

2. French companies facing higher interest rates

By Lucille Collet, Aurélien Espic, Lisa Kerdelhué

Since summer 2022, French non-financial corporations (NFCs) have had to cope with a historical increase in borrowing costs. This chapter begins by assessing the pass-through of higher interest rates to companies over 2023. The transmission of policy rates to the rates on new loans to French companies did not happen immediately but by mid-2024 the process seemed to be complete (see Chapter 1). Since the debt of French companies is largely at fixed rates,⁶⁸ the transmission of higher interest rates to macroeconomic aggregates is however still underway (see Chapter 1) and is materialising as corporations deal with new funding needs while activity slows down.

The chapter then sketches out some short-term prospects, based on the individual situations of listed French and European companies at end-2023. Since 2022, debt service has represented a growing burden for these companies;⁶⁹ this vulnerability could become more pronounced in 2024, depending on a variety of possible scenarios,⁷⁰ as companies gradually refinance their debt stock at higher interest rates. However, this vulnerability is offset by high levels of cash, which give firms room for manoeuvre, such that ultimately, few large French companies appear to be at risk from higher interest rates. Companies viewed as vulnerable, due to substantial indebtedness and a low interest coverage ratio, finance themselves at higher rates than other firms on the markets, but their financing conditions are stable, in an environment featuring risk appetite, and they boast a diversified investor base.

Thus, while some individual firms could become more vulnerable in the short term, on the whole, large French companies look to be resilient to higher interest rates, particularly owing to their solid cash reserves, which give them room to manoeuvre. NFC financing conditions and debt repayment capacity could however deteriorate in a more adverse economic scenario in which interest rates stay high or if market conditions worsen.

2.1 Transmission of monetary policy to companies

The transmission of monetary policy to French non-financial companies is progressing gradually

In France, funding structures featuring fixed rates and long maturities have shielded non-financial corporations (NFCs) from the rapid increase in rates, but also expose them to a more progressive and more persistent increase in the cost of debt. Floating-rate debt accounted for a mere 22% of total outstanding debt in December 2023 (see Chart 2.1). This low proportion, which has been stable over time, is due partly to the prevalence of market debt, which uses fixed rates more extensively than debt bank does (see Chart 2.2).

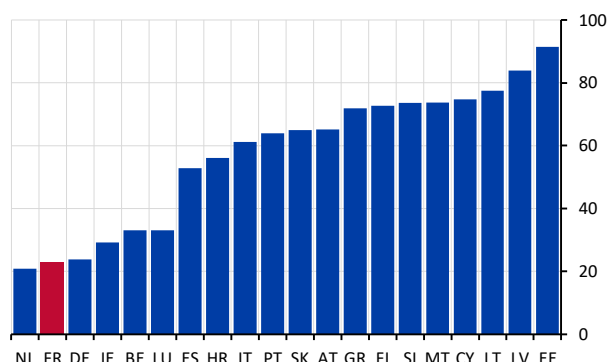
⁶⁸ See [Debt structure and rising interest rates: focus on European companies](#) | Banque de France ([banque-france.fr](#))

⁶⁹ This analysis does not apply to SMEs, however (see Box 2.1).

⁷⁰ These scenarios are based on the Banque de France's December 2023 macroeconomic projections and on assumptions for the future path of funding costs at large French companies.

Chart 2.1: Share of outstanding floating-rate debt

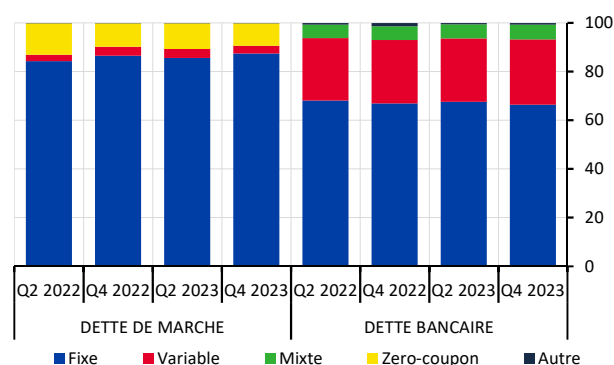
x: country / y: share of outstanding debt, %



Scope: euro area NFCs, December 2023.
Sources: AnaCredit, CSDB.

Chart 2.2: Debt interest rate structure, French companies

x: time / y: share of outstanding debt, %

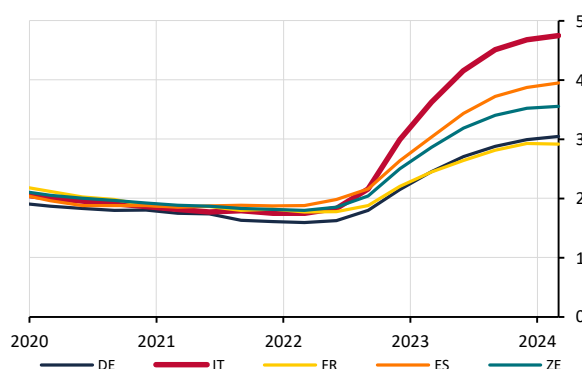


Scope: euro area NFCs.
Sources: AnaCredit, CSDB.
Note: in France, bank lending accounts for 66% of business financing, with debt securities making up the other 34%⁷¹

If a company chooses to refinance its debt, its average borrowing cost may rise as outstanding fixed-rate debt comes due. The increase will depend on the loan's maturity, repayment arrangements and interest rate movements.⁷² The progressive increase in the cost of debt is reflected particularly in the cost of bank financing in France (see Chart 2.3). The average rate on outstanding amounts in Germany and France, in March 2024, was approximately 60 basis points lower than the average in the euro area, owing to the significant role of long-dated fixed-rate loans in both countries.⁷³

Chart 2.3: Average cost of outstanding debt bank and issued securities

x: date / y: interest rate, %



Scope: euro area NFCs.
Notes: The detailed databases cover only part of companies' interest-bearing liabilities, which can be monitored using sector data in the national accounts.
Sources: ECB (AnaCredit, CSDB), authors' calculations, [Debt structure and rising interest rates: focus on European companies](#) | Banque de France ([banque-france.fr](#))

⁷¹ [Financing of enterprises - March 2024](#) | Banque de France ([banque-france.fr](#))

⁷² See [Debt structure and rising interest rates: focus on European companies](#) | Banque de France ([banque-france.fr](#))

⁷³ The average borrowing rate in France could remain below the euro area average, as other structural factors may account for the difference in average NFC bank lending rates in euro area countries.

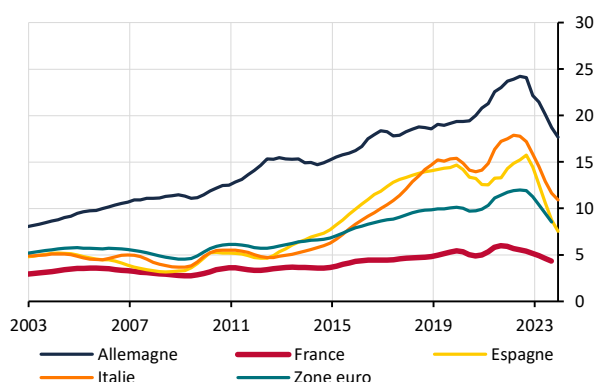
High cash reserves are partly offsetting the increase in borrowing costs, thereby safeguarding the repayment capacity of companies at the macroeconomic level

Upside pressure on interest rates depresses the interest coverage ratio (ICR) of companies in France and other major euro area countries (see Chart 2.4). The ICR offers a way to assess the capacity of a company to pay the interest on its debt. Interest charges have risen with the increase in interest rates. However, profit margin,⁷⁴ i.e. the share of gross operating surplus in value added, has remained intact at the macroeconomic level in France. The profit margin of companies, which fell to 31% in 2022 as support measures linked to the Covid-19 crisis were phased out, rebounded to 32.7% in 2023 (average of 31.4% over the 2000–2022 period)^{75,76}. The ICR, calculated based on the national accounts as gross operating surplus divided by interest expense, is structurally lower in France than in other large euro area countries due to the share of interest linked to intragroup lending by multinationals,⁷⁷ which is relatively significant as a proportion of income.⁷⁸

The relatively high cash reserves of French NFCs are a factor of resilience amid the increase in interest rates, as interest on these reserves has helped, all other things being equal, to cushion the increase in the debt financing burden. The ratio of cash (or liquid assets) to debt provides a proxy for liquidity buffers at the macroeconomic level (see Chart 2.5). In France, company cash reserves were stable between 2022 and 2023 (see Chart 2.6), so the gradual decrease in the cash ratio in France between 2021 and 2023 was due to a slight increase in outstanding nominal debt.

