment in transferable securities (UCITS) or an alternative investment fund (AIF); it must invest in short-term assets and have distinct or cumulative objectives offering returns in line with money market rates or preserving the value of the investment.

MMFs are classified based on the assets in which they invest and their method of valuation⁹⁰.

A standard MMF may invest in money market instruments with a residual maturity of two years, provided that the time remaining until the next interest rate reset date is 397 days or less, while a short-term MMF may invest only in money market instruments with a maturity of less than 397 days.

In general, the NAV of units will be variable (VNAV funds, short-term and standard) and measured as a function of the market value of assets held, but short-term funds may opt for constant NAV (low volatility net asset value (LVNAV) funds or constant net asset value (CNAV) funds). CNAV funds are authorised to use the amortised cost method to value their units.

⁸⁷ NFCs hold MMF units.

⁸⁸ NFCs issue short-term debt that acts as an investment vehicle for these MMFs.

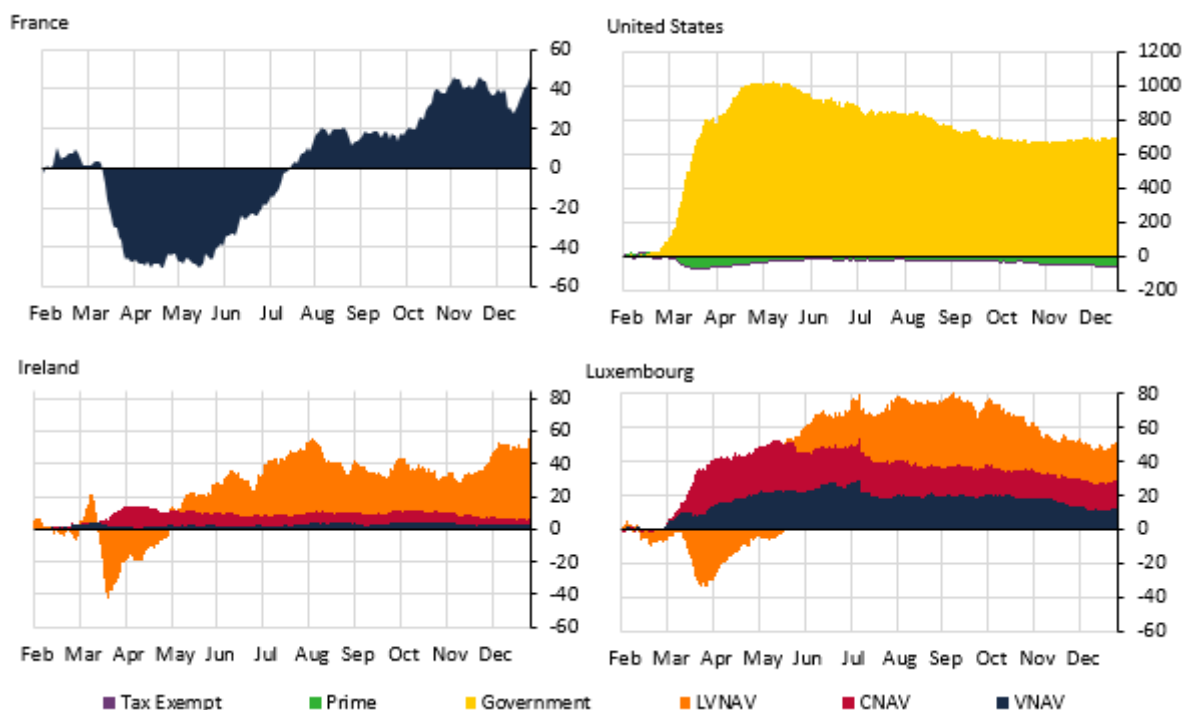
⁸⁹ AMF, [Q&A on money market funds, guide for asset management companies](#), July 2018.

⁹⁰ Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds. This regulation came into force in July 2018 for new funds and by 21 January 2019 at the latest for existing funds.

CNAV and LVNAV funds are exposed to greater risk in relation to first-mover advantage than VNAV funds. In the event that the value of their assets falls suddenly, CNAV and LVNAV funds run the risk of seeing the value of underlying assets deviate from their posted constant or low volatility value, requiring an extraordinary haircut to be applied to the value of these funds.

Chart 3.6: Reallocations on MMF markets

x: 2020 / y: EUR billion



Source: Lipper. Lipper data are taken from a commercial database that provides a partial but relatively representative picture of the market. Most recent value: end-December 2020

Different impacts on the European MMF market

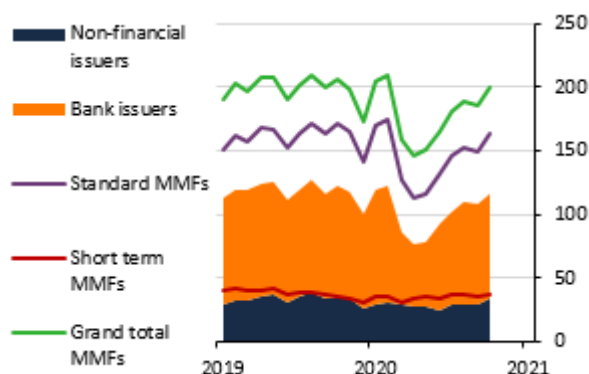
In France, the MMF market (27% of the total assets of MMFs domiciled in the euro area) is almost exclusively made up of VNAV funds denominated essentially in euros (Chart 3.5). Overall, this market recorded substantial outflows during the stress of March-April (EUR 55 billion), and these outflows were more persistent than those affecting the Irish and Luxembourg markets, with net inflows of EUR 47 billion and EUR 57 billion respectively into Irish and Luxembourg VNAV and LVNAV MMFs between the end of March and the end of May; French VNAV MMFs saw net outflows of EUR 8 billion over the same period.

These different trends across European MMFs during the crisis point to significant heterogeneity in investor profiles. While investors in Irish and Luxembourg MMFs are mainly financial institutional investors (generally non-euro area residents), in France NFCs and insurers account for a significant portion of investors.

Accordingly, it is easier for a shock to the real economy to spread across the French money market through the interconnectedness of participants (NFCs play roles on both asset and liability sides as debt issuers and investors for MMFs). The short-term funding market began showing signs of strain in early March, disrupting the supply/demand balance in NEU CP (Chart 3.7). As a result, the maturing securities of some issuers were not rolled over, and the prices and liquidity of these assets deteriorated.

Chart 3.7: Holdings of French MMFs: total outstanding CP held by fund type versus total outstanding NEU CP by issuer type

x: time / y: EUR billion



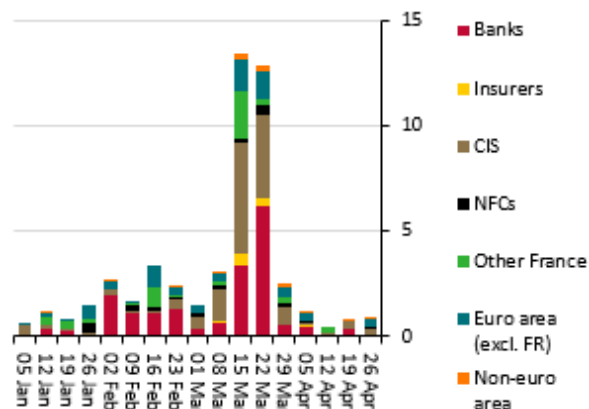
Source: Banque de France.

Guide: The chart shows the change in FR MMF holdings of NEU CP by type of fund (lines), as well as total outstanding NEU CP held by FR MMFs by issuer type, i.e. banks or NFCs (coloured areas).

Most recent value: September 2020.

Chart 3.8: Weekly redemptions of bank NEU CP by issuing banks, by holder type

x: 2020 / y: EUR billion



Source: Banque de France.

Guide: This chart shows redemptions (early reimbursements) of bank NEU CP (in EUR billion) by issuing banks according to seller type (primary market investors).

Most recent value: 26/04/2020.

From mid-March, as widespread lockdowns were announced, distortions on the NEU-CP market became amplified when French MMFs recorded substantial daily redemption requests from their investors (-15% of net asset value between 13 March and 31 March), who scaled back their investments on this market. NFCs that found no demand for their debt securities had to offer higher interest rates at issuance on the primary market to make their securities more attractive on the market. The increase in rates led to a deterioration in MMF valuations, further amplifying investors' outflows as withdrawals driven by cash requirements were compounded by withdrawals by investors aiming to maintain certain performance levels.

Effects on the short-term funding market

Overall, the shock caused by redemption requests to MMF liabilities translated into severe pressure to reduce assets, reduce the maturity of investments and sell debt securities, as the non-rollover of maturing securities was not enough to cover redemption requests. These sales essentially concerned bank NEU CP, which represented approximately 53% of the holdings of French MMFs at the end of September 2020⁹¹.

Sales were made primarily to issuing French banks, which were also seeing substantial drawdowns on credit lines by corporate customers (EUR 35 billion in March). These redemptions (Chart 3.8) reached around EUR 31 billion in March.

3.3 Central bank interventions and exit from the crisis

Faced with liquidity stress on primary and secondary money markets and limited absorption by banks of debt securities issued on the primary market or sold on the secondary market, major central banks had to make exceptional interventions (Box 3.2) to prevent markets from seizing up for a protracted period.

In Europe, the Eurosystem decided to make NEU CP eligible for the PEPP. The Banque de France's execution of this decision then enabled the NEU CP primary market to reopen, specifically by enabling NFCs to start issuing again. The announcement of temporary collateral easing measures on 7 April, with an increase from 2.50% to 10% in the maximum share of bank paper in a collateral pool, also had a very positive influence on market making in

⁹¹ Source ECB: Credit institutions and money market funds balance sheets (full report): <https://sdw.ecb.europa.eu/reports.do?node=1000005719>

the secondary market for bank NEU CP, which comprises the largest asset item on the balance sheets of EUR VNAV MMFs.

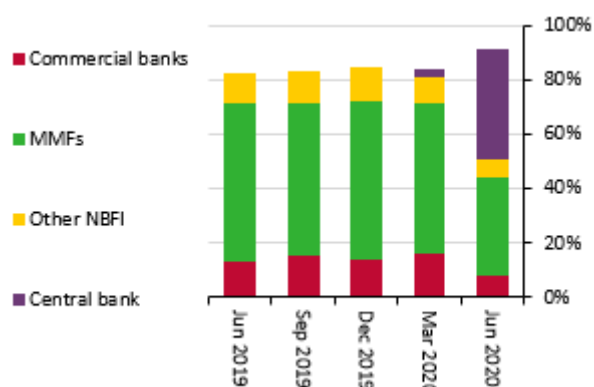
Funds that suffered substantial outflows in March were able to rebalance their portfolios by selling assets and reducing the maturity of assets held⁹². Despite the subsequent recovery in MMF investments, fund liquidity ratios remain higher than they were before the crisis; while liquidity has returned to NEU CP markets, the liquidity preference reflects fears that liquidity could vanish suddenly if other markets become stressed.

The substantial amounts committed by the Eurosystem to this market helped to greatly lower rates at issuance, while also promoting demand among private investors. At the end of November, the Eurosystem's exposure to the European CP market stood at EUR 24 billion, including EUR 20 billion in purchases on the primary market and EUR 4 billion on the secondary market.

At end-September, the Eurosystem held EUR 32 billion in CP, of which EUR 25 billion was invested in NEU CP issued by French NFCs, whereas the total outstanding amount on the French market in NEU CP issued by NFCs was EUR 70 billion⁹³ at the same date. The PEPP therefore substantially changed the distribution of NEU CP holdings since at end-September French MMFs held 36% of NEU CP issued by French NFCs (vs. 57% at end-2019, Chart 3.9).

Chart 3.9: Holdings of NEU CP issued by French NFCs

x: time / y: %



Source: Banque de France.

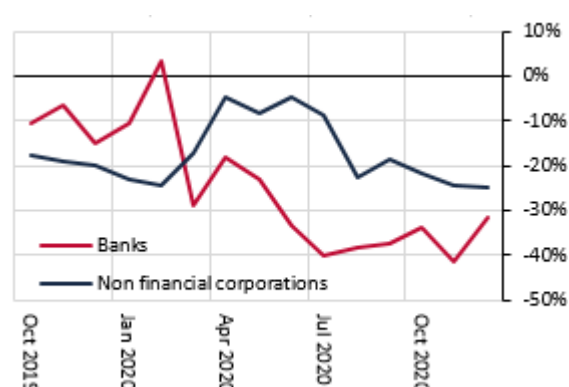
Guide: French financial participants' holdings of NEU CP issued by French NFCs.

