

2. An overview of the French financial system: changes over time, mapping, and interconnections with the rest of the world

Tarik Mouakil, Jonas Heipertz, Edith Stojanovic, François Guinouard

This chapter offers a description of the French financial system largely inspired by the euro area mapping proposed by Andersen and Sánchez Serrano.⁹⁷ It presents the financial exposures of all institutional sectors in a comprehensive matrix based on who-to-whom data underlying the French financial accounts published by the Banque de France. These data provide a comprehensive overview of bilateral financial relations between sectors for all categories of the European System of Accounts (ESA), particularly loans, debt securities (short-term notes and bonds), listed and unlisted shares, investment fund shares/units and derivatives.⁹⁸

The ESA disaggregates the financial sector into eight sub-sectors (Banque de France, banks, insurance corporations together with pension funds, money market funds (MMF), non-MMF investment funds, captive financial institutions,⁹⁹ financial auxiliaries and other financial intermediaries), thus providing a level of disaggregation for non-bank financial intermediaries (NBFIs) comparable to the NBFi benchmark taxonomy developed by the Financial Stability Board (FSB).¹⁰⁰

This study also builds on our December 2023 thematic chapter, which presented an initial analysis of the interconnections between banks and NBFIs based on the FSB taxonomy.¹⁰¹ The FSB taxonomy is more granular than the ESA taxonomy and is harmonised at the international level (facilitating meaningful comparisons between financial sectors of different FSB jurisdictions) but FSB data are less reliable than national financial accounts, and have neither their historical scope nor their quarterly frequency.

Moreover, the financial accounts go beyond financial sector accounting alone, since they cover the non-financial sector. In this chapter the interconnections between financial institutions are considered as part of the broader financial circuit of the French economy, with an analysis of bilateral financial flows with (and between) the various non-financial sectors (non-financial corporations, households and the state). This comprehensive mapping of the financial system brings to light certain stylised facts that demonstrate the often-overlooked role of non-financial players in financial sector dynamics.

The chapter contains three sections. The first section, based on the financial accounts and balance sheet accounts published by the Banque de France on a quarterly basis, describes and analyses the changes in the French financial system over the past 25 years. Several stylised facts emerge. First, there was a rise in the relative financial weight of non-financial corporations (NFCs), which have become the primary sector in terms of financial assets and whose unlisted shares are now the first asset type by size in France. Second, banks continue to play a pivotal role in the French financial system. On the other hand, and in contrast to what occurred at the euro area level, French NBFIs have not been particularly dynamic. The increasing openness of the French financial system, closely linked to euro area integration, is another key development of the past 25 years. Lastly, as in other jurisdictions, the derivatives market in France has grown dramatically.

The second section presents a detailed map of the interconnections between the sectors of the French financial system in the second quarter of 2024, based on an accounting matrix that aggregates the balance

⁹⁷ Andersen (I.) and Sánchez Serrano (A.) (2024), “A map of the euro area financial system”, *European Systemic Risk Board Occasional Paper Series*, No. 26.

⁹⁸ Who-to-whom data are also provided for monetary gold and SDRs, currency, bank deposits, insurance technical reserves and “other accounts receivable/payable”.

⁹⁹ Entities operating essentially within their group (financial or non-financial).

¹⁰⁰ See Appendix 5 for details of the ESA’s financial sector nomenclature.

¹⁰¹ Banque de France (2023), “[French non-bank financial intermediaries: mapping, risks and regulatory framework](#)”, *Assessment of Risks to the French Financial System*, pp. 73-89.

sheet accounts of the eleven French domestic sectors and of the rest of the world, with detailed who-to-whom data. From this matrix, one can extract the financial circuit centred on banks. Banks continue to be the central players in the French financial system, while French investment funds remain largely entangled with them. One can also trace the financial circuit centred on NFCs, which reveals their increasing organisational complexity. It also shows an apparent increase in NFC dependence on foreign NBFIs, which could be a result of internationalisation and tax optimisation strategies.

The third section uses the Eurosystem's Securities Holdings Statistics (SHS) database to map the interconnections between French and “rest of the world” sectors¹⁰² on three financial markets: debt securities, listed shares and investment fund shares/units. This mapping shows that the increasing openness of the French financial system is mostly linked to French sectors’ mounting exposure to foreign – and particularly euro area – NBFIs.

2.1. Changes in the French financial system – major trends since 1999

Systemic sectors in France

From the quarterly balance sheet account tables, one can rank the twelve main ESA sectors by size of outstanding amounts (see Table 2.1).¹⁰³ This ranking reveals some major trends in the evolution of the French financial system over the past 25 years. The sectors whose ranking and relative weight (as a proportion of total financial assets) have increased between 1999 and 2024 are marked in red in Table 2.1. NFCs and banks continue to be the two French sectors with a systemic dimension in terms of share of financial assets, which justifies our focusing on them in the remainder of this section. NFCs have become the leading sector in terms of financial assets, overtaking banks. This stylised fact may seem surprising and we will try to understand it in this section.

¹⁰² The rest of the world includes all non-resident units that carry out transactions with resident institutional units. Many subsidiaries of French financial and non-financial companies are located abroad, resulting in intragroup movements in the flows with the rest of the world.

¹⁰³ The Banque de France publishes statistics on France’s national financial accounts that date back to 1977. However, we have refrained from going that far back in this chapter, as we do not intend to review the period prior to the transition to the euro.

Table 2.1: Ranking of ESA sectors by descending order of financial assets, Q2 2024 vs. Q1 1999
Financial assets in EUR billions and share of total financial assets in %

Ranking in Q2 2024			Ranking in Q1 1999		
Rank	Sector	Total/Share of financial assets	Rank	Assets by issuing sector	Total/Share of financial assets
1	Non-financial corporations (F)	14 667 25.8%	1	Banks (B)	3 698 26.9%
2	Banks (B)	13 148 23.2%	2	Non-financial corporations (F)	3 075 22.4%
3	Rest of the world (RoW)	11 838 20.9%	3	Households (H)	2 456 17.9%
4	Households (H)	7 078 12.5%	4	Rest of the world (RoW)	1 899 13.8%
5	Insurance corporations and pension funds (IC+PF)	3 003 5.3%	5	Insurance corporations and pension funds (IC+PF)	806 5.9%
6	General government (G)	1 830 3.2%	6	General government (G)	639 4.6%
7	Non-MMF investment funds (IF)	1 556 2.7%	7	Non-MMF investment funds (IF)	480 3.5%
8	Banque de France (CB)	1 326 2.3%	8	Money market funds (MMF)	238 1.7%
9	Other financial intermediaries (OFI)	1 073 1.9%	9	Financial auxiliaries (FA)	190 1.4%
10	Financial auxiliaries (FA)	650 1.1%	10	Banque de France (CB)	140 1.0%
11	Money market funds (MMF)	424 0.7%	11	Other financial intermediaries (OFI)	104 0.8%
12	Captive financial institutions and money lenders (CF)	162 0.3%	12	Captive financial institutions and money lenders (CF)	24 0.2%

Source: Banque de France, quarterly financial accounts.

Note: Sectors whose ranking and relative weight (as a proportion of total financial assets) have increased since 1999 are marked in red. The acronyms in brackets are those used in this chapter, not those used in the ESA.

This table shows considerable NBFI sector stability, which is consistent with the trend for 2008-22 highlighted in last year's Financial Stability Report.¹⁰⁴ We can see here that this finding is actually valid since 1999 (see Chart 2.1). NBFIs accounted for EUR 6,868 billion in the second quarter of 2024,¹⁰⁵ that is 32.2% of French financial institutions' total assets, compared with EUR 1,842 billion and 32.4% in the first quarter of 1999. Insurance corporations (together with pension funds)¹⁰⁶ account for around half of this total, with outstanding amounts of EUR 3,003 billion. Investment funds make up more than two-thirds of French non-bank and non-insurance finance, but bear different risks depending on the type of fund.¹⁰⁷

¹⁰⁴ Banque de France (2023).

¹⁰⁵ The sum of lines 5, 7, 9, 10, 11 and 12.

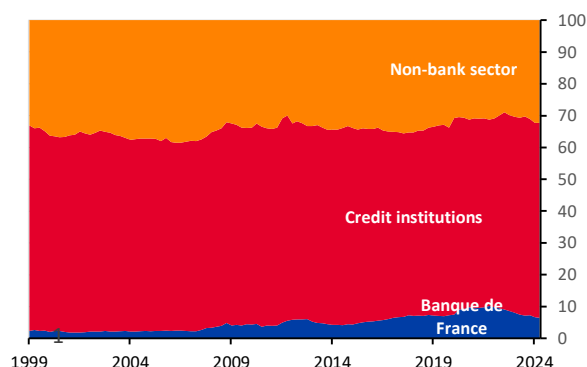
¹⁰⁶ Pension funds' outstanding amount of financial assets is very limited in France: EUR 186 billion in the second quarter of 2024 ([Stat Info, Placements financiers des sociétés d'assurances et des fonds de pension](#), Banque de France, Q2 2024), which reflects the major predominance of unfunded (often referred to as "pay-as-you-go") pension schemes. Furthermore, their development is quite recent, and stems from the creation of undertakings for supplementary occupational retirement provision made possible by the *Pacte* Act in 2019.

¹⁰⁷ Ibid.

A final stylised fact that emerges from changes in the ranking of ESA sectors is the international opening-up of the French financial system. The rest of the world sector now ranks third, its financial assets accounting for 21% of the total assets in circulation in the French financial system (up from only 14% in the first quarter of 1999). Later in this chapter we will try to disaggregate this sector as much as possible: first geographically by distinguishing between the euro area (whose deepening integration is the main factor behind the French economy’s opening-up) and the rest of the world; and second, wherever practical, by breaking it down at the sectoral level. The considerable stability in the French NBFIs sector is largely due to its “outsourcing” and to the development of interconnections between domestic sectors (banks and NFCs in particular) and NBFIs entities established abroad by French financial or non-financial corporations themselves.

Chart 2.1: Change in the breakdown of financial assets by resident financial sector

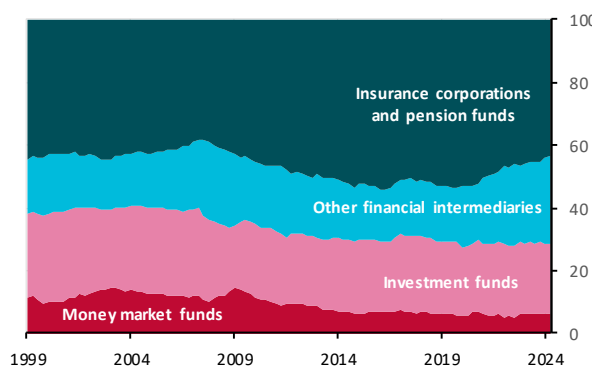
x: time/y: %



Source: Banque de France, quarterly financial accounts.

Chart 2.2: Change in the breakdown of financial assets within the resident non-banking sector

x: time/y: %



Source: Banque de France, quarterly financial accounts.

The main financial assets in circulation in France

In the same way as we did for the holding sectors, we can rank the main financial assets in circulation by issuing sector (see Table 2.2). Again, assets whose ranking and relative weight (as a proportion of total financial assets) have increased since 1999 are marked in red in this table. This new ranking provides some insight into the major trends of the French financial system’s evolution that emerged from Table 2.1.

There has been a rise in the proportion of NFC unlisted shares and other equity (mainly allocated between the NFCs themselves), which have now overtaken bank deposits to become the leading category of financial assets in France (15.9% of total financial assets in the second quarter of 2024 compared with 13.1% in the first quarter of 1999). Their growth has contributed to the relative increase in NFC financial assets. The increasing weight of unlisted shares and equity is primarily due to valuation effects. Compared with other countries, the methodology applied by France assigns a relatively high value to unlisted shares in the national accounts.¹⁰⁸ However, the greater weight of unlisted shares also reflects companies’ increasing organisational complexity.¹⁰⁹ The weight of unlisted shares and other equity from the rest of the world also increased slightly (from 8th to 6th place, accounting for 4.3% of total financial assets in circulation in France in 2024). The weight of listed shares issued by resident NFCs, on the other hand, declined, despite benefiting from valuation effects (4.5% of total financial assets compared with 5.5% in 1999).

¹⁰⁸ ESA 2010 proposes three methods for assessing the market value of unlisted shares: a valuation with reference to either the values of listed shares where appropriate (taking account of lower liquidity); the value of own funds; or discounting forecast profits. France applies the first while other countries more frequently apply the second (resulting in lower values).