Chart 2.4: Gross ICR

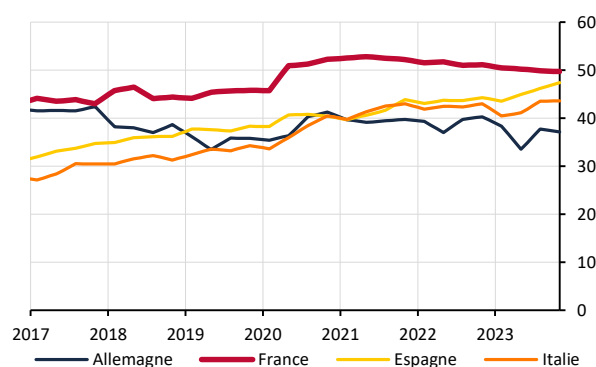
x: date / y: gross operating surplus and mixed income / interest expense



Scope: euro area NFCs.
Most recent value: Q3 2023.
Sources: ECB, QSA.

Chart 2.5: Gross cash buffers

x: time / y: cash⁷⁹/debt, %



Scope: euro area NFCs.
Most recent value: Q4 2023.
Sources: ECB, QSA.

In 2022 and 2023, business leaders' views on their cash positions deteriorated relative to the historical trend (2014-2024) in the Banque de France's monthly survey of business conditions. Steady cash reserves at the macroeconomic level may mask more contrasting individual situations, because increased production and

⁷⁴ The profit margin shows what is left to the company after paying labour and settling production taxes net of subsidies. A high margin is generally attributable to the use of substantial working capital; it does not necessarily imply a high return on capital employed (gross operating surplus has to be divided by this working capital), but may make it possible to finance investments. Although largely based on business statistics to estimate the NFC account, the national accounts profit margin differs in several conceptual aspects from that of business statistics. For example, in the national accounts measure, the margin is increased to recognise unreported activity at some companies (INSEE, 2024).

⁷⁵ [Margin, investment and self-financing rates of non-financial companies - France - FRENCH ECONOMY DASHBOARD \(insee.fr\)](#)

⁷⁶ Share of gross operating surplus in value added at factor cost.

⁷⁷ [Rise in interest rates: European companies will not be affected at the same pace \(banque-france.fr\)](#)

⁷⁸ Interest linked to trade credit is not deducted when calculating interest expense for the sector accounts.

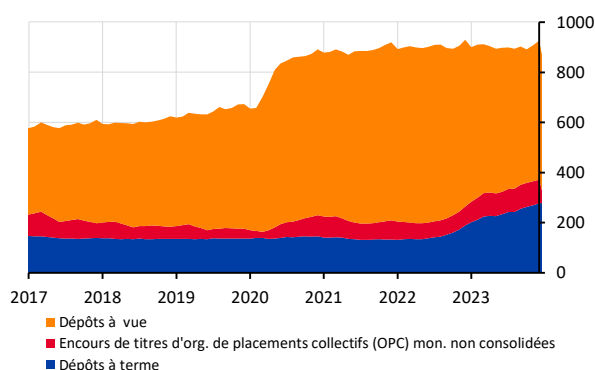
⁷⁹ Cash is made up of MMF units as well as sight and term deposits.

borrowing costs affect companies differently depending on their individual cash levels (see Section 2 for an analysis of the diversity of corporate situations). Companies also probably revised target levels for their precautionary cash holdings upwards in a setting of heightened uncertainty, recent inflation and increased funding costs.

The increase in interest rates is prompting companies to reallocate cash to deposits and interest-bearing financial instruments (see Chart 2.7). Net interest flows divided by income, i.e. interest expense net of interest income divided by gross operating income,⁸⁰ were relatively stable in the euro area between 2017 and 2023. There were however differences between the large euro area countries. Flows were negative in France in 2022, as interest-bearing cash offset the effects of higher interest rates. The rebound in net interest flows in 2023 in France was attributable to two factors: higher policy rates fed through with a delay to interest expense compared with other euro area countries, and interest income stabilised. Conversely, the stable flows recorded by German companies illustrate the benefits of the savings that these firms have built up.

Chart 2.6: Sources of cash, French NFCs

x: time / y: EUR billion



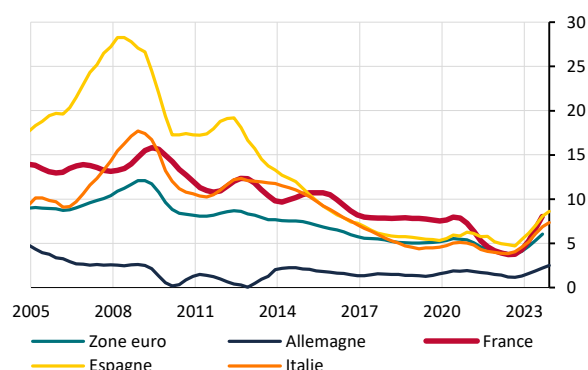
Scope: euro area NFCs.

Most recent value: Q4 2023.

Sources: ECB, QSA.

Chart 2.7: Net interest flows divided by income

x: time / y: (interest expense – interest income) / gross operating surplus



Scope: euro area NFCs.

Most recent value: Q3 2023.

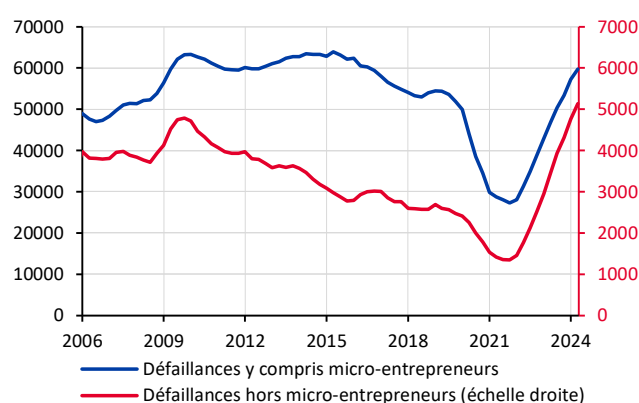
Sources: ECB, QSA.

However, the increase in debt repayment costs may affect companies unevenly. NFCs with smaller liquidity buffers, or facing a larger increase in production and funding costs without the ability to pass the increase on to their final selling prices, are more vulnerable. The number of business failures, particularly when microcompanies are excluded, remains on a catch-up trend and now exceeds its average level between 2010 and 2019 (if microcompanies are stripped out, see Chart 2.8). The indicators of increased credit risk for French NFCs are rising but remain contained (see Chapter 1, Section 1.2).

⁸⁰ Mixed income, from production activities before interest, rent or charges paid or received for the use of assets, is included. Mixed income is remuneration for work done by the owner (or family members) of a company without legal personality (such as when the firm's legal personality is not different from that of its owner). Mixed income may not be distinguished from the owner's entrepreneurial profit.

Chart 2.8: French business failures, by company size

x: date / y: number of failures (legal units)



Sources: Banque de France, Banque de France calculations.

Most recent value: April 2024.

NFC access to funding also looks resilient at the macroeconomic level

The transmission of monetary policy has modified the NFC funding mix and paved the way for deleveraging at the macroeconomic level. Companies finance themselves in five main ways: bank loans, issuance of debt securities at various maturities (money market and bond), trade credit, internal financing and fundraising on the equity market. Higher interest rates push up the cost of debt financing and may prompt companies to prefer internal financing. Current deleveraging by companies is due to the cumulative effect of slower growth in bank credit and bond debt and a larger increase in equity

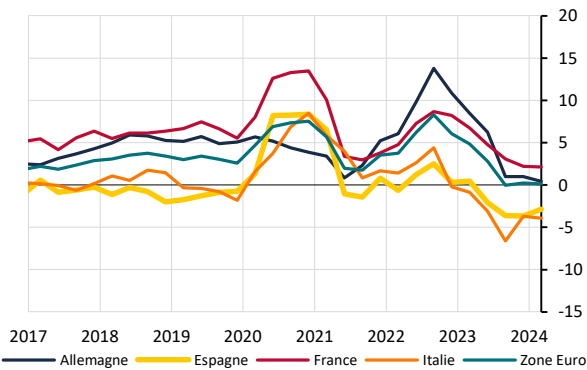
Credit from French banks to French NFCs, which makes up 30% of bank lending by euro area banks to euro area NFCs, continued to grow at a positive rate in 2023. It reached its lowest level since 2014 in France, but was still above the euro area average (see Chart 2.10). In France, as in the rest of the euro area, banks report a downturn in credit demand from businesses since the first quarter of 2023, but the share of companies that say they received the credit that they requested remains stable and high in France.

The market financing of French NFCs, which makes up 40% of euro area NFC financing, slowed considerably in 2022-2023 as monetary policy passed through more rapidly to market rates than to bank rates. However, market financing has caught up since early 2023 as market rates have once again fallen below interest rates on new loans, partly offsetting the credit slowdown. The cost of financing via debt securities went from 4.39% in September 2023 to 3.82% in April 2024, whereas the average interest rate on new loans to NFCs, which has been relatively stable since November 2023, stands at 4.76%. Growth rates for market financing are aligned in the major euro area countries, except for Italy, which has seen a faster catch-up (see Chart 2.10).

