30 January 2024
ESMA60-1389274163-2572

ESMA TRV Risk Analysis

Financial Stability

Assessing risks posed by leveraged AIFs in the EU

ESMA Report on Trends, Risks and Vulnerabilities Risk Analysis

ISBN 978-92-95235-07-6, DOI 10.2856/036462, EK-03-24-021-EN-N
European Securities and Markets Authority (ESMA)
Economics, Financial Stability and Risk Department
201-203 Rue de Bercy
FR-75012 Paris
risk.analysis@esma.europa.eu
ESMA - 201-203 rue de Bercy - CS 80910 - 75589 Paris Cedex 12 - France - www.esma.europa.eu
Cover photo : Image Microsoft 36

Financial Stability

Assessing the risks posed by leveraged AIFs in the EU

Contact : Jean-baptiste.haquin@esma.europa.eu[1]

Summary

Article 25 of the EU's alternative investment fund managers directive (AIFMD) states that national competent authorities (NCAs) will assess the risks that the use of leverage by an alternative investment funds manager (AIFM) could entail. Where necessary, NCAs can address the risks identified by imposing limits to the level of leverage that an AIFM is entitled to employ or other restrictions on the management of the AIF. ESMA's Guidelines on Article 25 of the AIFMD issued in 2020[2] operationalise this framework by setting out a common approach to identify and assess funds posing leverage-related risks. As a macroprudential framework, the Guidelines put the emphasis on the risks posed by groups of AIFs of the same type and similar risk profiles that may collectively present a risk to financial stability.

This article contributes to ESMA's financial stability objective by presenting the AIFMD Art. 25 framework and the results of the risk assessment performed by ESMA and NCAs in 2023, based on the end of 2022 AIFMD data. One focus of the 2023 risk assessment are the risks posed by real estate (RE) funds. It finds that RE funds pose low risks on an individual basis, due to their limited use of leverage or size in most jurisdictions, but could be more systemically relevant in jurisdictions where groups of funds own a large share of the RE market on aggregate. This is the case in Ireland where the Central Bank of Ireland (CBI) imposed leverage limits for those funds[3].

NCAs have also reported risks posed in one ancillary fund category, the "other" funds which is by far the largest category in the sample. This is especially the case for liability-driven investment (LDI) funds, which gain leveraged exposures to the UK government bond market. Following the severe stress experienced by LDI funds in September 2022, authorities in Luxembourg and Ireland communicated on the suitable levels of resilience (i.e. the increase in yields that a fund can withstand before its NAV turns negative) those funds should maintain. They also implemented additional data collection on LDI funds to monitor them on an enhanced basis. As potential risks have remained elevated, NCAs are consulting on maintaining such resilience requirements under Article 25 AIFMD.

Overall, we find that the implementation of the ESMA Guidelines, as reflected by the risk assessment reported, is improving the monitoring of the EU AIF sector. At the national level, NCAs generally managed to overcome existing AIFMD data gaps by using additional data sources and other information from fund managers to have an accurate view of the risk in their jurisdiction. This article complements ESMA's monitoring framework on AIFs, including the AIF market report[4] that reports annually on market development and key risk metrics, such as leverage and liquidity.

---

1 This article was written by Jean-Baptiste Haquin and Roberto Proietti.

2 Guidelines_on_article_25_aifmd, 2020, ESMA.

3 Financial Stability Review, 2022, Central Bank of Ireland.

4 EU alternative investment funds 2023, ESMA market report, January 2024.

Introduction

The provisions of Article 25 of the alternative investment fund managers directive (AIFMD) provide some of the main financial stability tools available to financial regulators in the investment funds space, to address risks posed by leveraged alternative investment funds (AIFs) in the EU. The risk analysis and assessment under Article 25 of the AIFMD by the national competent authorities (NCAs) and ESMA is based on AIFMD data and risk indicators developed by ESMA and NCAs. Where necessary, NCAs can address the risks identified by imposing limits to the level of leverage that an alternative investment fund manager (AIFM) is entitled to employ or other restrictions on the management of the AIF.

ESMA's Guidelines on Article 25 of the AIFMD operationalise this framework by setting out a common approach to identify and assess AIFs posing leverage-related risks, so that NCAs can impose leverage limits or other restrictions, if necessary. The Article 25 AIFMD risk assessment follows a two-step approach:

- under step 1, NCAs should identify AIFs that are more likely to pose risks to the financial system;
- under step 2 NCAs should evaluate potential leverage-related systemic risks to the financial stability of the AIFs identified under step 1.

AIFs included in step 1 comprise all funds employing leverage on a substantial basis, as defined by regulation[5]. This corresponds to funds displaying a leverage ratio over 300% under the commitment method. In addition, the sample must include leveraged funds which are not substantially leveraged but have assets under management (AuM)[6] of more than EUR 500mn. Finally, other leveraged funds which may pose a risk to financial stability due to their "unusual" use of leverage must be included. For example, this is the case when the leverage level of a fund significantly differs from its peers.

In a second step, NCAs should assess the risks posed by the funds in their sample and include in their assessment at least the following risks:

a) risk of market impact;

b) risk of fire sales;

c) risk of direct spill-over to financial institutions;

d) risk of interruption in direct credit intermediation.

Against this background, the Guidelines provide NCAs with a set of indicators to be considered when performing their risk assessment (see Annex II) and a set of principles that NCAs should take into account when calibrating and imposing leverage limits. In addition, several NCAs have introduced an additional step to focus on the riskiest funds. This is especially the case of jurisdictions with a large number of funds. Generally, this deep-dive has led NCAs to focus on a much narrower sample. This is permitted to the extent that the less risky funds are not excluded from the analysis.

ESMA's Guidelines put a particular emphasis on the analysis of "groups of funds". Most of the time, NCAs group funds which are exposed to corporate debt issued by non-financial institutions, corporate debt issued by financial institutions, structured products or real estate assets. Some NCAs apply this grouping on a systematic basis, while other NCAs only group funds when they consider it appropriate.

This group analysis is particularly relevant in the case of "other" funds: while this is by far the largest category, it is also the most heterogeneous. Therefore, grouping facilitates the analysis. In fact, some of the most significant findings come from the analysis of groups of funds in the "other" funds category. This diverse fund category is all the more important as it represents half of the EU AIF industry in terms of

---

5 Article 111(1) of AIFMD Level 2 regulation

6 Assets under management (AuM): value of all assets in a portfolio, including all assets acquired through use of leverage (borrowing of cash or securities and leverage embedded in derivative positions). This concept of AuM is different from the industry approach of AuM, which typically relates to the assets on the balance sheet of the AIF;

Net asset value (NAV): the net value of the assets of the AIF (as opposed to the NAV per unit or share of the AIF).

net asset value (NAV), as reported in the ESMA market report[7].

Finally, the Guidelines foresee that NCAs should communicate the results of their risk assessment to ESMA at least annually and anytime they identify a risk relevant to financial stability. This assessment is based on the end of 2022 AIFMD data and the information, both quantitative and qualitative reported by NCAs in their risk assessments. It also summarises the discussions between ESMA and NCAs in 2023 on leverage related risks.

Risk assessment

Sample of funds

The findings of this article come from the combination of the risk assessments reported by NCAs for AIFMs in their jurisdiction and the risk assessment performed by ESMA at the EU level. Unless otherwise specified, figures below refer to the ESMA's sample while the qualitative assessment includes both ESMA and NCAs findings.