¹⁰⁹ See Bidaud (F.) and Fontaine (G.) (2023), “Four decades of wealth and debt in France”, *Bulletin de la Banque de France*, No. 248, Article 8, September-October.

Deposits with the Banque de France (transferable deposits and minimum reserves) enter into the ranking in 2024 (see Table 2.2), due to the Eurosystem’s asset purchase programmes of the past years, the shortage of liquidity on the interbank market, and banks placing their excess liquidity with the central bank. The increase in deposits with the Banque de France contributed to the rise in the relative weight of its total financial assets between 1999 and 2024, as was shown in Table 2.1.

Still in line with the findings of Table 2.1, the financial assets issued by resident NBFIs demonstrated no particular dynamism. The weight of the overall category of insurance technical reserves fell slightly from 4.9% to 4.2% of total financial assets. The weight of investment fund shares/units also declined, both for non-MMF investment funds (2.8% of total assets compared with 3.4% in 1999) and for money market funds (down to 29th place with 0.8% from 1.3% in 1999).

Table 2.2 confirms another important stylised fact – the international opening-up of the French financial system. In addition to the increased weight of derivatives issued by the rest of the world (see below), the weight of other liabilities issued by the rest of the world – listed and unlisted shares, loans and other accounts payable – has risen over the 25-year period. Section 2 will present a geographical (distinguishing between euro area and non-euro area) and sectoral breakdown of the rest of the world.

A new stylised fact revealed by Table 2.2 is the sharp increase in the weight of derivatives (which include options, forwards and swaps, in particular) issued both by the rest of the world and by French banks. Their overall share has risen to 6.6% of total financial assets in circulation in France, compared with 1.5% in 1999.¹¹⁰ It is hard to estimate the real weight of derivatives as their accounting is particularly complex and difficult to implement. Certain derivatives operate with margin payments. However, financial accounts hide the majority of these margins as they are included in loans and deposits.¹¹¹ To make them reappear, the mapping of the euro area of Andersen and Sánchez Serrano (2024) includes who-to-whom data on initial margins from the European Market Infrastructure Regulation (EMIR) database. However, who-to-whom EMIR data are not as reliable as the information disclosed in the financial accounts and can be difficult to reconcile.

¹¹⁰ In Table 2.2, the share of derivatives issued by OFIs (0.8%) is not shown.

¹¹¹ Loans and deposits include all initial margins and repayable variation margins. However, certain forwards and options operate on the basis of non-repayable variation margins, “reducing or eliminating the asset/liability positions which may emerge during the life of the contract, [and which] are treated as settlements under the contract, and classified as transactions in financial derivatives” (European System of Accounts 2010, paragraph 5.220).

Table 2.2: Main financial assets in circulation by issuing sector and by descending order of outstanding amounts
Outstanding amounts in EUR billions and share of total financial assets in %, Q2 2024 vs Q1 1999

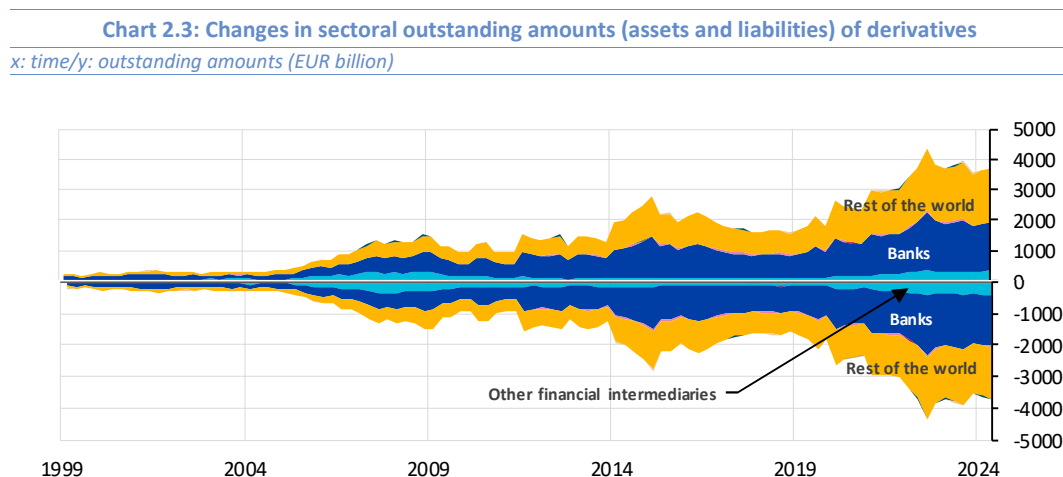
Ranking in Q2 2024			Ranking in Q1 1999		
Rank	Assets by issuing sector	Outstanding amounts/ Share of assets	Rank	Assets by issuing sector	Outstanding amounts/ Share of assets
1	NFC unlisted shares and other equity	8,968 15.9%	1	Deposits	2,324 17.7%
2	Deposits	8,392 14.9%	2	NFC unlisted shares and other equity	1,725 13.1%
3	Bank loans	4,337 7.7%	3	Bank loans	1,241 9.4%
4	Government debt securities	2,709 4.8%	4	Government debt securities	733 5.6%
5	NFC listed shares	2,530 4.5%	5	NFC listed shares	723 5.5%
6	Rest of the world unlisted shares and other equity	2,423 4.3%	6	Insurance technical reserves	634 4.8%
7	NFC loans	2,408 4.3%	7	NFC loans	626 4.8%
8	Insurance technical reserves	2,386 4.2%	8	Rest of the world unlisted shares and other equity	499 3.8%
9	Rest of the world debt securities	2,147 3.8%	9	Deposits with rest of the world	492 3.8%
10	Deposits with rest of the world	1,709 3.0%	10	Bank debt securities	473 3.6%
11	Rest of the world derivatives	1,647 2.9%	11	Non-MMF investment fund shares/units	448 3.4%
12	Bank debt securities	1,625 2.9%	12	Other NFC accounts receivable or payable	437 3.3%
13	Bank derivatives	1,572 2.8%	13	Rest of the world debt securities	347 2.6%
14	Non-MMF investment fund shares/units	1,566 2.8%	14	Other government accounts payable	193 1.5%
15	Other accounts payable by NFCs	1,405 2.5%	15	Money market fund shares/units	174 1.3%
16	Other accounts payable by banks	1,041 1.8%	16	NFC debt securities	170 1.3%
17	Deposits with the central bank	972 1.7%	17	Other accounts payable by households	164 1.3%
18	Rest of the world listed shares	779 1.4%	18	Other accounts payable by banks	157 1.2%
19	Rest of the world other accounts payable	776 1.4%	19	Rest of the world other accounts payable	153 1.2%
20	Rest of the world loans	684 1.2%	20	Rest of the world listed shares	137 1.0%

Source: Banque de France, quarterly financial accounts.

Note: Assets whose ranking and relative weight (as a proportion of total financial assets) have increased since 1999 are marked in red.

Growth of the derivatives market

The growth in outstanding amounts of derivatives over the past quarter century has been dramatic, increasing almost 20-fold between the first quarter of 1999 and the second quarter of 2024. The main driver for the success of derivatives was the demand for hedging against interest rate and foreign exchange rate volatility. According to the latest derivatives report from the European Securities and Markets Authority (ESMA), interest rate derivatives and currency derivatives accounted for 78% and 15%, respectively, of the notional amount of derivatives in the European Union in the fourth quarter of 2022 (5% for equity derivatives, 2% for credit derivatives and 1% for commodity derivatives). One can note two major breakpoints in the growth of derivatives. First, the 2007-08 crisis led to a (worldwide) reduction in derivative outstanding amounts, while a later decline began around 2015 and lasted until early 2019. The latter was in large part most likely caused by the implementation in Europe of the EMIR regulation, which requires reporting of all derivatives to Trade Repositories (since February 2014) and central clearing (since June 2016). These requirements led to an increase in the capital cost of derivative positions, which in turn prompted banks to clear and reduce their notional outstanding amounts of derivatives.¹¹² However, monetary policy is also a likely factor: the decline in outstanding short and long-term contracts on the euro-denominated interest-rate derivatives market after 2015 could be related to the fact that market players, especially banks, did not expect rate changes for several years to come.¹¹³



Source: Banque de France, quarterly financial accounts.

Derivatives are reported at their positive fair value in assets and their negative fair value in liabilities in the financial accounts.

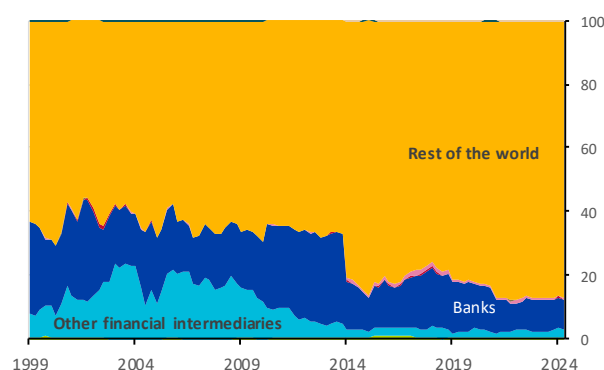
The main salient fact that emerges from this picture is the drying up of derivative transactions between resident banks and other financial institutions (OFIs). Both French banks and French OFIs now trade almost exclusively with the rest of the world. This reflects the growing trend towards the internationalisation, clearing and geographical concentration (notably on the London market for Europe) of the derivatives markets.

¹¹² For further details, see Demange (G.), Piquard (T.) and Vuillemeys (G.) (2023), "Régulation des marchés de produits dérivés : bilan et perspectives", Institut Louis Bachelier, *Opinions & Débats*, No. 27.

¹¹³ See Ehlers (T.) and Eren (E.) (2016), "The changing shape of interest rate derivatives markets", *Bank of International Settlements Quarterly Review*, December.

Chart 2.4: Change in sector holdings of derivatives issued by resident banks

x: time/y: %



Source: Banque de France, quarterly financial accounts.

Changes in the liquidity of the French financial system since 1999

To conclude this overview of changes in the French financial markets over the past 25 years, we can, in the manner of Andersen and Sánchez Serrano (2024), put forward a monitoring of the liquidity of the French financial system that revolves around the concepts of the *liquidity of a financial product* and *market liquidity*. Based on this taxonomy,¹¹⁴ the main liquid financial products in the French financial system are:

- currency;
- deposits with banks and central banks;
- debt securities other than those issued by NFCs;
- listed shares;
- money market fund shares.

This categorisation of liquid financial products remains very basic, as it overlooks the breakdown of each class of assets, for example according to maturity in the case of bank deposits (i.e. all bank deposits are here deemed to be equally liquid, ignoring the differences between sight deposits and time deposits). Similarly, we do not consider specific intra-sector characteristics. For example, all non-MMF investment fund shares are excluded here. However, shares in equity funds could logically have been included, as they are generally held to be more liquid than shares in bond funds or mixed funds. Equally, due to the lack of detail on foreign fund shares, they are all excluded from the liquidity measure, which can considerably distort the calculation of real liquidity.

Nevertheless, we can paint a broad picture of how liquidity in the French financial system has evolved over time (see Chart 2.5) based on the quarterly financial accounts. Net flows of liquid financial products (i.e. excluding valuation effects), of which deposits are still the main component, tended to increase at an accelerating pace in the first few years following the introduction of the euro but came to a sudden halt with the financial crisis of 2008. This initially led to a reduction in liquidity in the first quarter of 2009, followed by a drop in net flows of liquidity creation until the end of 2010. Subsequently, the sovereign debt crisis of 2011-13, and more recently the dash for cash following the Covid crisis, also resulted, at least temporarily, in negative quarterly net liquidity flows. Conversely, the Eurosystem's asset purchase programmes from 2014 onwards, and again after March 2020 in response to the public health crisis, brought about a significant

¹¹⁴ For further details on the different concepts of liquidity, see Banque de France (2008), "Overview", *Financial Stability Review*, No. 11, special issue on Liquidity, February, pp. I-VI.