Decreased leverage, i.e. total debt divided by equity in the national accounts, is also contributing to NFC resilience. The French leverage ratio is not only trending downwards – it is also lower in France than in other large euro area countries (see Chart 2.11). Increased equity financing, whether through retained earnings or external fundraising, limits companies' exposure to interest rate risk (see Chart 2.12).

Chart 2.9: Growth of outstanding bank loans

x: date / y: year-on-year, % of outstanding amount⁸¹



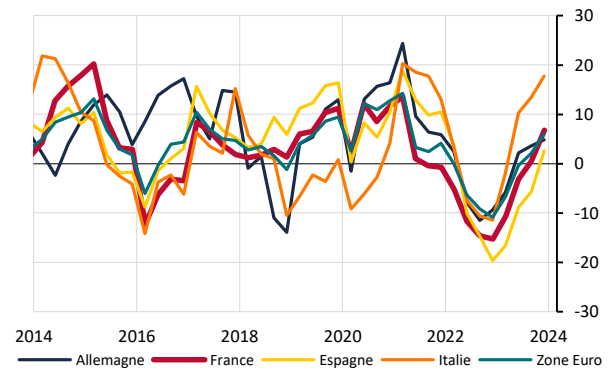
Scope: euro area NFCs.

Most recent value: Q1 2024.

Sources: ECB, QSA.

Chart 2.10: Growth of outstanding market financing

x: date / y: year-on-year, %, gross outstanding debt securities of French NFCs, non-consolidated, valued according to the rules of the system of national accounts⁸².



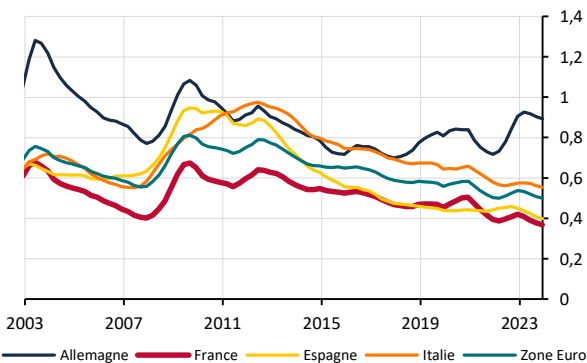
Scope: euro area NFCs.

Most recent value: Q4 2023.

Sources: ECB, QSA.

Chart 2.11: Leverage

x: date / y: total debt / equity



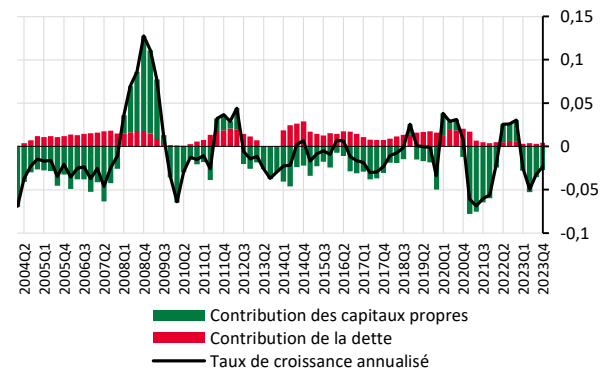
Scope: euro area NFCs.

Most recent value: Q4 2023.

Sources: ECB, QSA.

Chart 2.12: Leverage of French companies – Debt and equity contributions

x: date / y: total debt / equity



Scope: euro area NFCs.

Most recent value: Q4 2023.

Sources: ECB, QSA.

2.2 Diverse situations necessitating a granular approach

However, the sensitivity of companies to the increase in interest rates cannot be assessed solely at the macroeconomic level. Pockets of vulnerability could persist and pose risks to financial stability, notably depending on the size of vulnerable companies and their interconnectedness with their environment and the financial system. If a large company is in trouble, its suppliers could be hurt through the loss of market outlets, while its customers must find other supply sources. In addition, the funding needs of these companies might create connections between financial intermediaries, amplifying potential vulnerabilities.⁸³ Also, French financial intermediaries could be exposed to foreign companies, particularly via market securities, making it necessary to extend the analysis beyond the situation of France. This section therefore examines the situations of listed

⁸¹ The growth rate is calculated with reference to an index of notional stocks, rather than to outstandings directly, making it possible to describe series trends while avoiding the effects that non-transactions would have on stock growth rates.

⁸² Outstanding debt securities must be valued at market value (F.8 Valuation of Debt Securities at Both Market and Nominal Value, IMF Committee on Balance of Payments Statistics).

⁸³ Do highly indebted large corporations pose a systemic risk? | Banque de France (banque-france.fr).

companies, based on their consolidated balance sheets, which makes it possible to compare French companies to other European companies at end-2023.

The number of large companies that are vulnerable to the level of interest rates increased in 2023

This section studies the exposure of large companies to a subset of vulnerabilities linked to the level of interest rates. A company's level of indebtedness may be assessed using two financial ratios:⁸⁴ the interest coverage ratio (ICR), defined here as earnings before interest and taxes (EBIT) divided by interest payments, and a solvency ratio, defined here as the ratio of financial debt to earnings before interest, taxes, depreciation and amortisation (EBITDA). The second of these ratios relates the level of indebtedness to earnings generated by the company's business. It helps to assess a company's solvency independently of the interest rate scenario. An ICR of less than three and a solvency ratio of more than four⁸⁵ are traditionally viewed as initial warning thresholds.⁸⁶ A company may be considered as *a priori* vulnerable to an increase in interest rates if both of these thresholds are simultaneously breached, pointing to high debt service. However, since a company's risks is inherently multidimensional, this level of vulnerability does not necessarily signal a risk of imminent default: rather, it indicates that the company would probably adjust its balance sheet and activity to maintain debt ratios that are acceptable to its creditors and shareholders.

An analysis of the heterogeneity of NFC vulnerabilities to interest rate risk requires the use of granular balance sheet data. To facilitate European comparisons, the analysis in Sections 2 and 3 is based on the balance sheets of listed European companies whose balance sheets are available for each year between 2019 and 2023. The sample comprises 2,752 companies, including 261 French firms, 278 from Germany and 247 British companies. These companies represent a significant share of NFC debt calculated based on the national accounts. In France, companies in the sample hold EUR 756 billion in financial debt, or approximately 35% of the debt of French NFCs (the coverage ratio for the euro area is the same).⁸⁷

Indebtedness levels measured according to these ratios may vary considerably between companies. In France, for example, the share of listed companies with an ICR of between 0 and 3 increased between 2019 and 2023, but the share of companies with a negative ICR shrank (see Chart 2.13). Conversely, in the rest of Europe, while the share of companies with an ICR of between 0 and 3 also increased between 2019 and 2023, the share of companies with a negative ratio held steady (see Chart 2.13). The share of listed companies with a solvency ratio of more than 4 fell between 2019 and 2023 in France and elsewhere in Europe.

⁸⁴ These ratios and their associated thresholds are used as standard in financial stability analyses, as for example in the ECB's most recent *Financial Stability Review* or *this study by the US Federal Reserve*.

⁸⁵ Or less than 0 in the event of negative EBITDA.

⁸⁶ [Guidance on leveraged transactions \(europa.eu\)](#).

⁸⁷ Since the sample is not confined to companies at the highest level of consolidation, these statistics must be treated with caution, as some debt may be counted several times and geographical scopes vary across sources (the national accounts include debt held by French subsidiaries of a foreign group but that excludes the debt of foreign subsidiaries of French groups).

Chart 2.13: Distribution of large French companies according to their ICR

x: time / y: number of companies, % of the total

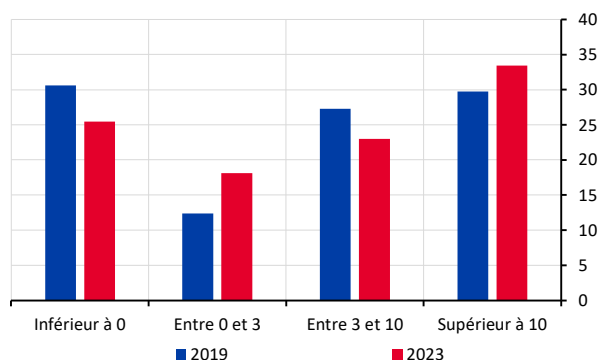
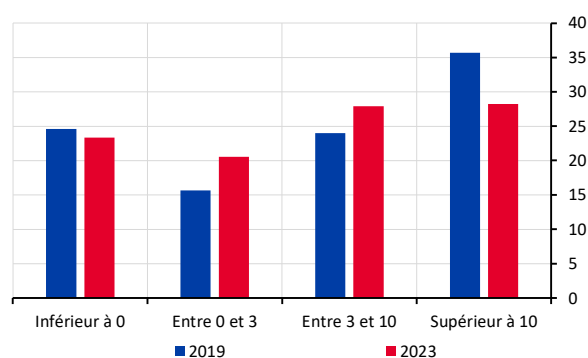


Chart 2.14: Distribution of other large European companies according to their ICR

x: time / y: number of companies, % of the total



Scope: listed European companies with a balance sheet for each year from 2019 to 2023. The number of companies varies across countries: Germany 278, France 261, United Kingdom 247, rest of continental Europe 1,966.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4.