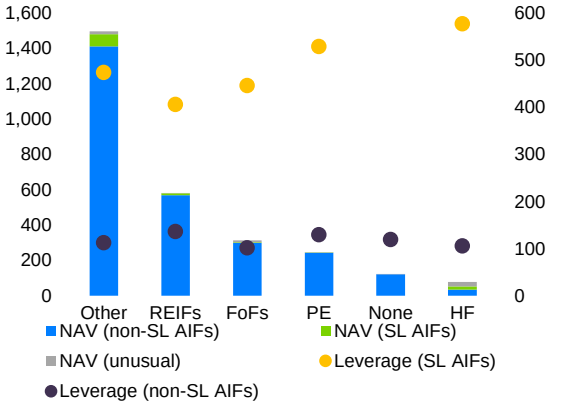
The ESMA's sample selection follows the methodology of the Guidelines on Article 25 described above. Under step 1, we only select AIFs posing potential leverage related risks[8]. This includes all funds employing leverage on a substantial basis and all leveraged funds managing more than EUR 500mn in AuM. In addition, we include funds which may pose a risk to financial stability due to their "unusual" use of leverage (for example, outliers in each fund category). The resulting sample of funds comprises 2,802 AIFs, representing a total net asset value (NAV) of EUR 2.8tn and an AuM of EUR 4.9tn. This represents 41% of the NAV of the EU AIF market. While both ESMA and NCAs use the same methodology, some funds may only be identified in one or the other sample: nevertheless, the ESMA sample is actually consistent with the funds included by NCAs in their Article 25 AIFMD risk assessment (EUR 2.9tn NAV in aggregate).

The vast majority (94% of NAV) of the reported funds fall into the category of "AIFs employing leverage not on a substantial basis and whose regulatory AuM is > EUR 500mn". This holds across categories except hedge funds, for which the proportion of significantly leveraged funds is much higher (46%) (Chart 1).

Chart 1

ESMA sample

Majority of "other" funds



Note: NAV of substantially leveraged (SL), large but non-substantially leveraged (non-SL) and unusually leveraged (unusual) AIFs, in 2022 (lhs, in EUR bn); Median commitment leverage of substantially leveraged and non-substantially leveraged AIFs, in 2022 (rhs, in %).
Sources: AIFMD, ESMA.

When looking at the type of AIFs included in ESMA's sample, they differ slightly from the composition of the AIF sector. Specifically, RE funds are overrepresented and account for 21% of the NAV in the ESMA's sample, followed by funds of funds (11%), private equity (9%) and hedge funds (2%). The residual category 'Other AIFs' represents the majority of funds included in step 1 (53% of NAV), while 4% of the funds are not reported under any of these categories.

Funds of funds

Generally, NCAs regarded risks posed by funds of funds (FoFs) as low. While the size of FoFs included in ESMA's sample is relatively large (EUR 303bn NAV), their leverage remains limited

7 EU alternative investment funds 2023, ESMA market report, January 2024.

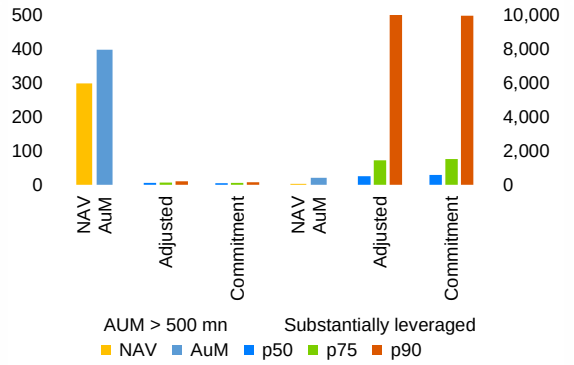
8 This means that funds excluded from the sample may pose other risks, such as liquidity, but these risks do not come from, and are not amplified by, the use of leverage.

overall, thus reducing the risk of **market impact** (i.e. the risk that a fund or a group of funds may "move" market prices due to their size). Although substantially leveraged FoFs may display much higher level of leverage, with a few funds (90th percentile of the substantially leverage funds) reporting a leverage ratio above 10,000% under both adjusted and commitment leverage metrics, these highly leveraged funds are small, with a combined AuM of EUR 21bn in total (Chart 2).

Chart 2

FoF leverage

Majority of FoFs not substantially leveraged



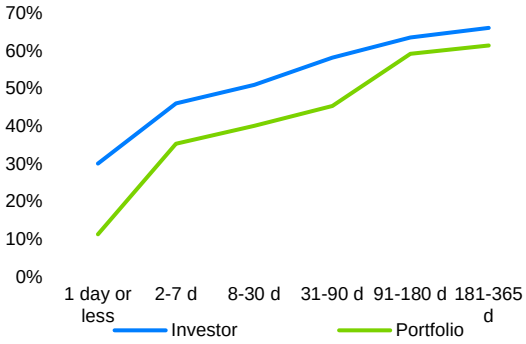
Note: NAV and AuM of EU AIFs using leverage on a substantial basis and leveraged AIFs managing more than EUR 500mn, in EUR bn (LHS); leverage measured by the adjusted method and the commitment method, for the median, the 75percentile and the 90 percentile, in % (rhs). Data for the EEA30, in 2022.
Sources: AIFMD database, National Competent Authorities, ESMA.

In the context of the Guidelines, the "risk of **fire sales**" specifically refers to the risk of forced sales to meet liquidity demands. It is heightened when funds present liquidity mismatches, in particular when they offer investors the possibility to redeem in less time than it takes them to sell assets. In the case of FoFs, their liquidity profile (Chart 3) points to a significant and persisting liquidity mismatch over the different time horizons. Within one day, investors can redeem up to 30% of the NAV (blue line), whereas only 11% of the assets can be liquidated within this time frame (green line). While the majority of FoFs are open-ended funds offering daily liquidity, the most leveraged funds, which are the most risky from a fire-sales perspective are generally closed-ended and have only a small AuM overall.

Chart 3

FoF liquidity profile

Material liquidity mismatches



Note: Portfolio and investor liquidity profiles of AIFs included in the Article 25 sample, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem.
Sources: AIFMD database, National Competent Authorities, ESMA.

The observed liquidity mismatch is attributable to a few large jurisdictions, in particular in Germany and to a lesser extent in Luxembourg. According to NCAs' assessment, the real liquidity mismatches tend to be lower as liquidity management tools (LMTs) such as gates, deferral of redemptions, or anti-dilution levies [9] at disposal of the AIFMs are not systematically reflected in the liquidity figures reported and act as a mitigation factor. In addition, some funds have credit bridge facilities in place to absorb, on a temporary basis, possible liquidity shocks on the liability side. Moreover, some funds are held by a unique investor, so the risk of first mover advantage in terms of redemptions does not apply.

Finally, some FoFs may pose a risk of **contagion**, (i.e. the risk of a fund to spread financial stress to other market participants). FoFs are particularly interconnected through their exposures (redemption requests may spillovers to funds held by the FoF) or through their investor base (especially banks, insurance companies, pension funds and other financial institutions). For the purpose of their risk assessment, NCAs

[9] In principle the use of LMTs should be taken into account when reporting the liquidity profile. However, NCAs noticed potential inconsistencies across managers.

have identified funds which could threaten the solvency of individual financial institutions. However, this assessment has also demonstrated that those funds do not pose a risk to financial stability due to their limited size compared to domestic financial institutions.