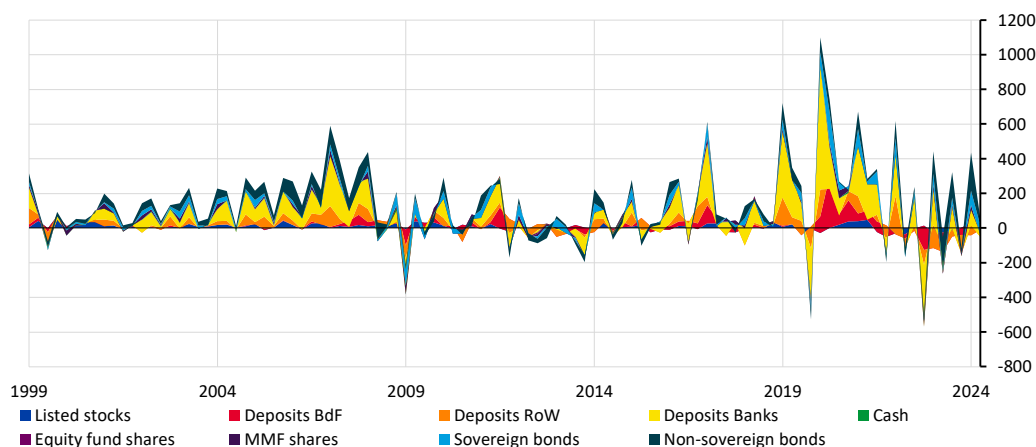
The *liquidity of a financial product* reflects the ease with which it can be exchanged for cash without loss of value.

Market liquidity is a related concept that refers to the market's capacity to absorb transactions in a given volume of assets or securities, without their prices being significantly affected.

increase in liquidity in the financial system (that is mainly reflected here in the growth in deposits with banks and the central bank). The period of quantitative tightening that began in 2022 resulted in a sharp drop in net liquidity flows, which now appear to be driven mainly by sovereign debt and listed share issuance.

Chart 2.5: Net flows in liquid assets by French sector

x: time/y: EUR billions



Source: Banque de France, quarterly financial accounts.

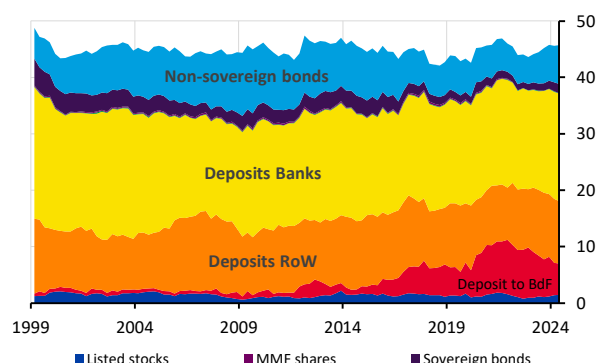
Likewise, we can paint a broad picture of changes in the liquidity of the main sectors of the French economy.¹¹⁵ We can see that the proportion of liquid assets in French banks' balance sheets has remained very stable. Recently, interbank deposits and debt securities on (other) banks or NBFIs have tended to act as an adjustment variable and to absorb the decline in central bank deposits that resulted from quantitative tightening (see Chart 2.6). Conversely, it would appear that the liquidity of non-MMF investment funds has trended downwards over the past several years (see Chart 2.8), due in particular to the decline in the proportion of listed shares on the asset side of their balance sheets. This trend might be linked primarily to developments in the portfolio of mixed funds, as the proportion of equity funds and bond funds in total non-MMF investment fund outstandings remained relatively stable.¹¹⁶ However, this sectoral deterioration in the liquidity of non-MMF investment funds should be nuanced: it would be far less pronounced if fund shares issued by the rest of the world were included in liquid assets, for example (see Chart 2.9).

¹¹⁵ This macroeconomic view does not intend to replace the liquidity ratios calculated and published by the supervisory authorities of these different sectors.

¹¹⁶ See Banque de France (2023) for a breakdown of outstanding amounts of non-MMF investment funds.

Chart 2.6: Change in liquid assets as a proportion of total assets – banks

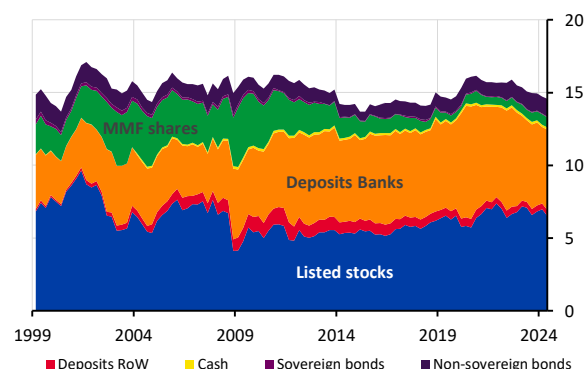
x: time/y: %



Source: Banque de France, quarterly financial accounts.

Chart 2.7: Change in liquid assets as a proportion of total assets – non-financial corporations

x: time/y: %

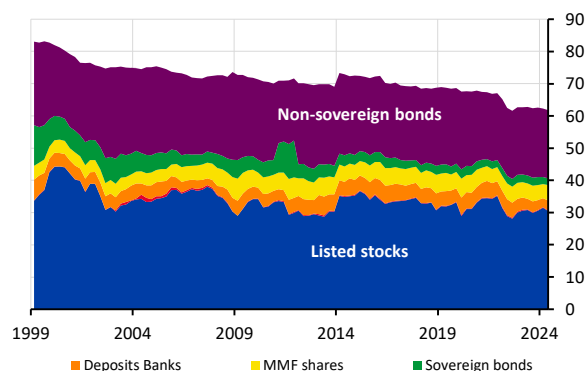


Source: Banque de France, quarterly financial accounts.

For NFCs (see Chart 2.7), there has also been a more recent downward trend in the proportion of liquid assets, which seems to be driven primarily by the contraction in their cash position as represented by bank deposits. However, the liquidity of this sector remains well above its 2000s' level.

Chart 2.8: Change in liquid assets as a proportion of total assets – non-MMF investment funds

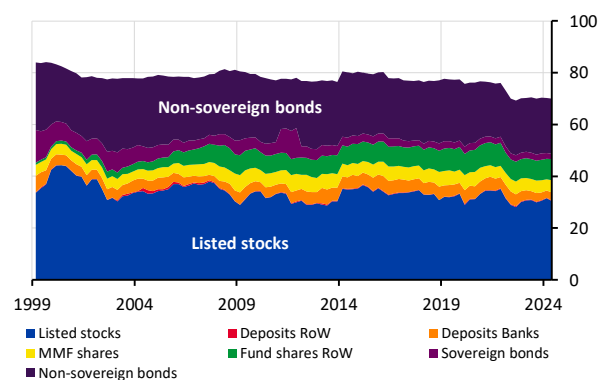
x: time/y: %



Source: Banque de France, quarterly financial accounts.

Chart 2.9: Change in liquid assets (including shares in rest of the world funds) as a proportion of total assets – non-MMF investment funds

x: time/y: %



Source: Banque de France, quarterly financial accounts.

2.2. An account mapping of the French financial system in the second quarter of 2024

Balance sheet matrix

One downside of the balance sheet accounts is that they fail to provide who-to-whom data by issuing-sector type. For instance, although we know how many deposits French NFCs hold, we do not know the exact proportions held by domestic banks or the rest of the world. Therefore, we cannot use the balance sheet accounts in their usual format to map the interconnections between the different sectors of the French financial system.

To solve this problem, we can present the underlying data from the balance sheet accounts in the form of a matrix of financial stocks¹¹⁷ (see Table 2.3). In this matrix, each column corresponds to the financial balance sheet account of a given sector and each row corresponds to a category of financial assets broken down by counterpart sector. It combines the two tables for “assets” and “liabilities and net financial stocks” of the balance sheet accounts published by the Banque de France. Financial assets take a positive sign while financial liabilities take a negative sign. Financial assets appear on the assets side of one unit and on the liabilities side of another, meaning that each row adds up to zero. Finally, in accordance with accounting practice, the balance sheet account for each sector balances, i.e. each column adds up to zero. To do so, the balance – the difference between total financial assets and liabilities – is entered as a liability (i.e. by inverting its sign) and is referred to as the net worth of the sector. For example, the 2,692 figure at the bottom of the first column of Table 2.3 means that French non-financial corporations had net financial liabilities of EUR 2,692 billion in the second quarter of 2024. Similarly, in the net flow matrix presented in the appendix, each column corresponds to the financial account of a given sector and each row corresponds to a financial transactions account for the period under review.

The balance sheet matrix, provided here for the second quarter of 2024, enables us to present inter-sector who-to-whom data for each financial asset item in a single table. Whereas the sub-categories of financial transactions in the Banque de France’s balance sheet accounts are those of the ESA, here financial transactions are disaggregated by sector of the issuer of the financial asset. The downside of merging the asset and liability tables in this matrix is that only the sector's net positions appear, thereby rendering intra-sectoral connections invisible. For example, the NFC shares held by other NFCs are not apparent in Table 2.3.

¹¹⁷ This type of matrix was developed at Cambridge University based on work carried out by Richard Stone, one of the founders of modern national accounting. For a more extensive presentation of these matrices, used in a theoretical framework, please refer to the monetary economics manual of Godley (W.) and Lavoie (M.) (2007), “An Integrated Approach to Credit, Money, Income, Production and Wealth”, Palgrave Macmillan.

Table 2.3: Matrix of France's financial stocks in Q2 2024 in EUR billions

	Non-financial corporations	Banque de France	Banks	Money market funds (MMF)	Non-MMF investment funds	Other financial intermediaries	Captive financial institutions and money lenders	Financial auxiliaries	Insurance corporations and pension funds	General government	Households	Rest of the world	Σ
Financial assets													
(F1) Gold and SDR		174										-174	0
(F21) Currency	24	-291	10						3		133	121	0
(F2M) Deposits with:	885	-806	-3,750	61	51	212		1	45	63	1,975	1,262	0
Banque de France		-960	720							7	3	230	0
Banks	810	33	-5,916	51	47	171			43	97	1,937	2,726	0
General government	15	4	8							-42	1	14	0
Rest of the world	60	117	1,438	10	4	41		1	2	2	34	-1,709	0
(F3) Debt securities issued by:	-488	962	-498	338	412	-255	-2	-97	1329	-2,640	48	891	0
Non-financial corporations	-674	89	21	38	57	2		1	91	4	1	369	0
Banks	18	72	-1,381	125	27	6		5	156	5	15	953	0
Other financial intermediaries			220		6	-357			8			121	0
Financial auxiliaries	2	2	10	2	7			-108	26	1	2	57	0
Captive financial institutions and money lenders			2				-2						0
Insurance corporations and pension funds		1	3		4				-38	1		29	0
General government	5	605	215	7	32	4		1	299	-2,678		1,510	0
Rest of the world	160	192	412	165	280	90		4	786	27	30	-2,147	0
(F4) Loans granted by:	-1,333		4,274	11	-24	113	-13	-178	-91	-195	-1,748	-815	0
Non-financial corporations	581					-1	-18	-141		-16		-404	0
Banque de France		1											0
Banks	-1,342		4,297		-11	-74		-68	-67	-231	-1,554	-950	0
Money market funds				11	-11								0
Non-MMF investment funds					1							-1	0
Other financial intermediaries	-33		-9			286					-182	-62	0
Financial auxiliaries	-19					-4		66	-24			-18	0
Captive financial institutions and money lenders							10	-10					0
Insurance corporations and pension funds	-6								12		-1	-4	0
General government	-34		-5						-1	106	-6	-59	0
Households	-8				-1	-2					12		0
Rest of the world	-470		-9		-3	-91	-5	-25	-11	-53	-16	684	0
(F511) Listed shares issued by:	-1,575	1	68		467	89	28	-9	15	112	309	495	0
Non-financial corporations	-1,747		38		152	5	2	14	39	108	227	1,161	0
Banks	2		-122		14		26		2	1	9	69	0
Financial auxiliaries	6		11		1			-26		1	2	5	0
Insurance corporations and pension funds			2		7			1	-55	1	5	39	0
Rest of the world	164		138		293	84		3	30	2	65	-779	0
(F51M) Unlisted shares and other equity issued by:	-1,146	-61	98		175	-13	14	53	166	480	1,409	-1,175	0
Non-financial corporations	-3,291		122		110		82	225	48	239	1,279	1,187	0
Banque de France		-63								63			0
Banks	10		-276		11			8	40	106	88	13	0
Other financial intermediaries	2					-14	2	1				7	0
Financial auxiliaries	66		31		25		9	-220	52		19	19	0
Captive financial institutions and money lenders			83				-102					18	0
Insurance corporations and pension funds			15		1			-65	25	21	3		0
Rest of the world	2,067	2	123		28		24	39	92	47		-2,423	0
(F52) Investment fund shares/units issued by:	257	19	50	-408	-1,183	24	2	34	889	144	388	-215	0
Money market funds	99		1	-409	72		1	15	105	10	16	91	0
Non-MMF investment funds	80	18	31		-1,380	6		17	639	114	319	157	0
Rest of the world	78	1	18	1	125	18		3	146	20	53	-463	0
(F7) Financial derivatives issued by:	-2	-2	2		-2	-123			-3	-1		132	0
Non-financial corporations	-15		6			2						6	0
Banque de France		-3			3								0
Banks	6		-1,421	1	8	43			1	1		1,360	0
Money market funds			1	-5							1	3	0
Non-MMF investment funds			11		-29	1						17	0
Other financial intermediaries	1		41		1	-437						393	0
Insurance corporations and pension funds			8						-8				0
General government			3							-3			0
Households				1							-2		0
Rest of the world	6	1	1,352	3	15	267		4				-1,647	0
(F6) Insurance technical reserves issued by:	49		3						-2,224	5	2,144	24	0
Insurance corporations and pension funds	49		2						-2,247	6	2,144	47	0
General government			1							-1			0
Rest of the world									24			-24	0
(F8) Other accounts receivable/payable	637	3	-413		-7	18		2	-28	26	223	-462	0
Non-financial corporations	-620		207		1	29		23		92	88	179	0
Banks	504	3	-958		1	1		5	1	7	331	104	0
Money market funds				-1									0
Non-MMF investment funds			1		-14						13		0
Other financial intermediaries	9		1			-37					2	25	0
Financial auxiliaries	23		3					-26					0
Insurance corporations and pension funds	14								-29	15			0
General government	131		7							-294	149	6	0
Households	78		82		5	2				193	-361		0
Rest of the world	497		244			22				12		-776	0
(BF90) Net financial assets	2,692	2	157	-1	111	-64	-29	193	-102	2,005	-4,881	-82	0
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Rounded numbers may result in discrepancies between the total per line/column and the sum of its components.