Other NBF include non-MM CIS, insurance corporations and other financial intermediaries and auxiliaries.

Most recent value: June 2020.

Chart 3.10: Interest rate at issuance, French NEU CP

x: time / y: %



Source: Banque de France.

Most recent value: end-December 2020

A number of issuers eligible for the Eurosystem programme took advantage of the reduction in premiums (Chart 3.10) to make substantial issues and reach the ceilings of their NEU CP issuance programmes. Among money market funds, there was a scarcity of purchasable securities, but this should fade with NEU CP (held by the Eurosystem) maturities in the coming months.

Box 3.2: Exceptional monetary policy measures on the short-term market

The introduction of various support programmes made it possible to mitigate the stress on money markets and hence on MMFs, where these funds were denominated in the same currency as that issued by the central bank in their country of domicile. However, European MMFs denominated in USD were not eligible for Fed (Federal

⁹² ESMA Report on Trends, Risks and Vulnerabilities, No.2, 2020 (p.32): https://www.esma.europa.eu/sites/default/files/library/esma_50-165-1287_report_on_trends_risks_and_vulnerabilities_No.2_2020.pdf

⁹³ Banque de France, monthly situation of the short- and medium-term negotiable securities market at 30/09/2020: https://www.banque-france.fr/sites/default/files/fileadmin/user_upload/banque_de_france/Politique_Monetaire/P19816_Noria_vue_d_ensemble_mensuel_20200930.pdf

Reserve) facilities or the Eurosystem's PEPP (Pandemic Emergency Purchase Programme). This explains why MMFs domiciled in Europe but denominated in USD needed longer to recover than funds denominated in EUR or GBP.

Central bank interventions impacting short-term funding markets were extensively deployed and took multiple forms.

Eurosystem

On 18 March, the ECB announced its EUR 750 billion temporary PEPP, which featured broader eligibility requirements than the Corporate Securities Purchase Programme (CSPP) and covered non-financial commercial paper (of sufficient credit quality). Previously, the CSPP covered only paper with a maturity of six months or more. While the signal effect was immediate upon the measure being announced, actual implementation of the plan from 27 March 2020 resulted in a period of ten or so days of market uncertainty. Following a decision by the Governing Council on 4 June 2020, the PEPP's budget was raised by EUR 600 billion to a total of EUR 1.350 trillion. Following a decision by the Governing Council on 10 December 2020, the PEPP's budget was raised by EUR 500 billion to a total of EUR 1.850 trillion.

In addition, on 7 April the ECB announced a set of temporary collateral easing measures⁹⁴. This included an increase from 2.50% to 10% in the maximum share of bank paper in a collateral pool. This had a very positive influence on market making in the secondary market for bank NEU CP, which comprises the largest asset item on the balance sheets of EUR VNAV MMFs.

Other central banks

The Fed announced a Money Market Mutual Fund Liquidity Facility (MMMLF) on 18 March and then implemented it on 23 March. This made it possible to provide credit facilities to investors buying assets from MMFs. At the same time, on 17 March the Fed set up a Commercial Paper Funding Facility.

Announced and implemented on 17 March, the Bank of England's Covid Corporate Financing Facility (CCFF) also consisted in buying commercial paper issued by non-financial entities. Use of the CCFF has declined in recent months. In early October, the total amount of commercial paper held under the CCFF was GBP 15.5 billion, its lowest level since April and down from its May peak of GBP 20.5 billion.

3.4 Lessons from the crisis and regulatory issues

Money market funds were faced with liquidity risk resulting from a liquidity mismatch between liabilities (investors exiting) and assets (NEU CP secondary market seizing up). This situation raises questions about the organisation of the NEU CP market (distribution of participants, depth of the secondary market) as well as about the prudential rules that governing money market funds.

Currently, the European prudential framework for MMFs contains regulatory restrictions and microprudential tools. Restrictions on the asset side cover the average maturity and life of the portfolio, plus daily and weekly asset buffers, which ensure a certain level of liquidity. In addition, MMFs are required to hold high credit quality assets and are subject to concentration and diversification ratios⁹⁵.

On the liability side, asset managers can use liquidity management tools to limit redemption requests and deal with such requests in a more orderly fashion. But these tools get little mention in MMF prospectuses⁹⁶, even

⁹⁴ <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200407~2472a8ccda.en.html>

⁹⁵ AMF, [Q&A on Money Market Funds – Guide for Asset Management Companies](#), November 2018.

⁹⁶ Darpeix (P-E), Le Moign (C), Mème (N), Novakovic (M), [“Overview and inventory of French funds' liquidity management tools”](#), Banque de France Working Paper Series, n° 775 .

though this is a pre-requisite for their use. Moreover, there is little data on their use, making it harder to monitor them and assess their effectiveness. Limited deployment of these tools by funds may reflect fears about the stigma attached to their activation: this situation, linked to weak individual incentives, creates negative externalities at the collective level.

Finally, MMFs are required to set up crisis simulation processes in order to identify potential events or future changes in economic conditions that could affect them adversely.

These microprudential requirements failed to prevent the tensions observed in March from spreading, notably due to the interconnectedness of short-term market participants, i.e. NFCs, banks and MMFs, but also because of the hold that MMFs have on short-term funding markets.

Enhancing the regulatory framework for MMF activities to include a systemic, i.e. macroprudential, approach would help to improve the stability of the sector, notably as regards its economic role in financing the real economy. Amid the March turmoil, which was partly fuelled by MMFs' procyclical management of their liquidity risk, the interventions by central banks proved decisive. However, such interventions must remain the exception, to avoid promoting moral hazard and complacent management of liquidity risk.

Aware of the need to improve the ex-ante regulatory framework, European bodies (European Systemic Risk Board and the ECB's Financial Stability Committee) and international bodies (Financial Stability Board) have begun work to analyse the vulnerabilities linked to non-bank financing and its role in liquidity management within the financial system, which were thrown into sharp relief by the Covid-19 shock. This work may lead to adjustments to the rules governing non-bank financing (especially for MMFs).

The Financial Stability Board published a holistic review of the March 2020 shock⁹⁷, which contains a precise analysis of market events connected with the role of different NBFI segments. Lastly, the International Organization of Securities Commissions published its thematic note on MMFs markets during the March-April episode⁹⁸. Regulatory work with a macroprudential focus will begin on MMFs in 2021.

⁹⁷ Financial Stability Board, Holistic Review of the March Market Turmoil, 17/11/2020: <https://www.fsb.org/2020/11/holistic-review-of-the-march-market-turmoil/>

⁹⁸ International Organization of Securities Commissions, Money Market Funds during the March-April Episode Thematic Note, November 2020 : <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD666.pdf>

4. Potential disconnect between financial markets and the real economy_____

At first glance, the sharp equity market rebound, particularly in the United States, the record reduction in risk premiums on investment grade corporate bonds and the value of government debt are at odds with the current economic situation. These valuation levels are predicated on assumptions of a swift return to normal with a strong catch-up effect supported by marked easing of financial conditions. Yet there is still considerable uncertainty about macroeconomic prospects, the deterioration in corporate credit quality and the health situation. This disconnect raises questions about how the market will respond to these uncertainties.

4.1 Despite considerable uncertainties, some valuation levels are hitting record highs

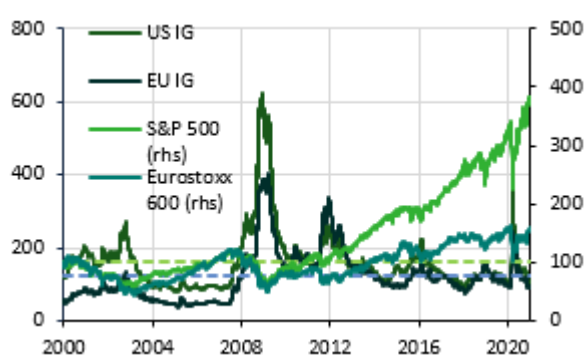
Markets are posting elevated valuation levels: a market rebound of unprecedented size and speed

After receiving a sharp shock in March, equity markets bounced back strongly as financial conditions eased. While at 23 March 2020, the US stock index, the S&P 500, was down 30.4% year-to-date (YtD), and Europe's Stoxx 600 had lost 32.7%, equity markets went on to claw back most of the year's losses. By 30 November 2020, the Euro Stoxx 600 was down just 6% YtD. Stock market indices bounced back even more vigorously in the United States, hitting record highs amid significant capital inflows. As at the same date in November, the S&P 500 was up +12% YtD.

Corporate bond markets exhibited the same trend. At the height of the crisis, risk premiums became extremely stretched, climbing to 401 bps for IG-rated⁹⁹ US corporations and 243 bps for their peers in Europe. However, these levels were lower than those recorded during the global financial crisis of 2008/2009. As equity markets recovered, bond risk premiums tightened once more, reverting to levels seen at the start of the year. The compression was unprecedented in both its size and speed and took premiums below their long-run average (Chart 4.1).

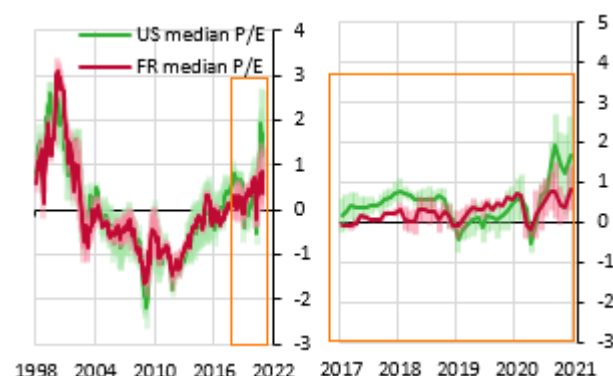
Price/earnings ratios were likewise above their long-run average in November (Chart 4.2).

Chart 4.1: Stock market indices and IG corporate bond credit spreads
x: time / y[left]: spread in bps / y[right]: total return index, 1 January 2000 = 100



Sources: Bloomberg, ICE
Notes: S&P 500 and Euro Stoxx 600 indices include reinvested dividends. The dotted lines show average bond spreads over government securities for 2000-2020 (US for US corporate bond spreads and German for EU corporate bond spreads).
Most recent value: end-December 2020

Chart 4.2: Price/earnings ratio – S&P 500 and CAC 40
x: time / y: standardised indices



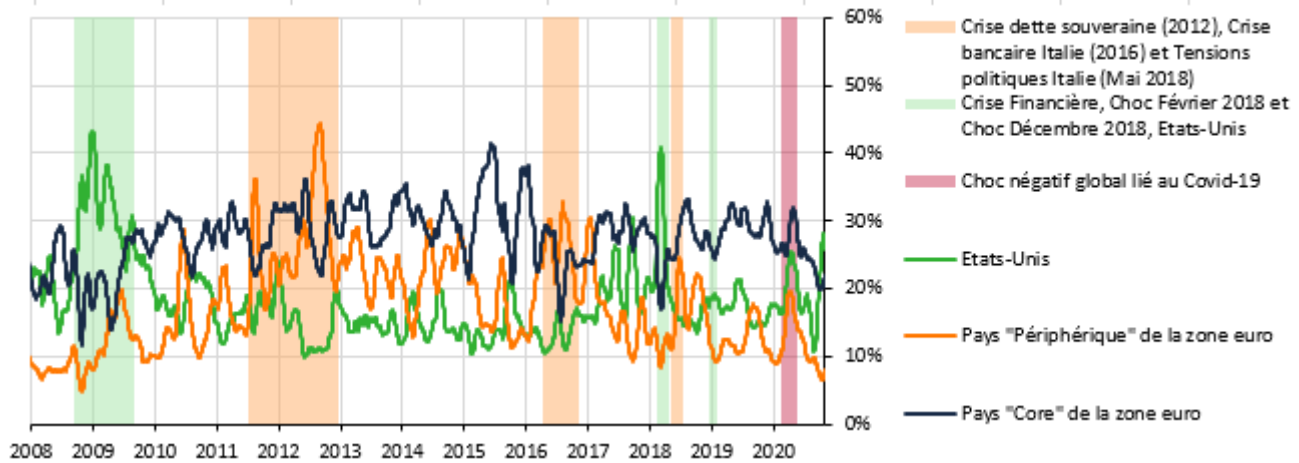
Sources: Robert Shiller website, Datastream, Bloomberg, CODE. Banque de France calculations
Notes: The median / error margins are taken from three metrics: Cyclically-adjusted price/earnings ratio (CAPE), P/E and forward P/E. P/E for price/earnings ratio (price/net earnings); US for United States; FR for France
Most recent value: end-December 2020

⁹⁹ Investment grade (IG) securities are rated BBB- or higher.