Hedge funds

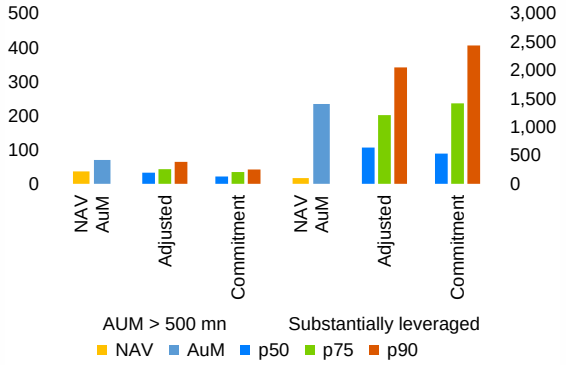
Only 130 hedge funds (HF) are included in ESMA's sample, as the majority of EU HFs are not substantially leveraged nor large enough (below EUR 500mn AuM) to be included in the step 1 analysis. However, when HFs are included in the sample they are among the most leveraged AIFs: 84 HF are substantially leveraged, with a median commitment leverage of 529% (adjusted leverage: 636%) and 10% of HFs exhibit a leverage ratio above 2,048%. In addition, their AuM is significantly higher (EUR 304bn) than their NAV (EUR 53bn) (Chart 4). The main source of leverage is through derivatives (interest rate, foreign exchange, equity, credit) and repo borrowing.

As noted by the Financial Stability Board (FSB)[10], many hedge funds operate strategies with relatively low levels of leverage. However, some employ highly-leveraged, complex and concentrated investment strategies that may embed vulnerabilities that are difficult for counterparties and regulators to assess in an effective and timely manner. The use of leverage therefore remains tied to the type of HF strategies, with strategies such as relative value or macro making more systematic use of leverage[11].

Chart 4

HF leverage

Highest level of leverage across fund categories



Note: NAV and AuM of EU AIFs using leverage on a substantial basis and leveraged AIFs managing more than EUR 500mn, in EUR bn (LHS); leverage measured by the adjusted method and the commitment method, for the median, the 75percentile and the 90 percentile, in % (rhs). Data for the EEA30, in 2022.

Sources: AIFMD database, National Competent Authorities, ESMA.

HFs may pose a risk of **market impact**, due to their leverage and the size of their positions, with 10% of substantially leveraged AuM managing more than EUR 10.8bn individually. While AIFMD data do not show any noticeable market footprint, the full extent of leveraged exposure can generally not be determined from the AIFMD reporting data only, as in particular each strategy is very specific.

Therefore, ESMA and NCAs use additional inputs from other regulatory reporting, such as EMIR data (especially for derivative exposures), commercial data or directly from the manager. Based on this supervisory assessment, the market footprint and hence the potential systemic impact is limited for the majority of HFs at individual level. This is because they are exposed to large markets, such as large-cap stock markets or indices, which are of limited size compared with the average trading volume in the underlying market in which the fund operates.

However, for some individual HFs the supervisory assessment permitted the identification of smaller market segments where the HF could have a market impact. For example,

[10] See The financial stability implications of leverage in non-bank financial intermediation, FSB, September 2023

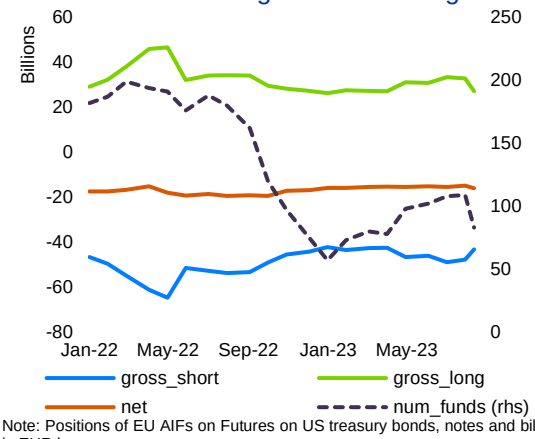
[11] See EU alternative investment funds 2023, ESMA market report, January 2024.

one NCA has identified and is closely monitoring a group of substantially leveraged HFs exposed to the local mortgage bond market with a gross leverage above 2,000% on average and representing 5-15% of the trading in this market. Additionally, the trading behaviour of this group is procyclical (i.e. they are predominantly sellers in falling markets and buyers in rising markets). However, their market share has remained stable through recent episodes of market stress (Covid-19, Russian invasion of the Ukraine).

Chart 5

EU HF exposure to US treasury future

No evidence of leveraged basis trading



Note: Positions of EU AIFs on Futures on US treasury bonds, notes and bills, in EUR bn.
Sources: TRs, FIRDS/FITRS, ESMA.

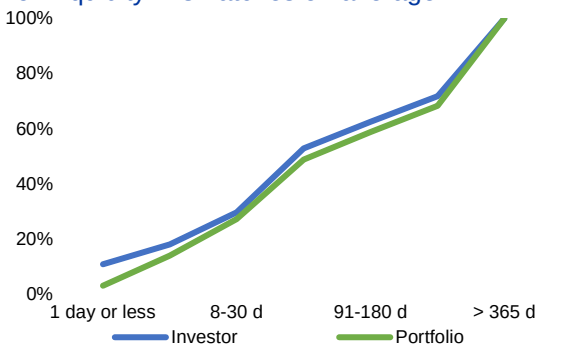
At the EU level, ESMA assesses the exposure of EU HFs to US treasury futures[12] - "basis trades", as there is evidence that US HFs have taken large basis trade positions in the US treasury market[13] [14]. Based on this assessment, the gross position of all EU AIFs (mainly HFs) in US treasury futures stands between EUR 69bn and EUR 111bn in 2023, while the net position between the long and the short position remained negative, between -14 and -20 EUR bn. While monitoring is ongoing, there is no evidence that EU HFs have increased their exposure to US treasury futures in 2023.

Most HFs pose a low **risk of fire sales**, with a few exceptions. On average HFs report managing assets that can be liquidated in a short time horizon (Chart 6) and this is particularly true for substantially leveraged funds, with more than 75% of funds having only negligible amounts of less liquid assets with a longer liquidation time horizon. Moreover, HFs which invest in less liquid assets can be subject to redemption restrictions: in one jurisdiction HFs with less liquid assets are either closed-ended or offer redemptions subject to a notice period which brings the time to liquidate the portfolio below the time for the investors to redeem in full. In addition, measures such as gates or anti-dilution tools mitigate the impact of adverse investor reactions especially when the investment objective focuses on strategies with a mid to long-term horizon.

Chart 6

HF liquidity profile

Low liquidity mismatches on average



Note: Portfolio and investor liquidity profiles of AIFs included in the Article 25 sample, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem.
Sources: AIFMD database, National Competent Authorities, ESMA.

Overall, the liquidity profile of HFs points to limited liquidity mismatch: on average within one week, investors can redeem up to 18% of the

12 Typically, HFs pursuing basis trading typically buy US treasuries (long position), that they finance by borrowing in the repo market using the same treasuries as collateral and deliver them through treasury futures (short position). This is an arbitrage strategy where HFs seek to exploit the price difference between cash treasury securities and treasury futures.

13 The Bank of England recently highlighted the build-up of large positions in US treasury futures by hedge funds, see Financial Stability Report (July 2023).

14 Recent developments in hedge funds' treasury futures and repo positions: Is the basis trade 'back'? Federal Reserve System, August 2023.

NAV, whereas 14% of the assets can be liquidated within this time frame (Chart 6). Where individual HFs are exposed to liquidity mismatches, they can be subject to increased monitoring. More specifically, one authority explained monitoring the individual liquidity plans in case of adverse liquidity stress.