Sources: Refinitiv Eikon, Banque de France calculations.

A company that is heavily indebted according to one of these criteria is not necessarily vulnerable if it has enough liquidity to deleverage. Plentiful cash reserves enable a firm to deleverage at lower cost.⁸⁸ Including the level of cash reserves as a factor of resilience is a way to identify the net vulnerability of companies to the level of interest rates. The ratio of net cash⁸⁹ to turnover can be used to assess how much room for manoeuvre a firm has. Its median level is approximately 30 days of turnover, which thus acts as another warning threshold for heavily indebted companies.⁹⁰ For the purposes of this chapter, we therefore consider that a company is vulnerable in the current environment if it is i) heavily indebted (i.e. its ICR is below 3 and its solvency ratio is higher than 4 or negative); and ii) its net cash is below 30 days of turnover.

In 2023, the number of heavily indebted or vulnerable large European companies rose, getting back to 2019 levels. In 2022, the share of heavily indebted companies was still below but close to the 2019 level (see Chart 2.15). The share of vulnerable companies was well below the 2019 level, particularly owing to the plentiful liquidity that accompanied the Covid crisis⁹¹ (see Chart 2.16). A major turning point occurred in 2023, as large French companies returned to their 2019 indebtedness and vulnerability levels. These levels are slightly below those in most European countries, with the exception of a handful of countries, including the United Kingdom.

⁸⁸ [Firm Balance Sheet Liquidity, Monetary Policy Shocks, and Investment Dynamics | Barcelona School of Economics Working Papers \(bse.eu\)](#)

⁸⁹ Net cash is defined as the sum of cash, cash equivalents and short-term investments less short-term borrowing.

⁹⁰ This ratio is used to relate cash reserves to two essential liquidity needs of NFCs, namely repaying short-term debt and advancing a portion of production costs. Other more conventional ratios focus exclusively on the first of these two reasons.

⁹¹ [What Individual Data Tells us about the Covid-19 Impact on Corporate Liquidity in 2020 | Banque de France \(banque-france.fr\)](#).

Chart 2.15: Share of heavily indebted large companies

x: time / y: number of companies, % of the total

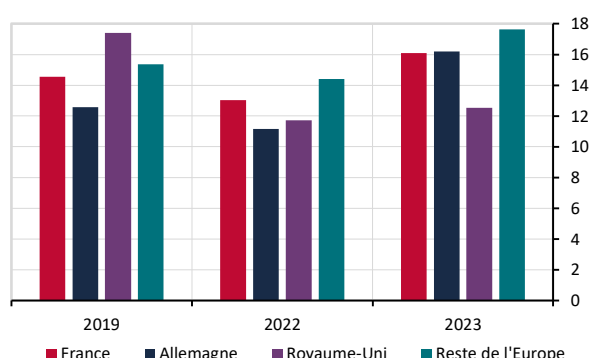
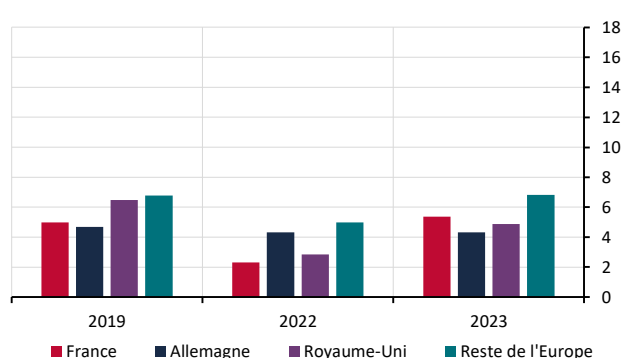


Chart 2.16: Share of vulnerable large companies

x: time / y: number of companies, % of the total



Scope: French companies with a balance sheet for each year from 2019 to 2023.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4. A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30.

Sources: Refinitiv Eikon, Banque de France calculations.

Box 2.1: Effects of higher interest rates on French SMEs

By Benjamin Bureau, Maïté Graignon, Abel Merebier, Loriane Py

The Banque de France conducted an exhaustive analysis of 2023 balance sheets to assess the situation of French SMEs.⁹² On aggregate, the profit margin of French SMEs withstood the economic slowdown. Their debt ratio also fell, in particular thanks to equity strengthening and repayment of state-guaranteed loans. SME cash reserves shrank, but remain far higher than in the pre-Covid period. Overall, against a backdrop of rising interest rates, the repayment capacity of French SMEs, as measured by Banque de France ratings, remained broadly intact at end-2023.

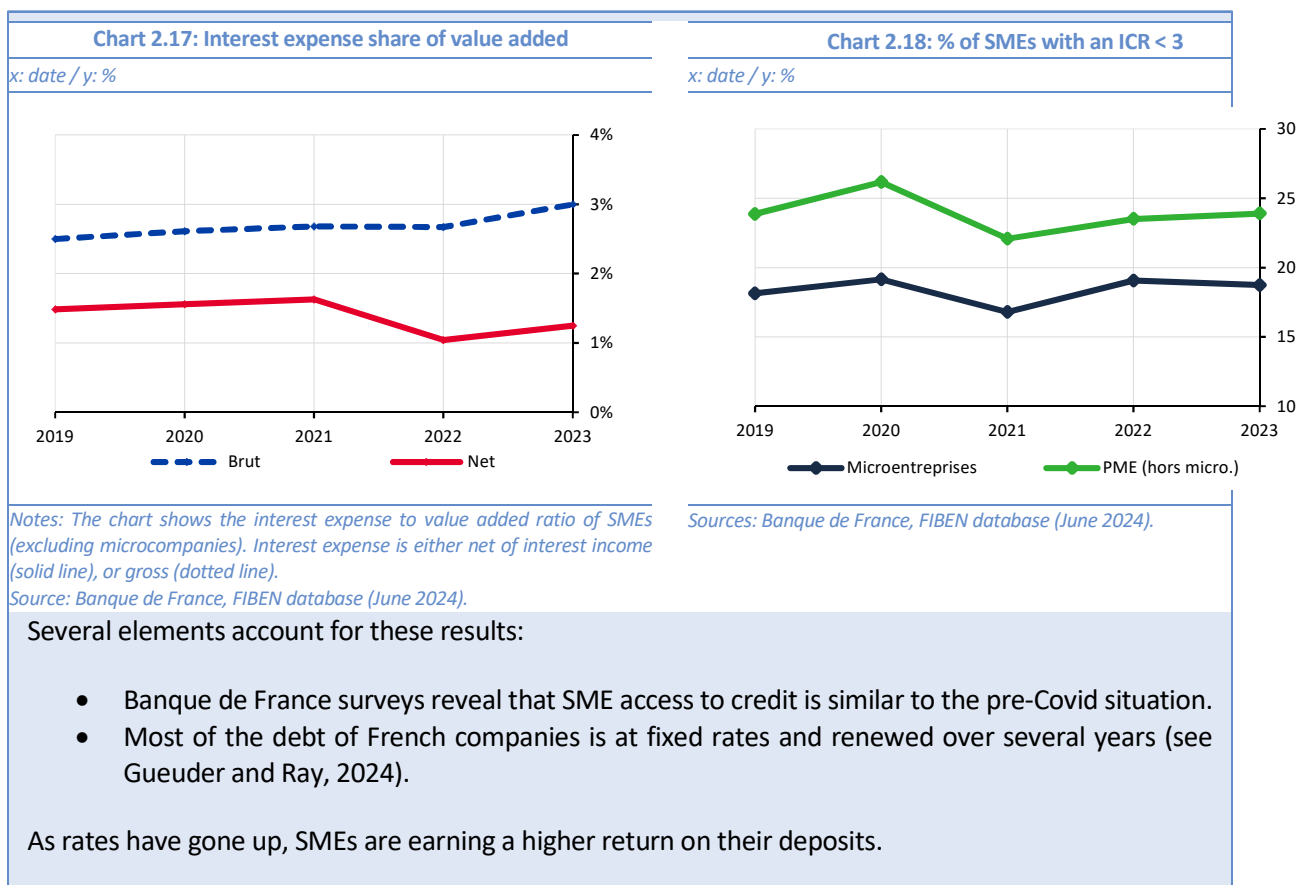
This was also true for medium-sized firms, which affirmed their resilience amid the economic slowdown. In 2023, the finances of medium-sized firms were steady at overall higher levels than in 2019 (debt ratio, median cash reserves, return on capital employed).

Looking beyond the aggregate situation, the dispersion of individual positions, which has always existed, increased strongly with the Covid-19 crisis, including within the same sector and/or size category, although a post-crisis normalisation process was apparent in 2023. However, unlike during the 2009 recession, heightened dispersion can be observed at both the bottom and top ends of the distribution. Pockets of vulnerability may thus have formed within France's production system and need to be analysed particularly in the context of monetary tightening.