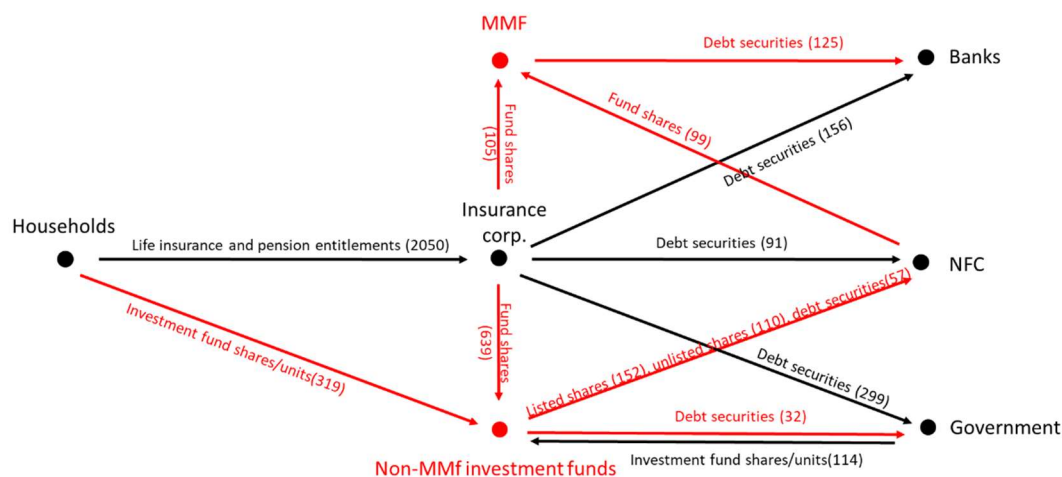
Source: Banque de France, quarterly financial accounts.

This stock matrix, which is a version of the Banque de France's balance sheet accounts broken down by counterpart sector, provides a comprehensive mapping of the interconnections between French financial sectors. To take the previous example, we can now see that of the EUR 885 billion in deposits held by NFCs in the second quarter of 2024, EUR 810 billion were held at domestic banks, EUR 15 billion were held by general government and EUR 60 billion were held with the rest of the world. Using this matrix we could construct an arrow diagram, similar to that of Andersen and Sánchez Serrano (2024), that would present a complete picture of all the interconnections between sectors. However, this type of diagram, in keeping with the tradition of graphical representations of national accounts,¹¹⁸ has the disadvantage of not being easy to disentangle and of putting together financial flows of very different magnitudes. Hence, we have opted for more limited arrow graphs that “zoom in” on the financial circuit specific to the French systemic sectors identified in Table 2.1, namely NFCs and the bank and investment fund ecosystem.

The bank and investment fund ecosystem

We can derive a simplified financial circuit diagram for investment funds from the stock matrix. The nodes represent the economic sectors and the arrows represent the financial flows. The sector that *paid out* holds outstanding *assets*, the amount of which is given for the second quarter of 2024. Conversely, the financial flows *recipient* sector bears a *liability*. For example, money market funds hold bank debt securities of EUR 125 billion, which corresponds to a net liability for the banking sector. Unlike the mappings of Andersen and Sánchez Serrano (2024) that provide an exhaustive overview, our diagram focuses on a single sector – here investment funds, whose financial flows are marked in red. Flows/outstanding amounts relating to other sectors are not exhaustive¹¹⁹ and we have left aside the rest of the world. Lastly, only flows that relate to the largest outstanding amounts of assets and liabilities appear in this diagram.

Figure 2.1: Simplified investment fund financial circuit. Outstanding amounts in Q2 2024 in EUR billions



This circuit provides a simple illustration of the type of financial intermediation carried out by investment funds. We can see that money market funds (MMF) mainly collect funds from insurance corporations (which in turn draw most of their funds from households) and from NFCs. MMF shares can thus be seen as securities

¹¹⁸ For a historical overview of the representations in the form of charts or tables of national accounts, see Vanoli, A. (2002), “A history of national accounts”, Paris, Editions La Découverte.

¹¹⁹ For insurance, only flows received from households similar to *savings flows* (i.e. the sum of *life insurance and annuity entitlements* and *pension entitlements*) are shown, which account for 96% of *insurance technical reserves* that accrue to households as they appear in the stock matrix (see Table 2.1). However, *non-life insurance technical reserves*, which correspond to the estimated amounts needed to meet future claims, do not appear here.

that compete with bank deposits,¹²⁰ but one can see that MMFs then mainly invest in bank debt securities. Moreover, most of the MMF asset management companies are affiliated to banking groups.¹²¹

The financial circuit of non-monetary funds is slightly different: they also derive the bulk of their funds from insurance corporations but they capture directly a significant proportion of savings (from households, NFCs¹²² and also government and social security funds) without using insurers as an intermediary, and mainly invest in the shares and debt securities of non-financial corporations. Non-monetary funds' asset management companies are also mostly bank-affiliated.¹²³

While the credit risk attached to investment funds is nothing like that borne by banks, their use of *leverage* and their *liquidity risk* are not negligible (see Banque de France, 2023).¹²⁴ Furthermore, in Europe, the affiliation of their management companies to a banking or insurance institution does not allow for "active" support from a "sponsor" institution or a third party when they need liquidity.¹²⁵ *Money market funds*, for example, are vulnerable to a liquidity mismatch between assets and liabilities. Investors can withdraw their investment on a daily basis. Meeting redemption requests in times of stress can be costly for money market funds, especially if there is a need to sell assets at depressed prices. This liquidity risk explains why money market funds must comply with liquid asset requirements (ratios of assets coming due within one day and one week). These liquidity reserves are meant to enable the fund to meet redemption requests without having to sell securities. Shares of non-MMF *bond funds* (with a large majority of debt securities) and *mixed funds* (with assets made up of at least two classes of securities), although not considered here to be liquid assets, are exposed to the risk of liquidity mismatch due to the low liquidity of certain debt securities, particularly those of companies with a *high yield* rating. However, as with *equity funds*, their leverage remains contained in France.

In the same way as for funds, we can use the stock matrix to map a simplified financial circuit for banks, and identify their links with the NBFi sector: money market funds and non-MMF investment funds, insurance corporations and pension funds, captive financial institutions, financial auxiliaries and other financial intermediaries (see Figure 2.2).¹²⁶

¹²⁰ Fund shares are legally financial instruments (see MiFID) and even financial securities (see CoMoFi Article L. 211-1).

¹²¹ In 2024, according to our estimates based on the Lipper commercial database, 81% of French money market funds were managed by asset management companies affiliated to a bank (out of the EUR 367 billion outstandings identified in Lipper).

¹²² For clarity, the EUR 80 billion in non-MMF fund shares/units held by NFCs is not shown in the diagram.

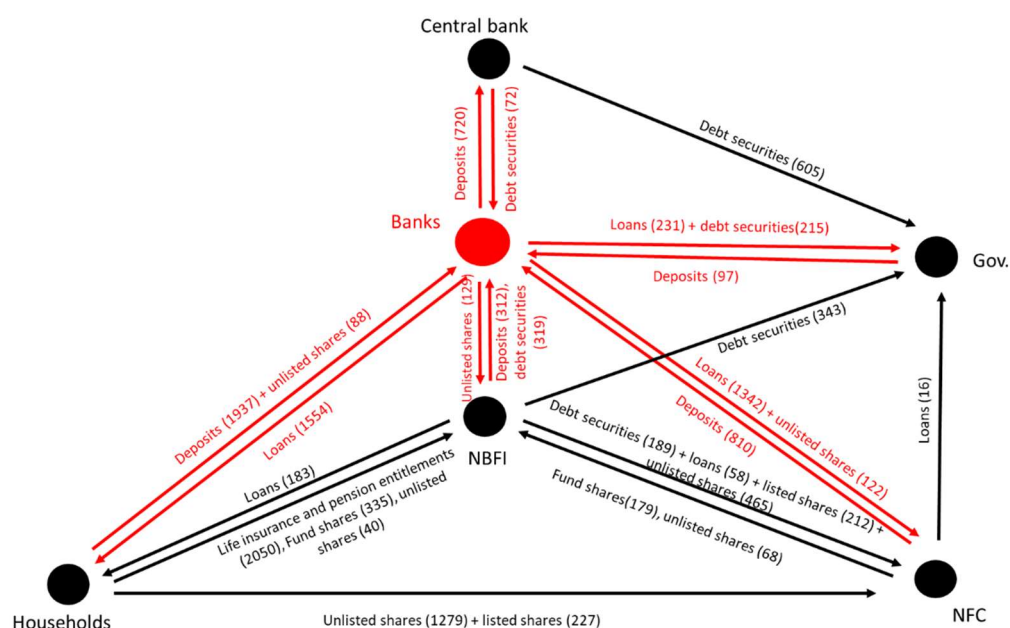
¹²³ In 2024, according to our estimates based on the Lipper commercial database, 64% of French bond funds were managed by asset management companies affiliated to a bank (out of the EUR 151 billion outstandings identified in Lipper).

¹²⁴ This 2023 report provides a more detailed analysis of the risks specifically associated with each type of NBFi.

¹²⁵ In Europe, the MMFR regulation governing money market funds prohibits third party support, unlike the United States, where the sponsor institution can inject liquidity in the event of a shock.

¹²⁶ Figure 2.2 exhibits clear similarities with the "money circuit" traditionally presented in certain monetary economics manuals, with the main difference here being the presence of the NBFi sector. See, for example, Marchal (J.) and Poulon (F.) (1987), "*Monnaie et crédit dans l'économie française*", Cujas, Vol. 2.

Figure 2.2: Simplified bank (and NBF) financial circuit. Outstanding amounts in Q2 2024 in EUR billions



This circuit confirms the central role played by banks, which, thanks to their money creation privilege, finance all the other French sectors. As we saw in Chart 2.1, banks account for 61.3% of the total assets of French financial institutions. If one added the investment funds whose asset management companies are bank-affiliated, the banking sphere would account for 65% to 70%.

All the sectors represented in this circuit are predominantly financed by the banking sector (excluding intra-sector flows), with the exception of general government. For the latter, the Banque de France is still the leading creditor at the French national level with EUR 605 billion (22.6% of general government liabilities, compared with only 1.4% in the first quarter of 1999). This is due to the Eurosystem's asset purchase programmes, which generated liquidity that is now, however, being phased out. It is in this simplified circuit, for the government and for NFCs, that the weight of financing from the non-banking sector appears most significant, at around three-quarters and two-thirds of bank financing, respectively.