Leveraged HFs generally dispose of large amounts of unencumbered cash to address potential **margin calls**. However, due to the general context of rising interest rates, one NCA specifically assessed HF resilience to a sharp increase in interest rates (and of other fund relevant risk factors) and their capacity to face higher than usual margin calls. In general, those funds disclosed appropriate stress tests and had access to a satisfactory amount of unencumbered cash or liquid assets to mitigate potential margin calls.

In terms of investor concentration, several jurisdictions report a high concentration of institutional investors (especially for pension funds) or professional clients. While investor concentration may raise a concern about run risk, NCAs generally consider such investors to be rather stable, and focused on the long-term. However, ESMA considers that the stability that has been observed should not be taken for granted in exceptional circumstances.

Finally, NCAs reported a low risk of **spillovers to financial institutions**, at both the individual and the group level. Exposures to financial institutions, including through OTC derivatives, are generally diversified across multiple counterparties, with relatively small individual exposures in absolute terms. However, one authority reports a higher risk for some individual funds, implying closer monitoring, because of a lack of diversification in terms of derivatives counterparties. In addition, the FSB found evidence that, if individually HFs trade with multiple prime brokers to diversify their sources of leverage, the prime brokerage activity itself remains concentrated within a few entities [15]. Therefore, HF exposures to financial institutions still need to be closely monitored.

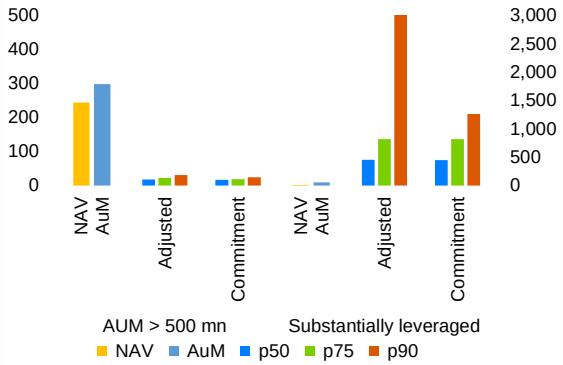
Private equity funds

The ESMA's sample includes 194 private equity (PE) funds, representing EUR 246bn NAV. Overall, NCAs did not report any noticeable risk for PE funds. This is not unexpected considering their reporting exemption on leverage (see below) and low liquidity transformation (PE funds are generally closed ended).

Chart 7

PE leverage

Low level of leverage



Note: NAV and AuM of EU AIFs using leverage on a substantial basis and leveraged AIFs managing more than EUR 500mn, in EUR bn (LHS); leverage measured by the adjusted method and the commitment method, for the median, the 75percentile and the 90 percentile, in % (rhs). Data for the EEA30, in 2022.
Sources: AIFMD database, National Competent Authorities, ESMA.

Further analysis is warranted, as **leverage** in a PE context can be used at three points:

- The leverage reported at the level of the fund is generally low. Substantially leveraged funds represent only EUR 2bn NAV, with a median commitment leverage ratio of 446%. Similarly, 90% of the non-substantially leveraged funds have a leverage ratio below 145%.
- However, the leverage is generally not borne directly by the fund but by a holding company or special purpose vehicle (SPV) that the fund invests in and uses to acquire control of companies. Since PE funds do not have to report leverage at the level of the structure

[15] The financial stability implications of leverage in non-bank financial intermediation , FSB, September 2023.

they invest in, it implies that gross exposures and NAV are only based on the equity approach and not on the consolidated approach used for accounting purposes.

– Finally, the target companies in which the fund invests (directly or through a structure) are typically leveraged. Recent analysis from supervisors building on CRA data highlighted an increase in the median corporate debt ratio between 2003 and 2021, from four to seven times the debt to equity of target companies in the EU[16].

As a result, the reported leverage of PE can be underestimated. NCAs thus need to investigate further to assess the magnitude of leverage. One NCA investigated leverage at the SPV level and concluded that the debts were non-recourse and sufficiently collateralised (Loan to value between 20% and 30%). In addition, one jurisdiction also suggested reporting the amounts of equity bridge financing which consists of borrowing money from a credit institution on a short-term basis and is excluded from the leverage calculation.

This problem was described in the ESMA letter to the Commission on the review of the AIFMD.[17] ESMA recommended removing the reference in the recital mentioning that PE funds do not have to report leverage at the level of SPV. Without revision of this provision, increased scrutiny will remain warranted.

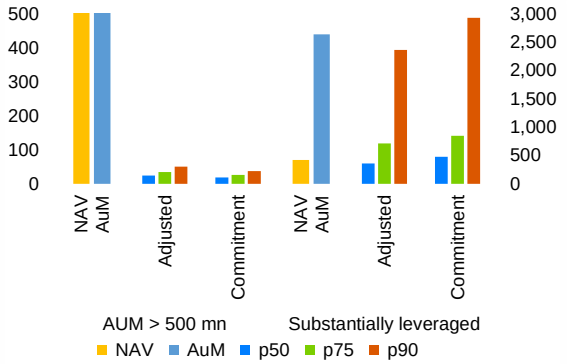
This "hidden" leverage may potentially increase the **valuation** concerns raised by the ESMA common supervisory assessment, which identified issues in the alignment between the NAV calculation, the asset valuation frequency and the availability of up-to-date data not only for PE funds, but for all funds invested in less liquid assets[18]. Due to infrequent valuation (quarterly or semi-annually), the valuation can become unreliable between valuation dates.

Other funds and LDI funds

"Other" funds represent, by far, the largest and most heterogeneous AIF category. ESMA's sample comprises 1,454 funds representing EUR 1,480bn NAV. At an aggregate level, "other AIFs" do not stand out in terms of leverage or liquidity profile compared to other fund categories. The liquidity shortage[19] in particular, is very limited. Furthermore, the NCA risk assessment does not identify systemic risks from individual "other" funds.

Chart 8

Other funds leverage
High heterogeneity



Note: NAV and AuM of EU AIFs using leverage on a substantial basis and leveraged AIFs managing more than EUR 500mn, in EUR bn (LHS); leverage measured by the adjusted method and the commitment method, for the median, the 75percentile and the 90 percentile, in % (rhs). Data for the EEA30, in 2022.
Sources: AIFMD database, National Competent Authorities, ESMA.

In contrast, the group analysis by strategy type is more relevant. NCAs identify groups of other funds particularly exposed to **corporate bonds** (issued and not issued by financial institutions) and structured products. Such funds generally offer daily redemptions in contrast with the less liquid nature of their assets:

– On the one hand this liquidity mismatch is mitigated by the fact that investors are mostly institutional with a long-term investment horizon and a business relationship that prevents unexpected behaviour;

16 See Thematic Analysis: Emerging Risks in Private Finance, IOSCO, 2023.

17 See ESMA letter to the Commission on the review of AIFMD, 18 August 2020.

18 See: Final report on the 2022 CSA on valuation, ESMA, 2023.

19 See the definition of liquidity shortage in box ASR-AIF.18 of the EU Alternative Investment Funds Annual Statistical Report, ESMA, 2021.

– On the other hand, the presence of institutional investors such as insurance companies, pension funds and banks increases the risk of contagion to the wider financial sector.

Given the risk of contagion that such funds may pose, they are subject to a particular monitoring by regulators. For example, Germany passed a national regulation (i.e. not through Article 25 of the AIFMD) capping the level of leverage of this type of funds to 300% in 2021. Additionally, they found that such funds use in-kind redemptions (45%) and notice periods (26%) to mitigate liquidity risk.

