



Non-bank financial intermediation in Spain

Financial year 2024

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The report on non-bank financial intermediation (NBFi) in Spain describes the most recent trends of the entities and activities that form part of the process and assesses their most important risks. This report is part of the CNMV's publication titled Monitor of Non-Bank Financial Intermediation and is published annually (<http://cnmv.es/portal/Publicaciones/PublicacionesGN.aspx?id=56>).

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1 Executive summary

This publication provides a detailed account of developments in the activity and risk profile of entities forming part of non-bank financial intermediation (NBFi) in Spain in 2024. It follows the methodology established some years ago by the Financial Stability Board (FSB), which classifies entities according to whether they perform one of five predefined economic functions. Entities within these functions exhibit risks similar to some typically associated with the banking sector. These risks are generally linked to credit intermediation (through debt or lending), short-term funding, and leverage levels. In Spain, the most significant NBFi entities by asset volume are investment funds. For this reason, new analytical extensions or enhancements are introduced each year, with the aim of improving understanding of the risks affecting this sub-sector.

The methodology established by the FSB may be restrictive in certain areas, as it excludes entities or activities that, while not fitting within the original definition, may nevertheless pose risks to financial stability that warrant appropriate monitoring. This is the case, for example, with private equity entities – or private finance more broadly – which were excluded from the FSB measure due to their closed-ended nature (and therefore their lack of exposure to mass redemption risk), but which may display certain vulnerabilities linked to the lower liquidity of their portfolios, valuation challenges, and, above all, counterparty risk. The same applies to crypto-assets, which, although they do not yet play a significant role in financing the economy, are increasingly a source of concern due to their growing interconnectedness with the traditional financial system.¹

In its opening pages, this Monitor describes the non-bank aggregate in its broadest sense, excluding only banking assets. This aggregate continues to account for approximately 30% of total system assets. This confirms that the Spanish economy remains highly bank-centred, in line with other European countries, where the non-bank aggregate is also relatively small (France: 31.2%, Italy: 35.9% and Germany: 36.4%).

The analysis then turns to NBFi itself, for which two measures are presented. The first aggregates the assets corresponding to the five economic functions referred to above. The second, known as the “narrow measure”, adjusts this aggregate by excluding assets that are consolidated within the banking perimeter. In Spain, the assets of entities performing the five economic functions amounted to €550 billion in 2024, representing an increase of 6.6% compared with 2023. Assets under the second measure – the narrow measure – stood at €400 billion, up

¹ Both measures are currently subject to analysis by the CNMV. By way of illustration, reference may be made to the recent article on private equity entities in Spain published in the latest *CNMV Bulletin*, as well as to the analysis of crypto-assets included in the *Financial Stability Note*, the Market Survey Report and, shortly, a dedicated report on digital assets.

13.8% year on year. These amounts represent 10% and 7.2%, respectively, of the Spanish financial system and therefore remain relatively limited in size.

Investment funds, which fall under the first economic function (EF1: *management of collective investment vehicles whose characteristics make them susceptible to runs*), further increased their share of total NBFI, reaching 91.7%. At the same time, the relative weight of securitisations (the fifth economic function) declined further, accounting for just 5.4% of NBFI. The remaining economic functions – which include finance companies, investment firms and mutual guarantee companies – together accounted for only around 3% of NBFI assets.

An assessment of the main EF1 fund categories – fixed income, mixed and money market funds – shows that there have been only limited changes compared with 2023. Credit risk therefore remains elevated, reflecting the nature of these institutions, whose portfolios are largely composed of fixed income assets. Liquidity risk has remained stable and has even improved for certain fund types, while leverage risk continues to be very low, in view of the limited exposure of these institutions to derivative instruments.

A key analytical component of this Monitor is the increasingly granular assessment of risks in the investment fund sector. In addition to the aspects discussed above, this analysis examines the credit ratings and duration of assets held in fund portfolios and extends the assessment to the portfolios of the collective investment schemes (CISs) in which CISs invest, providing further insight into underlying risk exposures. **Taken together, these metrics indicate that investment funds domiciled in Spain exhibit a significantly lower risk profile than their European counterparts.** The analysis of interconnections has also been enhanced, particularly with respect to fixed income portfolios. This confirms the existence of three groups of funds with specific vulnerabilities and points to a strengthening of linkages between these institutions.

In addition, the assessment of the availability of liquidity management tools among CISs – which help mitigate the risk of liquidity mismatches – shows that the proportion of funds with access to at least one such tool continues to increase. The updated stress test results further confirm the sector's resilience to a potential and severe increase in redemptions.

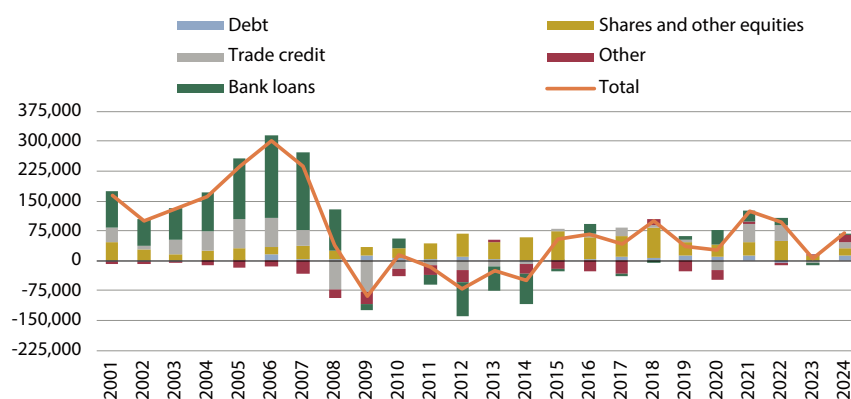
Lastly, the report includes a dedicated exhibit on money market funds, outlining their main characteristics and the different phases they have undergone in recent years, with particular emphasis on their recent expansion, within a European context.

2 Trends in key indicators

The strong pace of domestic economic activity, together with the decline in financing costs, led non-financial corporations to increase their use of external financing in 2024. As shown in Figure 1, net financing obtained by these entities amounted to close to €70 billion over the year as a whole, well above the €6.3 billion recorded in the previous year and broadly in line with the average observed in recent years. This financing was widely diversified across instruments, with limited reliance on bank credit. Equity financing (shares and other equity interests) accounted for almost 30% of the total, while debt instruments and trade credit each represented around 20%. This financing pattern, together with the strong growth in GDP, led to a reduction in the leverage ratio of the non-financial corporate sector – which takes into account loans and debt securities – from 66% of GDP in 2023 to 63.6% in 2024.

Financing of non-financial companies

FIGURE 1



Source: Bank of Spain. Data in millions of euros.

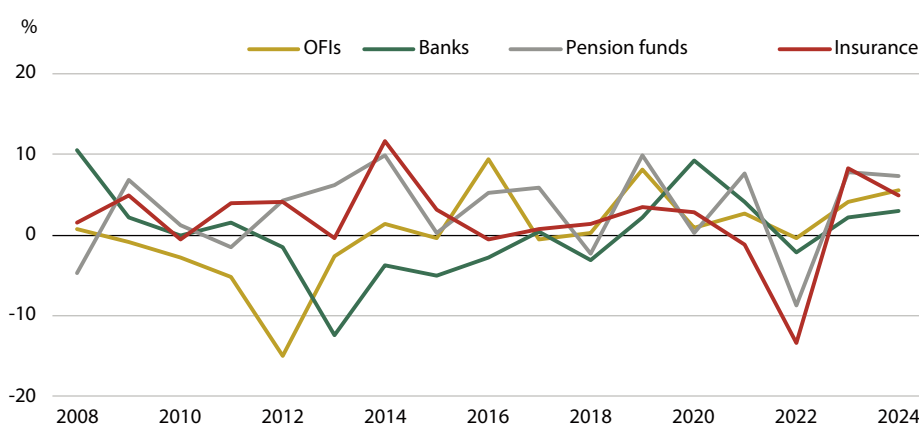
The size of the financial system in Spain stood at €5.52 trillion at the end of 2024 (3.5 times the GDP), representing growth of 2.7% compared with 2023. As shown in Figure 2, the main sectors comprising the financial system recorded growth rates above that of the system as a whole. This reflects the more modest growth – or contraction – of assets in another subsector, in this case the central bank (see Table 1). In particular, pension fund assets grew by more than 7%, those of other financial institutions (OFIs)² by 5.5%, and insurance sector assets by around 5%. Growth in bank assets was slightly below 3%, while, as noted above, central bank assets fell by 3.2%.

2 These entities include investment funds, captive financial institutions and money lenders, real estate investment trusts (REITs), investment firms, securitisation structured finance vehicles, finance companies, central counterparties and private equity entities.

As in previous years, this development resulted in a slight increase in the share of both the banking sector and OFIs within the financial system as a whole. As discussed later, OFIs are the aggregate from which the NBFI measure is derived. In the banking sector, asset growth to a level slightly below €3 trillion reflects – given the limited recourse of non-financial corporations to bank credit – an increase in lending to non-resident entities, together with higher investment in assets other than shares and equity interests, mainly fixed income instruments. As a result, the banking sector’s share of total system assets increased by a few tenths of a percentage point (pp), reaching 54.4%. This share has fluctuated between 50% and 55% in recent years and remains well below the 60–70% range observed up to 2015. OFIs remained the largest aggregate after the banking sector, with assets of close to €1.1 trillion in 2024, representing almost 20% of the total. Finally, the insurance sector and pension funds held assets accounting for 5.8% and 3.1%, respectively, of the financial system as a whole.

Rate of annual growth of financial system assets

FIGURE 2



Source: Bank of Spain.

Structure of the Spanish financial system

TABLE 1

Millions of euros

	Central bank	Banks	Insurance	Pension funds	Financial auxiliaries	OFIs	Total
Size in 2024 (millions)	865,128	3,002,166	319,060	170,961	68,811	1,091,945	5,518,070
Size in 2023 (millions)	893,325	2,914,823	303,979	159,265	66,993	1,034,703	5,373,087
% of total (2024)	15.7	54.4	5.8	3.1	1.2	19.8	100.0
2024 growth (%)	-3.2	3.0	5.0	7.3	2.7	5.5	2.7

Source: CNMV and Bank of Spain.

Assets in the broad non-bank aggregate – defined as that which only excludes banking institutions from the financial system – continue to account for approximately 30% of the total financial system. This share has remained broadly stable for more than two decades, with only isolated declines below 25% in specific years (for example, in 2012). This indicates that the Spanish economy remains strongly bank-centred, as the banking aggregate (including central bank assets) represents around 70% of the financial system. That said, over a longer time horizon the composition of the banking aggregate has changed, reflecting a growing weight of central bank assets alongside a decline in the remainder of the aggregate.

At the international level, average shares of the banking and non-banking aggregates are more balanced, although there is considerable cross-country heterogeneity. In jurisdictions such as United States, the weight of NBFI is very high (63.1%), whereas in European economies it is significantly lower – Germany (36.4%), Italy (35.9%) and France (31.2%) – reflecting the continued predominance of bank-based financial systems.

OFIs, with assets totalling €1,092 billion, account for around two thirds of non-bank financial system assets. As shown in Table 2 and Figure 3, non-money market investment funds and captive financial institutions are the most relevant of this group, with 40.4% and 35.1% of assets, respectively, at the end of 2024. The relative weight of these two categories has increased steadily in recent years, largely at the expense of securitisation vehicles. While the latter accounted for almost half of OFI assets in the past, they now represent only 11.7%. The remaining OFI categories account for much smaller shares. Finance companies continue to decline, with assets representing less than 5% of the total, while money market funds have expanded for a second consecutive year following several years of subdued activity and now account for more than 2% (see Exhibit 1).

Structure of other financial institutions in Spain

TABLE 2

Millions of euros

	Non-money market investment funds	Money market investment funds	Captive financial institutions ¹	SFVs: securitisations	Broker- dealers	Finance companies	REITs	Other	Total
Size in 2024 (millions)	441,453	22,868	383,562	127,791	3,736	52,391	34,493	25,650	1,091,945
Size in 2023 (millions)	391,601	10,512	378,979	139,917	3,487	53,749	34,141	22,316	1,034,703
% of total (2024)	40.4	2.1	35.1	11.7	0.3	4.8	3.2	2.3	100.0
2024 growth (%)	12.7	117.5	1.2	-8.7	7.2	-2.5	1.0	14.9	5.5

Source: CNMV and Bank of Spain.

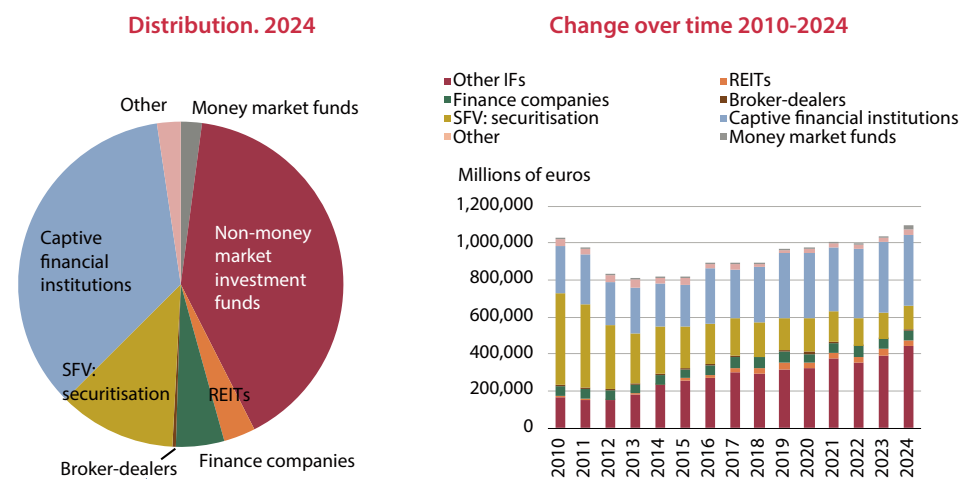
1 Includes holding companies that own equity stakes in financial and non-financial corporations, as well as special purpose entities, together with special purpose entities issuing vehicles that are subsidiaries of financial institutions.

At the international level, investment funds are also the largest entities within OFIs, accounting for just over 50% of their aggregate assets.³ By contrast, and as in previous years, certain entity types – such as investment firms – carry greater weight internationally than in Spain, representing close to 8% of OFI assets. Securitisation vehicles, by comparison, account for only around 4% of the sector.

3 In Spain, the share of money market funds and alternative investment funds (hedge funds) within the investment fund segment is significantly lower than the international average. These categories account for 0.6% and 0.5% of OFI assets, respectively, compared with around 7% and 5% internationally.