Financing from French NBFs, including insurance corporations, accounts for only a marginal proportion of banks' liabilities (EUR 731 billion, or only 6.0% of the liabilities of the entire French banking sector in the second quarter of 2024). However, approximately two-thirds of the financing supplied by the NBF sector to French banks comes from foreign NBFs.¹²⁷

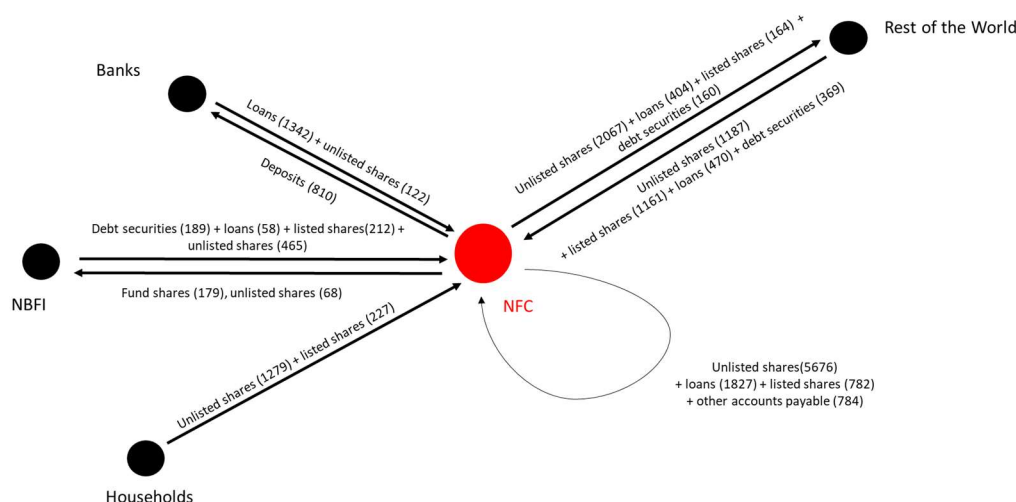
Financial circuit of non-financial corporations

Using the stock matrix (see Table 2.3), one can also map a simplified financial circuit for NFCs. The first difference between Figure 2.3 and Figure 2.2, in which NFCs already appeared, is the presence of the rest of the world sector. The latter emerges as a major partner of NFCs, but with a more balanced net position than with resident sectors. This reflects the complexity and international scope of the organisation of French companies, rather than a dependence on foreign financing. Indeed, a French parent company's ownership of

¹²⁷ Based on supervisory data, the total proportion of funding for the seven main French banking groups from resident and foreign NBFs represent around 16.5% of their liabilities. This level of non-bank financing is slightly higher than the 14% observed among systemically important banks in the euro area (Banque de France, 2023).

a foreign subsidiary (or vice versa) implies a stake in the subsidiary's equity capital while different entities within the same group also provide themselves with liquidity through the granting of loans.

Figure 2.3: Simplified NFC financial circuit. Outstanding amounts in Q2 2024 in EUR billions

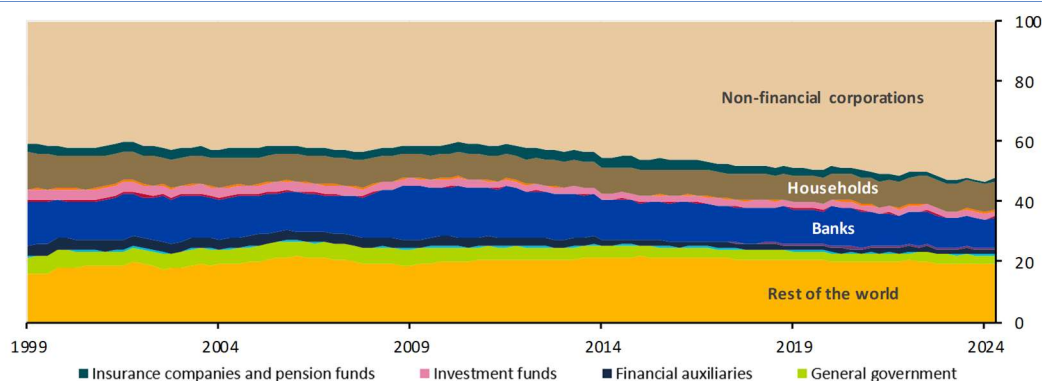


The second difference between Figure 2.3 and Figure 2.2 lies in the mapping of intra-NFC flows.¹²⁸ Their reincorporation into the financial circuit of NFCs is important because the change in the latter's liability composition is most likely related to an upsurge in NFC intragroup flows, which carry two types of risk beyond traditional credit risk: *internal operational risk* and the *risk of greater information asymmetries*.¹²⁹

An analysis of changes in NFC liabilities broken down by holding sector clearly shows an increase in financing originating from NFCs themselves. NFCs now account for the majority of the liabilities of other NFCs (52.3%), whereas intra-NFC financing made up only 40.8% of their liabilities in the first quarter of 1999. Banks' share in NFC financing, on the other hand, has been declining over the past 15 years, accounting for only 10% of liabilities in the second quarter of 2024, compared with 14.6% in the first quarter of 1999.

Chart 2.10: Changes in NFC financing items (% of liabilities)

x: time/y: %

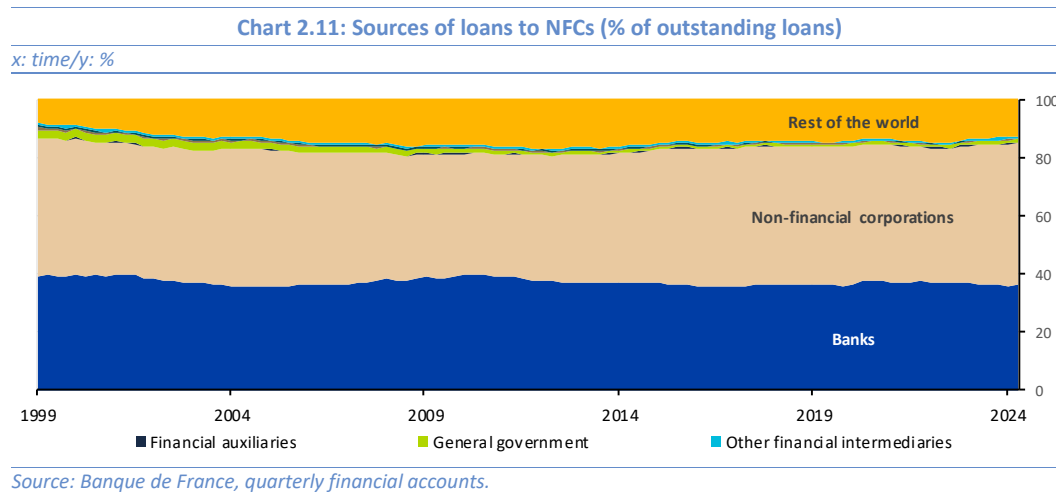


Source: Banque de France, quarterly financial accounts.

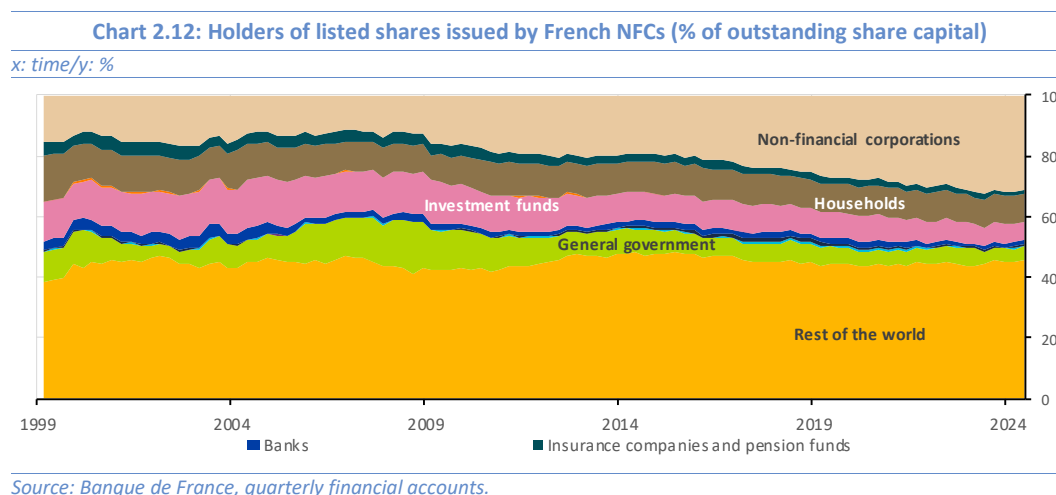
¹²⁸ As already noted, they are hidden in the stock matrix.

¹²⁹ Mouriaux (F.), Sabatini (M.) and Levy-Garboua (V.) (2019), "The euro area post-crisis financial system in perspective (1999-2018)", *Bulletin de la Banque de France*, No. 226, Article 8, November-December.

One can observe the same trends for the loans subset: NFCs now grant half of their outstanding loans themselves, and this proportion has increased over time. This source of credit seems linked to the development of inter-entity loans within increasingly complex groups.¹³⁰ Banks, on the other hand, now provide only 35.9% of NFCs' credit financing, a proportion that has declined over the long term.¹³¹ However, this decline is arguably more apparent than real considering that loans within NFCs are often bank loans redistributed within the same group.



Finally, NFCs and the rest of the world provide most of the equity financing. The latter accounted for the largest proportion of listed shares, with 45.9% of holdings. However, NFCs account for the majority of unlisted shares with 63.3% of holdings, and their weight has been growing over the past quarter century.

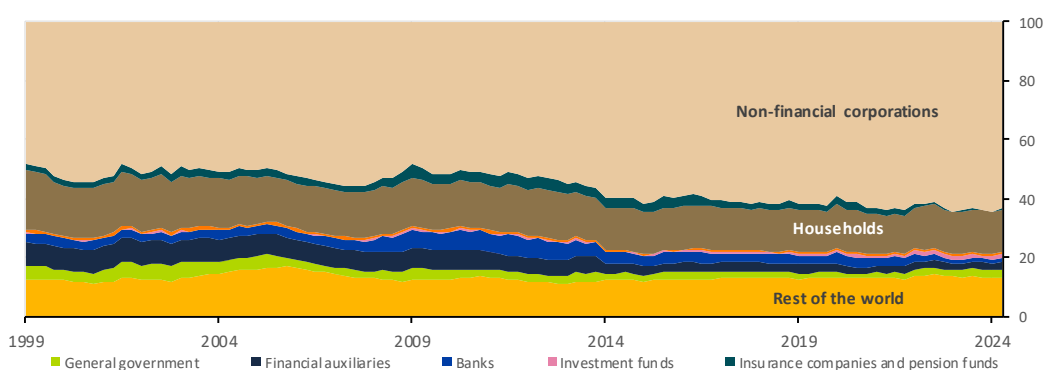


¹³⁰ However, delayed payments are recorded in the financial accounts under a different item (F81, trade credits and advances) from conventional loans (F4).

¹³¹ Excluding all intra-NFC loans, banks provide 70.2% of the loans taken out by NFCs with other sectors (and the proportion of bank financing is even higher because of the bank credit included in loans from the rest of the world).

Chart 2.13: Holders of unlisted shares issued by French NFCs

x: time/y: % of total holdings



Source: Banque de France, quarterly financial accounts.

Mouriaux et al. (2019) also observed on the basis of euro area financial accounts that the share of loans granted to euro area NFCs by the ESA “other financial institutions” (OFI) sector has risen continuously since 1999. They write that this finding, and that of a growing share of the international financial flows of NFCs, are “consistent with the hypothesis that some of the changes in the non-bank financial sector observed since the [2008] crisis may be explained by the development of intragroup and cross-border flows involving the creation of subsidiaries and specialised structures (captive financial institutions) that can also satisfy different grounds for optimisation.”¹³²

However, the relevance of this hypothesis in the French case may not be obvious. The share of loans granted to French NFCs by French OFIs (including captive financial institutions and financial auxiliaries) has in fact remained marginal, rising from 1.1% in the first quarter of 1999 to 1.4% in the second quarter of 2024. However, this hypothesis mainly relates to the increase in credit from foreign OFIs. There was a rather significant increase in the rest of the world’s share of loans granted to NFCs between the first quarter of 1999 and the second quarter of 2024 (up to 12.6% from 8% of total). Moreover, as we shall see, the share of OFIs in the financing originating from the rest of the world has also increased considerably (see Section 2). In other words, it is likely that the optimisation and internationalisation strategies of French NFCs played a non-negligible role in the development of links between the French financial system and foreign NBFIs.