Ireland, Luxembourg and the Netherlands have reported their assessment of **LDI funds** which gain leverage via the government bond repo market, or via interest swaps, as a significant sub-category of "other" funds. LDI funds represent EUR 149bn NAV and EUR 523bn in AuM in these three jurisdictions. LDI funds exposed to the gilt market were under particularly severe stress in September 2022, as a result of the sharp rise in UK sovereign yields (130 bps in a few days). This increase in yields triggered a large fall in the value of sovereign bonds used as collateral by LDI funds and margin requests on IRD exposures of those funds. As LDIs sold sovereign bonds amid low liquidity, the downward price pressure created a self-reinforcing price spiral that forced the Bank of England to intervene through purchases of up to GBP 65bn (around EUR 73bn) of bonds[20].

NCAs assessed the risk of **market impact** for LDI funds as material, with a market share estimated at 10% of the total gilt outstanding as of the end of September 2022 for Irish funds alone and sizable positions for funds in the two other jurisdictions, with funds reporting more than 1000% leverage under the AIFMD commitment method in some cases. NCAs also assessed the potential risk posed by LDI funds denominated in EUR. However, the government bond markets in EUR are in total larger and broader than the GBP government bond market and hence the market impact risk posed by LDI funds appears to be more limited.

For LDI funds the risk of **fire sales** is elevated, as many LDI funds use leverage through derivatives exposures (such as interest rate swaps) and through the use of repurchase agreements. These funds are particularly sensitive to interest rate movements, as evidenced by the reporting ("DV01"). Repo and interest rate swaps can create demand for additional liquidity as yields and interest rates increase, which may result in funds selling gilts or other assets. Gilts purchased with repo act as collateral for the repo transaction. If the value of those gilts falls, LDI funds must supply additional collateral to maintain the repo or close the position, liquidating the collateral.

In addition, the recapitalisation process which allows LDI managers to request additional capital from their investors within a given timeframe also bears the risk of fire sales: indeed, investors unable or unwilling to provide this additional money within the deadline see a reduction in exposure per unit held. Also, investors participating in the capital call to maintain their LDI hedge may have to sell assets (e.g., gilts, MMFs) in order to do so.

Regarding the risk of direct **spill over to financial institutions,** LDI funds as result of their inherent use of leverage could pose a risk of spill over by transmitting the liquidity pressure in debt markets where LDI funds are active (particularly UK government debt markets) with implications for other financial institutions. Direct links to financial institutions include pension funds on the liability side (as per potential recapitalisations mentioned previously) and MMFs on the asset side. During 2022's market stress, LDI funds especially made substantial redemptions from their holdings of MMF shares.

Finally, NCAs assessed the **risk of interruption to direct credit intermediation** as existent but lower. As mentioned, LDI funds may redeem MMF shares to meet liquidity requirements,

[20] See special feature in EU Non-bank Financial Intermediation Risk Monitor 2023, ESRB, June 2023.

potentially transmitting stress to this sector. Given the role of MMFs, this could affect short-term funding markets and the banking sector.

In-depth: Real-estate fund leverage

Significant macroeconomic shifts, such as elevated inflation and rapidly rising interest rates, coupled with global growth deceleration, have put RE markets under particular stress. As highlighted by the European Systemic Risk Board (ESRB) in its recommendation, vulnerabilities in the Commercial Real Estate sector (CRE) in particular could pose risks to financial stability[21].

Against this background, RE funds have seen significant growth in the past 5 years (+375%) and are among the most exposed investors to risks stemming from the RE sector. In an adverse scenario, disorderly asset sales on their behalf could add further downward pressure on CRE asset prices. are exposed to a potential downturn. In its recent report on RE markets, ESMA specifically identified liquidity mismatches as a key vulnerability for RE funds [22]

Sample

ESMA has included 709 RE funds in its sample representing a total NAV of EUR 578bn and an AuM of EUR 851bn (56% of the AuM of all EU RE funds). The sector is highly concentrated, with 92% of the assets managed in five jurisdictions (DE, LU, FR, NL and IT).

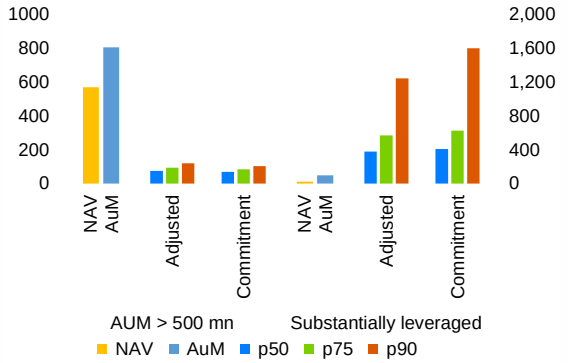
Limited financial stability concerns on an individual basis

In comparison with other fund categories, many RE funds (230) report using leverage on a substantial basis, but they only represent 2% of the total NAV of the sample. Moreover, the median leverage ratio of RE funds (406%) is the lowest of all fund categories in ESMA's sample, as measured under the commitment method.

Chart 9

RE leverage

Low level of leverage



Note: NAV and AuM of EU AIFs using leverage on a substantial basis and leveraged AIFs managing more than EUR 500mn, in EUR bn (LHS); leverage measured by the adjusted method and the commitment method, for the median, the 75percentile and the 90 percentile, in % (rhs). Data for the EEA30, in 2022.

Sources: AIFMD database, National Competent Authorities, ESMA.

This observation particularly holds in the five largest jurisdictions. For example, only 8% of the RE funds (in terms of AuM) are substantially leveraged in France, 6% in the Netherlands and 6% in Italy. In Germany, substantially leveraged funds are negligible, reflecting the fact that RE funds must comply with existing leverage limits (see Annex III). In comparison, 10% of Irish RE funds were substantially leveraged at the end of 2022, before the implementation of leverage limits.

RE funds potentially systemically relevant in some jurisdictions

While most RE funds exhibit a low level of leverage on an individual basis, their **market footprint** at an aggregated level can make them more systemically relevant. Managers of RE funds in the sample manage a total portfolio of assets of EUR 851bn of which EUR 445bn are real estate assets. When including all RE funds (i.e. beyond ESMA's sample), the fund sector

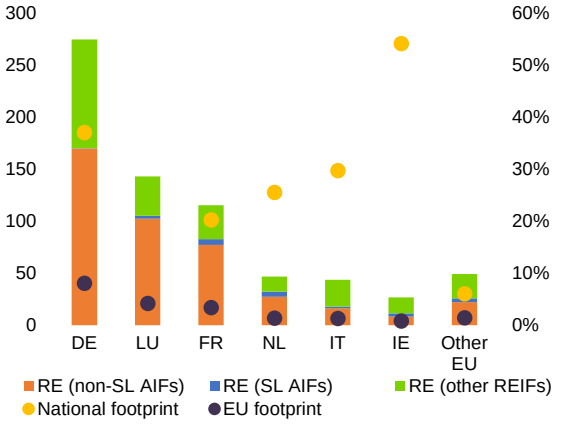
[21] See Recommendation of the European Systemic Risk Board of 1 December 2022 on vulnerabilities in the commercial real estate sector in the European Economic Area (ESRB/2022/9)

[22] See Real estate markets – Risk exposures in EU securities markets and investment funds, ESMA, December 2023.

manages EUR 952bn of RE assets, which represents 27% of the EU CRE market [23] [24].