Distribution and evolution of the OFI sector in Spain

FIGURE 3



Source: CNMV and Bank of Spain.

The expansion of money market funds in Spain

EXHIBIT 1

Money market funds are a type of collective investment scheme which, by investing in short-term assets, aim to deliver returns in line with money market rates, preserve the value of the investment, or both. Accordingly, their portfolios are composed of short-duration, high-quality assets, such as Treasury bills and other money market instruments, and they are not permitted to invest in higher-risk assets such as equities. At the European level, several types of money market funds are distinguished, broadly depending on whether their net asset value is constant (subject to certain conditions) or allowed to fluctuate in line with market conditions. In Spain, all money market funds fall into the latter category – that is, they have a variable net asset value, which at any given time reflects the market value of the assets comprising the portfolio. These products are generally suitable for highly conservative investors. In addition, many non-financial corporations invest part of their excess liquidity – or short-term cash surpluses – in money market funds.

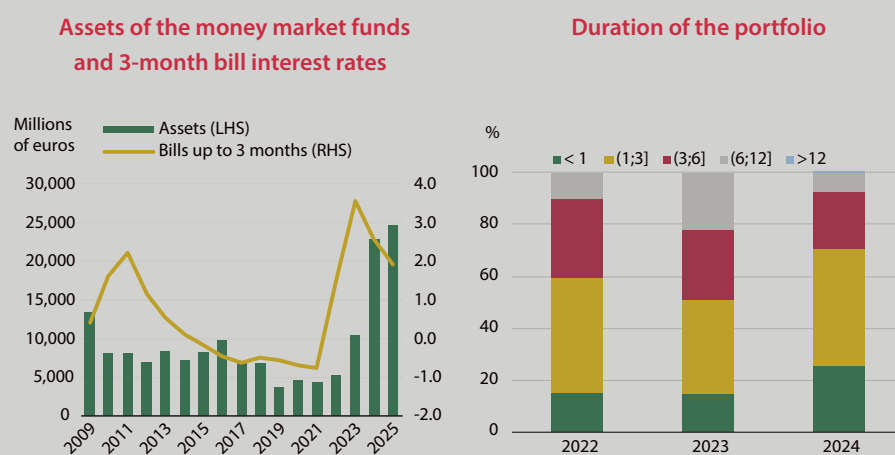
From a longer-term perspective, money market funds initially gained traction in Spain; however, the prolonged period of very low interest rates in recent years has weighed heavily on their performance. Short-term interest rates on public debt were extremely low – and even negative – over the 2015–2021 period (see Figure E1.1). As a result, fund fees, although modest, significantly reduced or, in some cases, fully offset the returns generated by these vehicles. In parallel, the entry into force of a new regulatory framework that tightened the requirements for classification as a money market fund led many funds to be reclassified in 2019 as short-term fixed income¹ funds. The main indicators for these funds reached their lowest levels in 2019, when only two institutions were registered with the CNMV and total assets stood below €3.8 billion (by contrast, between 2009 and 2011 there were 75 money market funds).

This situation changed in 2022, when the sharp rise in inflation prompted a significant shift in monetary policy and interest rates increased to levels not seen since the previous global financial crisis. By way of illustration, yields on Treasury bills with maturities of up to 12 months moved from negative levels at

the end of 2021 to above 3% by the end of 2023. This shift supported renewed demand for fixed income assets – including those investing at very short maturities, such as money market funds – which entered an expansionary phase that has brought total assets close to €25 billion, representing a fivefold increase since 2022. A similar pattern has been observed at the European level, where countries such as Ireland, Luxembourg and France account for the bulk of money market fund assets (see Table E1.1). Within the European context, assets held by money market funds in Spain rank relatively high, exceeding those recorded in Germany and Italy.

Indicators of money market funds and interest rates of public debt

FIGURE E1.1



Source: CNMV and Refinitiv Datastream. In the left-hand panel, 2025 data cover assets of money market funds up to August and public debt interest rates up to September.

The increase in assets held by money market funds (MMFs) since 2023 has not been accompanied by a comparable rise in the number of institutions, which has increased only from two to four. As a result, this segment of CISs is highly concentrated. A single money market fund, managed by a credit institution's asset management company, accounts for 84% of total MMF assets, while the remaining three funds represent 8%, 5% and 2%, respectively. As shown in the right-hand panel of Figure E1.1, an analysis of portfolio duration indicates a growing allocation to very short-term assets. In particular, the share of assets with maturities of up to three months increased markedly, from 50% of total assets in 2023 to 70% in 2024.

Money market funds in Europe: assets, net investment flows and number

TABLE E1.1

Millions of euros

Jurisdiction	MMF assets	Net flows	Number
Ireland	864,632.0	37,035.0	123
Luxembourg	625,429.0	46,975.0	176
France	446,707.0	7,211.0	90
Switzerland	40,848.1	1,996.6	19
United Kingdom	31,881.8	4,339.8	15
Spain	24,366.0	1,267.0	4
Germany	13,886.5	3,061.5	17
Italy	8,559.3	1,908.7	3
Belgium	5,546.5	3,989.5	1
Portugal	1,806.9	433.5	3
Greece	1,203.2	72.5	12

Source: EFAMA and CNMV. Data from June 2025.

The short-term outlook for these products remains favourable, provided that interest rates stay above the levels observed over the previous decade and that returns on bank deposits – one of their main competing instruments – remain relatively unattractive. That said, subscription volumes are not expected to match the exceptionally high levels recorded in 2023 and 2024. Indeed, some moderation in these flows has already been observed in 2025. With regard to risk, the most significant vulnerabilities are associated with constant value money market funds. During periods of market stress, these funds may face elevated redemption requests and be required to repay amounts that do not fully reflect the underlying value of the portfolio, potentially disadvantaging investors who remain in the fund. As noted at the beginning of this exhibit, no such funds operate in Spain. Accordingly, in the event of market turbulence, accurate portfolio valuation – which determines the redemption price – and the availability of appropriate liquidity management tools help to mitigate the risk of liquidity mismatches.

1 This refers to the entry into force of Regulation (EU) 2017/1131 on money market funds, as implemented through CNMV Circular 1/2019.

2.1 Credit intermediation and financing of NBFIs entities

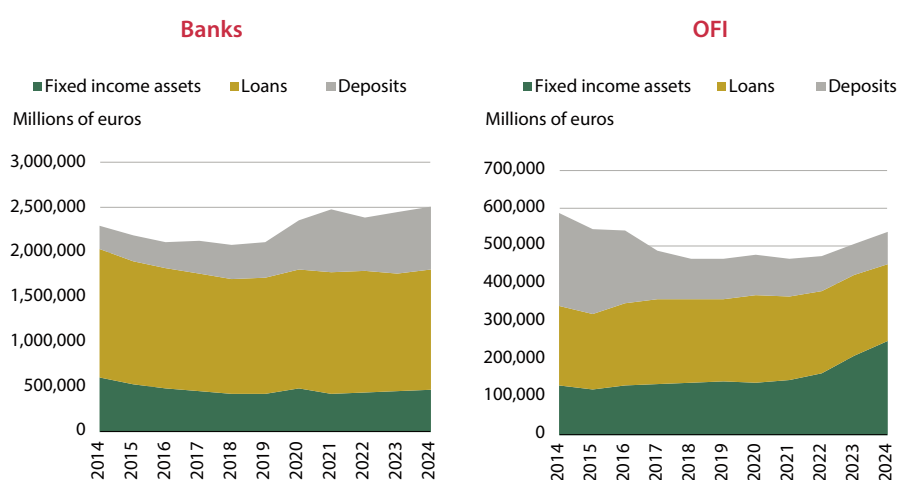
This section provides an overview of the role played by non-bank financial intermediaries in credit intermediation. To this end, it presents figures on both the financing extended by these entities and the funding they receive. Particular attention is given, in the latter case, to the use of wholesale funding.

In 2024, credit intermediation across the financial system as a whole increased by 3.1%, reaching almost €3.36 trillion. This increase was recorded across all sectors, albeit to markedly different extents, and reflected both the expansion of the financial system and the revaluation – although more moderate than in

2023 – of fixed income assets.⁴ The banking sector continues to account for by far the largest volume of credit assets, which exceeded €2.5 trillion last year (+2.5% in one year). Loans represent the largest share of these assets (44.3%; see the left-hand panel of Figure 4). Credit assets held by OFIs grew by 6.3% in 2024, reaching almost €535 billion at year-end, equivalent to around half of their total financial assets. Within the OFI aggregate, investment funds are the main contributors to credit intermediation, accounting for 49.4%⁵ of the total, followed by securitisation vehicles, with a share of 27.1%. The composition of credit assets differs substantially between these two categories: in the case of investment funds, more than 90% consists of fixed income assets, whereas for securitisation vehicles credit assets correspond to the loans securitised by these entities.

Trend in credit intermediation

FIGURE 4



Source: CNMV and Bank of Spain.

Financing received by entities within the financial system remains significantly lower than financing extended, although its growth rate is broadly in line with that of the system as a whole. Accordingly, total indebtedness⁶ amounted to almost €620 billion at the end of 2024, representing an increase of 2.8% compared with 2023. Almost all of this indebtedness corresponds to banks and OFIs. Bank indebtedness exceeded €356 billion (+5.5% compared to the previous year), while that of OFIs stood at just under €236 billion (see the left-hand panel of Figure 5). As shown in the right-hand panel of Figure 5, within the OFI aggregate securitisation vehicles account for more than half of total liabilities, reflecting the nature of their business model.⁷

4 For instance, in 2024 fixed income mutual funds experienced a portfolio revaluation of 3.5%, while in 2023 it was 4.2%.

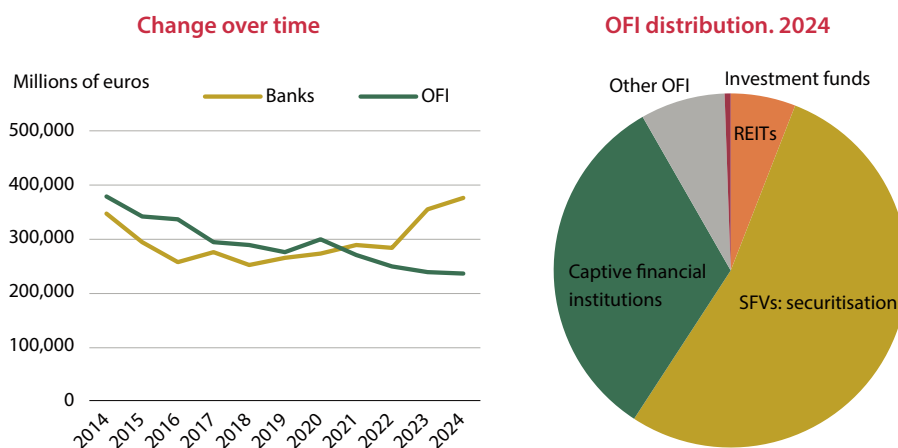
5 This figure includes money market funds and hedge funds.

6 Indebtedness comprises fixed income securities issued by the entity, loans and repurchase agreements (repos) recorded on the liabilities side of the balance sheet.

7 Virtually all liabilities consist of securitisation bonds or commercial paper issued by the vehicle itself.

Liabilities of banks and OFIs

FIGURE 5



Source: CNMV and Bank of Spain.

Wholesale funding – one of the most significant sources of funding for these entities⁸ and a category that had declined markedly for OFIs in recent years – remained broadly stable between 2023 and 2024. At the end of 2024, wholesale funding stood at just over €328 billion, equivalent to 30% of OFIs’ total financial assets. As expected, this share is higher than that observed for banks, where wholesale funding represents 12.5% of total financial assets. Within this funding category, long-term funding is the predominant source for OFIs, accounting for more than 70% of total wholesale funding in 2024.

2.2 Interconnections between banks and OFIs

Interconnections across financial sectors are a key factor in assessing risks to financial stability, as they shape the potential transmission of risks that may initially arise within a specific segment of the system. These interconnections can be analysed in several ways. Institutions may be linked directly, through the financing they extend to and receive from one another, or indirectly. Indirect linkages can be assessed using a range of approaches, including correlation indicators for prices or institutions, as well as the analysis of common exposures. This section presents two complementary strands of analysis of interconnections between institutions. First, it assesses direct exposures between banks and OFIs as a primary channel of contagion. Second, focusing on investment funds, it quantifies common holdings in fixed income assets. Identifying common exposures provides insight into both the vulnerability of these institutions to the materialisation of specific shocks and their potential to transmit those shocks across the system.

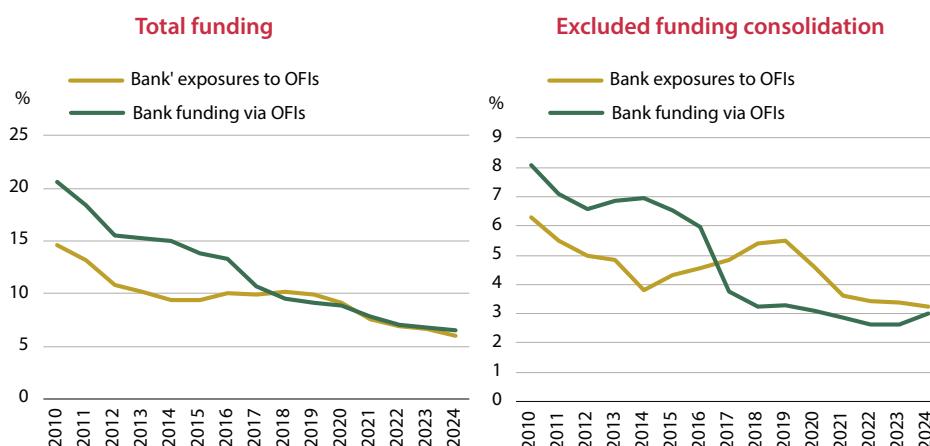
An assessment of direct exposures between banks and OFIs continues to indicate, in line with previous reports, a low and declining level of mutual exposure. This finding holds both when measuring banks’ claims on OFIs (“Bank exposures to

8 These instruments are essential for effective price setting and liquidity in secondary markets, but they can create short-term obligations and associated risks related to the maturity transformation and liquidity outside the banking system. Furthermore, wholesale funding can increase connectivity among various financial institutions, thereby potentially contributing to the procyclicality of the financial system.