If equity valuations are particularly high in the United States, this may impact the French market. Spillover to the CAC40 can be estimated using a Diebold-Yilmaz model (DY, Chart 4.3) to measure the impact of economic and financial shocks transmitted from a given country to CAC 40 returns.

Chart 4.3: Spillover indicators (DY), French stockmarket

x: time / y: percentage of the change in the CAC 40 index, dividends reinvested



Sources: Bloomberg, Banque de France calculations

Guide: The lines on the chart plot spillover from different geographical regions affecting the CAC 40. The chart shows spillover from the United States, peripheral euro area countries (Spain, Italy, Portugal) and core euro area countries (France, Germany). The coloured bars indicate events connected with increased spillover from a particular geographical region. The indices were calculated using a Diebold-Yilmaz indicator (introduced in Diebold and Yilmaz 2009, 2012 and 2014), based on an SVAR-GARCH¹⁰⁰ model and estimated from the total daily returns of ten indices covering the world's main economies. The model captures the effects of shared worldwide shocks, such as the Covid-19 crisis, through global exogenous variables (Citigroup economic surprise index and oil price) following De Santis and Zimic (2018). Most recent value: 29 October 2020

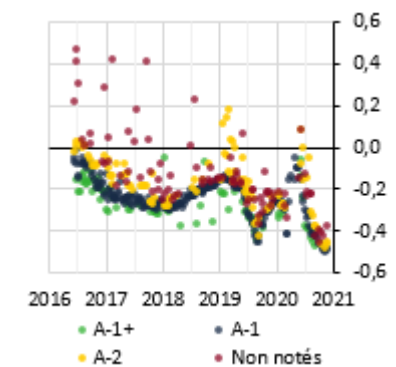
The lines plotted on the chart show to what extent changes in the CAC 40 are attributable, under the model, to shocks emanating from specific geographical regions over time. Spillover from the United States was especially high during the 2008 financial crisis. Similarly, contagion from peripheral European countries such as Italy, Spain, and Portugal... surged during the European sovereign debt crisis and during the stress on financial markets caused by Italian political tensions in May 2018.

Over the recent period, following the outbreak of the Covid-19 crisis, the impact of shocks to US indices on all other markets appears to have strengthened. This finding is consistent with past observations: in times of widespread stress, the share prices of large companies listed in the United States tend to strongly influence the overall level of uncertainty on the indices of all other countries¹⁰¹.

In corporate bonds, the marked return by secondary markets to pre-crisis valuation levels, driven by ultra-accommodative monetary policies, necessarily impacted issuance levels on the primary market. The same applies to the short-term paper market, especially the commercial paper segment (CP). Rates at issuance for CP issued by French non-financial corporations (NFCs) increased sharply in the second quarter (Chart 4.4), with lower-rated issues (CP rated A-2/P-2/F-2) particularly affected. In

Chart 4.4: Interest rates at issuance on French commercial paper maturing in 12 months

x: time / y: interest rate at issuance



Source: Banque de France

Note: Each point corresponds to the weighted average rate for securities issued during the course of one week

Most recent value: end-December 2020

¹⁰⁰ Boeckelmann (L.), Stalla-Bourdillon (A.) (2021), « Structural Estimation of Time-Varying Spillovers: An Application to International Credit Risk Transmission », Banque de France Working Paper Series, n° 798

¹⁰¹ Note that the model factors in the impact of global shocks linked to the Covid-19 pandemic, including the across-the-board increase in risk aversion. Even after these effects are recognised, spillover from US markets is still found to have increased.

the third quarter, the spread between interest rates at issuance for CP of different rating grades narrowed, seemingly indicating that the credit risk premium had fallen significantly in CP valuations, with dispersion of interest rates at issuance sharply reduced across all credit ratings.

Better than expected corporate earnings, regarding macroeconomic forecasts, may have helped to fuel the equity rebound

The direct and indirect effects of the second wave of the Covid-19 epidemic, particularly in Europe and in the United States, will undermine the economic recovery and magnify sector and regional divergences. Third-quarter earnings at major European and US companies continued to show the impact of the Covid-19 pandemic. In Europe, the earnings per share (EPS) of the Euro Stoxx 600 index was down 30% year-on-year in the third quarter, after falling by a record 58.6% in the second (Chart 4.5)¹⁰². All the sectors represented in the index besides Materials and Utilities saw profitability take hit. The situation is more encouraging in the United States. With results in from over 90% of S&P 500 companies, EPS was down just 9.1% in the third quarter, compared with a fall of 33.0% in the second. Moreover, about half of the sectors represented in the index reported a year-on-year increase in EPS.

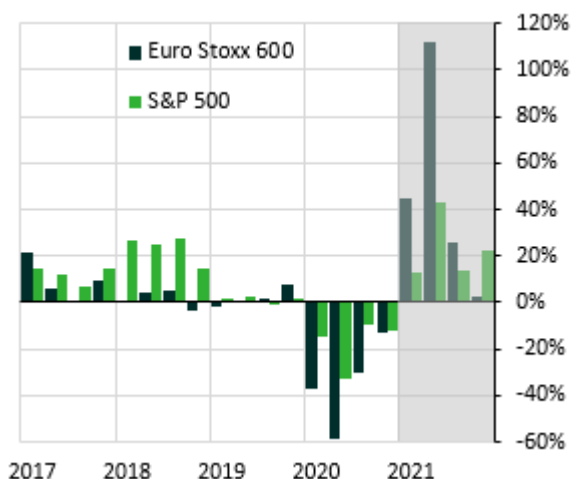
Despite the unsupportive macroeconomic environment, the high level of equity valuations may be first attributed to the fact that companies weathered the March shock better than expected. Results may have been lukewarm, but the number of companies publishing earnings beats was up

on both sides of the Atlantic, showing that profitability fell by less than initially expected in the third quarter. At 20 November 2020, 63% of Euro Stoxx 600 companies and 84% of S&P 500 companies had beaten the forecasts. In both instances, these percentages are well above average¹⁰³ but reflect very different trends. In Europe, the positive surprises were primarily due to cost-cutting efforts by companies, especially carmakers.

More importantly, while the aggregate earnings of the Euro Stoxx 600 beat analyst forecasts by 5.1% in the third quarter of 2020, the index's aggregate sales underperformed the same forecasts by 0.3%. In the United States, both indicators were in positive territory, at 19.0% and 2.4% respectively, i.e. two of the largest gaps relative to the consensus recorded since 2008. In addition, the fourth-quarter earnings guidance published by S&P 500 companies is mostly upbeat: out of the 70 forecasts published as at 20 November 2020, 31 expect improved profitability, 26 show no change and just 13 guide for EPS to fall.

Chart 4.5: Earnings per share (EPS) of European and US indices plummeted in 2020

x: time / y: year-on-year growth in quarterly EPS

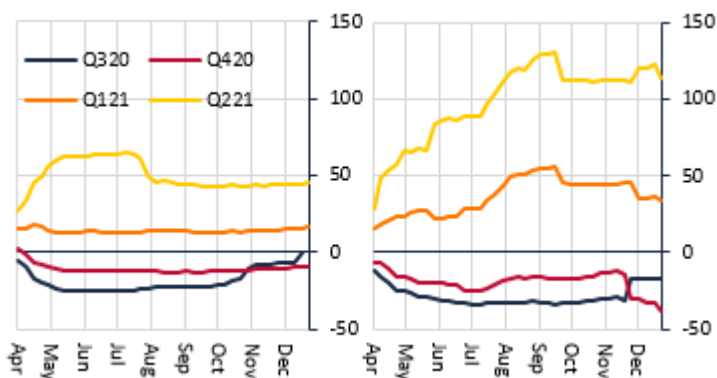


Source: Bloomberg. Banque de France calculations

Note: the greyed area shows forecasts.

Chart 4.6: Consensus EPS estimates for the STOXX 600 (left) and S&P 500 (right) point to improved profitability in 2021

x: forecast date / y: forecast year-on-year growth in quarterly EPS



Sources: Bloomberg. Banque de France calculations

Most recent value: end-December 2020

¹⁰² By 14 November 2020, 85% of companies in the Euro Stoxx 600 index had published their results, compared with 90% of firms in the S&P 500 index.

¹⁰³ The average since 2011 for the STOXX 600 index is 50%. The S&P 500's five-year average is 73%.

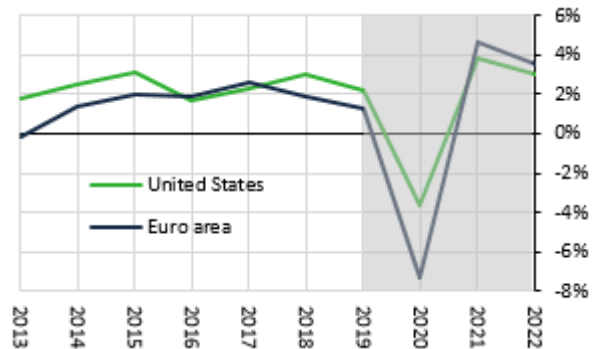
Whatever their underlying cases, these upside surprises prompted market analysts to upgrade their EPS forecasts for the coming quarters. The market consensus is now for the year-on-year change in Euro Stoxx 600 EPS to fall at a slower pace in the fourth quarter before starting to grow again in 2021 (Chart 4.6). A similar pattern is expected in the United States although the current resurgence in the epidemic in many US states calls for caution.

Chart 4.7: The strength of the US recovery caught analysts off-guard
x: time / y: difference between forecasters' expectations and actually published economic data (standardised and aggregated)



Source: Bloomberg. Banque de France calculations
Most recent value: end-December 2020

Chart 4.8: The US economy is expected to be less affected by the pandemic than the euro area economy
x: time / y: YoY real GDP growth (forecasts from 2020)



Source: Bloomberg. Banque de France calculations
Note: forecasts from 2020 onwards

It is important to stress that the companies included in the main stock indices are not usually very representative of the overall health of the economy, as their size and international reach mean they are better equipped to deal with the challenges caused by economic shocks. That said, the improved third-quarter performance of US companies is reflected in the economic statistics. Many analysts were caught off-guard by the strength of the US economic recovery from the end of the spring (Chart 4.7). Not until the late summer did a similar disconnect emerge in the euro area between the market consensus and published economic statistics (Chart 4.8). In Asia, China also enjoyed a brisk economic recovery.

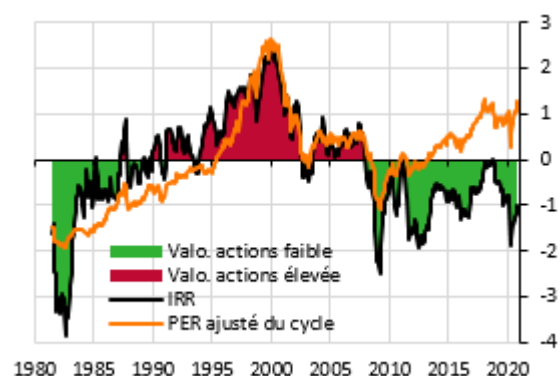
4.2 Sector and geographical divergences, and the role of investment funds

Valuations are high partly because interest rates are at historically low levels. The actions of central banks play a part in lowering the interest rate level and compressing risk premiums. Accordingly, an explanation lies with the current low rate environment: specifically, equity valuations can be interpreted as expected earnings discounted at ever lower (or even negative) rates. If interest rates are low, discounting expected earnings supports a high valuation level.

This situation particularly benefits the IT sector insofar as growth stocks have, by definition, cash flows that are distant in time. Without risk repricing or a change in expected earnings, a “lower for longer” rate environment will support valuations.

Thus, if price/earnings ratios (P/Es) in the United States and France are elevated, they should be considered against the macroeconomic variables on which they depend, particularly real interest rates, which remain

Chart 4.9: Relative Return Indicator (RRI) for the US stockmarket
x: time / y: standardised indices



Sources: Datastream, Robert Shiller website, St. Louis & Philadelphia Feds. Banque de France calculations.

Note: $RRI = (risk\text{-}free\ rate) - (E/P)$. According to GS, $RRI = (expected\ growth) - (risk\ premium)$. The indicator is standardised to be centred around zero, the green and red areas show whether the RRI is below/above its long-term average and hence whether the equity market is relatively under/overvalued.