Chart 20

RE fund assets vs domestic and EU RE market size
High market footprint of RE funds in some MS



Note: RE exposures and non-RE exposure of substantially leveraged and non-substantially leveraged AIFs, in 2022 (lhs, in EUR bn); Leveraged funds RE exposure in proportion of the national and EU market, in 2022 (rhs, in %).
Sources: AIFMD, MSCI.

RE funds in the five largest jurisdictions account for 18% of the estimated EU CRE market. RE funds in Germany (8%), Luxembourg (4%) and France (3%), have a potential large market footprint in the EU market. In terms of market footprint at the national level, this can be more accentuated. NL and IT RE fund holdings represent 25% and 30% of their national CRE market respectively. IE funds in the ESMA sample (which does not include unleveraged funds) hold 40% of domestic CRE assets [25].

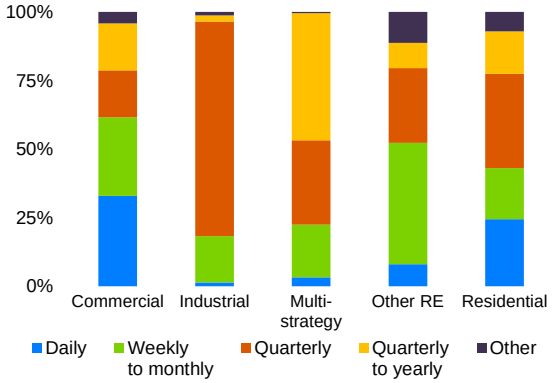
Another measure of the market footprint is the comparison between RE fund holdings and bank loans to the RE sector. This measure is an approximation of the source of financing for the sector, and the relative size of the asset management and the banking contribution. It also confirms the high market footprint in Germany and France, where the value of AIFs CRE assets in ESMA's sample represents 11% and 6% respectively of the value of domestic bank loans to CRE activities.

Existing liquidity mismatches increase the risk of contagion

RE funds are by far the fund category which is the most exposed to less liquid assets (89% of the portfolio cannot be liquidated below 3 months). However, their liquidity profiles are heterogeneous, reflecting the diversity of RE fund set-ups across the EU [26].

Chart 31

Redemption frequencies
Large dispersion across RE fund strategies



Note: Investor redemption frequencies allowed by open-end real estate funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

In terms of **redemption frequency**, liquidity mismatches are limited in jurisdictions where RE funds are closed-ended or subject to long notice periods (e.g. Belgium, Italy, the Netherlands and Poland). Liquidity mismatches are pronounced in jurisdictions with a high share of funds offering daily redemption. Overall, as a percentage of NAV, 21% of open-ended RE funds offer daily liquidity in the EU, with significant variations across RE strategies: 34% of open-ended CRE funds offer daily redemptions, whereas only 1%

[23] The ESRB highlighted the lack of commonly agreed working definitions across Member States on the RRE and CRE sector. In this article we consider the entire RE exposure and compare it to the RE market for professional investors.

[24] See EU alternative investment funds 2023, ESMA market report, February 2023.

[25] The national market footprint is an approximation as the country of investment is not reported in AIFMD. It is meaningful where RE funds are mostly invested in domestice assets. For example, in the case of Ireland (see ESMA advice) this is a fair description of the national market footprint as funds invest predominantly in the domestic market. In contrast for LU RE funds, the national market share is not meaningful as LU RE funds are mostly invested in other Member States.

[26] The liquidity profile is the average data gap between assets and liabilities for each range of maturity.

of industrial RE funds allow investors to redeem daily. The percentage for multi-strategy, other RE and residential funds are 3%, 9% and 26% respectively. [27]

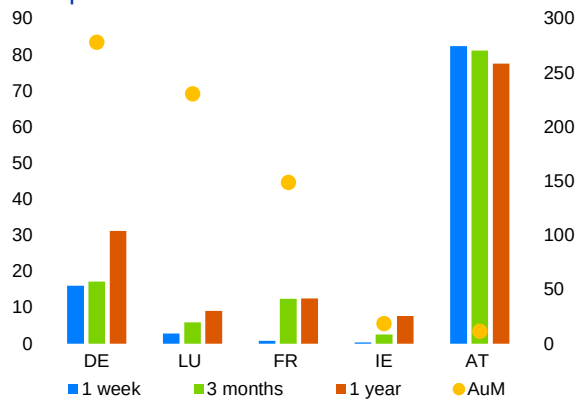
Liquidity mismatches, measured as the difference between the percentage of the NAV that can be redeemed and the percentage of assets that can be liquidated over the same period, are pronounced in a number of member states:

- In Austria the average liquidity mismatch represents 82% of NAV within 1 week. This reflects that most Austrian RE funds are open-ended funds with daily redemption rights that are primarily marketed to retail investors. A new legal liquidity provision under national legislation aims to address this issue starting in 2027.
- In Germany, mutual property funds (around 45% of the RE funds in 2022), are subject to a statutory notice period of 1 year. This restriction does not apply to "Spezialfonds" (special funds) which can invest in real estate and offer daily redemption, which explains the relatively high level of liquidity mismatches in German funds (16% of NAV within 1 week on average and 31% within 1 year for funds exposed to liquidity mismatches). While 75% of the special real estate funds indicated that they have implemented notice periods, they are generally of one month only. Finally, nearly 50% of the special funds implemented redemption gates.
- In France and Luxembourg, the average mismatch between redemption frequency and asset liquidity is limited, but a subset of funds has a significant liquidity mismatch (1-year shortage of 12.5% and 9%, respectively). In both jurisdictions the market comprises a mix of open-ended and closed-ended RE funds.

Chart 42

Liquidity shortage

More pronounced in a few Member States



Note: Liquidity shortage of RE funds included in the Article 25 sample over 1 week, 3 months and 1 year, in % of NAV. Liquidity shortfage is defined as the sum of liquidity deficits at the level of the funds, as not compensated by liquidity surplus (lhs). AuM of RE funds in Article 25 sample, in bn (rhs).
Sources: AIFMD database, ESMA.

The use of **liquidity management tools** mitigates the risk posed by liquidity mismatches in a number of Member States:

- Several member states (Germany, France, Luxembourg, Hungary, Ireland, Portugal and Slovakia) use liquidity buffers or minimum notification periods to limit liquidity mismatches.
- In addition, liquidity tools, such as the suspension of redemptions, fees, or the possibility for funds to resort to short-term borrowing to pay redemptions are at least available in Germany, Ireland, Spain, France, Lithuania, Luxembourg, Austria, Portugal and Slovakia[28].

Direct spillovers to financial institutions

The investor base of RE funds is diverse but primarily consists of institutional investors (80% at end 2022). Insurances and pension funds are the main investors accounting for 23% and 18% of the NAV, respectively. Households play an important role for CRE fund only as they own 22% of their NAV. [29]

27 Figures in this paragraph relate to the entire RE sector.

28 Based on information reported. This does not imply that there are no LMTs in other jurisdictions.

29 Figures in this paragraph relate to the entire RE sector.

In the context of this risk assessment, this means that there is a risk of **contagion to financial institutions** in the case of financial stability issues affecting RE funds. The risk of spillovers is less pronounced in funds owned by retail investors, although this may in turn pose investor protection concerns. For RE funds presenting liquidity mismatches, a key risk is the stability of institutional investor commitments, which may be tested in the context of high liquidity demands.

Variety of RE fund risk profiles

The risk assessment reported to ESMA provides an overview of the variety of risk profiles across EU jurisdictions.