This is because tightening represents a major challenge for non-financial corporations generally, but especially for SMEs, which are more fragile on average and whose funding sources are less diversified than those of large companies. Several elements, however, mitigate the risks specifically linked to higher interest rates. Chart 2.17 shows interest expense (net or gross of interest earned) divided by valued added: the ratio was lower in 2023 than it was prior to the Covid-19 crisis, if interest earned is included.

Financial analysts consider an ICR of approximately 3 to be critical. In this regard, we see in Chart 2.18 that the percentage of SMEs below this critical threshold did not go up with the rise in interest rates (approximately 20% in 2023, the same as in 2019).

⁹² Full analysis was released in July 2024 in two bulletins and a blog post.



What vulnerability levels for 2024-2025?

Although it is hard to genuinely forecast the debt ratios of each company, we can identify companies that could become vulnerable if their trajectory parallels the average trajectory of French companies as a whole. We propose two scenarios for this macroeconomic and financial trajectory in 2024 and 2025:

- **In the baseline scenario**, which reflects the market consensus in May 2024 on the future path of monetary policy, policy rates decrease by 75 bps in the second half of 2024, followed by a 60 bps fall in 2025. Changes in EBITDA and EBIT in 2024 and in 2025 are based on forecasts for growth, inflation and the profit margin of NFCs carried out by the Banque de France in June 2024.⁹³ We assume that cash reserves grow at the pace of the company's net earnings, that turnover increases at the pace of GDP, and the level of financial debt remains unchanged (which is the same as assuming relative deleveraging, since operating surplus increases).⁹⁴
- **In the adverse scenario**, policy rates decrease by just 25 bps in 2024 and remain constant in 2025. Changes in EBITDA and EBIT in 2024 are again based on the Banque de France's June 2024 forecasts, but we assume in this instance that business conditions are worse than expected in 2025, insofar as they follow the 2024 trend. We assume that cash reserves grow at the pace of the company's net earnings, that turnover increases at the pace of GDP, and the level of financial debt remains unchanged. This scenario offers a way to examine the assessment's sensitivity to the future path of interest rates and cannot be considered to be a stress test.

⁹³ Macroeconomic projections – June 2024 | Banque de France (banque-france.fr)

⁹⁴ Our scenarios are constrained by the Banque de France's public forecasts, which accounts for these simplifying assumptions.

We assume that the interest rate on new business loans is equal to the policy rate plus 100 bps. Note that the timing of the decrease in policy rates influences the average interest rate on new loans over the year. Rate cuts at the end of the year will have little impact on the financial statements for the current year, but will affect those of the following year.

Cash reserves increase at the pace of the company's net earnings, which correspond in their simplified version to EBIT less interest expense plus interest income. Interest income is assumed to be made up of the interest earned on cash reserves, of which 37% is assumed to be interest-bearing (see Chart 2.6), at the average interest rate on French NFC deposits.⁹⁵ We assume that the average interest rate on NFC deposits changes at the same pace as the ECB deposit facility rate, which moves differently according to the scenario.

Table 2.1: Simulation assumptions

	2023	2024 (baseline)	2025 (baseline)	2024 (adverse)	2025 (adverse)
Change in policy rates	Observed	-75 bps	-60 bps	-25 bps	0 bps
Average interest rate on new loans	4.5%	4.8%	4.0%	4.93%	4.75%
Annual change in the average cost of debt (outstandings + new flows)	+108 bps	+49.5 bps	+1.6 bps	+54.7 bps	+28.0 bps
Real GDP	Observed	+0.8%	+1.2%	+0.8%	+0.8%
GDP deflator	Observed	+2.9%	+1.5%	+2.9%	+2.9%
Profit margin	Observed	+0%	+0.6%	+0%	+0%
Debt	Observed	+0%	+0%	+0%	+0%

Determining the impact of the change in policy rates on the average cost of business debt requires to make assumptions about the structure of that debt. Since much of the debt of French companies is at fixed rates, the increase in interest rates was far from having been totally passed on to the average cost of debt at end-2023, as shown by Banque de France studies.⁹⁶ We assume that just 25% of the debt of listed French companies is at floating rates or matures in less than one year, meaning that an increase in interest rates over the year immediately affects the cost of all of these instruments.⁹⁷ For the remaining 75%, we assume that just 20% of this debt sees its conditions change each year, which corresponds to fixed-rate debt maturing in five years and principal to be repaid upon maturity, for example.⁹⁸ Fixed-rate debt, which on average was negotiated five years ago at a lower cost, is rolled over at a higher rate, irrespective of the interest rate scenario. The resulting increase in the average cost of debt is applied incrementally to the previous year's cost of debt, thus assuming a constant spread for each company.⁹⁹

⁹⁵ [Interest rates on deposits March 2024 | Banque de France \(banque-france.fr\)](#)

⁹⁶ [Debt structure and rising interest rates: focus on European companies | Banque de France \(banque-france.fr\)](#)

⁹⁷ This value is consistent with estimates for French companies as a whole, based on the AnaCredit and CSDB databases.

⁹⁸ Fixed-rate debt maturing in more than one year covers a wide variety of instruments. However, market debt, which makes up the majority of the financial debt of large companies, is largely redeemable at maturity, which supports this assumption.

⁹⁹ Note that if this methodology is applied to the 2022 annual accounts, the cost of debt should have risen by 120 bps in 2023. The sample's median cost of debt increased by 108 bps over the period.

Chart 2.19: Share of heavily indebted or vulnerable listed French companies, baseline scenario

x: time / y: number of companies, % of the total

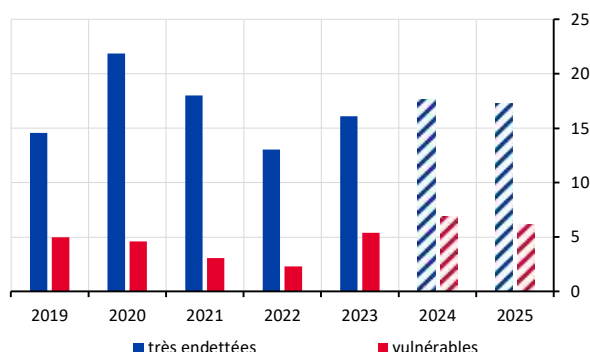
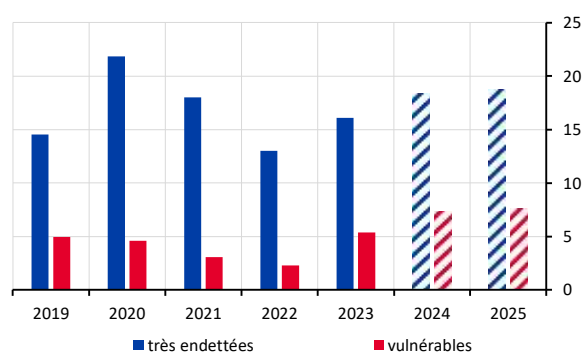


Chart 2.20: Share of heavily indebted or vulnerable listed French companies, adverse scenario

x: time / y: number of companies, % of the total



Scope: French listed companies with a balance sheet for each year from 2019 to 2023.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4. A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30. Values for 2024 and 2025 are derived from a projection.

Sources: Refinitiv Eikon, Banque de France calculations.

This exercise reveals that while a relatively substantial share of large French companies are in principal exposed to higher interest rates owing to their debt burden, their level of vulnerability is contained by liquidity buffers that look large enough overall to enable companies to cope (see Charts 2.19 and 2.20). However, the projections need to be treated with care since they assume uniform business conditions for all companies. For example, reactions to monetary tightening may exhibit sector-specific differences (see Box 2.2). Furthermore, companies identified as particularly vulnerable will likely undertake more radical deleveraging than average companies in a bid to maintain a balance sheet structure that is acceptable to their creditors. This type of behaviour was already noted in 2023, insofar as the share of vulnerable companies increased, but the share of outstanding debt held by vulnerable companies shrank (see Charts 2.21 and 2.22). Such adjustments reduce the outstanding amount of at-risk debt, at the cost of adjustments to capital expenditure or payroll if the firm has no cash surplus.