2.3. Financial interconnections with the rest of the world

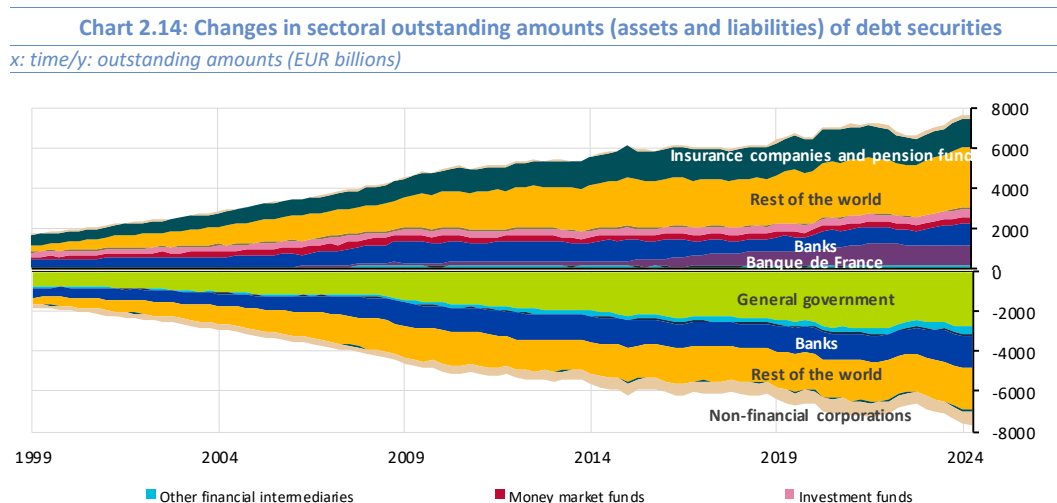
As noted above, a major limitation of the who-to-whom data provided in the stock matrix is that the rest of the world figures cannot be broken down sector by sector. This is particularly limiting as we have already noted that one of the main stylised facts in the evolution of the French financial system over the past 25 years has been its opening up internationally. The rest of the world appears, moreover, to be the main component of French sectors’ exposure to NBFIs.

In an attempt to disaggregate the rest of the world sector as much as possible, we include three tables (Appendices 2 to 4) based on the Eurosystem’s Securities Holdings Statistics (SHS) database in our mapping. They provide a complete set of who-to-whom data between French sectors and their Eurosystem country counterparts for debt securities, listed shares and investment fund shares/units.¹³³ They also provide reliable

¹³² An analysis of entities created by multinational groups was carried out by the IMF Committee on Balance of Payment Statistics. The [BOPCOM 18/03 - Final Report of the Task Force on Special Purpose Entities](#) cites entities responsible for issuing securities on behalf of their group, leasing companies and royalty companies, for example.

¹³³ The euro area mapping put forward by Andersen and Sánchez Serrano (2024) also uses data from the SHS database to round out information taken from the Eurosystem’s quarterly sector accounts.

sectoral data on the holdings of national sectors for the same categories of financial products that are issued by rest of the world sectors outside the Eurosystem. We will use these tables to try to identify and analyse the interconnections between the French financial system and the rest of the world. However, one should note that the SHS breakdown of NBFIs is less refined than that of the ESA, as the SHS OFIs also include captive financial institutions and financial auxiliaries.



Source: Banque de France, quarterly financial accounts.

Note: The outstanding amounts of the holding sectors (assets) take a positive sign and the outstanding amounts of the issuing sectors (liabilities) take a negative sign.

Interconnections with the rest of the world on the debt securities market

Before turning to the specifics of interconnections with other foreign countries, we should first note the increasing significance of the rest of the world, particularly on the holder side, for debt securities (short-term notes and long-term bonds) traded in the French financial system¹³⁴ (see Chart 2.14). The rest of the world accounted for 28% of issues and 40% of holdings in the second quarter of 2024 (compared with 20% and 16%, respectively, in the first quarter of 1999). On the holder side, outstanding amounts held by the Banque de France also increased during the Eurosystem's asset purchase programmes. The trend was, however, reversed at the beginning of 2022, as net asset purchases were halted, and quantitative tightening was introduced in March 2023.

One can also note that general government (35.3% of outstanding amounts) and banks (21.2% of outstanding amounts) are the largest resident issuing sectors in this market. The evolution of bank issuance has been quite erratic, with the rate of growth stagnating from the 2007-08 financial crisis onwards and picking up only very recently from 2022 with rising interest rates and the relative reduction in liquidity. NFCs account for only 8.8% of issuance. On the other hand, growth in government issuance accelerated from the 2007-08 crisis until the Covid-19 crisis, before ostensibly tipping into negative territory with the rise in interest rates in 2022-23. This recent decline is mainly due to valuation effects – the rise in interest rates mechanically led to a

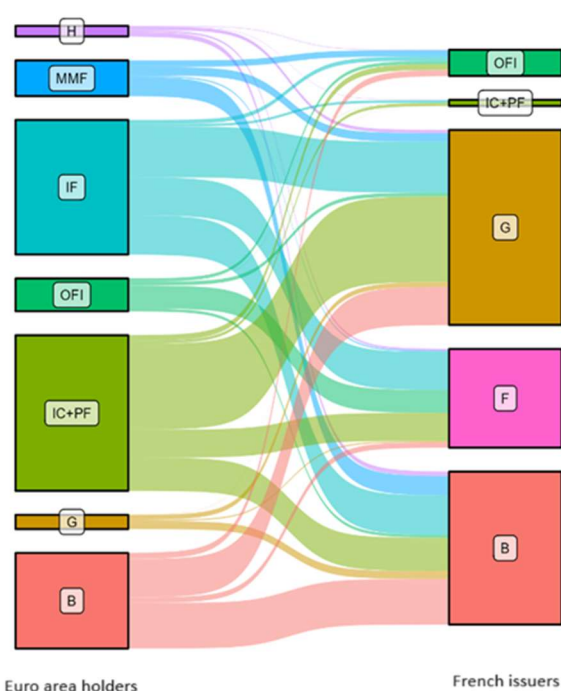
¹³⁴ The debt securities traded in France and shown in Chart 2.4 are all debt securities recorded in the balance sheet accounts, i.e. all the debt securities issued by resident sectors and also those issued by non-residents that are held by resident sectors.

reduction in the market value of government debt securities, especially for those with longer average maturities.¹³⁵

Charts 2.15 and 2.16 show the interconnections between resident and foreign sectors for French and foreign debt securities based on SHS who-to-whom data. For domestic securities, as already discussed, the prominence of investment funds in French banks' liabilities is notable. They account for 38% of euro area holdings of French bank debt securities. For NFCs, the shares of NBFIs and OFIs were 90% (EUR 179 billion), and 23% (EUR 45 billion) respectively of liabilities to the euro area in the second quarter of 2024 compared with only 76% and 3% respectively in the first quarter of 2014. This is in line with the hypothesis of Mouriaux, Sabatini and Levy-Garboua. More broadly, there has been a general increase in the financing originating from NBFIs, and in particular European money market funds, whose share of security holdings by euro area sectors rose from 4.9% in the first quarter of 2014 to 7.3% in the second quarter of 2024. Similarly, euro area OFIs raised their share from 3.2% to 6.8% of holdings by euro area sectors.

Chart 2.15: Holding sectors in the euro area (excluding France) of debt securities issued by resident sectors

EUR 957 billion in Q2 2024



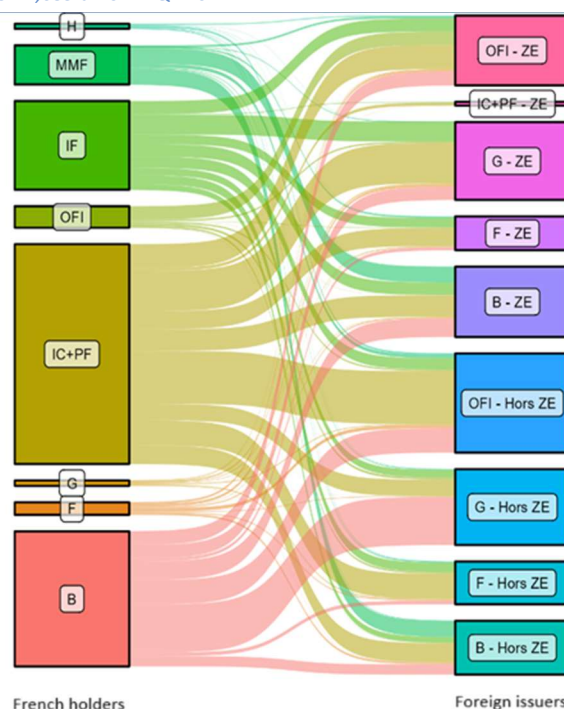
Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded;

F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households.

Chart 2.16: Resident holding sectors of debt securities issued by rest of the world sectors

EUR 1,683 billion in Q2 2024



Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded;

F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households, ZE = euro area, Hors ZE = non euro area.

Regarding foreign debt securities held by resident sectors (see Chart 2.16), one can note the predominance of French insurance corporations as well as the considerable sectoral and geographical diversification of their portfolios. As highlighted in Banque de France (2023), French insurers' securities portfolios tend to be more diversified than European insurers' portfolios. French banks' investments in foreign debt securities

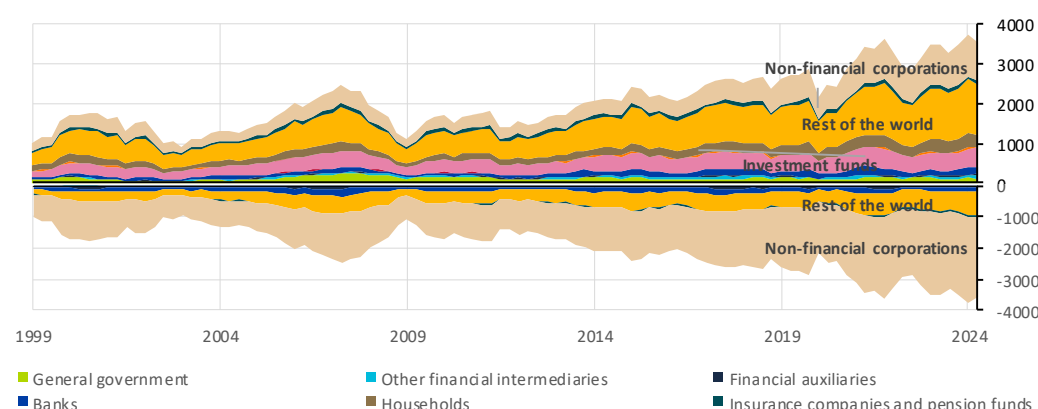
¹³⁵ Securities issued by banks, which have a much shorter maturity, were much less affected by these valuation effects.

appear to be more concentrated in public debt securities and debt securities issued by OFIs, with the bulk of these investments going to non-euro area institutions.

Interconnections with the rest of the world on the listed shares markets

For equities traded in the French financial system, the most notable fact over the past 25 years remains the rising weight of the rest of the world on the issuer side, from 18% of the listed and unlisted shares held by French institutions to 20.1% in the second quarter of 2024. Furthermore, the rest of the world's holdings rose from 31.3% of all French listed shares in 1999 to 36% in the second quarter of 2024.

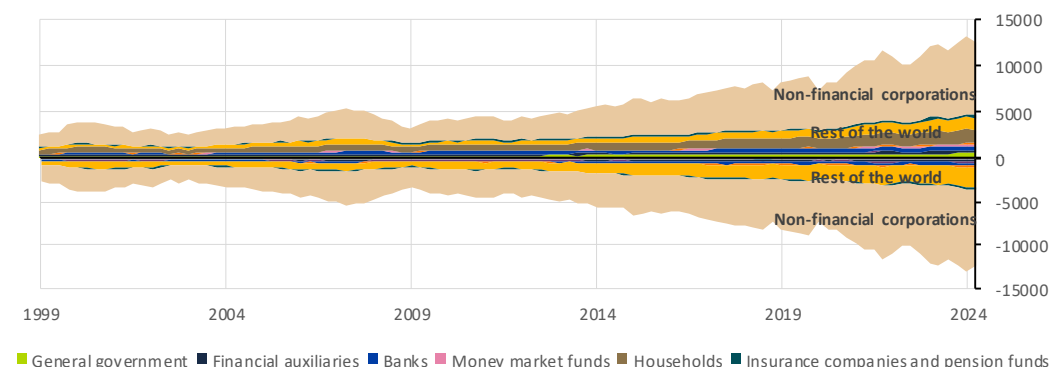
Chart 2.17: Changes in sectoral outstanding amounts (assets and liabilities) of listed shares
x: time/y: outstanding amounts (EUR billions)



Source: Banque de France, quarterly financial accounts.

Note: The outstanding amounts of the holding sectors (assets) take a positive sign and the outstanding amounts of the issuing sectors (liabilities) take a negative sign.

Chart 2.18: Changes in sectoral outstanding amounts (assets and liabilities) of unlisted shares
x: time/y: outstanding amounts (EUR billions)



Source: Banque de France, quarterly financial accounts.