Most recent value: end-December 2020.

historically low. Using the Gordon-Shapiro model (GS, 1956) and the work of Antonio Fatas (2018), by comparing returns on equity markets with those of bond markets, it is possible to obtain an indicator of equity market under/overvaluation. This Relative Return Indicator (RRI) will be high if investors' growth expectations are high and/or if the risk premium that they require is low¹⁰⁴. Put another way, the RRI will tend to be elevated during speculative bubbles on equity markets.

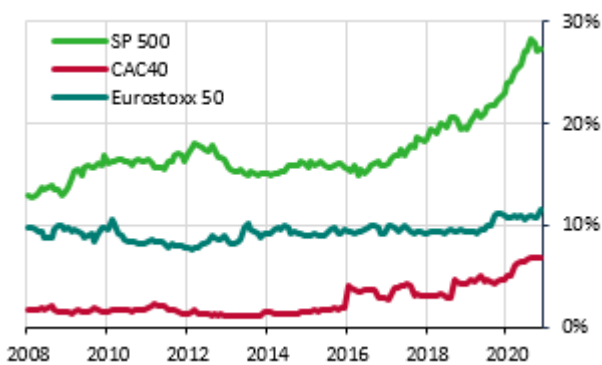
The RRI accurately captures the periods of stockmarket exuberance in 1987 and 1990-2000. In contrast, for the recent period, while the cyclically adjusted P/E suggests overvaluation, the RRI indicates that valuations remain weak. Thus, whereas the equity market displayed an independent upward trend during the dot.com bubble of the 1990s, today's high equity market valuations are in consistent with those observable on the bond market (sovereign and IG corporate). Since the financial crisis of 2008, the rise in stock prices does not appear to reflect "irrational exuberance" (Chart 4.9), especially given that the March 2020 rebound was less marked in France than in the United States.

Following Fatas (2018) and using the IMF's long-term (five-year) growth forecast, it is possible to decompose the RRI¹⁰⁵ and thus analyse the different contributions to movements in the cyclically-adjusted P/E ratio since the outbreak of the pandemic. The collapse in valuation ratios in March was mainly linked to the increase in the risk premium. Conversely, the rebound perceptible since March is particularly due to the positive impact of the decline in risk-free rates. This analysis also applies to the European stock index.

These valuation levels conceal substantial sector and geographical differences

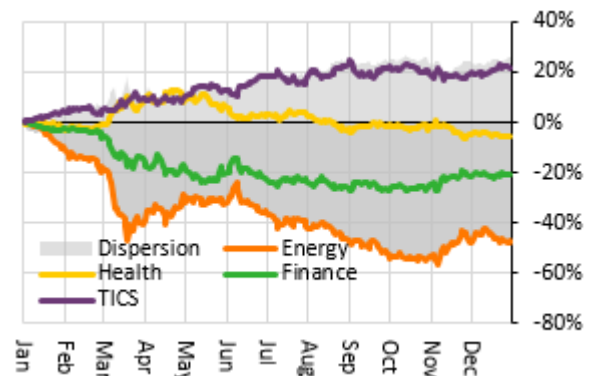
The share of the tech sector plays a key role in the level of stock indices

Chart 4.10: Tech sector share of market indices
x: time / y: percentage



Sources: Datastream. Banque de France calculations
Most recent value: end-December 2020.

Chart 4.11: Sector outperformances relative to the MSCI USA index
x: time / y: annual outperformance as a percentage



Sources: Bloomberg. Banque de France calculations
Note: The chart plots the outperformances of different sectors against the benchmark index. A 10% outperformance at 1 November means that the sector's YtD performance was 10% better than that of the index. MSCI USA is the Morgan Stanley Capital International equity index, TICS stands for technology, information and communication services
Most recent value: end-December 2020.

An additional explanation for the equity market rebound in the United States is the share of the technology sector in US indices (Chart 4.10). By virtue of their business models, digital firms have benefited more from lockdown policies compared with more traditional business sectors.

¹⁰⁴ See <https://blocnotesdeleco.banque-france.fr/billet-de-blog/quelles-sont-les-sources-de-la-forte-valorisation-des-marches-dactions>

¹⁰⁵ Given that the RRI is theoretically equal to the difference between expected growth and the equity market risk premium, subtracting the RRI from a proxy of expected growth is equivalent to estimating the risk premium.

In addition, these companies are highly sensitive to changes in long-term interest rates¹⁰⁶ and therefore benefited from the decline in US real interest rates described above. In October 2020, the IT sector made up 27% of the S&P 500's capitalisation compared with just 7% for the CAC 40, which partly explains the divergence between these two indices (Chart 4.11). Moreover, this difference is automatically amplified by the way the indices are structured, since sector weightings depend on market valuation: a decline in risk-free rates causes the valuation of the tech sector to go up; as a result, the sector's weight in the index also increases, making the index more sensitive to the valuation of GAAPM¹⁰⁷ stocks in the event that rates go down.

In addition, some sectors that are overweighted in European equity indices underperformed significantly in 2020. This was true of the financial sector, including banks, which made up 15.7% of the MSCI Europe index at end-November, compared with 10.4% for the S&P 500.

Risk premium compression could be amplified by flows into investment funds

Equity and bond funds in developed markets shrugged off the impact of the pandemic and saw net inflows of new money in 2020

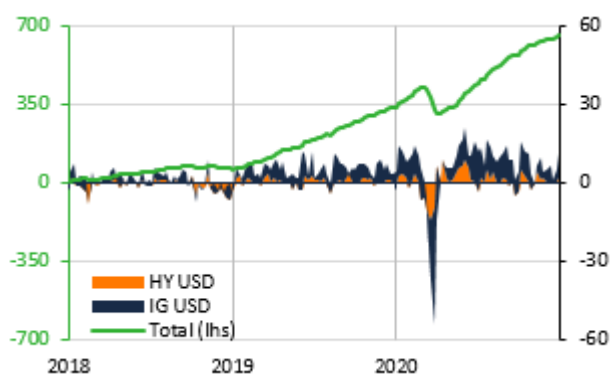
Changes in the assets under management in the non-bank sector may have contributed to narrower bond spreads. These changes may also be examined to assess the positioning of investors in the current environment.

While the trend towards net inflows in place since mid-2019 continued in early 2020, the months of March and April, when the pandemic and lockdown measures were at their peak, featured substantial outflows of funds from EUR-denominated equity and bond funds, especially out of funds invested in corporate bonds. However, net flows turned inward again starting in April/May in connection with the fiscal and monetary measures taken to support the economy and the pick-up in economic activity that followed the easing of lockdown measures. In developed markets, US bond funds were the main recipients of capital inflows.

Bond market: funds invested in EUR IG securities held up better than funds invested in HY securities

Chart 4.12: Weekly change in flows into/out of EUR HY and IG funds and total since 2018

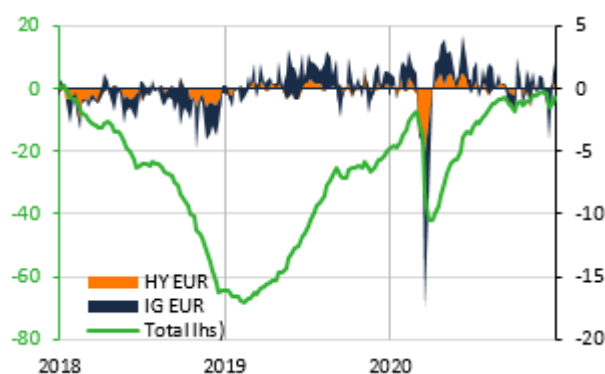
x: time / y[left]: USD billion equivalent / y[right]: USD billion equivalent, total since 2018



Sources: EPFR. Banque de France calculations
Note: IG for Investment Grade, HY for High Yield.
Most recent value: end-December 2020.

Chart 4.13: Weekly change in flows into/out of USD HY and IG funds and total since 2018

x: time / y[left]: USD billion / y[right]: USD billion, total since 2018



Sources: EPFR. Banque de France calculations
Note: IG for Investment Grade, HY for High Yield.
Most recent value: end-December 2020.

¹⁰⁶ Digital companies often have the longest expected dividend horizons, enabling them to benefit from falls in interest rates.

¹⁰⁷ Google, Apple, Amazon, Facebook and Microsoft.

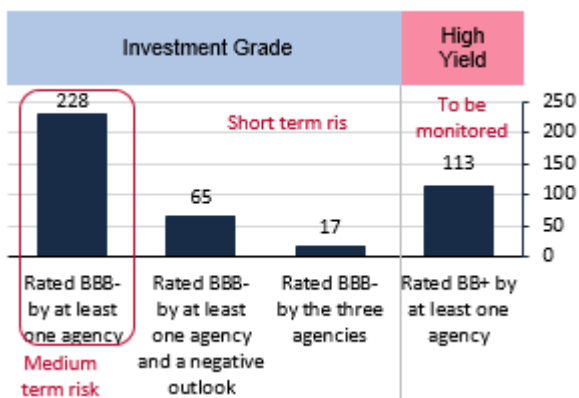
Investment flows into bond markets over time offer a good indicator of investors' risk appetite. Bond funds saw sharp outflows at the height of the crisis in March 2020. This was especially true for EUR funds¹⁰⁸ (Chart 4.12). After spreads compressed, renewed risk appetite was particularly noticeable in credit market funds. IG EUR bond funds saw inflows of USD 23.6 billion YtD, while HY funds lost out amid a flight to quality¹⁰⁹. The movement was more pronounced among USD IG funds and to a lesser degree among US HY funds, which recorded net inflows at end-November, after seeing outflows during the March events¹¹⁰. Inflows to USD credit funds then slowed from late October in the wake of the US election (Chart 4.13).

4.3 Company downgrades are happening at a sustained pace, sharply increasing the debt of speculative grade NFCs

With the situations of some indebted companies potentially worsening as a result of the earnings shock, rating agencies reassessed their credit risk. The current pace of downgrades exceeds that of all previous periods except the start of the sovereign debt crisis in 2012¹¹¹.

The slowdown in the business cycle is taking place at a time when large quantities of BBB-rated debt are outstanding (Chart 4.14), leading to a sharp increase in the number of fallen angels¹¹² due to rating downgrades. At 6 November 2020, around 15 euro area companies had been downgraded from investment grade to high yield by at least one of the main credit rating agencies, namely Fitch, Moody's and S&P¹¹³. These downgrades covered debt worth about EUR 35 billion, chiefly concentrated in three countries, namely Italy (34%), France (29%) and Germany (22%). Just four issuers accounted for about half the amount. The consumer discretionary sector accounted for just over half of the fallen angels (51%), followed by industry (31%). Most of the downgrades happened between early March and mid-August 2020 following the outbreak of the health crisis, with the pace quickening over the summer.

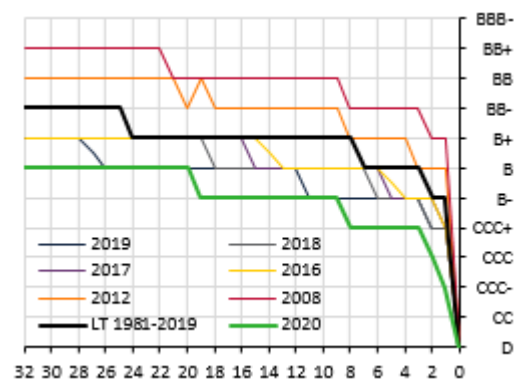
Chart 4.14: Distribution of debt of euro area NFCs rated BBB or HY
x: Rating / y: EUR billion



Source: Bloomberg. Banque de France calculations
Data: end-December 2020

Chart 4.15: Path to default of companies rated by S&P
Scope: World.

x: Number of months before default / y: S&P rating



Sources: S&P, Eikon, Banque de France calculations
Note: The chart plots the path to default of companies rated by S&P, i.e. the median rating in the months preceding default of companies that defaulted during a given year. The long-term average path to default is also shown.
Most recent value for the 2020 path to default: October 2020.

¹⁰⁸ USD 15 billion outflow in March from HY funds denominated in EUR and USD 19 billion outflow from IG funds denominated in EUR.

¹⁰⁹ EUR HY funds saw outflows of USD 5 billion over the year, which wiped out the net inflows recorded in 2019.