Chart 2.21: Share of debt held by heavily indebted or vulnerable French companies, baseline scenario

x: time / y: share of financial debt, % of the total

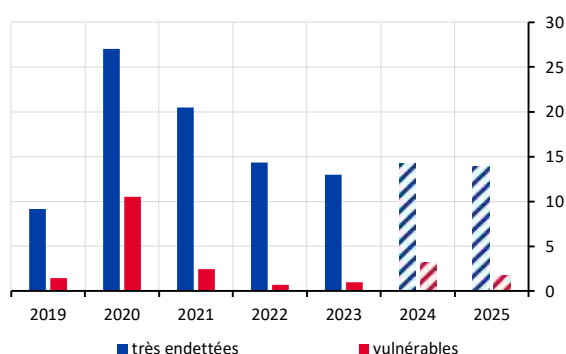
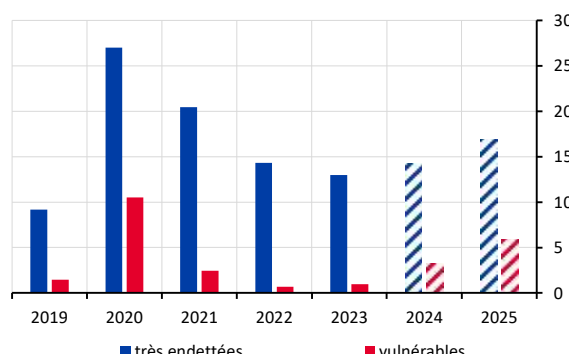


Chart 2.22: Share of debt held by heavily indebted or vulnerable French companies, adverse scenario

x: time / y: share of financial debt, % of the total



Scope: listed French companies with a balance sheet for each year from 2019 to 2023.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4. A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30. Values for 2024 and 2025 are derived from a projection.

Sources: Refinitiv Eikon, Banque de France calculations.

Box 2.2: Real estate and construction companies and monetary policy shocks - a historical perspective

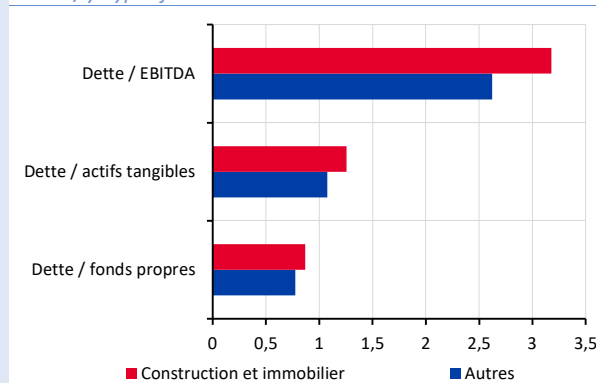
By Aurélien Espic

Changes in interest rates do not affect all companies equally. While the literature has highlighted multiple factors accounting for the heterogeneity of company reactions to an increase in interest rates (risk level, liquidity of assets, debt structure, etc.), this box focuses on the reaction by real estate and construction firms.¹⁰⁰ These companies have a number of features that could amplify their reaction to interest rate changes. Due to their business model, their debt ratio is higher than that of other companies on all metrics (see Chart 2.23).¹⁰¹ Furthermore, since banks are the source of much of their debt, they are in principal more responsive to a conventional domestic monetary policy shock.¹⁰² In addition, their upstream position in the production chain (through the supply of commercial real estate) and the significance of credit standards for the demand directed towards them (through the supply of residential real estate in particular) make them especially sensitive to macroeconomic shocks. Finally, their use of loans secured by the value of real estate assets exposes them to increased amplification of macroeconomic fluctuations.¹⁰³ The credit dynamics of these corporations are thus a major determinant of the financial cycle.¹⁰⁴

This box examines the sensitivity of the debt of French companies to conventional monetary policy shocks between 1999 and 2014. Monetary policy shocks are calculated based on changes in interest rate swaps around ECB monetary policy decisions.¹⁰⁵ A local projections model¹⁰⁶ is then used to estimate the effect of a shock on corporate indebtedness at different horizons. The model explains the cumulative growth rate of corporate indebtedness through the monetary tightening shock and macroeconomic control variables (growth rate, inflation, unemployment, short- and long-term interest rates from the previous year) plus individual control variables (total assets, leverage and income divided by total assets in the previous year). The model also includes fixed effects for each firm in order to control for sources of unobserved heterogeneity.

Chart 2.23: Debt ratios of French companies

x: ratio / y: type of debt ratio



Scope: French non-financial corporations with a 12-month balance sheet, 1999-2014

Source: Fiben Groupes database, IFRS and FR accounting standards, Banque de France calculations.

¹⁰⁰ Companies in building construction (sector NACE 41) are companies that are engaged in constructing new buildings (such as developers) or renovating existing ones. Real estate companies (sector NACE 68) are companies that own and rent real estate assets.

¹⁰¹ For more on these companies, see [H1 2023 Risk Assessment, Ch.3, Banque de France](#).

¹⁰² Alder, M., Coimbra, N., & Szczerbowski, U. (2023). Corporate Debt Structure and Heterogeneous Monetary Policy Transmission. *Banque de France Working Paper* No. 933.

¹⁰³ See Kiyotaki, N., & Moore, J. (1997). Credit cycles. *Journal of political economy*, 105(2), 211-248.

¹⁰⁴ Ivashina, V., Kalemli-Özcan, S., Laeven, L., & Müller, K. (2024). Corporate debt, boom-bust cycles, and financial crises. *NBER Working Paper* No. 32225.

¹⁰⁵ Jarociński, M., & Karadi, P. (2020). Deconstructing monetary policy surprises—the role of information shocks. *American Economic Journal: Macroeconomics*, 12(2), 1-43.

¹⁰⁶ Jordà, Ò. (2005). Estimation and inference of impulse responses by local projections. *American Economic Review*, 95(1), 161-182.

Chart 2.24: Reaction of the financial debt of companies to a monetary tightening shock

x: year since the shock / y: cumulative growth in financial debt, %

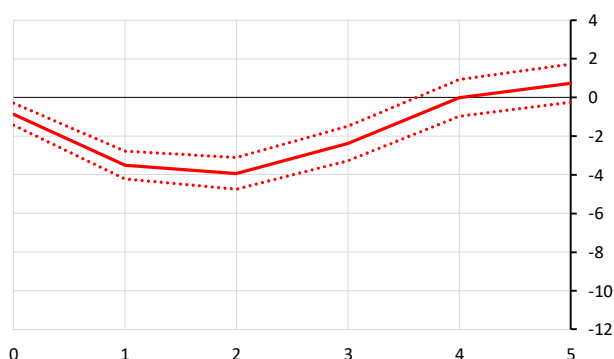
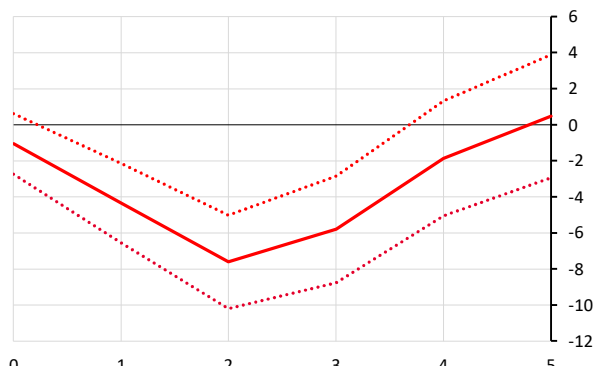


Chart 2.25: Reaction of the financial debt of real estate and construction companies to a monetary tightening shock

x: year since the shock / y: cumulative growth in financial debt, %



Scope: French companies with a 12-month balance sheet, 1999-2014

Notes: the solid line shows the value of the estimator, while the dotted lines show the confidence interval at the 5% level. Standard deviations are clustered at the level of the firm and the year. The growth rate calculated here is the mid-point growth rate: the absolute change between t and $t-1$ is divided by the average values at t and $t-1$. This rate is thus between -2 and 2, making it possible to include extreme variations without skewing the estimate. Over the period, the sample contains 4,792 observations for real estate and construction companies, compared with 45,619 observations for other companies.

Sources: Fiben, consolidated balance sheets, IFRS and FR accounting standards, Banque de France calculations.

Chart 2.24 shows the average reaction by French companies. A monetary policy shock reduces the debt of companies by 4% after two years, which is the peak of the reaction. To highlight the reaction by real estate and construction firms, the projection model is adjusted to split companies into two groups. Chart 2.25 shows the reaction of real estate and construction companies to the same interest rate shock. As expected, the effect is almost twice as high at its peak, with debt decreasing by around 8% after two years. These results are subject to greater uncertainty, however, due to the relatively small number of companies in these sectors.

2.3 Companies exposed to the increase in interest rates enjoy stable funding structures on fixed income markets

After having identified which listed companies have high debt service that exposes them to the increase in interest rates (see Section 2.2), this section describes the financing conditions of these firms compared with the other listed companies in the sample. While creditors correctly identify additional risk for the heavily indebted NFCs in the sample, these companies enjoy financing conditions and investor bases that are similar to those of the other listed companies.

This section focuses on financing conditions on fixed income markets,¹⁰⁷ as bank debt made up just 32% of the financing of French companies in the sample in 2022 (compared with 36% on average for large French groups¹⁰⁸).¹⁰⁹

¹⁰⁷ This section uses detailed data on the debt securities of companies, but at a non-consolidated level. However, the debt issued by groups' lead companies accounts for the lion's share of the consolidated financial debt of the companies in the sample, as reported on their balance sheets.