OFIs” in the panels of the figure below) and when analysing banks’ liabilities vis-à-vis OFIs (“Bank funding via OFIs”). As shown in the left-hand panel of Figure 6, both banks’ exposure to OFIs and their liabilities stood at around 6% of total bank assets in 2024, below the levels recorded in earlier years. This pattern persists when claims and liabilities involving OFIs consolidated within banking groups are excluded⁹ (see the right-hand panel of Figure 6), which reduces the degree of dependence to approximately 3%.

Interconnection between banks and OFIs (% of bank assets)

FIGURE 6



Source: CNMV and Bank of Spain.

The level of interconnection between OFIs and other financial system subsectors is quite limited. The only item of some significance is liabilities vis-à-vis insurance undertakings, which amounted to €17 billion at the end of 2024. As in previous years, the internal interconnection among the entities within the OFI sector was more significant, amounting to nearly €77 billion.

2.2.1 Interconnections in investment funds

The analysis of interconnections through common exposures in the investment fund sector focuses exclusively on fixed income portfolio assets, as these are the most relevant for funds included within the NBFIs aggregate.¹⁰ Within this portfolio, holdings of public debt amounted to €103.6 billion at the end of 2024, while investments in private fixed income totalled €115.1 billion. These figures represent approximately 31% and 34%, respectively, of the portfolios of these institutions.¹¹ In the latter case, the share was broadly unchanged from 2023 (33%), whereas the weight of public debt declined markedly, by 9 pp.

⁹ For Spain, data on interconnections between banks and OFIs consolidated within banking groups are available only for the structured finance vehicle (SFV) subsector.

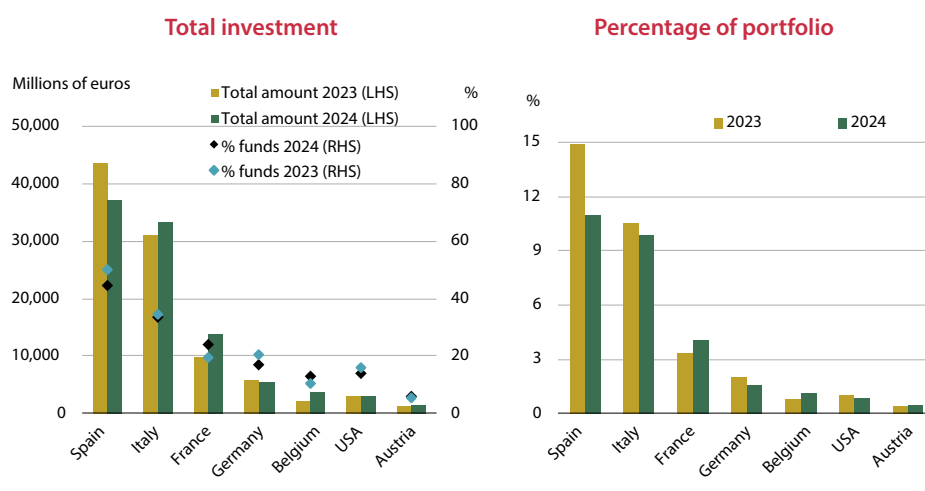
¹⁰ As explained in a later section, all investment funds except equity funds are included within the NBFIs aggregate due to their role in credit intermediation, which is largely driven by investment in debt instruments. Mixed funds (included within the NBFIs) may invest in both fixed income and equity assets, either directly or indirectly.

¹¹ The remainder of fund portfolios consisted mainly of investments in other CISs (22%), equities (4%), and cash and deposits (5%).

Within the public debt segment, investment funds show a high level of exposure to Spanish and Italian sovereign debt. At the end of 2024, holdings exceeded €37 billion and €33 billion, respectively. In the case of Spanish sovereign debt, exposure declined markedly over the year, from almost €44 billion at the end of 2023. These amounts represented 10.9% and 9.8% of total fund portfolios and were also spread across a significant share of institutions. Almost 45% of funds held some exposure to Spanish sovereign debt, while more than 33% included Italian sovereign debt assets in their portfolios¹² (see Figure 7). Although exposure to the sovereign debt of other countries was less significant, it remained relevant. Noteworthy investments included French debt (nearly €14 billion) and German debt (€5.4 billion).

Analysis of public fixed income in the portfolio of investment funds

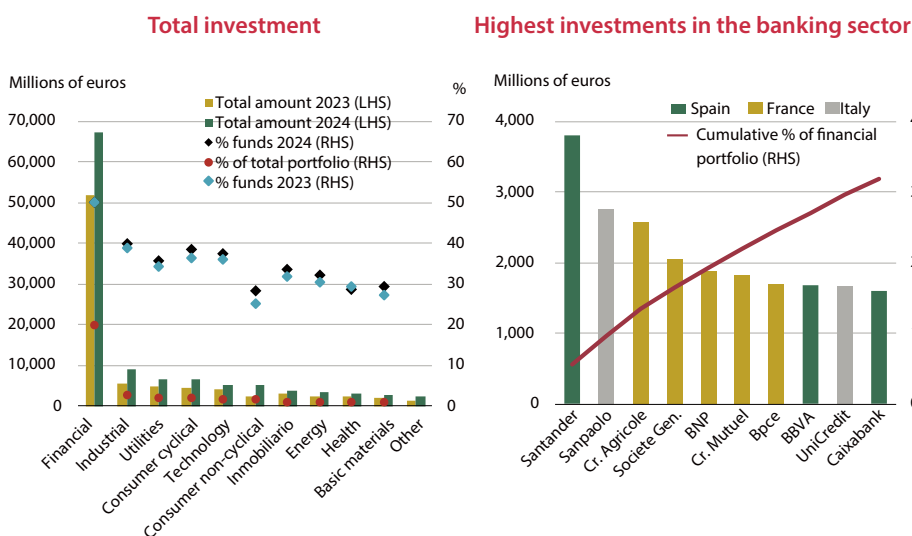
FIGURE 7



Source: CNMV.

Exposure to private fixed income assets is much more concentrated in instruments issued by the financial sector, a concentration that intensified further in 2024. As shown in the left-hand panel of Figure 8, holdings of financial-sector private debt amounted to more than €67 billion at the end of 2024, representing an increase of 30% compared with 2023. These holdings accounted for 19.9% of fund portfolios and were present in around half of the entities. Investment in private fixed income issued by other sectors was held by a substantial share of funds – between 28% and 40% – but involved significantly smaller amounts: €9 billion in the industrial sector and just over €5 billion in utilities, consumer cyclicals and technology.

Within financial-sector debt holdings, concentration levels were relatively high at the end of 2024 and were largely focused on Spanish, French and Italian banks. The largest positions corresponded to one bank in each of these countries and together represented 13.6% of the financial-sector portfolio (see the right-hand panel of Figure 8). In aggregate terms, the ten largest holdings accounted for 32.0% of all bank securities, with the three largest Spanish banks among them.



Source: CNMV.

The analysis of interconnections among investment funds, based on their positions in fixed income assets, shows a high level of interconnectedness. This exercise is based on, for each fund, the share of investments in the sovereign debt of a given country and in private fixed income instruments, grouped by sector. The results for 2024 point to a high level of similarity across fund portfolios, slightly above that observed in 2023. Network density stood at 76.3%¹³ in 2024 (75.9% in the previous year), while the weighted average number of links per fund rose to 164,¹⁴ one more than in 2023. The following two figures illustrate the outcome of this analysis from different perspectives.

Interconnections among the largest funds in the sector – representing 70% of total portfolio holdings (114 funds)¹⁵ – are particularly strong for fixed income funds and, to a lesser extent, for mixed funds, especially those of medium size (see the top panel of Figure 9). This pattern reflects both the number of connections between funds and the intensity of those connections. An analysis by category shows that both fixed income and mixed funds are interconnected within each category and also across categories. The figure highlights several medium-sized funds (smaller funds are not shown) that can be characterised as hubs, as they maintain multiple connections with other funds within their own category and with funds in other categories. By contrast, the largest money market fund shows no significant connections with the rest of the funds, a pattern

13 This indicator is calculated as the ratio of the number of observed connections to the total number of possible connections. A network with a density of zero means there it has no connections between its nodes, while a density of 100% represents a fully connected network where all nodes are linked to each other.

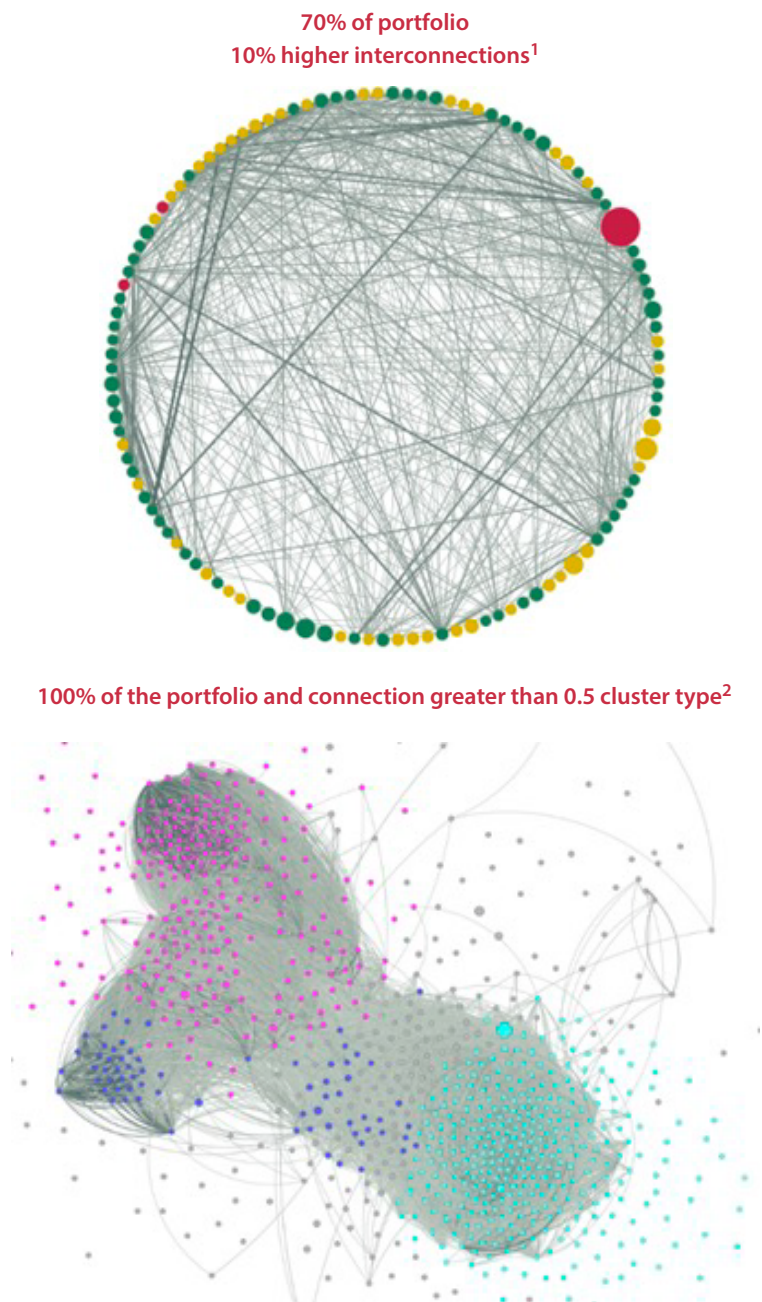
14 This value is derived from the average number of non-zero connections per fund (731), weighted by the value of each connection (22.5% on average).

15 Funds are arranged around the circle, with node size proportional to the value of portfolio assets and colour indicating category (fixed income, mixed or money market). The figure shows only the top 10% of connections between fund pairs (represented by segments). Line thickness and colour intensity are directly related to the strength of the connection, with thicker and darker grey lines indicating a higher degree of interconnectedness.

that also applies to the other large funds, all of which belong to the fixed income category.¹⁶

Interconnections between investment funds in the area of fixed income

FIGURE 9



Source: CNMV.

- 1 Each circle represents an investment fund. Circle size is proportional to the size of its portfolio, and colour indicates category (fixed income: yellow; mixed: green; money market: maroon). The thickness and colour intensity of the segments connecting funds reflect the degree of similarity between their portfolios. The analysis estimates a total of 349,931 connections, of which only the strongest 10% are shown.
- 2 Each circle represents an investment fund, with size proportional to portfolio value. Colour indicates the cluster to which the fund belongs, and only connections with a value greater than 0.5 (on a scale from 0 to 1) are displayed, representing 12.6% of all non-zero connections.

¹⁶ In the figure, some funds appear to have no connections; this is because only the strongest 10% of connections are shown for illustrative purposes.

The lower panel of Figure 9 shows interconnections above a threshold of 0.5¹⁷ and identifies three groups of funds with a higher degree of interconnectedness among themselves¹⁸ (clusters). A large share of funds (69.1%) belong to one of these three groups, confirming the high level of interconnectedness within the network. Each group contains a broadly similar distribution of fund categories. Table 3 shows that two of the groups comprise a relatively large number of funds, with 348 funds in Group 3 (light blue) and 280 in Group 1 (purple). By contrast, Group 2 (dark blue) is considerably smaller, consisting of only 73 funds, and is characterised by a relatively low average fund size.

Characteristics of clusters

TABLE 3

	Number of funds	% total portfolio (%)	Weighted average number of links	Density	Connections higher than 50%	Characteristics
Cluster 1	280	24.3	98.6	1	26.5	Spanish government bonds
Cluster 1	73	11.0	34.0	1	45.0	Italian government bonds
Cluster 1	348	33.8	136.7	0.99	35.0	Private fixed income from financial institutions

Source: CNMV.

An analysis of the portfolios of funds belonging to these clusters makes it possible to identify the sources of interconnectedness within each group and, consequently, to pinpoint risk factors that may be relevant. In Group 1, the high degree of interconnectedness is driven by investments in Spanish sovereign debt, which account on average for 51.2% of the total portfolio of funds in the group.¹⁹ Group 2 is composed of vehicles with substantial exposure to Italian sovereign debt,²⁰ while in Group 3 interconnectedness reflects high investment in private fixed income issued by the financial sector.²¹ This evidence helps to delineate the set of funds that are more exposed in the short term to potential shocks affecting these debt assets, as well as the extent to which such shocks could be transmitted to other funds.

17 This represents 9.6% of total interconnections.

18 The estimated network densities for these groups are 1, 1 and 0.99, respectively.

19 This percentage varies widely across funds, ranging from 1% to almost 100%. Most of these funds also share exposures to other sovereign debt, particularly Italian, French or German debt. On average, 71% of portfolios is invested in public fixed income.

20 For these funds, approximately 66.7% of assets are invested in public debt, of which more than 85% corresponds to Italian sovereign debt.