¹¹⁰ USD 264 billion inflow since the start of 2020 after inflows of USD 233 billion in 2019 for HY USD funds; for IG USD funds: USD 23.7 billion in inflows since the start of 2020 after USD 12 billion in inflows in 2019.

¹¹¹ The volume of revisions during that period is attributable to the downgrade of France's sovereign debt, which impacted the ratings of French companies because of the unspoken rule that a company cannot have a better rating than its sovereign. France's sovereign rating was downgraded in January 2012 and July 2013.

¹¹² A fallen angel is a company that is downgraded by a credit rating agency from IG to HY.

¹¹³ Unlike securities rated BBB- or higher (investment grade), securities that are considered to be speculative and assigned a rating of BB+ or lower (high yield) have a non-zero probability of default on a one-year horizon.

The number of fallen angels appeared to stabilise in the autumn, despite the second wave of infections that began in mid-October in Europe. The as-yet uncertain size of the economic impact due to the resurgence of the Covid-19 epidemic could trigger another round of fallen angels. A second round would sharply increase the volume of debt of companies rated BB+ by at least one credit rating agency, which currently stands at just under EUR 110 billion (Chart 4.14).

In the short term, the immediate risk is to the lowest-rated IG issuers, representing a volume of debt in the euro area ranging between EUR 17 billion (rated BBB- by three agencies) and EUR 65 billion (rated BBB- and negative outlook by at least one agency). Further out, the risk for the euro area can be measured by considering the volume of debt rated by at least one of the major credit rating agencies as being BBB- (the last notch before speculative grade), which stands at approximately EUR 230 billion. Given these volumes, a major shift would cause a surge in the volume of HY debt and especially of debt rated BB+. This raises the question of the market's capacity to absorb such an influx of debt.

Accordingly, from a financial stability perspective, it is necessary to consider not only the current pace of downgrades but also the meaningfulness of the ratings assigned to companies that ended up defaulting and whether these ratings are sufficiently informative for investors. It is possible to conduct a retroactive assessment to see whether ratings are sufficiently predictive and enable credit risk to be monitored in the case of an extreme event based on statistical data provided by credit rating agencies.

To do this, it is common practice to analyse the paths to default¹¹⁴ provided by credit ratings agencies¹¹⁵ (Chart 4.15). This method consists in calculating, for defaulting companies only, median ratings in the months leading to default. The higher the ex-ante ratings assigned to defaulting companies, the higher their path to default on Chart 4.15, before the fall to D or SD, meaning a default for S&P. This analysis shows that the path to default was highest in 2008, as credit rating agencies assigned high ratings to companies that ultimately defaulted. Conversely, from 2008 to 2019, paths to default show downward trends.

The same trend is in evidence for 2020, suggesting that defaults were relatively well anticipated in 2020, including over the Covid-19 period, in contrast with what happened during the 2008 crisis. However, legal and economic measures that have tended to limit or delay defaults need to be taken into account when considering this result. It is possible that some companies did not technically default even though they were struggling, because default registrations were suspended for a large number of companies.

4.4 High asset valuations could amplify the impact of the shocks on financial stability

Considerable uncertainty remains in the short term over Brexit, the health situation and the risks of instability in emerging countries

Looking beyond developments related to the health situation, short-term volatility factors are still present. In the lead-up to the US elections, equity market volatility increased, particularly the term structure of option implied volatility. However, the situation returned to normal in the wake of the elections.

Developments in Brexit negotiations (Box 4.2) may also add fuel to market tensions, even though these already factor in an unfavourable scenario based on a no-deal outcome. Finally, the Covid-19 crisis has highlighted weaknesses among some emerging countries, as well as China's dominant role.

The impact of new exogenous shocks is likely to be increased if the question of private and public debt sustainability is a source of instability in the medium term.

¹¹⁴ This metric provides the median ratings of defaulting companies in the months leading to default.

¹¹⁵ Credit rating agencies are regulated in Europe by Regulation (EC) No. 1060/2009 of the European Parliament and of the Council of 16 September 2009.

Box 4-2: Regulatory issues linked to Brexit

France's authorities acted early to get ready for the risk of a no-deal or minimal-deal outcome in talks by the European Union (EU) and the United Kingdom (UK) on their future relationship and for an absence of equivalence decisions specifically on financial services, which are outside the scope of strictly trade-related negotiations. **The exit agreement negotiated in December did not affect the relations governing financial services, which therefore continue to have relevance with regard to the main contingency measures to deal with non-continuity risks linked to Brexit** adopted within the EU, and in France through Act 2019-486 of 22 May 2019 on business growth and transformation (the “Pacte Act”), supplemented by Ordinance No. 2020-1595 of 16 December 2020 on the consequences of the withdrawal of the United Kingdom from the European Union in terms of insurance, collective investments and equity savings plans. **As a result, the French financial sector looks ready heading into the end of the transition period** provided for by the withdrawal agreement. The UK is scheduled to leave the union on 1 January 2021.

The adoption of these contingency measures, which are vital in the short term, does not however remove the need to make changes to the way that financial markets operate in the medium term, in order to reflect the new situation, which will see the United Kingdom become a third country outside the EU.

The main financial stability challenge linked to Brexit particularly concerns **the need to relocate EUR clearing activities to the EU-27**. In this regard, the short-term financial stability risks linked to the heavy reliance of European financial participants on UK central counterparties (CCPs) were dispelled by the European Commission's decision on 21 September 2020 to grant UK CCP prudential rules equivalence with EU legislation for a period of 18 months starting on 1 January 2021. This decision was supplemented on 28 September 2020 as the European Securities and Markets Authority (ESMA) recognised the three CCPs authorised in the UK, which had applied to the European authority in order to continue their activities.

In the medium term, however, keeping EUR clearing activities with systemically-important entities that are no longer located within the borders of the EU-27 remains a financial stability concern. Accordingly, the equivalence decision came with a call by the Commission, which was repeated by ESMA, urging European participants to voluntarily reduce their exposures to UK CCPs before the decision expires. In parallel, in 2021 ESMA will launch the process provided for by EMIR (Art 25 (2c)) to bring about the relocation of certain segments of activity.

The presence in the UK of clearing activities posing potentially systemic risks to the European Union creates the need for these activities to be redeployed within the EU. These risks could materialise through multiple channels. First, in practice, ESMA has limited direct supervisory powers over non-EU CCPs. Meanwhile, there is a risk that the UK could diverge from the EU regulatory framework, potentially resulting in UK CCPs being subject to standards that are less strict than those of the EU through the comparable compliance mechanism, which would exempt them from a number of quantitative requirements, notably in terms of margin calibration. Second, in times of crisis, UK CCPs might take decisions that are detrimental to the EU's financial stability (such as sudden margin increases or haircuts on EUR collateral in response to market stress, which would have a procyclical impact on financing costs in affected Member States without affecting the UK economy). Third, given their systemic importance, a failure by one of these CCPs could have repercussions for the whole EU financial system. Materialisation of these risks might result in the Eurosystem being forced to provide liquidity in euros to stave off the crisis, without having any say over the CCPs' use of resources or risk management practices.

5. The commercial real estate sector is exposed to the impacts of the health crisis

In recent years, commercial real estate has seen strong growth, offering relatively high returns in a low interest rate environment, notwithstanding differences across segments, i.e. offices, retail and industrial. Deals hit a record total of more than EUR 40 billion in 2019, while prices climbed by 4.4% over the year. Well before the outbreak of the health crisis, this vibrant growth had alerted the authorities to the risk of a price correction, prompting the HCSF to look at the issue.

Stress testing led by the HCSF in 2017 did not reveal a threat of systemic risk in the event of a pronounced shock to asset values, since the financial sector's exposure to the market remains contained. However, a reversal on this market, linked to dimmer macroeconomic prospects, could trigger significant redistribution effects among tenants, asset holders and creditors.

The commercial real estate (CRE) sector is therefore highly exposed to the health crisis. It is vulnerable to the direct effects of the economic downturn, because rents are a major cost item that companies may try to adjust. More importantly, longer-term demand for these assets may be radically revised with the arrival of remote working arrangements and the acceleration of e-commerce. While the market is not large enough on its own to cause problems for financial institutions, it could combine with other factors to undermine their balance sheets and impair their capacity to finance the economy.

This chapter looks first at the CRE market's importance to financial stability and reviews pre-crisis dynamics. The second section considers the impact of a CRE market reversal on financial institutions and companies.

5.1 Does commercial real estate represent a structural challenge in terms of financial stability?

What is commercial real estate?

CRE spans a number of different investment typologies depending which definition is used¹¹⁶.

- Under the narrowest definition, it consists of income-producing real estate, that is, any property held by a financial intermediary as part of an economic activity. In France, such intermediaries are typically real estate companies, dedicated investment funds (OPCIs or SCPIs) or insurers, which may hold professional (offices, shops, warehouses) or residential property. The total value of professionally managed real estate was estimated at around EUR 400 billion in France in 2019¹¹⁷.
- More broadly, CRE includes all real estate assets excluding residential properties owned by households for their own use or as buy-to-let investments. The broad definition thus encompasses all real estate assets owned by companies themselves, which may play a key role in companies' financing capacities while, from an economic perspective, meeting the same use-related demand as income-producing assets. According to national accounts data, these assets, taken together, are worth approximately EUR 4 trillion¹¹⁸ in France.

CRE forms a class of imperfectly substitutable assets exhibiting diverse market dynamics. Accordingly, demand for suburban warehouses will probably be out of step with demand for downtown commercial properties, such that these assets will not be readily substitutable. Conversely, an office in Paris's "Golden Triangle" could theoretically

¹¹⁶ At the institutional level, the narrowest definition was used by the European Systemic Risk Board (ESRB) in its Recommendation ESRB/2016/14: https://www.esrb.europa.eu/pub/pdf/recommendations/2016/ESRB_2016_14.en.pdf. In 2019, the ESRB published an updated recommendation, Recommendation ESRB/2019/3, which uses a broad definition: https://www.esrb.europa.eu/pub/pdf/recommendations/esrb.recommendation190819_ESRB_2019-3~6690e1fbd3.en.pdf

¹¹⁷ "Real Estate Market Size 2019", published by MSCI in June 2019.

¹¹⁸ This is the sum of housing, non-residential buildings and supporting land recorded in the assets of Non-Financial Corporations (S11), Financial Corporations (S12) and General Government (S13) in 2019 balance sheets.

be converted to residential use if the demand was there, despite significant regulatory frictions. An analysis of transactions makes it possible to measure the relative shares of different segments and geographical disparities. In 2019, the office segment accounted for just over 60% of transactions, and 70% of these concerned assets in the Île-de-France region¹¹⁹.

Box 5.1: Assessing the level of CRE prices from corporate purchasing power

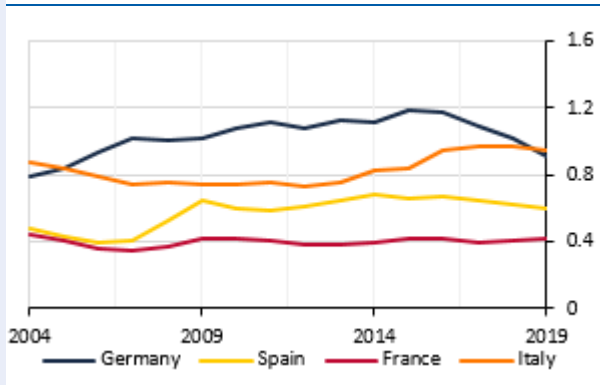
One way to analyse the price level is to compare it against the change in value added created by companies. By adapting a tried and tested approach to analysing residential real estate, we can study the change in the real estate purchasing power of companies¹²⁰ by asking: how many square metres can they acquire per employee? The real estate purchasing power of companies in square metres per employee S_t is calculated from their gross disposable income per employee GDI , the interest rate at which they borrow τ_t , office prices per square metre P_t , their debt-service-to-income ratio E_t and the maturity of loans used, written M ¹²¹:

$$S_t = \frac{GDI * [1 - (1 + \tau_t)^{-M}] * E_t}{\tau_t * P_t}$$

This approach has two limitations compared with the same approach that is commonly used for households. First, real estate use constitutes intermediate consumption for companies, but final consumption for households. Thus, if the share of renting companies increased, their gross disposable income would decline with their real estate investment needs. This calculation therefore assumes that the share of renting companies is stable or changes in a like manner across countries for the purpose of comparisons. Next, the employed population cannot be directly compared to the gross disposable income of companies because sole proprietors are included with household accounts in the national accounts. Accordingly, the analysis is a summary one and thus assumes that the share of employment among NFCs is constant over time.