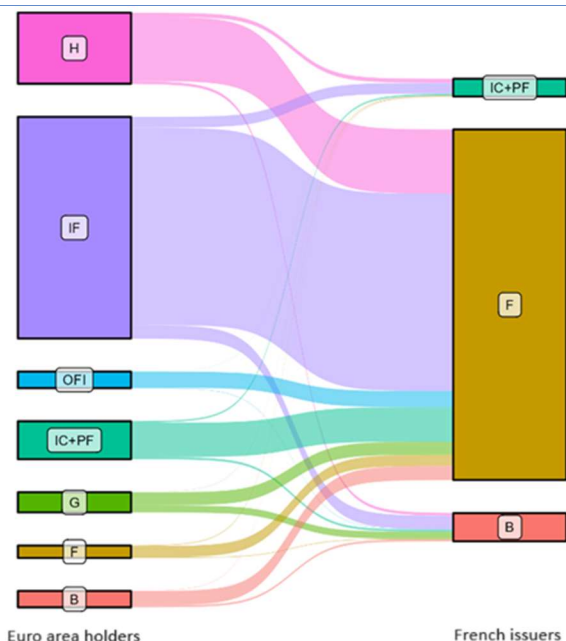
Note: The outstanding amounts of the holding sectors (assets) take a positive sign and the outstanding amounts of the issuing sectors (liabilities) take a negative sign.

Charts 2.19 and 2.20 show the interconnections between resident sectors and rest of the world sectors for French and foreign listed shares based on SHS who-to-whom data. With regard to domestic securities, as already discussed, the prominence of investment funds is notable. In terms of resident listed shares held by the euro area, the increase in holdings by European non-MMF investment funds is particularly noteworthy, up

from 51.8% of euro area holdings in the first quarter of 2014 to 56.2% in the second quarter of 2024. For resident NFCs, this type of financing originates mainly from euro area NBFIs, although their share and that of OFIs increased more modestly than for debt securities. As for French NFCs, the proportion of their listed shares that are held by European NBFIs and OFIs were 71.2% (EUR 156 billion) and 4.6% (EUR 10 billion) in the second quarter of 2024, compared with 69.6% and 1.8% in the first quarter of 2014.

Chart 2.19: Holding sectors in the euro area (excluding France) of listed shares issued by resident sectors

EUR 249 billion in Q2 2024

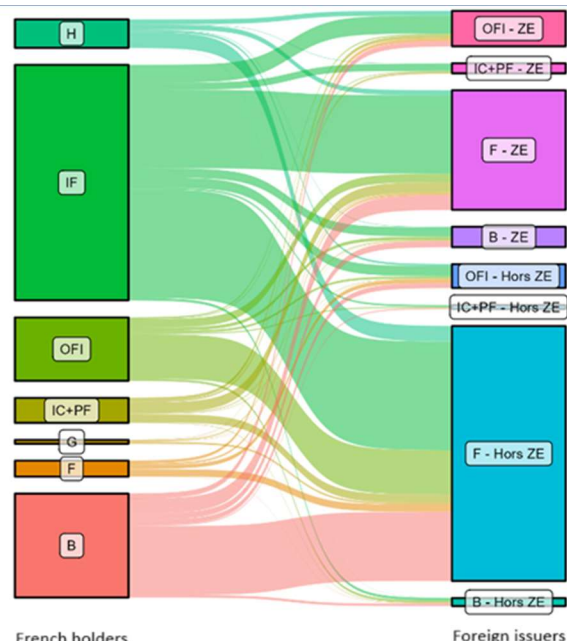


Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded; F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households.

Chart 2.20: Resident holding sectors of listed shares issued by rest of the world sectors

EUR 598 billion in Q2 2024



Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded; F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households, ZE = euro area, Hors ZE = non euro area.

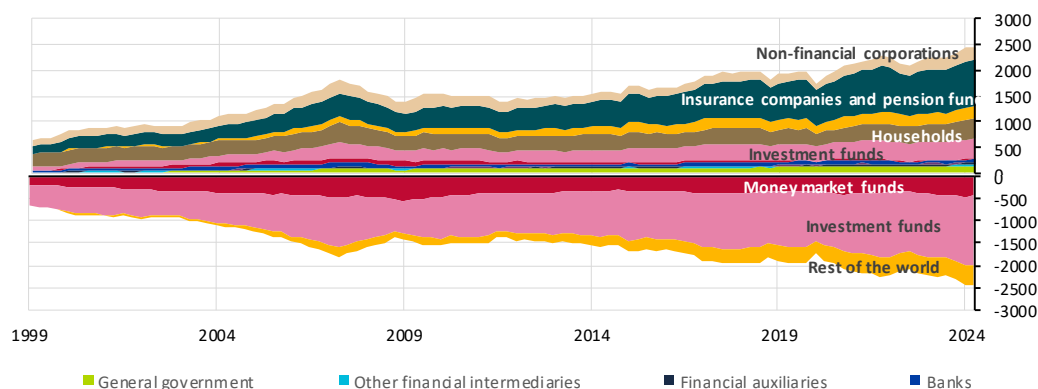
Conversely, in terms of foreign listed shares held in France (see Chart 2.21), the proportion held by French non-MMF investment funds fell from 56.6% of resident sector holdings in the first quarter of 2014 to just 49.5% in the second quarter of 2024. This decline partly explains the fall in the proportion of liquid assets held by resident non-MMF investment funds noted in the first section of this chapter.

Interconnections with the rest of the world on the investment fund shares/units market

For investment fund shares traded in France there has been an increase in the relative weight of the rest of the world, both in terms of holdings and issues. The rest of the world now accounts for 10.1% of holdings, up tenfold since 1999. In terms of issuance of investment fund shares (held by resident sectors), the rest of the world's proportion also increased, from 3% in 1999 to 18.8% in the second quarter of 2024.

Chart 2.21: Changes in sectoral outstanding amounts (assets and liabilities) of investment fund shares/units

x: time/y: outstanding amounts (EUR billions)

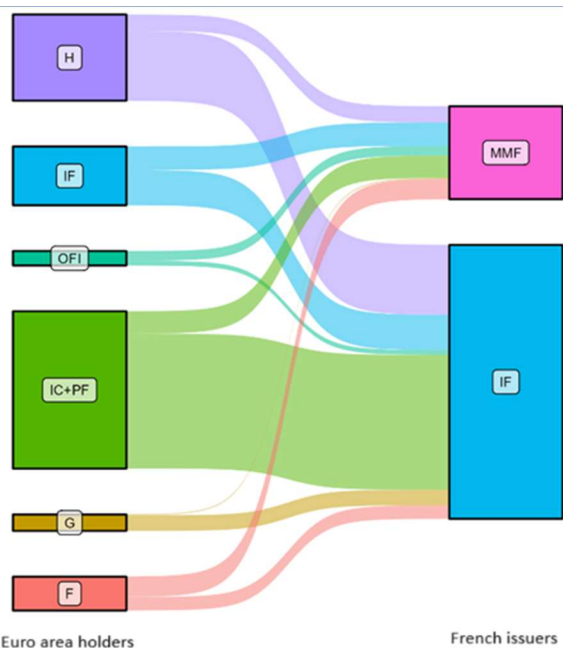


Source: Banque de France, quarterly financial accounts.

Note: The outstanding amounts of the holding sectors (assets) take a positive sign and the outstanding amounts of the issuing sectors (liabilities) take a negative sign.

Chart 2.22: Holding sectors in the euro area (excluding France) of resident investment fund shares/units

EUR 167 billion in Q2 2024



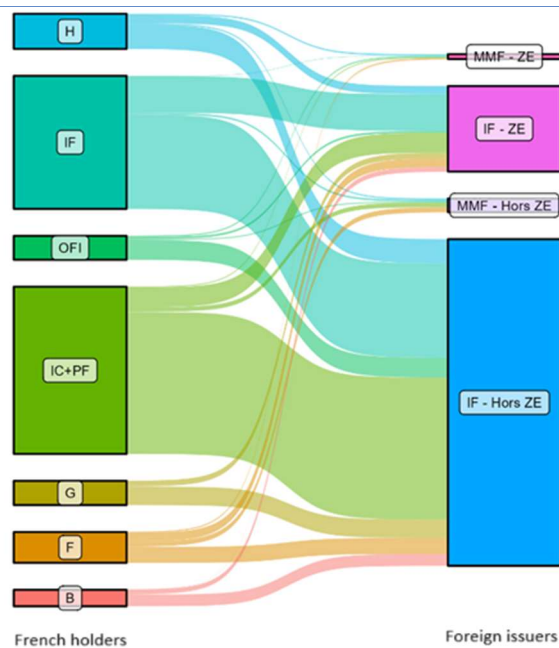
Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded;

F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households.

Chart 2.23: Resident holding sectors of foreign investment fund shares/units

EUR 371 billion in Q2 2024



Source: ECB Securities Holdings Statistics by Sector (SHSS).

Note: The width of the arrows is proportional to the amount of the holdings; Eurosystem holdings are excluded;

F = non-financial corporations, B = banks, MMF = money market funds, IF = non-MMF investment funds, OFI = other financial intermediaries, IC+PF = insurance corporations and pension funds, G = general government, H = households, ZE = euro area, Hors ZE = non euro area.

Looking at shares/units issued by resident investment funds and held abroad (see Chart 2.22), we see that – on the issuer side – the weight of French money market funds has increased at the expense of non-MMF investment funds. MMF shares accounted for 36.8% of resident fund shares held abroad in the second quarter of 2024, compared with only 11.3% in the first quarter of 2014. In terms of holders, for the euro area,

European insurers and pension funds increased their presence to account for 42.5% of euro area holdings of French investment fund shares in the second quarter of 2024, compared with just 25.8% in the first quarter of 2014.

Finally, turning to foreign fund shares held in France, the relative weight of money market funds has not risen to the same extent (see Chart 2.23). On the (resident) holding side, the main development over the past ten years has been the increased importance of insurance corporations, from 32.9% of total resident holdings of foreign funds in the first quarter of 2014 to 38.5% in the second quarter of 2024. Insurers – across the euro area as a whole – seem to have been attracted to investment fund shares in recent years, which is reflected in their balance sheet composition.¹³⁶

Conclusion

This chapter tried to provide a detailed mapping of the interconnections of the French financial system, based on data from France’s financial accounts and balance sheet accounts. In order to address the lack of disaggregation of the “rest of the world” sector in national accounting, we augmented this mapping with who-to-whom data from the Eurosystem SHS database that describe interactions on various markets between the French sectors and their euro area counterparts. Another limitation of the financial accounts is that certain complex financial transactions such as derivatives or repos lack adequate detail or remain hidden.¹³⁷ A solution would be to extend this work along the lines of the mapping of Andersen and Sánchez Serrano (2024). Hence, one could provide a set of who-to-whom data on initial margin payments on derivatives based on European Market Infrastructure Regulation (EMIR) data and another on loans relating to securities purchased under repurchase agreements based on the European Securities Financing Transactions Data Store (SFTDS).

¹³⁶ See Banque de France (2023) for a more detailed analysis of French insurers’ balance sheets.

¹³⁷ However, hidden does not mean absent as the flows they generate are included in the figures for other categories of financial transactions (in particular deposits and loans).