21 On average, 68% of the total portfolio is invested in private fixed income and 4.6% in public debt. Within private debt holdings, almost half is invested in financial-sector fixed income, with the remainder distributed across other sectors.

3 Non-bank financial intermediation

The volume of assets included in non-bank financial intermediation in this Monitor is calculated using a methodology developed by the Financial Stability Board in 2013.^{22,23} This methodology identifies financial entities and classifies them into five economic functions, based on a risk assessment broadly aligned with risks traditionally associated with the banking sector. It could be said that this approach to NBFIs is relatively restrictive and does not preclude complementary, broader non-bank risk analyses, which may encompass entities such as pension funds and insurance undertakings, or entities and activities subject to a lower degree of regulation, such as private finance. As explained in detail below, the measure presented in this report is derived primarily from a subset of entities within the OFI aggregate.

As shown in Table 4, total assets in Spain corresponding to the five economic functions defined by the FSB amounted to €550 billion in 2024, representing an increase of 6.6% compared with 2023. In quantitative terms, the most significant NBFIs in Spain are those included in the first economic function, which comprises collective investment vehicles whose characteristics make them susceptible to runs. These entities – which include all financial CISs except equity funds²⁴ – held assets totalling €365 billion, 15% more than in the previous year and equivalent to 66.3% of the assets across the five functions. The share of this function within the total has risen steadily since 2011, when it accounted for 22.4% of assets across the five functions. Next are entities included in Function 5, which comprises institutions engaged in credit intermediation through securitisation. Assets under this function amounted to close to €128 billion in 2024, 8.7% lower than in 2023. As noted in the discussion of OFIs, the asset volume of these entities has fallen markedly in recent years. As a result, their share of the assets across the five functions declined from close to 70% in 2011 to 23.2% in 2024.

22 “Policy Framework for Strengthening Oversight and Regulation of Shadow Banking Entities”.

23 For further details, see the first article in this series: Isperto, A. (2019). “Non-bank financial intermediation in Spain”. *CNMV Bulletin*. Quarter I, pp. 77–118. Available at: https://www.cnmv.es/DocPortal/Publicaciones/Boletin/Boletin_I_2019_WEBen.PDF

24 Because they do not perform a relevant credit intermediation function.

Classification of the NBFi according to economic functions

TABLE 4

Economic functions	Definitions	Entities belonging	Size in millions of euros (% in total NBFi), % change 2024
EF1	Management of collective investment vehicles whose characteristics make them susceptible to massive redemptions	Money funds, fixed income funds, mixed funds, ¹ hedge funds and SICAVs	364,665 (66.3%) 14.9%
EF2	Granting of loans dependent on short-term financing	Finance companies	52,391 (9.5%) -2.5%
EF3	Intermediation in market activities dependent on short-term financing or guaranteed financing	Broker-dealers	3,736 (0.7%) 7.2%
EF4	Entities engaged in credit "facilitation" activities	Mutual guarantee companies	1,695 (0.3%) 8.2%
EF5	Credit intermediation based on securitisation for financing financial institutions	Structured finance vehicles (SFVs), designed specifically for the securitisation of assets	127,791 (23.2%) -8.7%
Total			514,684 (100%) 5.4%

Source: CNMV and Bank of Spain.

¹ According to the criterion established by the FSB, only mixed funds with a percentage of equities below 80% of the total portfolio are included in EF1. In Spain, under current legislation, the equity exposure of mixed funds is capped at 75% of the portfolio, so all such funds are classified as NBFi.

As a result, the remaining functions accounted for a relatively small share of the total, representing 10.5% in 2024 (11.4% in 2023). This share is concentrated almost entirely in entities classified under Economic Function 2, which carry out lending activity dependent on short-term funding—namely, finance companies. Assets held by these entities amounted to €52.4 billion in 2024, equivalent to 9.5% of the total. Accordingly, assets held by entities in the remaining functions – EF3 (investment firms) and EF4 (mutual guarantee companies) – amounting to €5.4 billion, represented only 1% of the assets across the five functions.

The FSB also proposed a “narrow” measure of NBFi, which starts from the assets corresponding to the five functions described above and excludes those consolidated within banking groups. In Spain, this measure amounted to just under €400 billion in 2024, representing an increase of 13.8% compared with the previous year. As illustrated in Figure 10, the calculation begins with the non-bank aggregate and excludes assets held by insurance undertakings (€319.1 billion), pension funds (€171 billion), financial auxiliaries (€68.8 billion), and OFI entities that do not perform any of the defined economic function²⁵ (€541.7 billion). This yields the assets corresponding to the five economic functions. In a final step, assets consolidated within banking groups²⁶ (€152.5 billion) are deducted, resulting in a narrow measure of close to €400 billion, as indicated above.

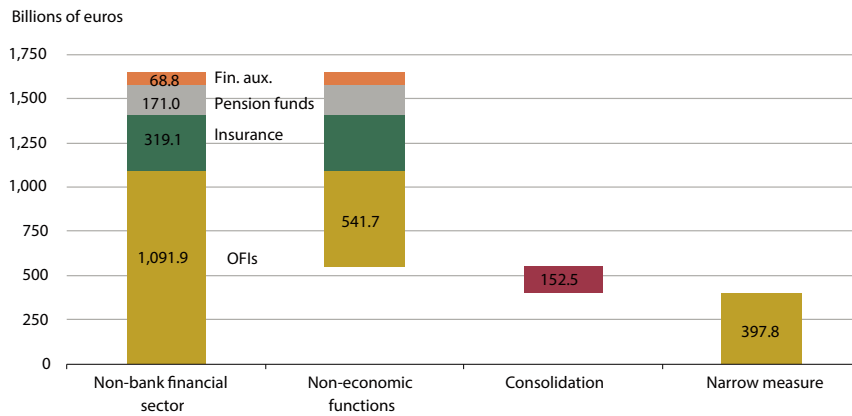
²⁵ OFIs that are not included within the NBFi comprise captive financial institutions and money lenders, equity investment funds, real estate investment trusts (REITs), central counterparties (CCPs) and private equity entities. Together, these entities account for around half of total OFI assets. Assets held by entities that do not fall within the OFI aggregate but are included in the NBFi are also taken into account. These entities are of marginal quantitative relevance and consist mainly of mutual guarantee companies.

²⁶ Banking consolidation arises primarily in two situations: where the entity concerned is controlled by a bank, or where the assets held by the entity are, in turn, recorded on the bank's balance sheet. (therefore, subject to banking regulation). This latter case applies to securitisation vehicles, whose assets must

From the non-bank financial sector to the narrow measure of NBFi. 2024

FIGURE 10

Non-bank financial
intermediation

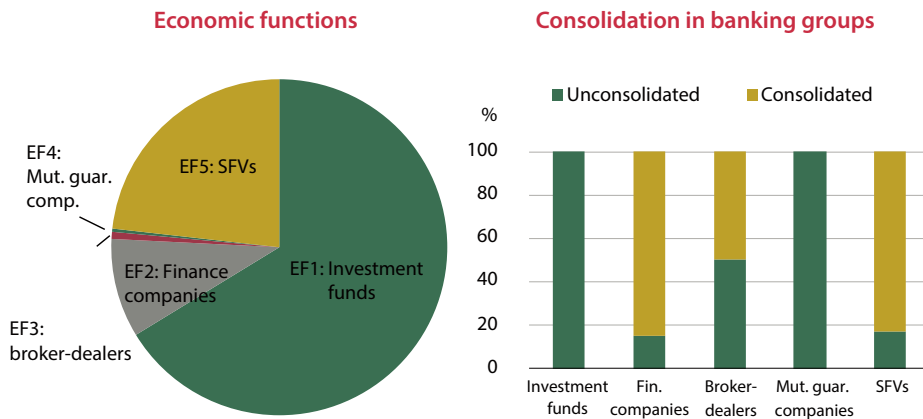


Source: CNMV.

Consolidation within banking groups affects three of the five economic functions and is particularly significant in the case of securitisation vehicles and finance companies. Consolidation ratios for both types of entities are close to 90% (see the right-hand panel of Figure 11), which substantially reduces their asset volumes in the final measure. After this adjustment, the share of assets corresponding to EF1 (CISs) rises to 91.7%. In other words, almost the entire narrow NBFi measure consists of CIS assets. The remainder is distributed across securitisation vehicles (EF5), with a share of 5.4%, finance companies (EF2), with 2%, and, in aggregate terms, investment firms (EF3) and mutual guarantee companies (EF4), which together account for around 1%.²⁷

Distribution of non-bank financial intermediation. 2024

FIGURE 11



Source: CNMV and Bank of Spain.

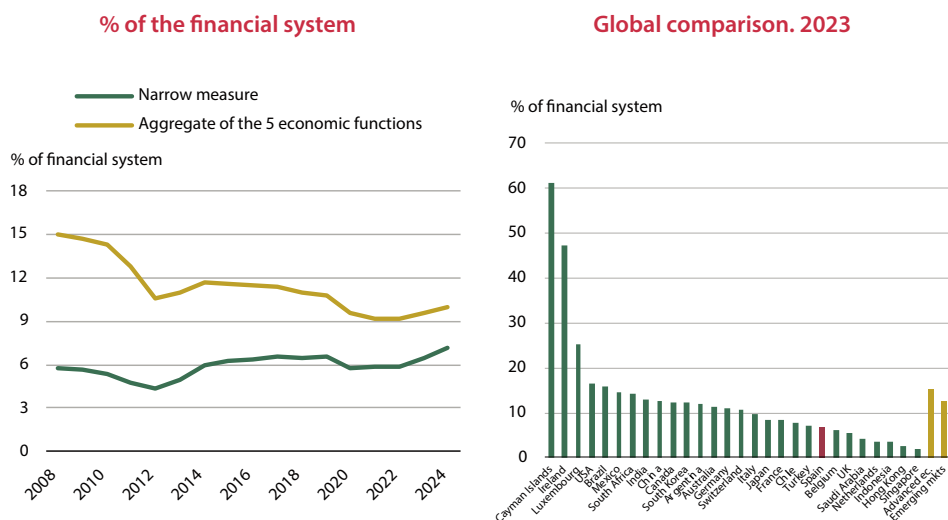
remain on the bank's balance sheet where the risks and rewards associated with them have not been substantially transferred to third parties.

27 The average weight of these functions across the sample of countries covered by the FSB report reflects a lower relative importance of investment funds and a greater role for the remaining functions (with the exception of EF4, which is also residual): EF1: 74.1 % EF2: 8.5 % EF3: 7.0 % EF4: 0.2 % EF5: 7.5%. The remaining percentage corresponds to assets that cannot be fitted into any given function.

The expansion of NBFİ assets resulted in a modest increase in the share of this sector within the financial system. The combined assets of the five economic functions rose from 9.6% in 2023 to 10.0% in 2024, while the narrow measure increased from 6.5% to 7.2%. These ratios-particularly in the case of the narrow measure-are the highest recorded in recent years. Nevertheless, they remain low both relative to the size of the Spanish financial system and in comparison with the averages reported by the FSB for advanced economies (15.0%) and emerging economies (12.7%) (see Figure 12).

Relative weight of NBFİ

FIGURE 12



	Investment funds			Finance companies	Broker-dealers	SFVs: securitisation
	Money market	Fixed income	Mixed			
Credit risk	●	●	●	●	●	●
Maturity transformation	○	●	○	○	●	●
Asset liquidity ¹	○	○	●	●	●	●
Leverage ²	○	○	○	●	●	●
Interconnectedness with the banking system	●	●	○	○	○	●
Relative importance ^{3,4} (%)	4.2	28.4	29.4	9.5	0.7	23.2

Source: CNMV. The credit risk indicator is based on the proportion of credit assets (fixed income and loans) relative to total assets. Maturity transformation risk assesses the ratio of short-term liabilities to short-term assets, except for investment funds, where the focus is on the proportion of long-term assets to total equity. Liquidity risk examines the relevance of liquid assets in the portfolio, while leverage, considers the proportion of own funds in total liabilities. For further details of the thresholds defined for each risk and type of entity, see the article by Ispuerto, A. (2019) "Non-bank financial intermediation in Spain". *CNMV Bulletin. Quarter I*, pp. 77–118.

- 1 For investment funds, the risk levels, indicated by colours, are determined using the HQLA (High Quality Liquid Assets) methodology, which considers the asset type and its credit rating. Since the 2022 NBFI monitor, this assessment has included the portfolio assets of CIS investments in other CISs.
- 2 In investment funds, leverage risk is evaluated on indirect leverage, based on derivatives positions.
- 3 The weights of each entity shown in this table do not sum to 100% because mutual guarantee companies and some fund categories, also part of NBFIs, are not included.
- 4 These percentages are calculated based on the total size of the sector, without excluding entities consolidated into banking groups.

3.1.1 Economic function 1: management of collective investment vehicles whose characteristics make them susceptible to runs

CISs classified under Economic Function 1 (EF1) accounted for 92% of the narrow NBFI measure in Spain at the end of 2024, an increase of 1 pp compared with the previous year, reflecting the growth in their assets. Under the EF1 definition, this category in Spain includes money market funds, fixed income funds, mixed funds, hedge funds²⁹ and open-ended collective investment companies (SICAVs). Private equity entities, which have expanded significantly in recent years, are quantitatively relevant within the broader non-bank aggregate. However, due to their closed-ended nature, they do not formally fall within this economic function as defined by the FSB, nor do they fit within the other functions. Nonetheless, this is a segment that warrants ongoing monitoring in view of the risks it may entail, and which the CNMV addresses in other publications.³⁰ As illustrated in the right-hand panel of Figure 13, assets held by NBFI funds

29 These institutions might face large-scale redemptions during their liquidity windows, if available. This category includes the four types of hedge investments found in Spain: hedge CISs (funds and companies) and fund-of-hedge-fund CISs (funds and companies).