Chart 5.1: change in the office purchasing power of companies, by country

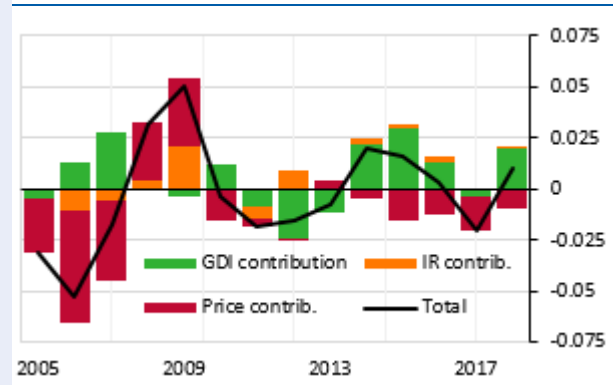
x: time / y: square metres by employee



Source: OECD, MSCI, ECB, Banque de France calculations

Chart 5.2: decomposition of the change by factor for France

x: time / y: square metres by employee



Source: OECD, MSCI, ECB, Banque de France calculations

The results are presented in Charts 5.1 and 5.2: the purchasing power of French companies stayed relatively stable at around 0.4 square metres per employee. An average company could therefore increase the surface area owned per employee by approximately 2% over one year, based on average real estate ownership per employee of 25 square metres¹²². Purchasing power therefore seems structurally weaker than in neighbouring countries. This is connected with the level of office prices in France, which stand at EUR 8,000/m² compared with just EUR 4,300/m² in Germany, reflecting the French market's much higher concentration.

¹¹⁹ "At a Glance – Investissement en France, T4 2019" published by BNP Paribas Real Estate.

¹²⁰ "An alternative method for capturing tensions in the residential property market", by Lalliard (A.), Quarterly Selection of Articles Banque de France No. 45 - Spring 2017.

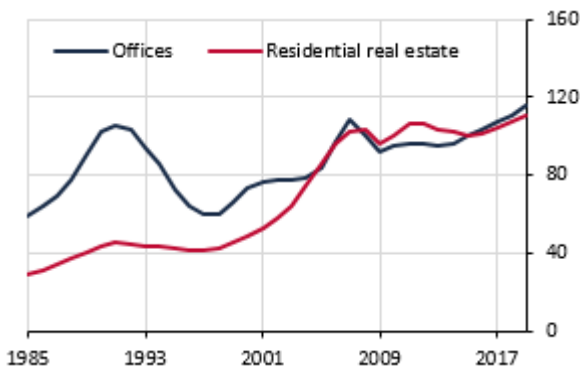
¹²¹ These last two parameters are set at 25% and four years respectively, based on the findings of an ACPR survey of real estate professionals, making the assumption that companies would have access to the same financing terms as financial intermediaries if they wanted to acquire the offices that they use.

¹²² "The macroeconomics of teleworking", by A. Bergeaud and S. Ray, Bulletin de la Banque de France No. 231/2, September-October 2020.

A cyclical sector

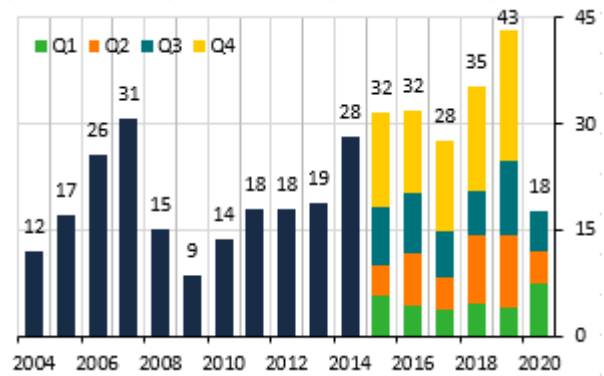
The CRE market is characterised by significant cyclicity, as illustrated by the crisis in the early 1990s (see Chart 5.3). CRE was also identified as a key predictor of bank defaults in the United States in 2008¹²³. The market's cyclicity stems from three factors that could come into play in the Covid-19 setting. First, the value of these assets depends on investment demand, which in turn varies with financial conditions, such as the level of interest rates and the risk premium, which fluctuate over time. Next, rental demand depends on economic activity and may potentially over-adjust to economic shocks, insofar as rents are a relatively variable cost: tenants can break their contracts every three years in a standard commercial lease. This flexibility allows companies to adjust their cost structure more easily in the event of a crisis, but creates a procyclical risk for landlords. Finally, supply adjusts only slowly to changes in demand through construction. The lag between housing starts and deliveries can amplify cycles, with over-building during acceleration phases causing excess supply to come onto the market just as activity is cooling.

Chart 5.3: relative change in office and residential real estate prices in France
X: time / y: 2015 = 100



Source: MSCI, OECD.

Chart 5.4: transaction volume on the CRE market (offices, retail, logistics & business, services)
x: time / y: EUR billion



Source: BNP Paribas Real Estate

Pre-existing vulnerabilities

Investment dynamics in the income-producing real estate segment created vulnerabilities ahead of the health crisis. In a low interest rate environment, these assets offered a relatively attractive risk/reward tradeoff that drew keen investor interest. As a result, 2019 saw absolute records broken for transactions in France, with over EUR 40 billion in deals (see Chart 5.4). This was accompanied by an increase in prices (4.4% in 2019), reflecting the compression of expected rental yields, which fell by between 2 and 3 percentage points (pp) depending on the segment over ten years, reaching 4% for income-producing estate overall at end-2019.

This brisk growth alerted the authorities to the risk of a price correction well before the health crisis. The office segment, representing the bulk of the market, looks especially vulnerable to a tightening of financial conditions. With a market concentrated in urban centres around the world, offices are a relatively liquid product that is preferred by a global base of investors looking for income. As such, they are subject to more volatile capital flows. The problem was not so much that prices were overvalued but that they might correct in the event of an interest rate increase¹²⁴. As Box 5.1 shows, office prices mostly moved in step with corporate revenues. But an increase in interest rates would result automatically in a decline in valuations by making alternative investment opportunities in interest rate products more attractive. The Haut Conseil de Stabilité Financière (HCSF – High Council for Financial

¹²³ "Commercial Bank Failures during the Great Recession: The Real (Estate) Story", by Antoniadis (A.), BIS Working Paper No. 530, 2015.

¹²⁴ "Commercial real estate: is there a risk of a financial bubble?", by Coffinet (J.), Ferrière (T.) and Henricot (D.), Bulletin de la Banque de France No. 219/2, October 2018.

Stability) was therefore prompted to conduct cross-cutting sensitivity exercises and to step up communication with participants¹²⁵. The health crisis could be a catalyst for repricing, if financial conditions tighten.

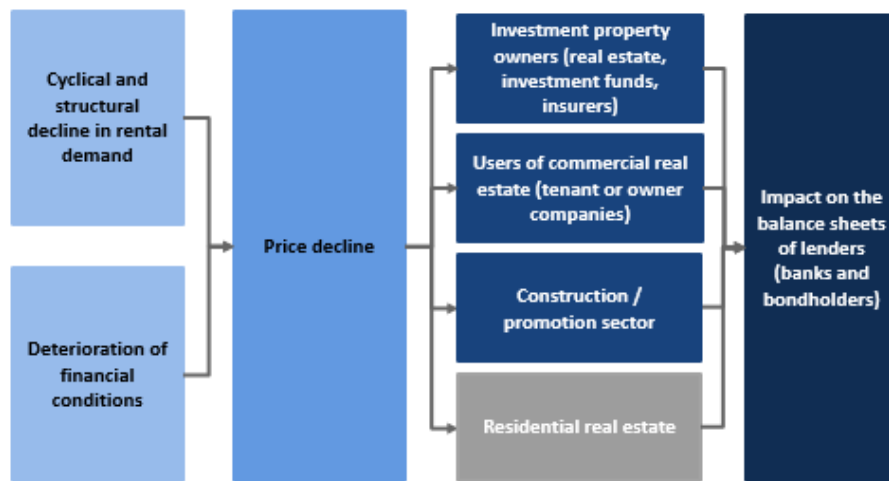
With the potential growth of remote working arrangements, the office segment is surely at the greatest risk. The expected impact on other markets is more mixed. The retail segment had already seen broad changes before the crisis, with the decline of the model based on large suburban supermarkets and the rise of e-commerce. Demand for warehouses could move in the opposite direction to the retail segment as online demand replaces physical demand. The hotel segment, meanwhile, could be lastingly affected by the global downturn in international tourism.

5.2 How is the health crisis impacting commercial real estate?

Transmission channels

The current crisis has led to a decline in rental demand for CRE. The shift is at once cyclical, with entire sections of the economy bring shut down, and structural, with the rise of remote working and the increase in online commerce. Shrinking demand should lead to a gradual increase in vacancy and a decrease in rents, as leases expire. Coupled with a risk of a deterioration in financial conditions, this could cause the prices of affected assets to fall. These trends could generate losses for owners of income-producing real estate or developers, while the effect on users would be more ambiguous. The shock could also be disruptive to lenders who financed these assets or accepted them as collateral. Meanwhile, looking outside the scope of this report on the financial system, difficulties in the sector could affect residential real estate via land prices¹²⁶. These channels are summarised in Chart 5.5 and addressed in turn in Section 5.3.

Chart 5.5: transmission channels for the impact of Covid-19 on CRE



Source: Banque de France.

Cyclical shock and its impact on rental demand

To assess the effect of the crisis, the first step is therefore to measure the potential size of the fall in rental income. Rents and vacancy typically adjust slowly on the rental market owing to the duration of leases and rent indexing. Furthermore, weaker demand could translate into an increase in vacancy first before leading to a reduction in rents. However, rents are a relatively variable cost item for companies: historically, the variability of this item has

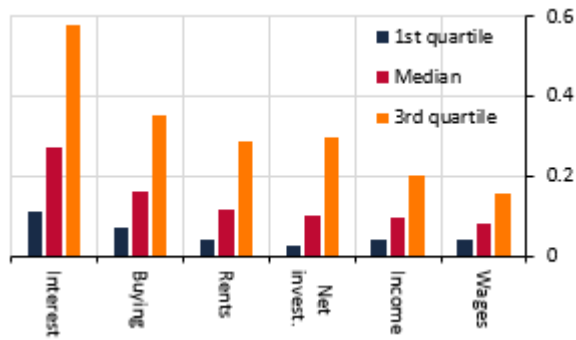
¹²⁵ “Diagnostic actualisé et résultats des stress tests liés à l’immobilier commercial”, published by the HCSF in March 2017.

¹²⁶ “Imperfect Substitutability in Real Estate Markets and the Effect of Housing Demand on the Macroeconomy”, Davis (J.), Huang (K.) and Sapci (A.), Globalization Institute Working Paper 401, September 2020.

exceeded that of wages or even net investments (see Chart 5.6). It is therefore to be expected that companies looking to make savings would adjust this cost item.

Chart 5.6: distribution of the standard deviation by company of the growth rate of cost items

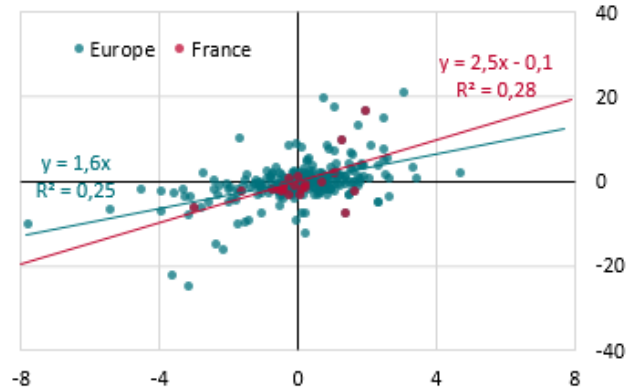
X: P&L account item / y: index



Source: FIBEN parent company database

Chart 5.7: historical relationship between real growth rates of office rents and employment growth rates in Europe and France

x: growth rate of demeaned employment / y: real growth rate of demeaned rents



Source: MSCI, OECD

In the half-yearly index published by MSCI, vacancy is up 1.8pp while rents continue to rise with moderate 0.3% growth over six months. Historically, rents and vacancy are closely correlated with employment trends, especially on the office segment (see Chart 5.7). Applying these correlations to the Banque de France's unemployment forecasts¹²⁷, the effect of an increase in unemployment on rental incomes can be estimated: they are estimated to decline by 2% across CRE as a whole by 2021 (5% for offices respectively), including a 1pp increase in vacancy (2pp respectively) (see Box 5.2).