¹⁰⁸ *Bulletin Banque de France* – January 2024. [Une situation financière des grands groupes toujours très satisfaisante en 2022, en dépit de la hausse de l'inflation](https://www.banque-france.fr/fr/actualites/une-situation-financiere-des-grands-groupes-toujours-très-satisfaisante-en-2022-en-dépít-de-la-hausse-de-l'inflation) | Banque de France ([banque-france.fr](https://www.banque-france.fr))

¹⁰⁹ In addition, for companies in the sample, this bank financing is mainly within subsidiaries: the bank debt of the identified companies represents just 10% of their consolidated balance sheet.

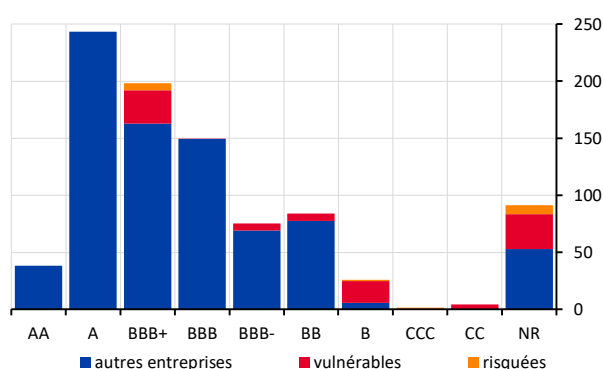
On average, companies with the greatest exposure to interest rate risk finance themselves at higher rates on the markets

On average, listed French NFCs identified as heavily indebted have worse credit ratings than other NFCs, reflecting recognition of this risk by credit rating agencies. Note however that debt indicators alone cannot entirely explain the distribution of NFC ratings, which are subject to multifactor determinants. In France, heavily indebted NFCs are mostly rated BBB to BBB- (55% of outstanding amounts on average between January 2020 and May 2024). Speculative-grade ratings (below BBB-) make up a minority share of outstanding amounts among these companies (22% on average over the period) (unrated companies make up 17%). Heavily indebted French NFCs are better rated, relatively speaking, than their European peers: in the euro area, most ratings were speculative grade (52%) on average over the period. However, heavily indebted or vulnerable NFCs do make up the majority of the sample's lowest-rated outstanding amounts, accounting for 72% of the outstanding amounts of euro area NFCs rated B or lower (see Chart 2.26) in May 2024. Credit rating agencies thus appear to distinguish NFCs that are exposed to the increase in interest rates from other companies in the sample, while also recognising the diversity of risks within the group of heavily indebted NFCs.

The increase in policy rates led to a swift and pronounced increase in yields on bonds issued by heavily indebted NFCs, and caused the spread between heavily indebted NFCs and other listed NFCs in France to widen (see Chart 2.27). The spread narrowed in 2023 and 2024 however, with average yields to maturity of French NFCs coming into line with those of euro area NFCs amid the overall compression of credit spreads (see Chart 2.27 and Chapter 1). Thus, in May 2024, the average yield on the debt securities of heavily indebted NFCs reached 5.18% in France and 5.51% in the euro area, compared with 3.27% for other French NFCs, giving a spread of 191 bps, which has narrowed since May 2022. The average yield of heavily indebted NFCs has remained stable in the euro area and fallen in France since May 2022. Credit spreads among heavily indebted companies are not uniform and fluctuate significantly according to rating levels. The average yield of heavily indebted NFCs rated BB continues to rise in France, with the spread reaching 247 bps in May 2024, compared with 254 bps in the euro area.

Chart 2.26: Outstanding market debt of listed euro area NFCs, by rating and exposure to interest rate risk in May 2024

x: time / y: EUR billion

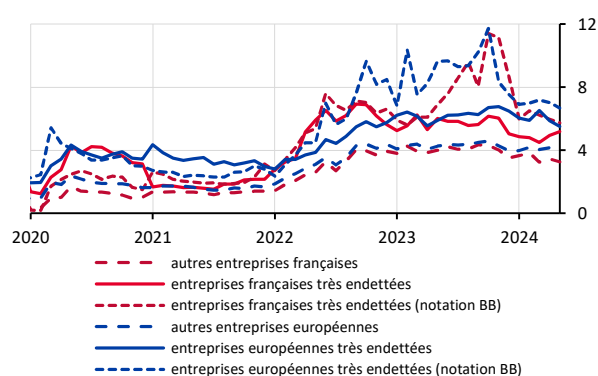


Scope: Bond debt issued by NFCs identified as vulnerable based on the methodology and scope detailed in the second section. Debt issued in EUR by the group (non-consolidated) and held in the euro area is taken into account. Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4.

Sources: Refinitiv Eikon, CSDB, Banque de France calculations.

Chart 2.27: Average yield of French and European NFCs, by type of risk

x: date / y: average yield to maturity weighted by outstandings (%)



Scope: listed European companies with a balance sheet for each year from 2019 to 2023. The number of companies varies from one country to the next: Germany 278, France 261, United Kingdom 247, rest of continental Europe 1,966.

Most recent value: May 2024.

Note: A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30.

Sources: Refinitiv Eikon, CSDB, Banque de France calculations.

Heavily indebted companies also benefit from a bond debt structure featuring fixed rates and long maturities

Overall, the interest rate structure of the market debt of heavily indebted NFCs is aligned with that of companies in general. In France and in the euro area, the interest rate structure of the market debt of companies identified as heavily indebted is dominated by fixed rates (93% and 90% in May 2024 in France and the euro area respectively), as it is for listed companies generally.

The most vulnerable companies do however stand out because of the increase in their share of short-term debt securities (commercial paper). Vulnerable NFCs, i.e. those with a high debt burden and low cash reserves, carry more debt via zero-coupon commercial paper (CP). The CP share has increased, solely for these NFCs, since January 2022 in France, rising from 17% to 39% of outstanding amounts in December 2023, while the average cash ratio of these firms, expressed in days of turnover, worsened between 2022 and 2023. The average maturity of CP issued by these same NFCs also fell, reaching 89 days in May 2024 compared with 217 days in May 2021. The growing use of CP could point to growing cash concerns for vulnerable NFCs.

The bonds issued by heavily indebted French NFCs have longer maturities than those of their European peers. Heavily indebted NFCs are not facing a “maturity wall”, even though the majority of their outstanding debt will have to be repaid or rolled over by 2028. In France, heavily indebted NFCs will have to repay 59% of their bond debt between 2024 and 2028, including 26% before the end of 2025 (see Chart 2.28). In this regard, the bond debt structure of the heavily indebted companies in our sample is closely aligned with the debt of French NFCs as a whole, whose median residual maturity is four years.¹¹⁰ Heavily indebted European NFCs however must repay 69% of their outstanding debt between 2024 and 2028, including 22% between 2024 and 2025. Long maturities are thus more widespread in the bond debt of heavily indebted French NFCs than in the debt of European companies. In terms of their maturity schedule, heavily indebted French NFCs are also comparable to the rest of France’s listed NFCs, which are going to have to repay 56% of their bond debt between 2024 and 2028, including 26% between 2024 and 2025 (see Chart 2.29).

Chart 2.28: Maturity schedule for the bond debt of heavily indebted listed NFCs

x: date / y: % of total outstandings

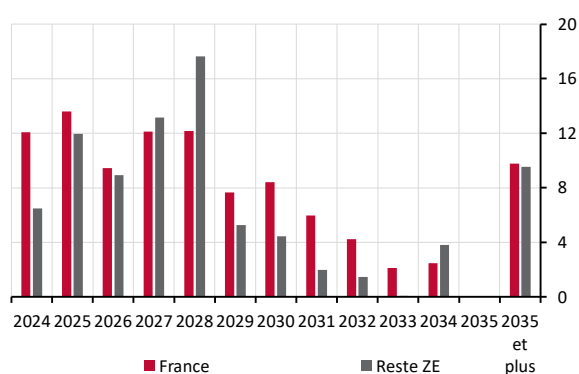
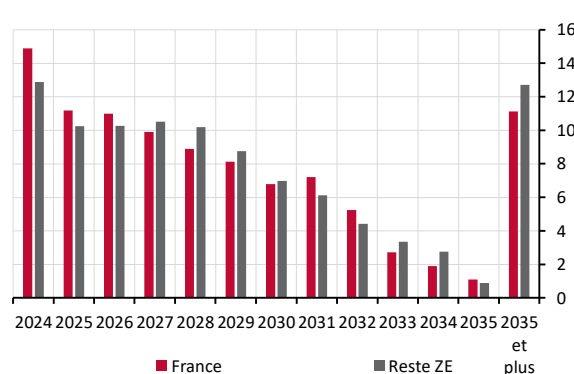


Chart 2.29: Maturity schedule for the bond debt of listed NFCs

x: date / y: % of total outstandings



Scope: Bond debt issued by NFCs identified as vulnerable based on the methodology and scope detailed in the second section. Debt issued in EUR by the group (non-consolidated) and held in the euro area is taken into account.