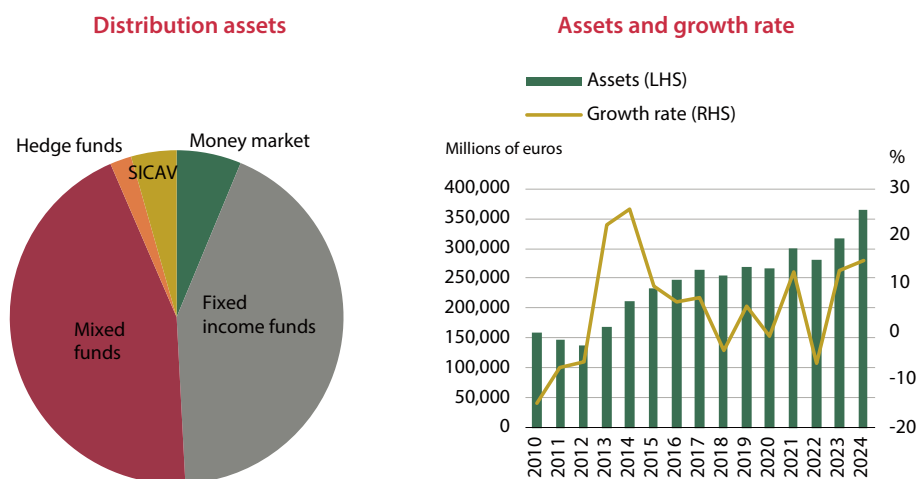
30 For further details on the evolution of these entities between 2013 and 2024, see the article by Santiago Cañizares, M.D. and Pedrón Fernández, G. (2025) "Change over time. Private equity collective investment schemes between 2013 and 2024". *CNMV Bulletin*, October, pp. 51–88. Available at: https://www.cnmv.es/DocPortal/Publicaciones/Boletin/Boletin_II_2025_ENen.pdf

increased by 14.9% in 2024, driven by both portfolio valuation gains and net subscriptions by investors.

Within EF1, the share of fixed income vehicles increased significantly for a third consecutive year, reaching a level very close to that of mixed funds. Fixed income funds accounted for 42.9% of the total, up by 2 pp, while the share of mixed funds declined from 49.4% to 44.3%³¹ (see the left-hand panel of Figure 13). These developments were driven by strong net subscriptions throughout the year in fixed income funds³² – exceeding €35 billion – together with net redemptions in the main categories comprising mixed funds. As regards money market funds, although their size in Spain remains limited compared with other countries, their relative share increased markedly in 2024, rising from 3.3% to 6.3%, following an earlier increase from 1.6% in 2023 (see Exhibit 1 for further detail). The share of SICAVs remained broadly stable at 4.4%, after two years of decline driven by a high number of fund closures.³³ Alternative investment funds (hedge funds) accounted for 2.1% at the end of 2024, an increase of 0.3 pp compared with 2023.

Distribution of investment funds belonging to NBF1

FIGURE 13



Source: CNMV.

The number of investment vehicles classified under EF1 stood at 1,866 at the end of 2024, broadly unchanged from the previous year (a decrease of four vehicles). Of this total, 1,282 were investment funds, 428 were SICAVs, and 156 were hedge funds. In 2024, the main characteristics of vehicles within this economic function remained broadly in line with those described in previous editions of this report, albeit with some changes compared with the previous year. First, the largest vehicles continued to be investment funds. At year-end, 83 investment funds each managed assets exceeding €1 billion (up from 69 in 2023), a threshold surpassed by only two SICAVs. Second, concentration levels across these institutions remained very high and even higher than in previous years reflecting the fact that the largest

31 Within mixed funds, several categories can be distinguished, most notably global funds (38.0%), mixed fixed income funds (23.7%) and passive management funds (17.1%).

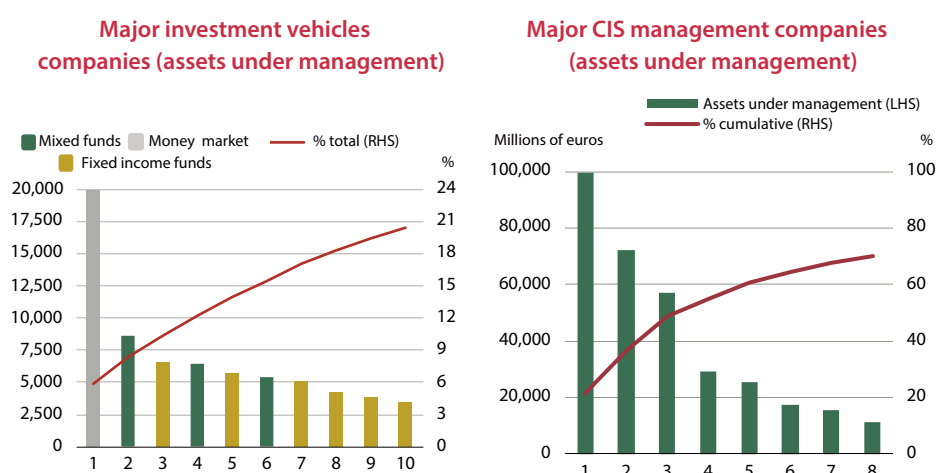
32 Despite the stabilisation of interest rates, this trend continued into the first half of 2025 – more strongly, if anything – with net subscriptions over the six-month period exceeding €20 billion.

33 Between 2022 and 2023, 80% of vehicles were deregistered following the entry into force of Law 11/2021 of 9 July on measures to prevent and combat tax fraud.

(money market) fund doubled its assets in 2024. As a result, this single fund accounted for 5.9% of total fund assets (see the left-hand panel of Figure 14), while the ten largest funds together represented 20.4% (19.6% in 2023). Concentration among CIS management companies also remained very high, broadly unchanged from the previous year: the three largest entities managed 48.9% of total assets and the seven largest 67.8%, all of them belonging to banking groups (see the right-hand panel of Figure 14).

Concentration in the collective investment sector

FIGURE 14



Source: CNMV.

As in previous years, the assessment of financial risks associated with NBFi investment funds points to an absence of material vulnerabilities from a financial stability perspective. As in earlier editions of this report, the analysis covers potential liquidity mismatches and leverage levels – which remain the main focus of international concern in the context of systemic risk – as well as credit risk and maturity transformation. To refine the assessment of the latter two risk dimensions, the analysis incorporates an evaluation of the quality of assets in funds’ fixed income portfolios, based on credit ratings and duration.

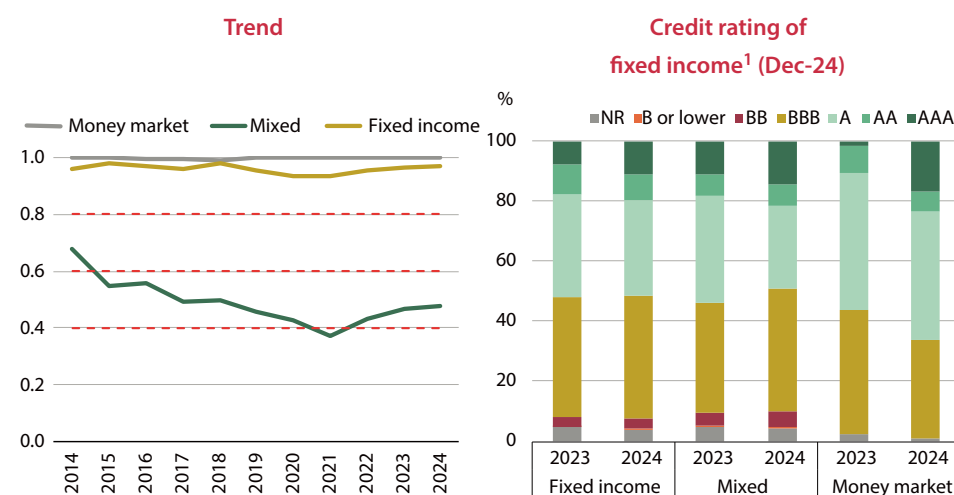
Credit risk in investment funds is assessed by examining both the share of credit instruments within portfolios and the credit quality of those assets. Given their underlying design, money market funds and fixed income funds typically hold a very high proportion of fixed income assets, reflecting their primary investment mandate. Accordingly, for these funds, ratios close to 100% should not in themselves be regarded as a warning signal. A proper risk assessment requires this information to be complemented by an analysis of portfolio credit quality, addressed later in this section. For mixed funds – where this ratio is more informative – the proportion increased to 47.5% at the end of 2024, compared with 46.7% one year earlier. This rise is almost entirely due to increased investments in public debt, which accounted for 18.1% of the total portfolio by year-end, over 4 pp more than in 2023.

An assessment of credit ratings within funds’ fixed income portfolios points to a stabilisation in the share of assets classified as high quality (or investment grade), following the sharp increase recorded in 2023. Specifically, the proportion of high-quality debt assets stood at 92.4% in fixed income funds and 90.2% in mixed

funds – levels broadly in line with those of 2023 – while in money market funds it reached 99.0%, up from 97.7% (see the right-hand panel of Figure 15).³⁴ In addition, as happened in 2023, money market funds recorded a further improvement in asset quality within the investment-grade segment. The share of BBB-rated assets – the lowest investment-grade category, immediately above high yield – declined by almost 9 pp to 32.8%, while holdings rated AAA or AA increased markedly, rising from 10.4% to 23.3%.

Credit risk in the different types of investment funds

FIGURE 15



Source: CNMV.

1 Distribution of the fixed income portfolio of the three categories of NBFi funds (income, mixed and money market) based on the credit ratings of their assets in the portfolio. NR: no rating.

Maturity transformation risk in investment funds is assessed by calculating the ratio of long-term assets to assets under management.³⁵ In 2024, this ratio declined for fixed income funds and remained stable for mixed funds.³⁶ As shown in the left-hand panel of Figure 16, the ratio is relatively high only in fixed income funds. However, following a decline of 6 pp in 2024 (to 45.4%) their risk classification shifted from medium to moderate. For mixed funds, the ratio remained slightly above 23%.

34 In the case of European Union funds, analysis published by the European Systemic Risk Board (ESRB) indicates that the credit quality of debt held in their portfolios remained broadly stable between 2023 and 2024. As a result, the average level continues to be lower than that observed for Spanish funds: the share of high-quality (or investment grade) debt stood at around 50%, well below the level exceeding 90% in Spanish funds.

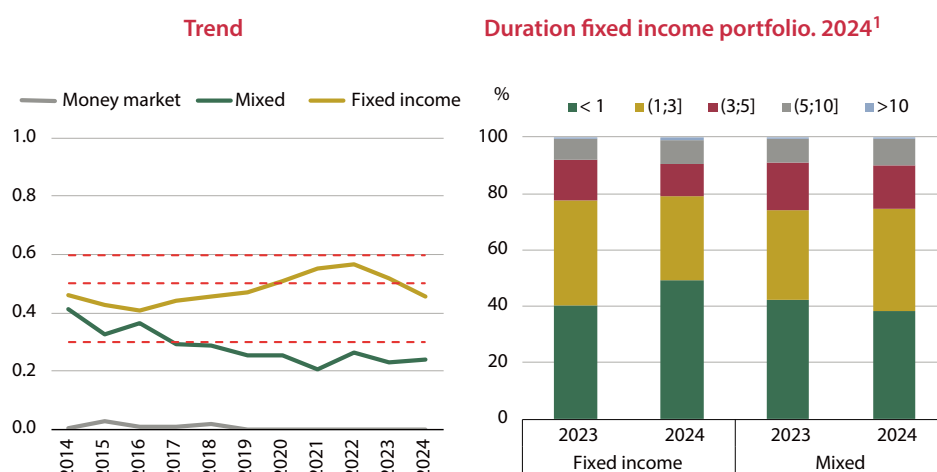
35 For investment funds, instead of calculating the ratio between short-term liabilities and assets – as is done for other entities – the proportion of long-term assets relative to total assets is calculated. As mentioned in previous reports, this variation is due to the frequent, often daily, redemption of shares by unitholders in investment funds, which means short-term liabilities do not accurately represent all of the fund's potential obligations.

36 In the case of money market funds, long-term assets are nearly non-existent due to the constraints of their investment policies. The average portfolio duration must be 60 days or less, and the average maturity cannot exceed 120 days.

An assessment of the duration³⁷ of assets held in these vehicles' fixed income portfolios, based on modified duration,³⁸ yielded average values of 1.9 for fixed income funds and 2.1 for mixed funds in 2024, broadly unchanged from 2023. For money market funds, duration was markedly lower, at 0.22,³⁹ reflecting a substantial decline from 0.31 in 2023. According to the right-hand panel of Figure 16, slightly more than 38% of assets (at market value) in the fixed income portfolios of mixed funds had a modified duration of less than one year, while only 0.6% had a duration exceeding ten years. For fixed income funds, the corresponding proportions were 49.1% and 0.8%, respectively.

Maturity transformation in the different types of investment funds

FIGURE 16



Source: CNMV.

1 Money funds are not included as their entire fixed income portfolio has a duration of less than one year.

Most funds – 95% of both fixed income and mixed funds – recorded an average modified duration below 5.⁴⁰ In addition, the dispersion of modified duration values across fund portfolios remained limited and broadly similar for fixed income and mixed funds (see Figure 17). At the end of 2024, more than half of funds had a modified duration between 0.5 and 3, a range slightly wider than in 2023 (between 0.8 and 2.8).

37 Duration is a measure of the effective term until an asset's maturity, taking into account all cash flows throughout the asset's life.

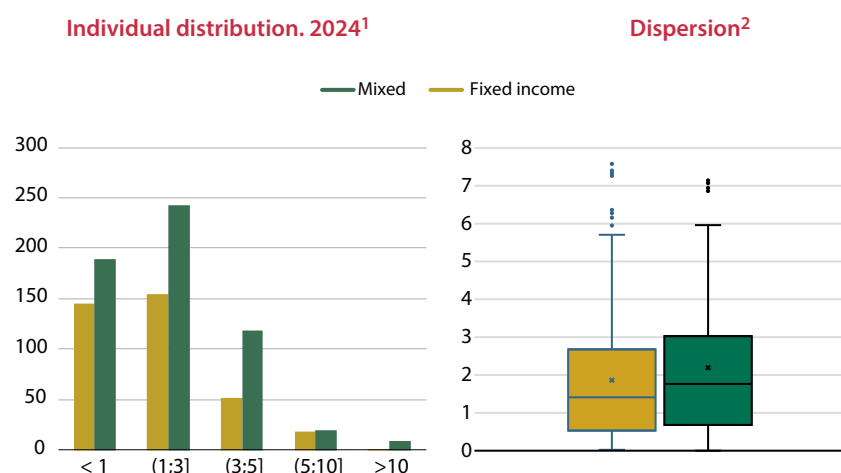
38 Modified duration measures the percentage change in the price of a financial asset in response to a 100-basis-point increase in interest rates.

39 No data are available on modified duration for European Union funds; however, data on duration are available, with an average of 6.4 in 2024, compared with 6.7 in the previous year. Although these figures are not strictly comparable, they clearly indicate that sensitivity to interest rate increases in Spain is lower than the average observed across EU countries.

40 Only ten funds (two more than in 2023) were identified as having a fixed income portfolio with an average modified duration greater than 10 at the end of 2024. Of these, nine were mixed funds and one was a fixed income fund.

Average modified duration of the fixed income portfolio of the different types of investment funds

FIGURE 17



Source: CNMV.