- In Ireland, some RE funds report high levels of leverage and have a large market footprint on the domestic CRE market. In addition, a subset of these funds is exposed to liquidity mismatches. The Central Bank of Ireland (CBI) announced its decision to impose leverage limits for those funds, considering that they had the potential to amplify shocks affecting the CRE market through disorderly asset sales.
- German and Luxembourgish RE funds generally have a low leverage but hold a significant market share in the EU. They are exposed to liquidity mismatches and some funds do not have LMTs in place, in particular German special funds. Their investors are mostly institutional, such as insurance and pension funds, which implies a risk of contagion during stressed market conditions.
- In France, the Netherlands and Italy, RE funds are large in comparison of their national CRE markets. Moreover, a subset of funds is substantially leveraged. However, RE funds can only be closed-ended in Italy or subject to a notice period in the Netherlands, while in France only closed-end funds can be substantially leveraged. Open-ended French RE funds are subject to specific constraints in terms of leverage and liquidity which limits the risk of having a combination of leverage and liquidity mismatches in the same fund.
- In Austria, the level of leverage appears to be low, although its market share is not negligible. Austrian funds are exposed to significant liquidity mismatches. These will be mitigated by national legal requirements (notice period), applicable from 2027.

Measures to address the identified risks

Real estate funds

On 3 November 2022, the CBI notified ESMA and the European Systemic Risk Board (ESRB) of its intention to impose leverage limits under Article 25(3) of the AIFMD on certain RE funds. The measure consists of imposing a 60% **leverage limit** (calculated as the ratio between the total debt and the total assets of the fund) in respect of AIFs established in Ireland with at least 50% of their assets under management directly or indirectly invested in physical Irish property assets. There is a phased implementation period of 5 years for these measures.

In addition, the CBI announced the introduction of guidance to limit liquidity mismatch for Irish RE funds. It requires RE funds to extend their notice and/or settlement period to at least 12 months, to better align with the liquidity profile of their assets. This applies to new and existing RE funds. In its advice on the measures taken by the CBI, ESMA considered that the conditions for taking actions in Ireland were met, due to the high level of leverage reported by a part of Irish real estate funds and their large market footprint on the Irish CRE market[30].

Against this background ESMA's assessment is that there is no identical situation to Irish real estate funds in other EU countries, first of all due to existing leverage limits in several jurisdictions (implemented under national law rather than Article 25, see Annex III). As a consequence, imposing similar leverage limits in other jurisdictions would have less impact on the potential risks. Given the variety of risk profiles

[30] ESMA advice on proposals for leverage limits on real estate funds in Ireland, ESMA, 24 November 2022.

and vulnerabilities, there is no one-size fits all solution:

- Generally, NCAs have reported an increased supervisory focus on real estate funds in the context of their annual Art. 25 risk assessment. Among the largest markets, BaFin (Germany) and the AMF (France) have been conducting in-depth assessment of RE funds as part of their work programme, including additional data collection and regular interviews of the managers to understand the most recent market trends and their strategies in a stressed market environment.
- Regarding the significant liquidity mismatches Austrian RE funds are exposed to, the FMA has reported new legal liquidity provisions under national legislation adopted in 2022. Now, paragraph 11 of the Austrian Real Estate Fund Act requires a minimum holding period of 12 months. Existing real estate funds will have to apply the new rule from 1 January 2027, with optional earlier application. These changes will have a material impact only in the subsequent years.

LDI funds

Following the LDI stress event, NCAs engaged with GBP LDI fund managers who subsequently increased the resilience of their funds, which can withstand a 300 to 400 basis points increase in yields before their NAV turns negative. NCAs in Ireland and Luxembourg subsequently asked LDI managers to maintain this level of resilience, an initiative supported by ESMA[31] in the EU and the FPC in the UK[32].

As a follow-up, NCAs in Ireland, Luxembourg and the Netherlands have been monitoring LDI funds on an enhanced basis, which is reflected in their report on the Article 25 risk assessment. Their conclusion is that the risks related to those funds remain elevated and the limits set after the severe stress experienced in September 2022 remain appropriate. As a consequence, the CBI and the CSSF have launched consultations with a view to maintain the existing 300bp resistance levels as another restriction on the management of the AIF under Article 25(3) of the AIFMD on LDI funds[33].

Conclusion

The risk analysis and assessment under Art. 25 of the AIFMD by National Competent Authorities (NCAs) and ESMA is based on AIFMD data and risk indicators developed by ESMA and NCAs. Where necessary, NCAs can address the risks identified by imposing limits to the level of leverage that an AIFM is entitled to employ or other restrictions on the management of the AIF. ESMA's Guidelines on Article 25 AIFMD issued in 2020 operationalize this framework by setting out a common approach to identify and assess funds posing leverage-related risks[34]. As a macroprudential framework, the Guidelines emphasise on the risks posed by groups of AIFs of the same type and similar risk profiles that may collectively present a risk to financial stability.

The 2023 risk assessment has had a particular focus on RE funds. It finds that RE funds pose low risks on an individual basis, due to their limited use of leverage or size, but could be more systemically relevant in jurisdictions where groups of RE funds own a large share of the underlying RE market on aggregate. The main vulnerability of RE funds relates to liquidity mismatches in jurisdictions with a high share of funds offering daily or frequent redemption.

NCAs have also reported risks posed in the "other" fund category, which is by far the largest category of funds in the ESMA sample. This is especially the case for LDI funds, in Ireland, Luxembourg and the Netherlands. The risk assessment finds the risks related to those funds gaining leverage via the government bond repo market remain elevated.

The risk assessment generally finds that risks are limited in other fund categories or, when

---

31 See CSSF, Central Bank of Ireland and ESMA communications in November 2022

32 Bank staff paper: LDI minimum resilience - recommendation and explainer | Bank of England.

33 Macroprudential measures for GBP Liability Driven Investment Funds CP157 - Macroprudential measures for GBP Liability Driven Investment funds

34 Guidelines_on_article_25_aifmd, 2020, ESMA.

individual risks have been identified, they are not deemed systemic by NCAs. HFs in particular may pose a risk of market impact due to their leverage and the sheer size of their positions. On the other hand, most HFs invest in liquid assets and dispose of large levels of unencumbered cash to address potential margin calls, which limits the risk of fire sales. Moreover, their derivative exposures are generally diversified across multiple counterparties which limits the risk of spillovers to other financial institutions at individual level (therefore monitoring is particularly warranted at aggregated level).

The risk assessment also highlights existing data gaps. As a consequence, the magnitude of the risk posed by leverage may be more difficult to assess for HFs using derivatives of all type (IR, FX, Equity, Credit) corresponding to a variety of strategies, but also for PE funds, whose actual leverage is under-reported, thus necessitating further investigation to assess the magnitude of leverage.

Against this background, several jurisdictions adopted measures to address the identified risks. The CBI announced the activation of the Article 25 leverage limits for the first time in the EU, considering that RE funds in its jurisdiction had the potential to amplify shocks affecting this market through disorderly asset sales. The measure has a phased implementation period of 5 years. In Austria, the FMA reported new legal liquidity provisions applying to RE funds under national legislation, which will become effective in 2027. In general. NCAs reported an increased supervisory focus on RE funds, in the context of the annual risk assessment.

Similarly, jurisdictions reported measures not based on Article 25 but with an impact on leverage-related risks for groups of funds. This is particularly the case of LDI funds to which NCAs recommended to maintain a resilience levels limiting in practice their leverage. Since then, they have launched a consultation with a view to maintain the existing buffer using Article 25 of the AIFMD.