Most recent value: May 2024.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4. A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30.

Sources: Refinitiv Eikon, CSDB, Banque de France calculations.

¹¹⁰ Debt structure and rising interest rates: focus on European companies | Banque de France (banque-france.fr)

The investor base of vulnerable companies on fixed income markets is representative of companies as a whole

The main holders of the bonds of French NFCs that are vulnerable to interest rate risk are investment funds (41% of holdings in the fourth quarter of 2023) and insurers (38%) (see Chart 2.30). The investor base of vulnerable French NFCs thus displays a degree of concentration that is similar to the investor base of other listed French NFCs. The riskiest NFCs have a larger share of money market funds and NFCs and a smaller share of banks in their investor base. The investor base of vulnerable European NFCs is markedly different, with fewer holdings by insurers but higher bank holdings in the fourth quarter of 2023.

Chart 2.30: Investor base by sector and exposure to interest rate risk, NFCs

x: date / y: % of total holdings

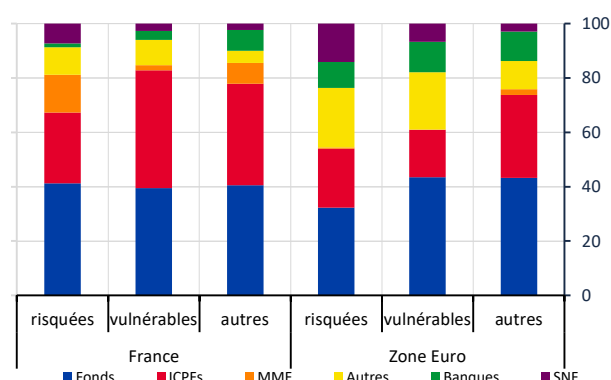
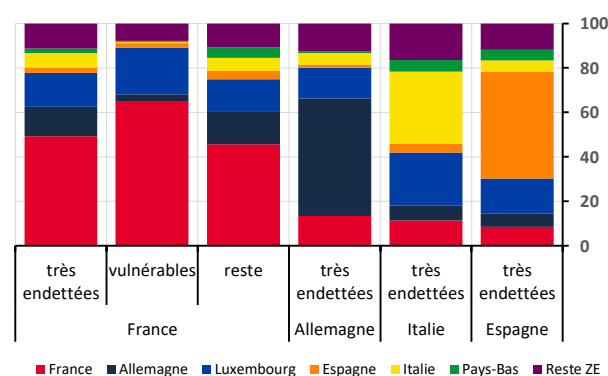


Chart 2.31: Investor base by country and exposure to interest rate risk, NFCs

x: date / y: % of total holdings



Scope: Bond debt issued by NFCs identified as vulnerable based on the methodology and scope detailed in the second section. Debt issued in EUR by the company (without consolidating debt issued by subsidiaries) and held in the euro area is taken into account.

Most recent value: fourth quarter of 2023.

Note: a company is considered to be heavily indebted if its ICR is below 3 and its debt/EBITDA ratio is negative or higher than 4. A company is considered to be vulnerable if it is considered to be heavily indebted and if its liquidity ratio expressed in days is below 30.

Sources: Refinitiv Eikon, CSDB, SHS-S, Banque de France calculations.

Vulnerable companies depend primarily on domestic holders, as do all vulnerable European companies. In France, French holders accounted for 50% of holdings of heavily indebted NFCs in the fourth quarter of 2023, compared with 45% for the other listed NFCs in the sample. Holdings of heavily indebted European NFCs also show a domestic bias, although it is less pronounced in the case of Italian NFCs. In the fourth quarter of 2023, domestic holders accounted for 53% of the holdings of heavily indebted NFCs in Germany, 48% in Spain and 32% in Italy (see Chart 2.31). Heavily indebted European NFCs have a more pronounced domestic bias than their non-vulnerable peers, unlike heavily indebted French NFCs.

Box 2.3: Non-bank loans are a growing but risky alternative for the financing of NFCs with the greatest exposure to the increase in interest rates

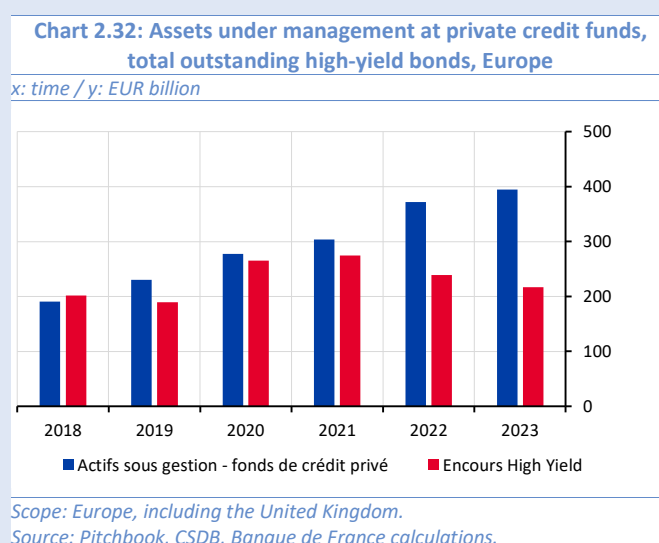
By Lucille Collet

The most heavily indebted NFCs have various debt financing options: bank financing, the high-yield bond market and non-bank loans, including private credit. Private credit, which refers to the direct financing of companies through non-bank credit outside the bond market and provided by alternative funds, has been growing strongly for several years. These funding methods are typically used by NFCs owned by private equity funds. Accordingly, 77% of private credit transactions in Europe¹¹¹ involve companies sponsored by private equity funds. Private credit and high-yield bonds serve companies that exhibit different characteristics but that share high levels of leverage. Private credit funds primarily finance mid-sized companies, whereas high-yield

¹¹¹ International Monetary Fund *Global Financial Stability Report* – Chapter 2 – The Rise and Risks of Private Credit, April 2024 [The Last Mile: Financial Vulnerabilities and Risks \(imf.org\)](#)

bonds are mainly aimed at large companies. Private credit funds present themselves as an alternative to high-yield bonds for companies that do not have access to such instruments (see Block et al. (2023)).¹¹² In 2022, outstanding private credit reached EUR 390 billion in Europe (see Chart 2.32), compared with EUR 239 billion for high-yield bonds.

Bank financing remains a major funding source for the most heavily indebted NFCs. In 2017, the ECB's single supervisory mechanism (SSM) introduced enhanced monitoring of bank exposures to leveraged finance, defined as exposures to borrowers, other than SMEs, whose debt-to-EBITDA ratio exceeds 4.¹¹³ Between 2018 and 2022, these exposures increased as financial covenants became less stringent. Between 2022 and 2023, volumes of leveraged bank lending shrank as interest rates went up. In France, outstanding leveraged loans on the balance sheets of the five main banking groups reached EUR 157 billion in the fourth quarter of 2023, compared with approximately EUR 186 billion in the fourth quarter of 2022.¹¹⁴ The ratio of non-performing loans in the leveraged loans of French banks has been rising since end-2022, however, and reached 9.1% in the first quarter of 2024. It is naturally higher than the ratio for non-leveraged NFCs lending, which has held steady at 3.2%.



While non-bank loans are a way to diversify the funding mix of NFCs, they could increase the exposure of companies to the ups and downs of financial cycles. During financial crises, non-bank lenders on syndicated loan markets¹¹⁵ reduce their NFC lending business by 50% more than banks (Aldasaro et al. 2023).¹¹⁶ This contraction is only marginally due to differences in the characteristics of borrower companies, since non-bank lenders lend more to heavily indebted companies than banks. The procyclicality of non-bank lending may however vary depending on the type of loan. Issues of direct loans by private credit funds appear to have been more stable post-Covid-19 than issues of other non-bank loans or high-yield bonds.¹¹⁷

¹¹² Block et al. 2023 [A Survey of Private Debt Funds](#) | NBER

¹¹³ [Guidance on leveraged transactions \(europa.eu\)](#)

¹¹⁴ Outstanding leveraged loans for all systemically important institutions supervised by the SSM totalled approximately EUR 450 billion in Q3 2023. [ECB-Annual-Report-on-supervisory-activities 2023.pdf \(banque-france.fr\)](#)

¹¹⁵ Syndicated loans are a type of financing provided by a group of lenders, often banks and other financial institutions, to a single borrower. Loans are syndicated when they are too large or risky for a single lender. Bank loans to large companies are often syndicated. These loans may also be provided to non-banks, such as securitisation vehicles (with a view to issuing collateralised loan obligations – CLOs) or investment funds.

¹¹⁶ Aldasaro et al. 2023 [Non-bank lending during crises \(bis.org\)](#)

¹¹⁷ International Monetary Fund *Global Financial Stability Report* – Chapter 2 – The Rise and Risks of Private Credit, April 2024 [The Last Mile: Financial Vulnerabilities and Risks \(imf.org\)](#)