1 Distribution of the number of funds according to their modified duration.

2 The figure represents, for each type of funds, the minimum, maximum, average (x), median and 0.25 and 0.75 percentiles of the duration of the funds. In the case of the minimum and maximum, outliers (values that are below [above] the first [third] quartile whose distance from it is greater than 1.5 times the interquartile range [P75-P25]) have been excluded.

To assess liquidity conditions in fund portfolios, the high-quality liquid assets (HQLA) ratio is used. This indicator incorporates information on both asset type and credit quality. Under this methodology, two liquidity measures are calculated: a more restrictive measure (Level 1), which includes assets considered fully liquid (see footnote 1 to Figure 18), and a broader measure (Level 2), which in addition includes variable proportions of assets with medium or high liquidity (see footnote 2 to Figure 18). For the Level 2 measure, the liquidity of collective investment schemes in which Spanish funds invest is also taken into account.

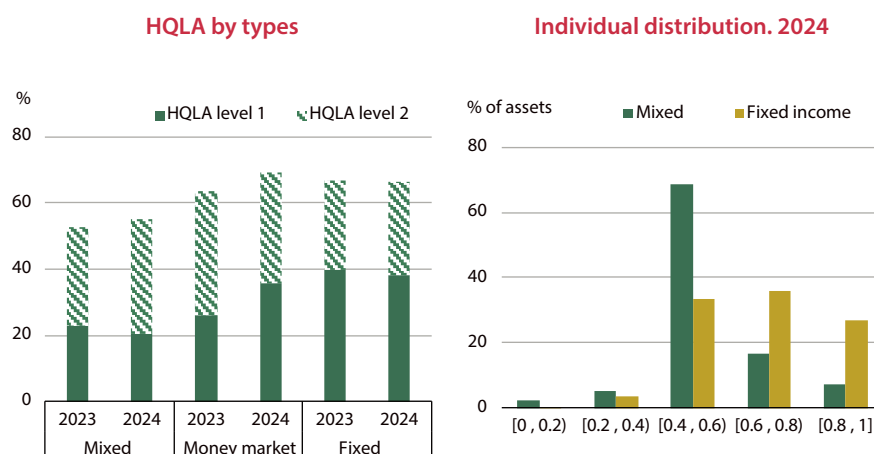
In 2024, the share of highly liquid assets (HQLA Level 1) declined slightly in fixed income and mixed funds – from previously high levels – while increasing in money market funds. The ratio stood at 20.6% for mixed funds and 38.1% for fixed income funds, in both cases around 2 pp below the levels recorded one year earlier. For money market funds, the share reached 35.9%, following an increase of almost 10 pp over the year. Within highly liquid assets, the largest component consisted of high-quality sovereign debt, particularly in fixed income funds, where it accounted for almost three quarters of the total. In mixed funds, cash holdings also represented a significant component, accounting for 22% of liquid assets.

By contrast, the HQLA Level 2 ratio increased in 2024 for both money market and mixed funds, rising from 63.7% to 69.1% in the former and from 52.5% to 55.0% in the latter, while remaining broadly unchanged in fixed income funds (66.5%). In mixed funds, the improvement in liquidity was driven mainly by higher credit quality within public debt holdings, with assets rated A or above accounting for 67.9% of this portfolio, up from 54.1% in 2023. Looking at the distribution across funds, there was a marked increase in those with a high share of liquid assets (exceeding 60% of assets), which rose from 20.6% of total assets to 24.2% (see the right-hand panel of Figure 18). In fixed income funds, 2024 saw a reduction in holdings of public debt alongside increased investment in private fixed income.

While this shift would normally weigh on liquidity indicators,⁴¹ the effect was offset by a higher share of assets with the highest credit ratings (AA/AAA), which rose to 19.5%, 2 pp higher than in 2023. The marked increase in liquidity observed in money market funds, in turn, reflected a reallocation within fixed income portfolios. Unlike other fund categories, these funds increased their exposure to public debt at the expense of private debt.⁴²

Liquidity risk of investment funds: distribution of HQLA assets^{1,2}

FIGURE 18



Source: CNMV.

- Assets classified under HQLA Level 1 comprise cash, deposits and high-quality sovereign debt.
- HQLA Level 2 includes, in addition to Level 1 assets, 50% of the value of equities, as well as variable proportions of sovereign debt, private fixed income and securitisation instruments, depending on their credit rating. The percentage of government bonds considered liquid ranges from 0% to 100%, corporate fixed income from 0% to 85%, and securitisations from 0% to 65%.

Finally, with regard to the level of leverage of CISs, a distinction can be made between financial leverage (indebtedness) and synthetic leverage (through the use of derivatives). As regards financial leverage, Spanish legislation provides that transferable securities CISs (with the exception of hedge funds) may incur borrowing only on a temporary basis in order to address transitory liquidity needs⁴³ and in no case may such borrowing exceed 10% of net assets.⁴⁴ In addition, these institutions may take on leverage through the use of derivatives, a practice that may significantly amplify other risks already present in these vehicles. For this reason, leverage is subject to ongoing monitoring, using the methodology proposed by the International Organization of Securities Commissions (IOSCO).⁴⁵

41 For a given credit rating, sovereign debt carries a higher weight within the HQLA framework than private fixed income instruments.

42 Within fund portfolios, the share of sovereign debt increased from 18.4% in 2023 to 25.6% in 2024, while the share of private debt declined from 63.0% to 52.7%.

43 Royal Decree 1082/2012, of 13 July, approving the implementing Regulations of the Collective Investment Schemes Act of 35/2003 of 4 November.

44 SICAVs can exceptionally reach 15% when they resort to financing for the purchase of properties necessary for their activity. At the end of 2024, average financial indebtedness of IFs and SICAVs included in the NBFIs stood at 0.02% of net assets.

45 IOSCO (2019). *Final Report on Recommendations for a Framework Assessing Leverage in Investment Funds*, December.

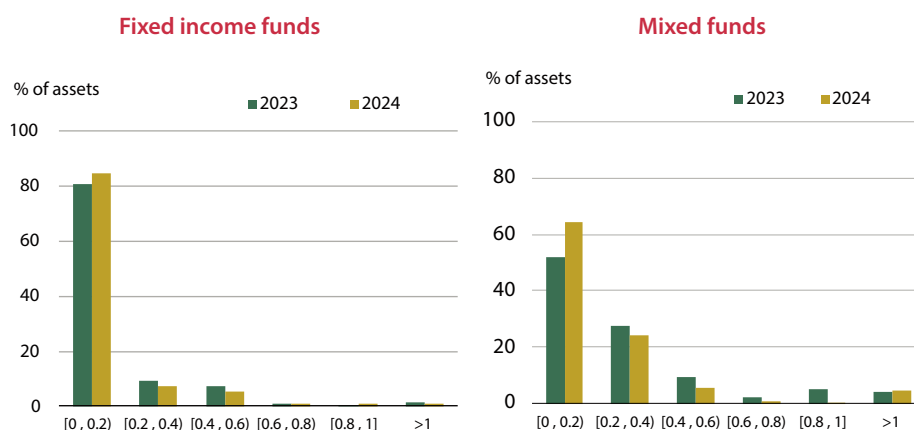
Under this methodology, gross exposure is calculated as the sum of the notional amounts of derivative contracts, with the option to apply a delta adjustment⁴⁶ in the case of options. Net exposure is derived from gross exposure after applying specified netting arrangements between long and short positions, thereby neutralising transactions undertaken for hedging purposes in relation to the cash portfolio. European regulation has developed a specific methodology for calculating net exposure, known as the “commitment method”, which sets out detailed rules for offsetting long and short positions. Leverage is defined as the ratio between derivative exposure (gross or net) and the net assets of the institution.

At the end of 2024, average gross derivative exposure for investment funds (IFs) and SICAVs included in the NBFi stood at 14.4% of net assets, down from 19.0% in the previous year. Based on the information available to the CNMV, no material vulnerabilities continue to be identified in relation to the risks potentially arising from this activity, including counterparty, market and contagion risks. On a net basis, average exposure amounted to 8.2% of net assets at year-end 2024, slightly below the 2023 level (9.0%). This figure was calculated for 94% of IFs and SICAVs, as the remaining 6% are not required to calculate net leverage.⁴⁷ None of the leverage measures referred to above captures potential indirect exposures arising from investments in other CISs that themselves employ leverage.

An individual-level assessment of gross leverage in the fixed income and mixed fund subcategories⁴⁸ indicates that a large proportion of funds either made no use of derivatives or did so only to a very limited extent.⁴⁹ Accordingly, market risk exposure remained below 40% for more than 90% of fixed income funds and was at a comparable level for mixed funds, measured in terms of assets. By contrast, only 1.9% of fixed income funds recorded leverage above 80%, while this share rose to 5.2% among mixed funds.

Gross leverage in the different types of investment funds

FIGURE 19



Source: CNMV.

46 It reflects the likelihood of the option being exercised.
 47 Most of these are IFs that use the VaR (value at risk) methodology to calculate leverage risk. This group also includes some funds with a guaranteed return objective.
 48 Money market funds may only contract derivatives to hedge both interest rate and exchange rate risk.
 49 In aggregate terms, fixed income funds had a leverage ratio of 10.5%, while mixed funds had a leverage ratio of 20.7%.

With regard to hedge funds, despite their more flexible regulatory framework – which allows for higher leverage – average gross exposure remained low, at 25% at the end of 2024,⁵⁰ and the majority of funds (in terms of assets) made no use of derivatives. As regards CISs that invest in other hedge funds (funds of hedge funds),⁵¹ it should be borne in mind that leverage is assumed indirectly through investment in hedge funds themselves. Directly reported derivatives activity is very limited, with only three institutions reporting commitments related to short positions.⁵²

Counterparty risk – that is, the risk of transmission of a counterparty’s financial difficulties to the CIS, which is typically amplified by high leverage – remains negligible for Spanish investment funds. This largely reflects the fact that derivatives transactions are predominantly cleared through central counterparties. At the end of 2024, the debit balance of all investment funds and SICAVs included in the NBFI, arising from positive derivative positions pending settlement, represented 0.1% of total net assets (0.15% in 2023). After deducting collateral received from counterparties, net counterparty risk stood at 0.01% of net assets. For hedge funds, these figures were slightly higher than for IFs and SICAVs, amounting to 0.7% in gross terms and 0.4% net of collateral.

3.1.2 Economic function 2: short-term funding-dependent lending

Economic function 2, defined as lending activity reliant on short-term funding, is represented in Spain by finance companies and accounts for only a very small share of NBFI. That said, this function can be performed by a wide range of entities and, depending on the jurisdiction, under differing regulatory frameworks. In Spain, as noted earlier in this report, finance companies held assets in excess of €52 billion at the end of 2024, equivalent to 9.5% of the assets of the five economic functions. However, the high proportion of assets consolidated within banking groups (85% of the total) means that this function has only a marginal presence in the narrow measure of NBFI, accounting for 2.0% in 2024, 0.2 pp less than in 2023.

The risk assessment for entities performing this function shows no major changes compared with previous reports. Credit and liquidity risks remain the most prominent, reflecting the nature of their business model. As shown in Figure 20, the risk indicators display a high degree of stability over time. Even where the highest ratios are observed, these levels are not a particular cause for concern, given that lending activity necessarily entails elevated credit and liquidity risk. A more precise assessment would require more detailed information on the types of credit extended and the characteristics of the borrowers. Nevertheless, it should be recalled that the impact of these entities’ activity on financial stability is very limited, given their relatively small size.

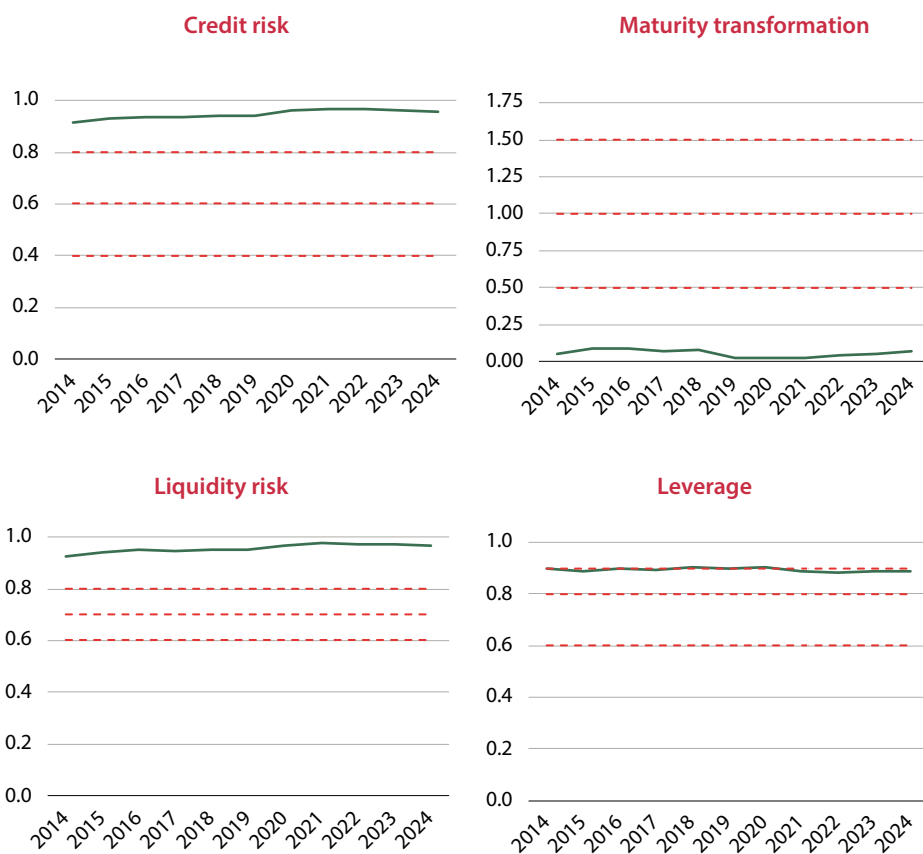
50 Calculated from the sum of the nominal amounts of derivatives contracts, without making any delta adjustment in the case of options.

51 Funds and companies that invest in other hedge funds.

52 Possibly for hedging purposes.

Risks trends for finance companies

FIGURE 20



Source: CNMV.