Appendix 1: Matrix of French net financial flows in Q2 2024

	Non-financial corporations	Banque de France	Banks	Money market funds (MMF)	Non-MMF investment funds	Other financial intermediaries	Captive financial institutions and money lenders	Financial auxiliaries	Insurance corporations and pension funds	General government	Households	Rest of the world	Σ	
Net financial flows														
(F1) Gold and SDR													0	
(F21) Currency	1	-2									4	-3	0	
(F2M) Deposits with:	3	13	-35	-5	6	13			2	13	20	-30	0	
Banque de France		39	-21							7		-24	0	
Banks	4	-19	15		6	13			2	9	20	-49	0	
General government	1									-3		2	0	
Rest of the world	-2	-6	-29	-5								41	0	
(F3) Debt securities issued by:	-16	-16	68	-8	4	-22	-1	-12	9	-57		51	0	
Non-financial corporations	-19	-1	1	4					-2	-1		18	0	
Banks	2	-2	1	-10	-1	-2			1		-1	12	0	
Other financial intermediaries			14		-1	-7		-1	-1			-4	0	
Financial auxiliaries			1		1			-8	1			4	0	
Captive financial institutions and money lenders			1				-1					0	0	
Insurance corporations and pension funds			2					-1				-1	0	
General government	-1	-6	14	2	-2	3		-1	5	-55		42	0	
Rest of the world	1	-8	35	-4	6	-14			4	-1	1	-21	0	
(F4) Loans granted by:	-14		4	1		-10		-6	-2	2	1	25	0	
Non-financial corporations	-3						-1	-6		5		5	0	
Banks	-14		-1			-5		-7	3		7	16	0	
Money market funds				1	-1							0	0	
Other financial intermediaries	-0		4			-23					-7	26	0	
Financial auxiliaries	-1							3	-3			1	0	
General government	3									-3		0	0	
Rest of the world	1					19		4	-1			-23	0	
(F511) Listed shares issued by:	-22		13		2	15	1			1	4	-15	0	
Non-financial corporations	-11		2		-2	-4				1	4	11	0	
Banks	2				-1		1					-2	0	
Financial auxiliaries								-1		1		1	0	
Insurance corporations and pension funds	-3								2			1	0	
Rest of the world	-10		10		5	20					1	-25	0	
(F51M) Unlisted shares and other equity issued by:	-3		-7				2	9	1		2	-5	0	
Non-financial corporations	-103		13		9		5	32	4	1	13	25	0	
Banks	27		-13		-2			-1			-8	-4	0	
Other financial intermediaries	6											-5	0	
Financial auxiliaries	58		-7		-7		-3	-25	-7		-3	-6	0	
Captive financial institutions and money lenders			2									-2	0	
Insurance corporations and pension funds			-1						3	-1		-1	0	
Rest of the world	9		-1		1			3	1			-13	0	
(F52) Investment fund shares/units issued by:	-8		-1	11	-16	4	1	4	-2		11	-2	0	
Money market funds	-10			11	7		1	-1	-4		1	-4	0	
Non-MMF investment funds	1				-22	1		4	4		9	4	0	
Rest of the world	1		-1			3		1	-2	-1	1	-2	0	
(F7) Financial derivatives issued by:		-1	-3		2								2	0
Non-financial corporations	-1		1										0	
Banque de France		-1			1								0	
Banks	1		-93	-1	1	-3						95	0	
Money market funds			-1	-1								1	0	
Non-MMF investment funds			2		-2	-1						1	0	
Other financial intermediaries			-10		-1	15						-4	0	
Rest of the world			98	1	2	-11			-1			-91	0	
(F6) Insurance technical reserves issued by:									-19		14	5	0	
Insurance corporations and pension funds									-18		14	4	0	
Rest of the world									-1			1	0	
(F8) Other accounts receivable/payable	5	2	25		-1	1			1	-7	3	-30	0	
Non-financial corporations	10		-3			-5				-9	1	5	0	
Banks	-8	2	26			-1					-9	-10	0	
Non-MMF investment funds					-1	-0					1	0	0	
Other financial intermediaries						6					-1	-6	0	
Insurance corporations and pension funds									1	-1		0	0	
General government	-12									-16	27	0	0	
Households	1		-3			-1				19	-17	0	0	
Rest of the world	13		5			2				-1		-20	0	
(BF90) Net lending/net borrowing	54	3	-63	2	3	-1	-4	6	10	47	-59	2	0	
Σ	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: This matrix combines two tables – “Net acquisitions of financial assets” and “Net liabilities and net lending/net borrowing” – from the financial accounts published by the Banque de France. Net acquisitions of financial assets take a plus sign. Net liabilities take on a minus sign. As each transaction account must balance, the sum of each line is zero. In accordance with national accounting practice, the balance, which is the difference between net increases in assets and liabilities, is entered as a net flow of liabilities (therefore with a minus sign) and is referred to as the sector's net lending (or net borrowing if the balance is negative). Therefore, the sum of each column is also zero.

Source: Banque de France, quarterly financial accounts.

Appendix 2: Assets and liabilities of the French sectors (excluding the Banque de France) vis-à-vis non-resident sectors for debt securities in Q2 2024 in EUR billions

	Non-financial corporations	Banks	Money market funds (MMF)	Non-MMF investment funds	Other financial intermediaries	Insurance corporations and pension funds	General government	Households	Σ
Assets with the rest of the world	40	431	125	284	69	702	17	16	1,683
EA issuing sector	18	155	58	177	50	340	10	5	813
F ^{EA}	1	10	5	30	2	57	2	1	108
B ^{EA}	3	59	50	40	1	69	2	1	224
OFI ^{EA}	6	44	6	42	43	76	2	3	222
IC ^{EA} +PF ^{EA}				2		9			12
G ^{EA}	7	42		63	5	128	4	1	248
Non-EA issuing sector	22	276	67	107	19	362	7	11	869
F*	3	12	3	29	6	79	3	2	136
B*	6	33	50	18	1	60	1	2	172
OFI*	11	77	11	35	5	169	3	5	316
IC*+PF*						1			2
G*	2	153	2	23	7	52		1	242
Liabilities to the rest of the world	369	953			178	29	1,510		3,039
EA holding sector	199	305			52	12	389		957
F ^{EA}	3	3					4		10
B ^{EA}	11	90			12		76		189
MMF ^{EA}	3	38			13		17		70
IFI ^{EA}	75	78			8	5	100		266
OFI ^{EA}	45	6			6		7		65
IC ^{EA} +PF ^{EA}	56	66			11	6	169		308
G ^{EA}	2	16					10		28
H ^{EA}	4	9			1	1	7		21
Non-EA holdings	171	648			126	16	1,121		2,082

Sources: ECB Securities Holdings Statistics by Sector (SHSS) and Banque de France, quarterly financial accounts.

Notes: Liabilities to non-euro area residents are identified as the difference between liabilities to the rest of the world from the quarterly financial accounts (QFA) and the sum of holdings of euro area residents; Eurosystem holdings of French securities are included in non-euro area holdings; rounded numbers may result in discrepancies between the total per line/column and the sum of its components.

Appendix 3: Assets and liabilities of the French sectors (excluding the Banque de France) vis-à-vis non-resident sectors for listed shares in Q2 2024 in EUR billions

	Non-financial corporations	Banks	Non-MMF investment funds	Other financial intermediaries	Insurance corporations and pension funds	General government	Households	Σ
Assets with the rest of the world	20	131	296	80	31	5	36	598
EA issuing sector	6	33	141	17	20	2	13	233
F ^{EA}	2	19	99	11	13	1	6	150
B ^{EA}		8	11	4	1		1	25
OFI ^{EA}	3	7	22	1	4		6	45
IC ^{EA} +PF ^{EA}			9	1	2		1	12
Non-EA issuing sector	14	98	154	63	12	3	22	365
F*	9	87	136	56	10	2	20	320
B*		3	3	3	1			10
OFI*	5	6	13	3	1		2	30
IC*+PF*		1	2	1				5
Liabilities to the rest of the world	1,161	69		5	39			1,274
EA holding sector	219	18		1	11			249
F ^{EA}	7							7
B ^{EA}	9	1						10
IFI ^{EA}	124	8		1	7			140
OFI ^{EA}	10							10
IC ^{EA} +PF ^{EA}	22	1			1			24
G ^{EA}	8	4						13
H ^{EA}	40	2			3			45
Non-EA holdings	941	51		5	28			1,025

Sources: ECB Securities Holdings Statistics by Sector (SHSS) and Banque de France, quarterly financial accounts.

Notes: Liabilities to non-euro area residents are identified as the difference between liabilities to the rest of the world from the quarterly financial accounts (QFA) and the sum of holdings of euro area residents; Eurosystem holdings of French securities are included in non-euro area holdings; rounded values may result in discrepancies between the total per line/column and the sum of its components.

Appendix 4: Assets and liabilities of the French sectors (excluding the Banque de France) vis-à-vis non-resident sectors for investment fund shares/units in Q2 2024 in EUR billions

	Non-financial corporations	Banks	Money market funds (MMF)	Non-MMF investment funds	Other financial intermediaries	Insurance corporations and pension funds	General government	Households	Σ
Assets with the rest of the world	26	14	1	114	21	143	21	30	371
EA issuing sector	8	4		32	3	18	5	8	78
MMF ^{EA}	1				1	1		1	4
IF ^{EA}	7	4		31	2	17	5	7	73
Non-EA issuing sector	18	10	1	82	18	126	16	22	293
MMF*	4		1	2	1	4		1	13
IF*	14	10		81	17	122	16	21	280
Liabilities to the rest of the world			91	157					247
EA holding sector			43	124					167
F ^{EA}			9	6					15
B ^{EA}			1						1
IF ^{EA}			11	16					27
OFI ^{EA}			4	2					7
IC ^{EA} +PF ^{EA}			10	61					71
G ^{EA}				7					7
H ^{EA}			7	32					39
Non-EA holdings			48	32					80

Sources: ECB Securities Holdings Statistics by Sector (SHSS) and Banque de France, quarterly financial accounts.

Notes: Liabilities to non-euro area residents are identified as the difference between liabilities to the rest of the world from the quarterly financial accounts (QFA) and the sum of holdings of euro area residents; Eurosystem holdings of French securities are included in non-euro area holdings; rounded values may result in discrepancies between the total per line/column and the sum of its components.

Appendix 5: Nomenclature of the French financial sector according to the ESA

Financial intermediaries except insurance corporations and pension funds S12A					Financial auxiliaries	Captive financial institutions	Insurance corporations and pension funds	
Monetary financial institutions			Non-monetary financial intermediaries S12AIF					
Central banks	Other monetary financial institutions S12T		Non-MMF investment funds	Other financial intermediaries				
S121	S122		Money market funds S123	S124	S125	S126	S127	S128+S129
<div>Banque de France</div> <div>IEDOM (French overseas departments' note-issuing bank)</div>	<div>• Commercial banks</div> <div>• Mutual or cooperative banks</div> <div>• Credit banks</div> <div>• Resident electronic money institutions</div> <div>• Specialised financial institutions (SFIs) – Euronext Paris – Caisse de garantie du logement locatif social (CGLS) – Agence française de développement (AFD)</div> <div>• Regional development companies (RDC) incl. overseas department financial institutions</div>	<div>• Financial corporations governed by specific legal or regulatory provisions – Financial corporations affiliated to mutual or cooperative banks – Building societies – Mortgage credit institutions – Special status guarantee companies – Sofergies (leasing companies financing energy savings) – Overseas department credit companies – Telecommunications finance companies</div> <div>• Financial corporations engaged in various types of activity – Financial leases – Other credit distribution – Financing companies</div> <div>• Caisse des dépôts et consignations (CDC)</div> <div>• Factoring corporations, French head office</div>	<div>• SICAV monétaires (money market open-ended investment companies)</div> <div>• FCP monétaires (money market open-ended investment funds)</div>	<div>General-purpose non-money market SICAVs and FCPs, o/w: – equity investment funds – bond investment funds – structured investment funds – alternative investment funds – diversified investment funds – Monaco investment funds</div> <div>• SICAF (closed-ended investment funds)</div> <div>• FCP Entreprises (workplace investment schemes): – Employee savings plans (FCPE, SICAVAS)</div> <div>• Managed futures funds (FCIMT)</div> <div>• High-risk investment funds, including venture capital and innovation funds</div> <div>• Professional real estate investment funds (SCPI)</div> <div>• Real estate collective investment undertakings (OPCI)</div>	<div>• Investment enterprises</div> <div>• Action Logement Services (ALS) Managed by ANPEEC</div> <div>• Professional groups for distribution of collective loans to non-bank agents</div> <div>• Mutual guarantee companies (SCM)</div> <div>• Securitisation vehicles</div> <div>• Société de financement de l'économie française (SFEF) – corporation for the financing of the French economy)</div> <div>• Micro-lending companies</div> <div>• Institutions overseen by the ACPR</div>	<div>• Portfolio management companies (AMF)</div> <div>• Brokerage companies</div> <div>• GIE Carte Bleue</div> <div>• GIE Carte Bancaire</div> <div>• Deposit insurance funds</div> <div>• Money changers</div> <div>• Financial companies</div> <div>• Payment institutions</div>	<div>• Companies that hold a level of capital that allows them to control a group of subsidiary companies and whose main function is to own that group without providing any other services (they do not administer or manage other units)</div> <div>• Selection criteria for these LU – LU with output < EUR 1 million and – LU with over 80% of total assets in equity securities and – LU with 0 to 3 employees and – LU with a balance sheet > EUR 1 million</div>	<div>• Corporations: – life insurance – non-life insurance – reinsurance</div> <div>• Mutual insurance corporations</div> <div>• Provident insurance institutions</div> <div>• Coface</div> <div>• Pension funds</div>

Sources: ESA 2010 and Banque de France.

Notes: The European System of Accounts (ESA 2010) breaks down the financial corporations sector (S12) into nine sub-sectors: S121, S122, S123, S124, S125, S126, S127, S128 and S129; ACPR: Autorité de contrôle prudentiel et de résolution (Prudential Supervision and Resolution Authority); FCP: fonds commun de placement; LU: legal unit; SICAF: société d'investissement à capital fixe; SICAV: sociétés d'investissement à capital variable.

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