Box 5.2: Modelling a scenario for rental demand and prices based on employment forecasts

A two-stage approach is proposed to measure the effect on prices of a change in employment. First, the effect of employment on rental demand is modelled. Since the rental market can reach equilibrium in the short term through prices (rents) or quantities (vacancy), we estimate the historical correlation of these two variables with employment, remaining agnostic ex ante on the adjustment method. This elasticity is then applied to unemployment forecasts and used to obtain rent and vacancy forecasts. The product of vacancy and rents represents rental income. Stage two consists in discounting rental income trajectories using assumptions for the long-term rent growth rate and the interest rate environment. Specifically, stage one consists in estimating the following equation:

$$\begin{bmatrix} \Delta \text{real rents} \\ \Delta \text{vacancy} \end{bmatrix}_{it} = A * \begin{bmatrix} \Delta \text{real rents} \\ \Delta \text{vacancy} \end{bmatrix}_{it-1} + \beta \Delta \text{Employment}_{it} + FE_i + \epsilon_{it}$$

The model is estimated for a panel of 14 European countries with the help of MSCI vacancy and rent growth data, plus fixed effects FE_i to capture any national trends. Errors are grouped by year. Separate estimates are performed for the retail and office segments and for CRE as a whole. To improve robustness, a single elasticity was estimated for all the European countries. For the office market, a 1% decline in employment leads to a 1.3% decrease in rents and a 0.8pp increase in vacancy. Rents are autocorrelated, while vacancy tends to oscillate; this may reflect successive supply over- and under-adjustments to economic fluctuations. An increase in vacancy tends to depress rents in the following year, which is consistent with the intuition that short-term

¹²⁷ https://publications.banque-france.fr/sites/default/files/medias/documents/projections-macroeconomiques_2020-09.pdf

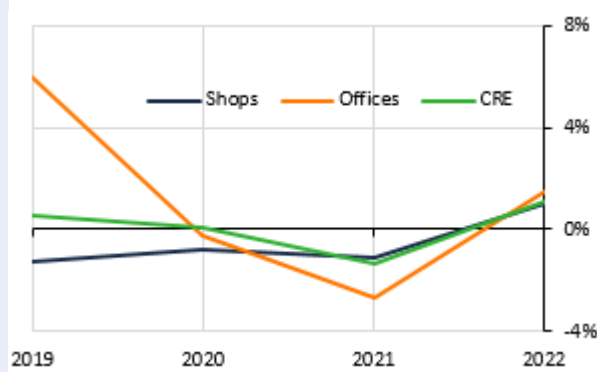
adjustments are made to quantities. Finally, elasticities are generally higher on the office market, which would appear to indicate that overall CRE masks a variety of dynamics.

Stage two consists in calculating the immediate price impact by discounting rent flows and comparing a benchmark price with a price corresponding to the abovementioned rental income trajectories. The discount formula is written:

$$P = \sum_{t=2020}^{2039} \frac{(1 - vacancy) * rent * (1 + g)^{t-2019}}{1 + r_f + r_p}$$

Chart 5.8: rent growth projections by segment

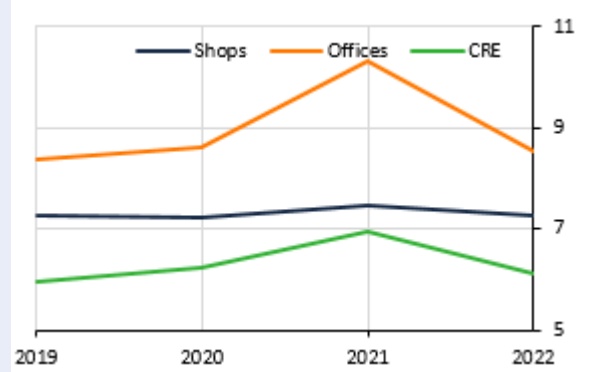
x: time / y: %



Source: Banque de France calculations

Chart 5.9: vacancy rate projections by segment

x: time / y: %

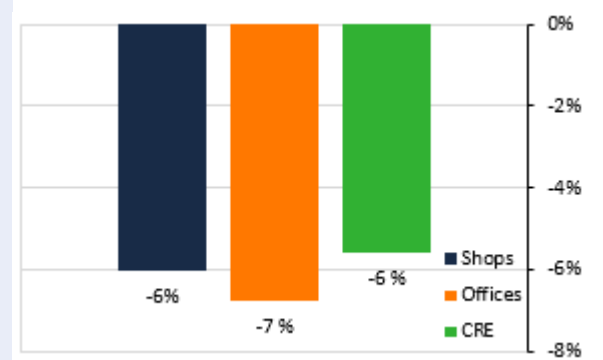


Source: Banque de France calculations

Assuming that the average duration of an investment is 20 years and that long-term growth in rents g is constant and anchored to the ECB's 2% inflation target, and using the initial rental yield value provided by MSCI and approximately equal to $r_f + r_p - g$, we can deduce the value of the risk premium r_p : 6.1% at end-2019 for retail, 5.8% for offices and 6% overall. The French ten-year government bond yield (0.15% at end-2019) was used as the risk-free rate. The price ratio provided at the benchmark price gives a guide to the change in prices by segment (Chart 5.10).

Chart 5.10: possible change in CRE prices by segment

x: segment / y: %



Source: Banque de France calculations

Under these assumptions, the office segment would be marginally more affected than the rest. This approach assumes constant elasticity of prices to employment (and hence no decline in office density demanded per employee with remote working) and similarly does not assume a correction in capitalisation rates, which could occur on the office segment given pre-crisis developments.

Structural changes: remote working

The mechanical effects of the decline in employment could be amplified by the acceleration of structural changes. For example, the health crisis and physical distancing measures implemented by most governments have seen companies adopt remote working approaches where possible.

This involved lifting numerous psychological, regulatory and technical obstacles and making investments in equipment, all of which suggests that the practice of remote working will become more important once the health crisis is over than it was at the beginning¹²⁸. Moreover, [a study conducted in several European countries](#) by the European Foundation for the Improvement of Living and Working Conditions has found that the most employees working from home are satisfied overall with their experience of remote working (60% in France).

Numerous questions remain over the macroeconomic effects that such a shift in working practices and consumption could create, not just for productivity ([Cette, 2020](#)) but also for employees, worker wellbeing ([Batut, 2020](#)), and prices ([Byrne et al., 2016](#)).

One of the major macroeconomic impacts could be a decline in demand for commercial real estate, linked to greater rotation of employees at workplaces or stepped-up use of e-commerce. While such a decline might have positive impacts for companies, for which property is often the second-largest expense item after wages ([Bergeaud and Ray, 2020](#)), it would represent a structural shift in rental demand to which CRE participants would have to adjust.

Asset valuations are expected to fall

An analysis of the stock prices of real estate companies reveals how financial markets assess the impact of the health crisis on CRE. A US study, for example, shows that real estate funds with the greatest geographical exposure to Covid-19 saw the steepest drops in valuations¹²⁹.

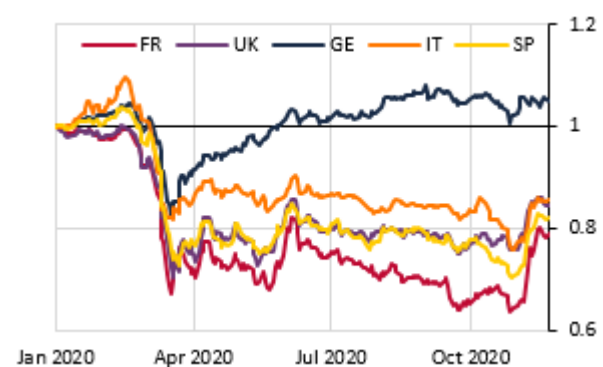
In France, we can use the change in real estate companies' stock prices and leverage to calculate the implied change in the price of commercial real estate¹³⁰.

These assets are estimated to have lost up to 20% of their value since the start of 2020 in France (see Chart 5.11).

German real estate companies differ from those in neighbouring countries in that they have recorded growth in values year to date. This may be due to the significant presence in the sample of companies that specialise in residential real estate and are less cyclically sensitive.

Price indices, meanwhile, have moved more modestly: at June 2020, CRE prices were down 1.3% over six months, while rental yields remained stable (see Charts 5.12 and 5.13).

Chart 5.11: implicit change in the value of the assets of listed real estate companies based on their leverage and the change in their stock prices
X: month/y: 100 = 2 January 2020, until 23 November 2020



Source: Bloomberg, Banque de France calculations

Note : FR for France, UK for United Kingdom, GE for Germany, IT for Italy, SP for Spain

¹²⁸ The [DARES-ACEMO Covid-19 survey](#) found that 12% of employees were still working from home in September. Remote working remains especially prominent at large companies.

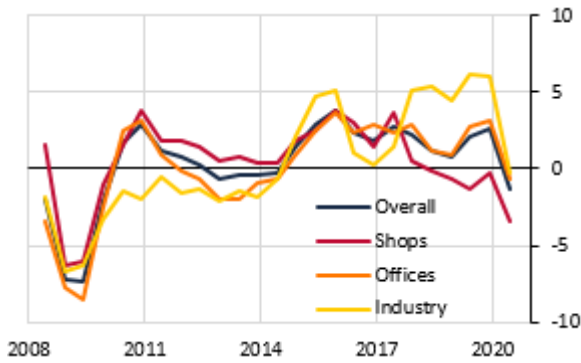
¹²⁹ "A First Look at the Impact of COVID-19 on Commercial Real Estate Prices: Asset-Level Evidence", Ling (D.), Want (C.) and Zhou (T.), Review of Asset Pricing Studies, 5 May 2020.

¹³⁰ Specifically, implied growth of CRE prices can be written: $g_A = g_E \frac{E}{A}$, where g_A indicates the growth rate of asset prices, g_E the growth rate of equity prices, and $\frac{E}{A}$ the ratio of equity to total assets, which is estimated as being $1 - \frac{D}{A}$ where D stands for the total debt of these companies. In France, the median value for the $\frac{E}{A}$ ratio among real estate sector companies is approximately 60%.

However, these indices react slowly to cyclical conditions, as they are based on actual transactions. During times of crisis, transactions become scarcer and more focused on specific assets. Finally, the expected change in rental income excluding structural changes shows prices declining by around 6%-7% (see Box 5.2).

Chart 5.12: annualised change in CRE prices, by segment

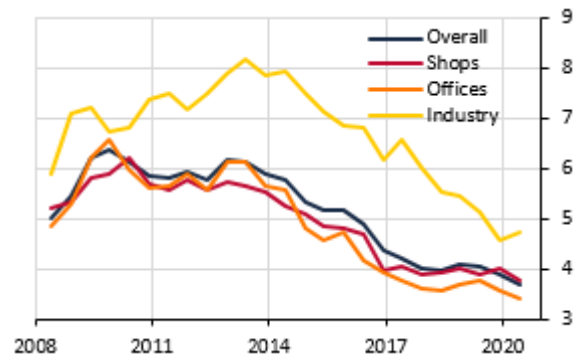
X: time / y: %



Source: MSCI

Chart 5.13: change in CRE rental yield, by segment

x: time / y: %



Source: MSCI

What risks do owners of income-producing real estate face?

Income-producing real estate in France is worth some EUR 400 billion, which is also what investors could potentially lose. There is a wide range of potential investors, including insurers, specialised investment funds (OPCIs, SCPIs), real estate companies and developers.

Real estate sensitivity exercises conducted by the HCSF in 2017 made it possible to analyse the impact of a fall in prices on the first two categories of participant¹³¹. Insurers, which currently hold EUR 200 billion in assets around the world, are not particularly vulnerable to the risks represented by a sector that accounts for a tiny fraction of their total assets: at 31 December 2019, CRE made up 7% of insurers' investments. Funds, meanwhile, are most often closed-end or virtually closed-end in France: accordingly, a reversal would lead to losses for investors but not the risk of a firesale of real estate assets. The exception to this rule is retail OPCI funds, which have seen strong growth in recent years. However, at approximately EUR 20 billion, their AUM remain small in absolute terms¹³².

Like the above investment funds, real estate companies are companies that specialise in property. As they carry out leveraged acquisitions, they are potentially vulnerable. Even so, the fact that the real estate sector has not made much use of France's state-guaranteed loan (PGE) scheme (EUR 1.6 billion or 1.3% of the total provided, whereas the sector generates 13% of the value added of French companies¹³³) suggests that the sector has not encountered cash problems at this stage, with public support measures limiting payment delinquencies.