Overall, we find that the implementation of the ESMA Guidelines, as reflected by the risk assessment, is improving the monitoring of the EU AIF sector. As foreseen in the Guidelines, NCAs used other data sources, from other regulatory reporting or commercial data to overcome existing AIFMD data gaps and other information from fund managers to have an accurate view of the risk in their jurisdiction. In 2024, NCAs will continue to perform their risk assessment on a quarterly basis and report the results to ESMA at least annually and anytime they identify a risk relevant to financial stability. ESMA will re-examine its risk assessment accordingly and the potential measures taken or envisaged by NCAs. Finally, on the basis of the information received, ESMA will assess if there is a need to issue an advice to NCAs to address the identified financial stability risks.

Annex I: AIFs included in ESMA sample

	Funds of Funds	Hedge Funds	Real Estate	Private Equity	Other AIFs	None
AIFs using leverage on a substantial basis						
Number of funds (Absolute number)	52	66	230	31	309	_
Net Asset Value (EUR bn)	3	13	12	2	70	_
Gross leverage (Median, in %)	524	662	417	415	544	_
Commitment leverage (Median, in %)	577	529	406	446	474	_
Adjusted leverage (Median, in %)	519	636	375	455	359	_
Large AIFs (AuM > 500mn) employing leverage not on a substantial basis						
Number of funds (Absolute number)	235	44	473	162	1,145	55
Net Asset Value (EUR bn)	300	35	566	244	1,411	122
Gross leverage (Median, in %)	109	168	143	103	148	143
Commitment leverage (Median, in %)	106	130	137	102	113	120
Adjusted leverage (Median, in %)	115	195	150	105	146	148
Other AIFs with unusually high use of leverage (NCAs)						
Number of funds (Absolute number)	231	2	31	171	238	9
Net Asset Value (EUR bn)	25	1	2	11	15	1

Note: All values refer to AIFs managed and/or marketed by EEA30 AIFMs at the end of 2020, AIFs reported to ESMA by National Competent Authorities (NCAs). AIFs sold under a National Private Placement Regime (NPPR) are excluded. Leveraged funds are identified using the AIF reporting code as specified in the Annex 2 of ESMA guidelines on AIFMD reporting obligations. Open ended AIFs are funds that issue shares which are redeemable on demand by investors. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

Annex II: List of indicators included in the Guidelines

Leverage-related systemic risk	Indicator	Description		Scope	Data source[35]
Market impact The size of an AIF or a group of AIFs is sufficient to move the market	Net exposure	NAV x leverage calculated under the commitment method		Single AIF	AIFMD: 53, 295
	Market footprint on the underlying market	Main categories of assets in which the AIF invested compared to the size of the underlying market		Group of AIFs	AIFMD: 123, 124 Size of the underlying market based on external data (see Annex II)
		Value of turnover in each asset class over the reporting months compared to the turnover of the asset class		Group of AIFs	AIFMD: 126 Turnover of the underlying market based on external data (see Annex II)
Risk from fire sales The activities of an AIFM could contribute to a downward spiral in the prices of financial instruments or other assets in a manner that threatens the viability of such financial instruments or other assets	Investor concentration	Percentage of the AIF's equity that is beneficially owned by the five largest owners		Single AIF	AIFMD: 118
	Liquidity profile	Average difference across time buckets between share of AIFs' portfolios capable of being liquidated and investor ability to receive redemption payments.		Single AIF	AIFMD: 53, 57, 178-184, 186-192
	Share of less liquid assets	Illiquid assets include physical assets, unlisted equity, non-investment grade corporate and convertible bonds, and loans, in percentage of AuM		Single AIF	AIFMD: 33, 123,
	Potential liquidity demands resulting from market shock (Single AIF: in % of NAV; group of AIFs: in base currency)	Risk measures	Net Equity Delta	Single AIF or group of AIFs	AIFMD: 53, 139:142
			Net DV01		
			Net CS01		
		Additional information that competent authorities could require AIFMs to report on a periodic basis pursuant to Article 24(5) of the AIFMD	VAR	Single AIF or group of AIFs	AIFMD: 53, 139,145, 302
			Vega exposure		
			Net FX Delta		
			Net Commodity Delta		

[35] Figures refer to the corresponding field in the AIFMD reporting.

Leverage-related systemic risk	Indicator	Description	Scope	Data source[35]
	Other potential liquidity demands	Potential liquidity demands from collateral calls (on AIFs' derivatives and repo) relative to available liquid assets	Single AIF	AIFMD: 185, 284-289, 157-159
		Potential liquidity demands (by source)	Single AIF	AIFMD: 297-301
Risk of direct spill-overs to financial institutions The exposure of an AIF or several AIFs could constitute an important source of market, liquidity or counterparty risk to a financial institution	Linkages to financial institutions via investments	Long value of investments in listed equities and corporate bonds issued by financial institutions.	Group of AIFs	AIFMD: 123 (securities issued by financial institutions)
		Sum of long exposures in structured and securitised products.	Group of AIFs	AIFMD: 53, 57, 123
	Counterparty risk	Mark-to-market net counterparty credit exposure vis a vis the AIF	Single AIF	160-171 Size of the AIF counterparty based on external data (see annex II)
		Potential liquidity demands resulting from market shock[36] (see above)	Single AIF	Single AIF
	Linkages to financial institutions via investor base	Financial institution exposed to a risk of loss[37]	Group of AIFs	AIFMD: 209
Risk of interruption in direct credit intermediation AIFs contributing to the funding of the real economy deleverage during the downturn thus contributing to the procyclicality of the overall credit supply.	AIFs' investments in credit instruments of non-financial institutions	Sum of long values of corporate bonds, convertible bonds not issued by financial institutions.	Group of AIFs	AIFMD: 123
		Sum of leveraged and other loans.	Group of AIFs	AIFMD: 123

[36] Liquidity demands stemming from derivatives especially represent a counterparty risk for the counterpart.

[37] Bank exposure to shadow banking entities is nevertheless limited by EBA's guidelines. EBA is of the view that only AIFs with limited leverage could be considered to fall outside the definition of 'shadow banking entities'

Annex III: Current leverage limits applicable to RE funds

Country	Limit	Commitment equivalent*	Perimeter	Exclusion	Date	Art. 25
IE	Borrowing ≤ 60% AuM	250%	Property funds	Social housing	2027	Yes
	Borrowing ≤ 100% NAV	200%	Retail AIFs		Current	No
CZ	Borrowing ≤ 100% NAV	200%	Real estate funds		Current	No
DE	Borrowing ≤ 60% AuM	250%	Real estate funds		Current	No
ES	Borrowing ≤ 50% NAV	150%	Real estate funds		Current	No
FR	Borrowing ≤ 40% RE assets	167%	OPCI[38] RE funds	RE funds that are not OPCI	Current	No
FI	Gross leverage ≤ +100-130% of NAV	230%	RE funds		Current	No
HU	Borrowing ≤ 60% AuM	250%	Publicly available and open-ended RE funds	Non publicly available or closed-ended RE funds	Current	No
IT	Borrowing ≤ 100% NAV	200%	Retail RE funds		Current	No
LT	Borrowing ≤ 80% NAV	180%	Retail RE funds		Current	No
MT	Borrowing ≤ 50% NAV (open-ended) Borrowing ≤ 100% NAV (closed-ended)	150%-200%	Professional investors in real estate		Current	No
NO	Permanent leverage not permitted	100%	AIFs		Current	No
SK	Borrowing ≤ 50% AuM	200%	RE funds		Current	No

*In the absence of other leverage sources

[38] Organismes de placement collectif en immobilier.

Publications Office
of the European Union