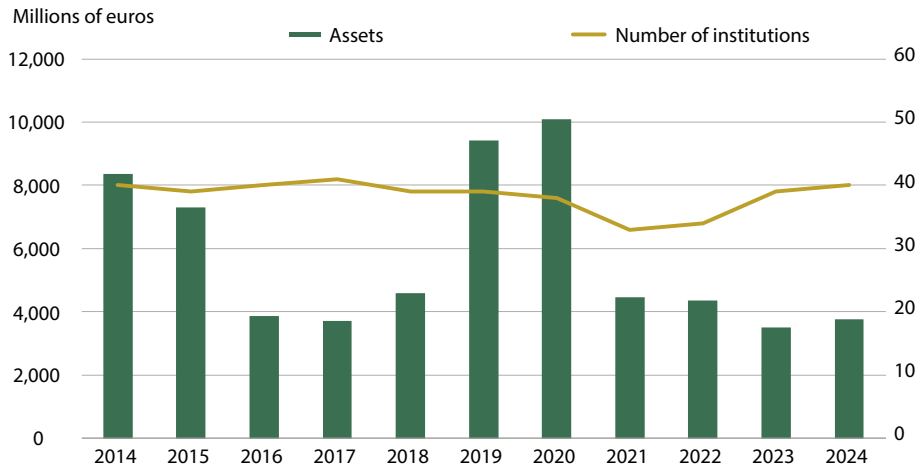
3.1.3 Economic function 3: market intermediation reliant on short-term or secured funding

This economic function comprises broker-dealers, which numbered 40 at the end of 2024 (39 in 2023), with total financial assets of €3.74 billion, up 7.2% year on year. Despite this increase, and although the number of entities has grown in recent years, the sector’s asset volume remains very low and close to historical lows (see Figure 21). As mentioned in previous editions of this publication, the broker-dealer sector (and investment firms more broadly) is very small relative to other jurisdictions. In Spain, investment services are provided mainly by credit institutions: in 2024, 87% of income generated in this area corresponded to credit institutions, with the remaining 13% attributable to other entities, including broker-dealers, brokers and financial advisory firms.⁵³

53 The annual analysis conducted by the CNMV, which assesses financial institutions’ business models beyond their legal form, shows that nearly 70% of activity related to the provision of investment services in Spain—including collective investment scheme management and measured by fee income—was carried out by traditional commercial banks or entities belonging to their banking groups. For further details, refer to chapter I.3 of the CNMV Annual Report.

Assets of broker-dealers and number of institutions

FIGURE 21

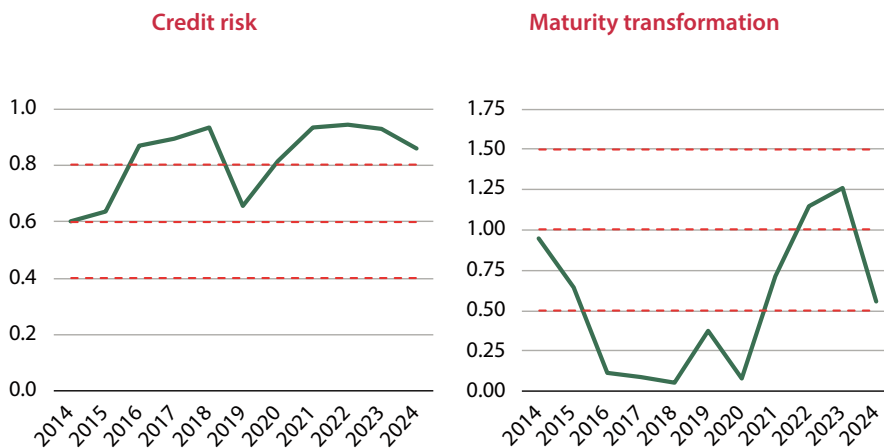


Source: CNMV.

Within the five economic functions, broker-dealers play a very limited role, accounting for less than 1% of the total. As a result, their activity poses only a minimal risk to financial stability. Nevertheless, for illustrative purposes, Figure 22 presents the risk indicators for these institutions. The different panels show that the most relevant risks are credit and liquidity risk, while maturity transformation risk declined significantly in 2024. With regard to liquidity risk, information reported by Spanish institutions to the CNMV shows that all broker-dealers comfortably met the minimum requirements laid down in Regulation (EU) No. 2033/2019.^{54, 55}

Risks trends for broker-dealers

FIGURE 22

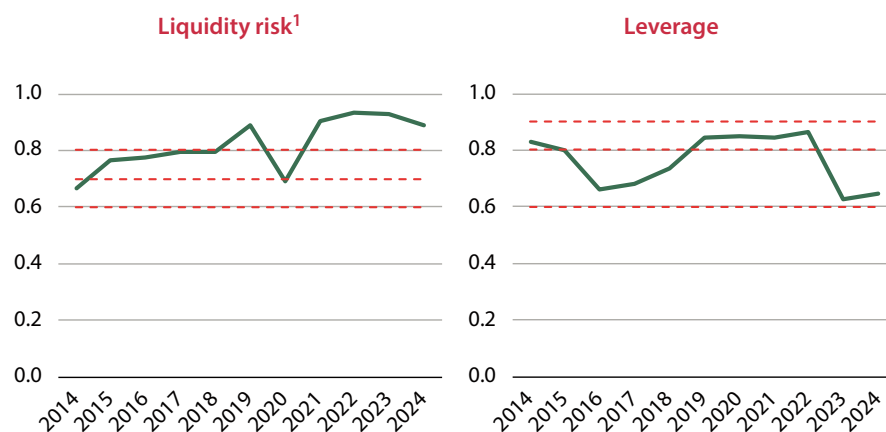


54 Regulation (EU) No. 2033/2019 of the European Parliament and of the Council, of 27 November 2019, on the prudential requirements of investment firms and amending Regulations (EU) No. 1093/2010, (EU) No. 575/2013, (EU) No. 600/2014, and (EU) No. 806/2014.

55 The minimum liquidity requirement is at least one-third of the requirement based on fixed overheads, which is set at 25% of the fixed overheads from the previous financial year.

Risks trends for broker-dealers (continuation)

FIGURE 22



Source: CNMV.

1 From 2021, with the entry into force of the Regulation referred to in footnote 54 and through the new liquidity requirements statement, the total amount of deposits can be broken down between own and client deposits. As a result, customer deposits have been excluded from the calculation of liquidity risk from that date, meaning that figures prior to that date are not comparable with those thereafter.

3.1.4 Economic function 4: facilitating credit creation

In Spain, this category comprises mutual guarantee companies, whose assets, at just under €1.7 billion, account for only 0.3% of the assets of the five economic functions. The primary purpose of these entities is to facilitate SMEs' access to credit and, more broadly, to improve their financing conditions by providing guarantees to banks, public administrations, and customers or suppliers. Their relative size remains below the minimum threshold (0.5%) required for a more detailed assessment of their financial risks.

Although they are not yet formally included within the NBFi, it is important to monitor crowdfunding platforms, which would naturally fall within this economic function, as they act as intermediaries between investors and entities seeking financing. This subsector has expanded significantly in Spain in recent years. At the end of 2024, 25 crowdfunding service providers (PSFPs) were registered, and total funding raised during the year amounted to €451.8 million, representing an increase of 61.4% compared with 2023. Of this total, around 60% was raised through debt instruments, while the remaining 40% was raised through equity instruments.

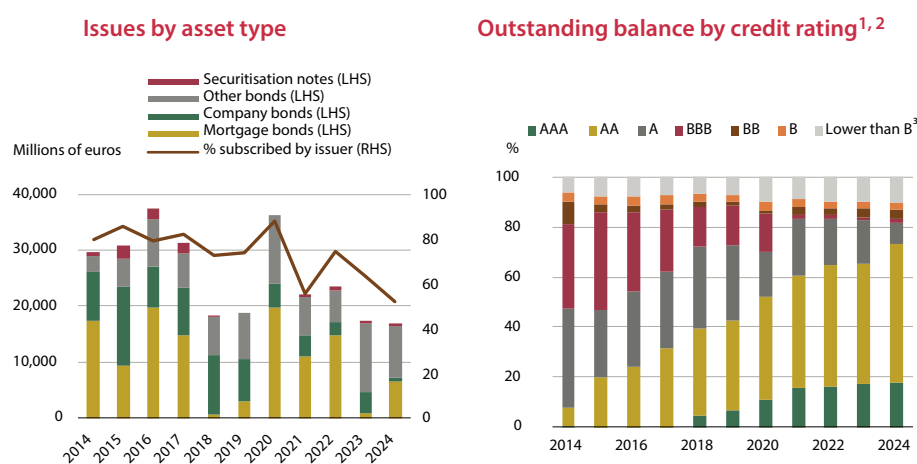
3.1.5 Economic function 5: credit intermediation based on securitisation for financing financial institutions

This category comprises structured finance vehicles (SFVs), whose purpose is the securitisation of assets. These vehicles provide funding to securitisation originators – mostly banks – whether or not there is an effective transfer of assets or risks, and may therefore constitute a key link in credit intermediation chains. Accordingly, they need to be taken into account when assessing the risks associated with NBFi, particularly those related to maturity transformation.⁵⁶

⁵⁶ As noted in previous editions of this report, securitisation in Spain is generally structured so that payments are covered by the amortisation of asset pools, making this issue relatively minor. Moreover,

In Spain, although securitisation remains the second most significant sector within the NBF, its relative importance has declined markedly in recent years. As already noted, at the end of 2024 the financial assets of SFVs stood at just under €128 billion, representing 23.2% of the aggregate assets of the five economic functions – 4 pp less than in the previous year. As in the case of finance companies, and in line with the discussion above, a very high proportion of securitisation activity is consolidated within banking groups.⁵⁷ Once this consolidation effect is taken into account, its relative weight within the NBF falls to 5.4% (6.2% in 2023).

Evolution of securitisation bonds and commercial paper by type of asset FIGURE 23



Source: CNMV.

- 1 MARF is not included.
- 2 Ratings grouped according to their equivalent to Standard and Poor's.
- 3 Includes unrated issues.

Issuance of securitisation bonds and commercial paper amounted to €17 billion in 2024, following a 2.5% decline compared with the previous year (see left-hand panel of Figure 23). The share of securitisation bonds subscribed by the issuer or originator itself was significantly lower than in 2023, falling to 52.2% from 63.0% in the previous year. By asset type, issuance of mortgage-backed bonds – very limited in 2023 (just over €800 million) – rose sharply in 2024, exceeding €6.5 billion and accounting for 38.7% of the total. Despite this increase, issuance levels remained below those recorded in earlier years. By contrast, bonds backed by consumer loans (included under “Other bonds”), which represented 37.1% of total issuance, have gained considerable importance over the past two years, up from just over 3% in 2022. Finally, although credit ratings for securitisation vehicles have stabilised in recent years (see Figure 23), an improvement was observed in 2024. Assets rated AA increased at the expense of

securitisation in Spain has typically served more as a financing tool than a means of risk transfer, which stands in contrast to other economies where it was a key issue during the 2008 financial crisis.

57 The reason this occurs in Spain is that, in most cases, the transferor entity retains control in line with Bank of Spain Circular 4/2017 and IFRS 10- Consolidated Financial Statements. This is mainly because the entity remains exposed to the variable returns of the funds and securitised assets, either through credit enhancements or a swap where it receives returns from the securitised portfolio while paying the bond coupons. Under current accounting standards, in such cases, the vehicle must stay on the balance sheet of the issuing banks and, consequently, is subject to traditional banking regulation.

those rated BBB: the former increased from 48.0% to 55.4% of the total, while the latter decreased from 17.6% to 8.5%.

Issuance of simple, transparent and standardised (STS) securitisation bonds, which is increasing year-on-year, exceeded €8.1 billion in 2024, almost half of total issues (38.5% the previous year). These instruments are regulated by Regulation (EU) No. 2017/2402,⁵⁸ which establishes a general framework for securitisation and a specific regime for STS securitisations.⁵⁹ The outstanding amount of these instruments also rose, increasing by more than 5 pp to reach 28.6% of the total.

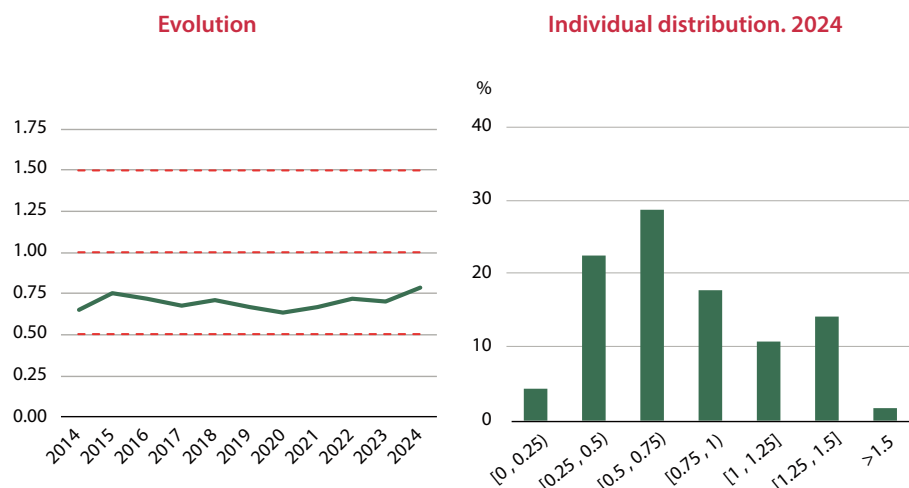
As regards risk assessment for these entities, **maturity transformation risk is clearly the most significant, while liquidity risk is also relevant to a lesser extent.** By contrast, for SFVs the assessment of credit and leverage risk is of limited relevance, at least in Spain.⁶⁰ In 2024, the proportion of illiquid assets in these entities stood at 92.5%, a figure that has remained very stable in recent years: almost the entire asset base consists of transferred loans, leaving very few liquid assets. At the individual level, more than 83% of securitisation funds (by assets) held liquid assets below 10%, while only 1.4% recorded liquid asset levels above 40%.

The risk indicator for maturity transformation reached 78.5% in 2024, almost 8 pp higher than in 2023 (see left-hand panel of Figure 24), and therefore remains within the moderate-risk range. There are substantial differences across vehicles: while the majority – almost 75% in asset-weighted terms – recorded values below 100% (low or moderate risk), 1.7% of vehicles fell into the high-risk category (see right-hand panel of Figure 24). In Spain, most securitised assets originate from long-term loans or credit – mainly mortgages – as do the securities issued on the liability side. At the end of 2024, short-term assets and liabilities of Spanish securitisation funds accounted for 36.0% and 22.3% of the balance sheet, respectively. These shares have increased in recent years, reflecting the growing securitisation of consumer and car loans.