The development sector affected at an early stage

Several indicators are already pointing to a relative deterioration for the development segment. Pre-sale ratios are continuing the deterioration that began in late 2018, with ratios exceeding 20% at their lowest level, while transactions with a pre-sale ratio of 0% peaked in June 2020 (see Chart 5.14). At the same time, the financial base of developers is gradually shrinking in mainland France, with the share of capital ratios exceeding 20% falling below that of ratios of between 10% and 20% (see Chart 5.15).

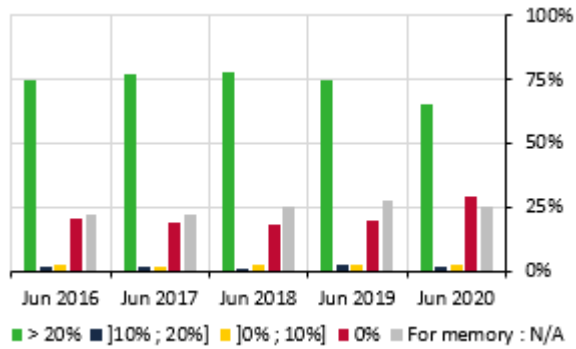
¹³¹ "Updated analysis and stress test results for the commercial real estate market", published by the HCSF in March 2017.

¹³² <https://www.ieif.fr/actualites/chiffres-cles-opci-grand-public>

¹³³ [PGE usage at end-September 2020.](#)

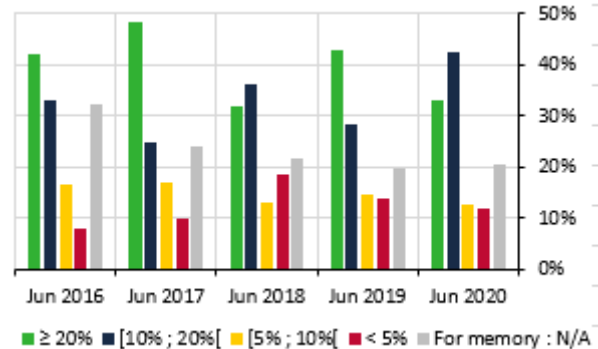
On the whole, unpaid rents seem to be marginal for the time being, thanks to support measures. Although rent-related assistance measures meant that landlords and tenants shared losses in the short term, they should make it possible to underpin tenant viability further out. Thus, rent waivers for SMEs and VSEs may be partly offset by a tax credit within the framework of the second lockdown¹³⁴ (see Box 2.3). However, an increase in unpaid rents once the support programmes end should be monitored.

Chart 5.14: pre-sale ratio
(special purpose developers and estate agents, France)
x: time / y: %



Source: ACPR

Chart 5.15: capital ratios (developers, France)
x: time / y: %



Source: ACPR

Some companies may find it harder to get financing

The health crisis may also have a macroeconomic impact via its effect on companies' medium-term investment capacity.

This effect could be amplified if the crisis is accompanied by a decline in CRE prices linked, for example, to more widespread use of remote working arrangements or e-commerce (see above). Such a price decline would lower the value of real estate assets, which make up the lion's share of the assets that companies can post as collateral ([Beck et al., 2008](#)) and could therefore further weaken sectors that own the most commercial real estate (Chaney et al., 2012). Conversely, tenant companies would stand to benefit overall from lower prices through a reduction in rental charges. This channel was highlighted by [Fougère et al. \(2019\)](#).

In this last study, the authors show that a real estate price shock affects business investment and that the effect increases with the size of their CRE holdings relative to their total assets¹³⁵. This makes it possible to measure the elasticity of investment to real estate prices. Predictably, sectors owning more CRE are also the ones that use it more as collateral (see Chart 5.16). By adopting this methodology¹³⁶ and taking a qualitative approach, it is possible to draw up a list of sectors that are most likely to be impacted by a fall in real estate prices, i.e. the ones holding more real estate.

Chart 5.17 shows how sectors are distributed as a function of the direct impact of the health crisis (measured by negative value added shocks expected by Banque de France analyses of business conditions) and their holdings of commercial real estate potentially used as collateral. Some sectors such as transport manufacturing, metals or

¹³⁴ [The government is offering landlords a tax credit of 30% applicable to rent waivers granted over the October to December period.](#)

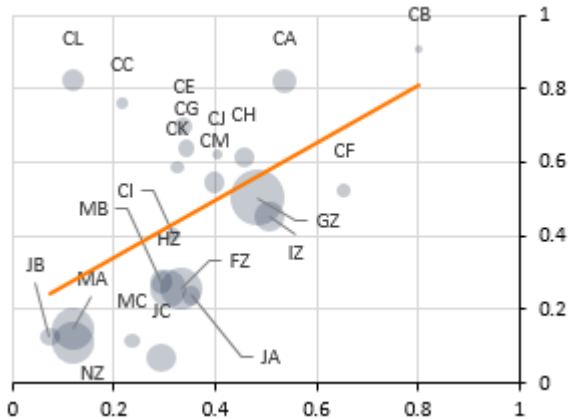
¹³⁵ The authors introduce the concept of a normalised measure of real estate holdings, defined as the ratio of the estimated amount of real estate in m² to the value of physical capital in EUR thousands.

¹³⁶ The empirical analysis by [Fougère et al. \(2019\)](#) proposes elasticities for normalised real estate holdings by sector. The replication exercise conducted here is limited to examining the real estate holdings of each sector relative to the others.

textiles¹³⁷ could thus be doubly impacted, first in terms of their activity during the periods of restrictions linked to the health crisis and then via reduced financing capacity owing to the potential collapse of CRE prices.

Chart 5.16: distribution of sectors¹³⁸ as a function of their holdings and use of CRE as collateral

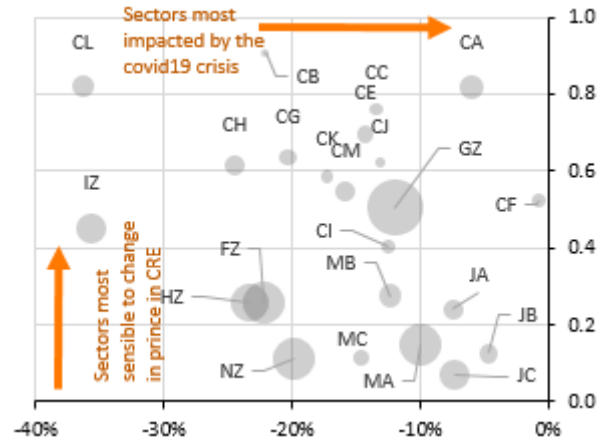
x: share of real estate assets in collateral, by sector in 2019 /
y: normalised real estate holdings in 2017.
The size of the bubble represents the size of the sector in terms of value added.



Source: FIBEN company database and AnaCredit.

Chart 5.17: distribution of sectors¹²⁷ as a function of their vulnerability to the crisis and their CRE holdings

x: size of the health shock to activity in the sectors as a monthly average between March and September 2020 /
y: normalised real estate holdings in 2017.
The size of the bubble represents the size of the sector in terms of value added.



Source: FIBEN company database and Banque de France.

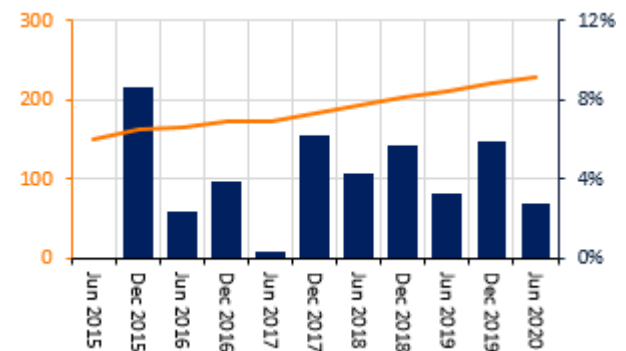
Banks remain resilient in the face of these uncertainties

Over the period prior to the crisis, the exposures of France's five main banking groups to real estate professionals as reported in the ACPR's six-monthly survey surged to reach EUR 222 billion at end-2019. The trend continued in the first half of 2020 as exposures grew by 2.8% over the first six months of the year and by 8.8% over 12 months to EUR 228 billion. Exposures to France totalled EUR 139 billion, making up 60% of the total exposures of French banks to real estate professionals and 2.6% of the total domestic assets¹³⁹ of the five banks at 30 June 2020 (Chart 5.18).

While the first half typically shows smaller growth in exposures than the second, growth in activity over the first six months of 2020 slowed only slightly compared with the first half of 2019. However, offices saw a more pronounced

Chart 5.18: bank exposures

x: time /
y left: gross exposures in EUR billion /
y right: half-yearly changes in exposures in pp



Source: ACPR

¹³⁷ Particularly CL: Transport manufacturing, CH: metal manufacturing and CB: Textile manufacturing.

¹³⁸ CA = Food manufacturing; CB = Textile manufacturing; CC = Wood, paper and printing; CE = Chemicals industry; CF = Pharmaceutical industry; CG = Plastic and paper manufacturing; CH = Metal and metal products manufacturing; CI = Computer, electronic and optical manufacturing; CJ = Electrical equipment manufacturing; CK = Machinery and equipment manufacturing; CL = Transport equipment manufacturing; CM = Other manufacturing industries; FZ = Construction; GZ = Trade; HZ = Transportation and storage; IZ = Accommodation and food services; JA = Publishing, audiovisual and broadcasting; JB = Telecommunications; JC = IT activities; LZ = Real estate activities; MA = Legal and accounting activities; MB = Scientific research and development; MC = Other specialised, scientific and technical activities; NZ = Administrative and support services.

¹³⁹ FINREP 20.01 reports, total assets.

decline, with production shrinking by 33% compared with the same period in the previous year.

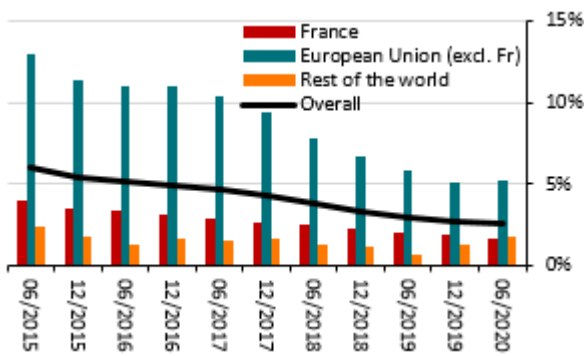
The risks to which banks are exposed through their financing of real estate professionals fall into two categories. First, they may have to cope with defaults by borrowers that are unable to continue servicing their debt.

At this stage, real estate professionals continue to show resilience to the current crisis, with the percentage of gross non-performing exposures continuing to fall and reaching its lowest point since June 2015 on 30 June 2020, at 2.6%. This trend is consistent with the broader trend among NFCs, which are benefiting from extensive public support measures that are delaying potential defaults.

Second, banks may be affected by a decrease in the value of assets posted as security for their loans, which lessens the likelihood of recovering their claims in the event that borrowers default.

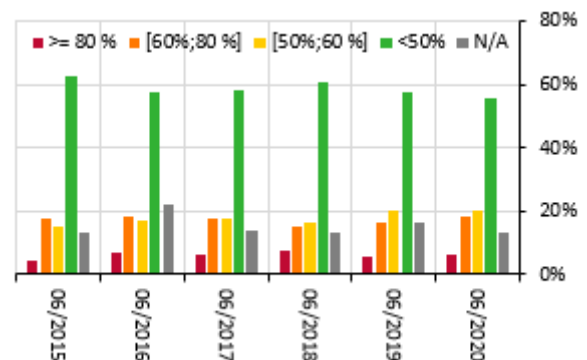
From this perspective, the change in the loan to value (LTV) ratio is particularly important: while the distribution of financing provided to investors by LTV ratio has been relatively stable since 2015, with over three-quarters of financing associated with LTVs of below 60%, a slight deterioration is perceptible, since the share of loans with an LTV ratio of more than 60% has risen by 3.1 pp since the end of 2018 (see Chart 5.20).

Chart 5.19: Non-performing loan ratio by geographical region
x: time / y: %



Source: ACPR

Chart 5.20: Breakdown of exposures by LTV (listed and unlisted real estate companies, specialised financing; all regions)
x: time / y: %



Source: ACPR

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