58 Amended by Regulation (EU) 2021/557 (SECR).

59 For a securitisation to qualify as STS, it must meet certain simplicity requirements (ownership of the credit exposures must be transferred to the securitisation vehicle through a true sale), transparency requirements (potential investors must be provided with information on the historical performance of defaults and losses), and standardisation requirements (compliance with risk-retention rules and a prohibition on the use of derivatives other than for hedging purposes). The aim of introducing this classification is to support investor distribution relative to more complex securitisations, as well as to allow for more favourable treatment in terms of capital requirements and risk-retention obligations for the originator.

60 Credit risk is, by definition, close to 100%, since the entire asset side of SFVs consists of loans transferred by the originating or assigning entity. A similar situation applies to leverage, as securitisation funds have no own funds and, consequently, the ratio, as defined, is always equal to one.



Source: CNMV.

3.2 Use of macroprudential tools

Liquidity management tools⁶¹ (LMTs) are designed to mitigate the risk arising from liquidity mismatches in investment funds, understood as the timing gap between investors’ ability to redeem their units and the time required to liquidate the fund’s underlying assets in an orderly manner. These tools differ widely in nature – ranging from anti-dilution mechanisms,⁶² to measures that introduce flexibility in the settlement of redemptions, to instruments that restrict or cap redemptions – as well as in the conditions under which they may be activated,⁶³ whether by the fund manager or by the supervisor. Their availability also varies across European jurisdictions. In comparative terms, Spain stands out for the broad range of liquidity management tools available.⁶⁴ Ongoing initiatives at European level are expected to contribute to greater consistency in the toolkit available and to encourage more widespread use across the European Union.

In November 2024, IOSCO launched a public consultation on a proposal to revise its 2018 recommendations on liquidity management in CISs, together with new

61 The key tools available to undertakings for UCITS include suspending redemptions, side pockets, partial redemptions, advance notice for redemptions, in-kind redemptions, redemption co-benefiting the fund, swing pricing, and minimum liquidity ratios. In the context of hedge funds, gates are added to these tools.

62 These mechanisms aim to pass the transaction costs incurred by the fund when selling assets onto redeeming investors (with purchase costs passed to subscribers).

63 Typically, authorities within companies activate these tools, but the CNMV can also do so under certain circumstances, such as retired pensioners redemptions or reinforcing liquid assets. The most recent tool, introduced during the COVID-19 crisis in March 2020, allows for the establishment of notice periods for redemptions. This can be done without adhering to the usual requirements regarding term, minimum amount, and prior inclusion in management rules. Both the manager and the CNMV can set these deadlines.

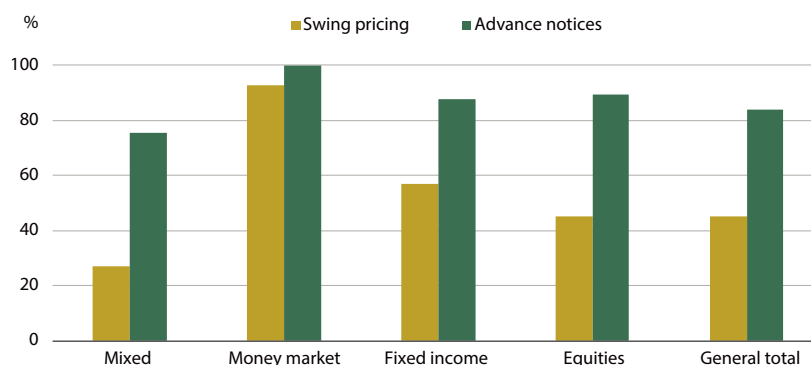
64 For more detailed information, see Exhibit 2 of the NBF1 monitor published in 2020.

guidelines on their effective implementation.⁶⁵ The aim was to align IOSCO's recommendations with those of the FSB, which were revised in December 2023, in particular by: i) categorising investment funds according to the liquidity of their assets; ii) encouraging the use of liquidity management tools; and iii) placing greater emphasis on anti-dilutive tools to mitigate potential first-mover advantage, incorporating the content of IOSCO's recent guidance on their application.

The latest data available to the CNMV indicate that Spanish fund managers continue to have a high level of access to liquidity management tools, with a slight increase in the proportion of funds for which such tools are envisaged. Specifically, at the end of June 2025, 83.7% of investment funds (in terms of assets) provided in their prospectus for the possibility of requiring advance notice of up to 10 business days when redemptions exceeded €300,000, 1 pp more than a year earlier. In addition, 45.2% of funds in terms of assets provided, either in the prospectus or through a material event disclosure, for the use of swing pricing mechanisms or other anti-dilutive tools (up from 43.4% a year earlier). As shown in Figure 25, money market funds are the category most likely to make use of this type of mechanism, with 92.7% having the option available. It should be noted that, while these measures may be used on a recurring basis, no data are currently available on their frequency of application; only on the existence of the option to apply them when the conditions set out in the prospectus or the management company's internal procedures are met.

Availability of liquidity management tools in IFs

FIGURE 25



Source: CNMV.

In addition to the measures described above, Spanish CISs may, in exceptional circumstances, use other tools such as partial subscriptions and redemptions. This mechanism is applied when some of the securities in which a CIS invests are affected by trading suspensions or by events that temporarily render them illiquid and prevent a reliable valuation. When partial subscriptions and redemptions are applied, the share of the CIS's assets represented by the affected investments immediately prior to the suspension is determined. On that basis, part of the units subscribed for may remain pending allocation, or part of the redemption amount may remain pending payment. Once the extraordinary circumstances that gave rise to the partial subscriptions and redemptions have been resolved, the fund allocates the outstanding units and settles the amounts pending payment,

65 IOSCO (2024). ["IOSCO Publishes Consultation Report on Updated Liquidity Risk Management Recommendations for Collective Investment Schemes"](#). The final report was published in May 2025.

based on the updated market value of the assets affected by the event. A simpler variant of this mechanism involves temporarily valuing the illiquid assets at zero, in which case compensation is made only to unitholders who redeemed during that period. At the end of October 2025, six institutions (three IFs and three SICAVs) held securities affected by events that prevented their valuation—three as a result of the war in Ukraine and three due to trading suspensions affecting portfolio securities—with the maximum suspended amount representing 12% of their assets.

3.2.1 Stress tests

Stress tests are one of the supervisory tools used to assess the resilience of supervised entities under a highly adverse hypothetical scenario. In the case of investment funds, stress tests are primarily designed to assess their capacity to withstand an exceptional increase in redemptions, although other resilience exercises are also conducted, such as those related to climate change.^{66, 67} For the purposes of the exercise presented in this Monitor, fund resilience depends on both the magnitude of the assumed redemption shock and the liquidity conditions of the assets held in their portfolios. Accordingly, the exercise constitutes an assessment of liquidity mismatch risk in investment funds—widely regarded as the most significant risk for these institutions from a financial stability perspective—which arises when redemption patterns are not sufficiently aligned with the liquidity profile of the portfolio. The following paragraphs summarise the main results of this type of exercise applied to Spanish UCITS, which is conducted on a semi-annual basis using a methodology initially developed by the European Securities and Markets Authority (STRESI framework [ESMA, 2019])⁶⁸ and subsequently extended by the CNMV (see Ojea, 2020).⁶⁹

The exercise conducted for this publication, using data on Spanish investment funds from June 2009 to June 2025, incorporates a revised methodology. This revision has made it possible to expand both the number of funds analysed and the time span covered. The analysis yields several findings, two of which are particularly relevant: i) quantifying the share of liquid assets in investment fund portfolios, and ii) identifying funds that could face difficulties in meeting redemptions under different adverse scenarios.

66 See Crisóstomo, R. (2022). *Measuring transition risk in investment funds*. CNMV, Working Paper No. 81. Available at: https://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/DT_81_Measuring_Transition_Risken.pdf, and Mykhalyuk, D. (2025). *Dynamic modelling of climate-related shocks in the Spanish fund sector*. CNMV, Working Paper No. 91. Available at: https://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/DT_91_Dynamic_modelling_EN_vfen.pdf, which constitutes an extension of the above.

67 The relevance of interconnections among different market participants is giving rise to the need for a more comprehensive assessment of risks. Developing system-wide stress tests, examples of which have been seen in Europe, can be a highly effective tool in this context.

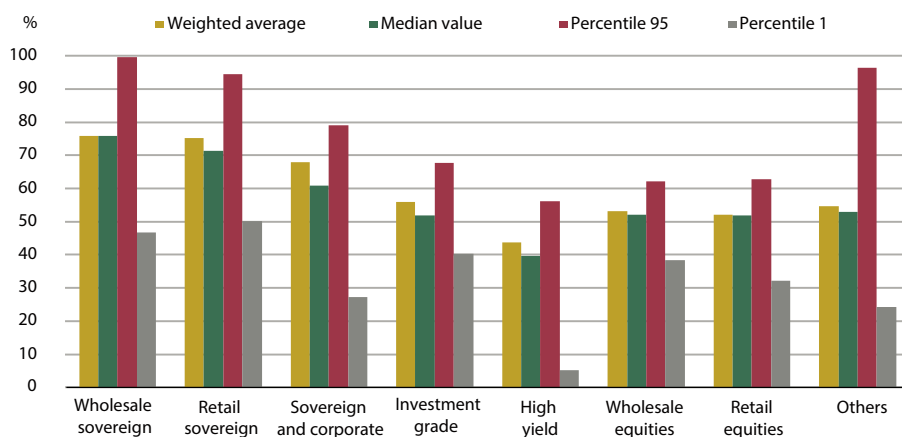
68 ESMA (2019). *Stress simulation for Investment funds*. ESMA Economic Report.

69 Ojea, J. (2020) “Cuantificación de la incertidumbre sobre los escenarios adversos de liquidez para los fondos de inversión”. *CNMV Bulletin*. Quarter II, pp. 23–44. Available at: https://www.cnmv.es/DocPortal/Publicaciones/Boletin/Boletin_II_2020_ENen.PDF

Under the HQLA⁷⁰ methodology, the weighted average share of liquid assets stood in June at between 44% and 76% of assets, depending on the fund category. Typically, high-yield corporate bonds have the lowest average liquidity ratios and a higher percentage of funds with significantly lower liquidity compared to their category and other categories. Conversely, sovereign bonds exhibit the highest proportions of liquid assets.

Proportion of HQLA of investment funds by category

FIGURE 26



Source: CNMV.

The number of funds that could face difficulties under this theoretical exercise is very small: it ranges from one fund in the second most severe scenario to two funds in the most severe scenario, all of them belonging to the high-yield corporate fixed income category. A total of five theoretical redemption scenarios of varying severity have been estimated. One scenario was proposed by ESMA in its 2019 exercise, while the others were developed by the CNMV. For reference, the most severe scenario ($CoES(\alpha = \beta = \sqrt{0.4\%})$ ⁷¹ is up to 11 times more severe than the worst week observed during the COVID-19 crisis.⁷² Funds facing difficulties were identified by comparing the estimated volume of liquid assets for each fund with the size of the estimated redemption shock.

70 The HQLA approach assesses the liquidity of a fund's portfolio using an index that assigns a liquidity degree (a weight ranging from 0 to 100) to each asset class based on its characteristics: $HQLA_i = \sum_{k=1}^n (w_{i,k} * s_{i,k}) * 100$. Here, $w_{i,k}$ is the weight (liquidity degree) of asset k in fund i and $s_{i,k}$ represents the proportion of that asset in the fund's portfolio. Essentially, the HQLA index is a weighted average of the liquidity of the assets within the fund's portfolio. The weights, $w_{i,k}$, align with those applied in Basel III.

71 The CoES is formally defined as: $CoES_{i|j}(\alpha, \beta) = \int_0^u F_i^{-1}(v) dv$, where $u = F_i^{-1}(CoVaR_{i|j}(\alpha, \beta))$ and F_i^{-1} is the inverse distribution function of variable i . Meanwhile, the $CoVaR$ represents the value at which: $Pr(Net\ flow\ \%_i < CoVaR_{i|j}(\alpha, \beta) \mid Net\ flow\ \%_j < VaR_j(\alpha)) = \beta$, where $VaR_j(\alpha)$ is the percentile α of net flows j that determines the severity of conditional redemptions, while β is the percentile that determines the severity of redemptions conditional on the above scenario. For example, under the $CoES$ approach used ($\alpha = \beta = \sqrt{5\%}$) to calculate the redemption shock faced by funds in each category, the analysis considers the 22.36% ($\sqrt{5\%}$) largest redemption episodes for each category, selected from periods in which the fund sector as a whole experienced its largest 22.36% of redemptions.

72 The methodological revision introduced this year, which has expanded both the number of funds and the time periods included in the sample, has altered the distribution of net flows, resulting in adverse theoretical shocks that are somewhat less severe than those estimated in previous years.

The results of this exercise continue to demonstrate a high degree of resilience in the securities investment fund market against the proposed scenarios. As shown in Table 6, which displays the percentage of funds (and assets) in each category that might face challenges in projected to lose redemptions under different scenarios, only one category – high-yield corporate fixed income – could encounter issues in any of the scenarios considered. These funds represent 2.9% of the funds considered in this category and 1.5% of the assets of the sample of funds, in the most adverse scenario. No other categories show funds facing difficulties.

Results of stress tests (aggregate flows)

TABLE 6

%

Number of funds with RCR¹ < 1 in each style/Total funds in each style (in %)

Scenarios	Wholesale sovereign	Retail sovereign	Sovereign and corporate	Investment-grade corporate	High-yield corporate	Wholesale equities	Retail equities	Other
<i>ES</i> ($\alpha = 3\%$) ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{5\%}$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{3\%}$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{2\%}$)	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{0.4\%}$) ³	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0

%

Assets of funds with RCR¹ < 1 in each style/Total funds in each style (in %)

Scenarios	Wholesale sovereign	Retail sovereign	Sovereign and corporate	Investment-grade corporate	High-yield corporate	Wholesale equities	Retail equities	Other
<i>ES</i> ($\alpha = 3\%$) ²	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{5\%}$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{3\%}$)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{2\%}$)	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
<i>CoES</i> ($\alpha = \beta = \sqrt{0.4\%}$) ³	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0

Source: CNMV.

- 1 RCR: The redemption coverage ratio is defined as the ratio between a fund's liquid assets and the size of the redemption. Funds with an RCR of less than one are identified as those likely to face direct liquidity issues.
- 2 This represents the main scenario in the stress test conducted by ESMA (2019). *ES* (Expected Shortfall) is a risk measure that, in this context, assesses expected redemptions by focusing exclusively on the largest potential redemptions. Here, the top 3% of redemptions are considered.
- 3 There are two funds that could face liquidity problems, both of which are in the high-yield fixed income category.

