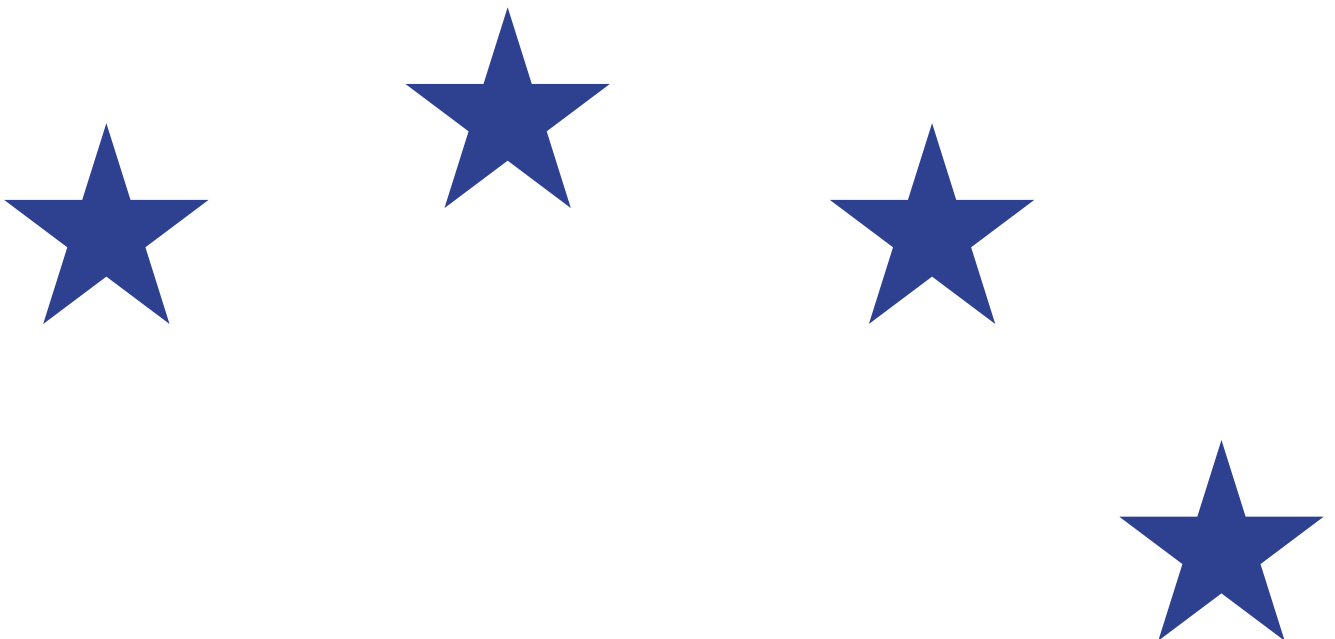


# EU Alternative Investment Funds

ESMA Annual Statistical Report

2021

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ESMA Annual Statistical Report on EU Alternative Investment Funds

2021

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# Executive summary

## Market structure and developments

**The EU Alternative Investment Funds (AIF) market:** The size of the EU AIF universe continued to expand to reach EUR 6.8tn in net asset value (NAV) at the end of 2019, a 15% increase from 2018. The growth of the EU AIF market results from the launch of new AIFs in 2019 and positive valuation effects. Overall, AIFs accounted for 40% of the EU fund industry at the end of 2019. Professional investors own most of the shares of AIFs, yet retail investor share is significant at 15% of the NAV, with more retail participation in FoFs (28%) and RE funds (21%). AIFs invest predominantly in the European Economic Area (EEA) and across a broad range of asset classes (securities, derivatives or funds). At the aggregate level adjusted leverage declined slightly to 182% of NAV (compared with 193% in 2018). Overall, there are signs of potential liquidity mismatch at short horizons, as the liquidity offered to investors is greater than the liquidity of the assets, especially for RE funds. This section also reviews the impact of the COVID-19 related market stress on AIFs in 2020.

**Funds of Funds:** FoFs account for 15% of the NAV of EU AIFs, at around EUR 1tn (+22% compared with 2018). FoFs invest mainly in equity and bond UCITS (72% of identified fund exposures) rather than AIFs. At the very short end, investors are able to redeem 39% of the NAV within one day, whereas only 29% of assets could be liquidated within this time frame. If large redemptions were to occur, AIFs would face challenges due to this liquidity mismatch.

**Real Estate Funds:** RE funds account for 12% of the NAV of AIFs, at EUR 802bn. They continued to grow, albeit at a more moderate pace (+9% in 2019 after +35% in 2018). Compared with 2018, the proportion of retail investors was stable (21%) but remains high compared with other AIF categories. RE funds are exposed mostly to illiquid physical assets which take time to sell (usually months). Liquidity risk in RE funds remains a concern: Around 54% of funds are open-ended, and almost half of Commercial Real Estate (CRE) funds — the largest category — offer daily liquidity to investors. At the aggregate level, RE funds face liquidity mismatch across all time periods, an indication of a structural vulnerability as the maturities of assets and liabilities are not aligned.

**Hedge Funds:** The size of the EU HF sector remained stable in 2019 at EUR 354bn, or 5% of all AIFs. However, when measured by gross exposures, HFs account for 62% of AIFs since they rely heavily on derivatives. The majority of HFs are managed and domiciled outside the EU, with HFs sold through the National Private Placement Regime (NPPR) 160% larger than HFs managed by EU AIFMs. Leverage is very high at more than 900% after adjustments, and particularly so for some strategies highly reliant on derivatives. Typically, HFs using derivatives tend to maintain large unencumbered cash positions, possibly to meet future margin calls related to derivatives positions. EU HFs continue to show limited liquidity mismatch, as their assets can be liquidated quickly to meet investor redemptions. However, HFs are exposed to financing risk, as for some strategies more than half of their funding is overnight, implying potential rollover risks.

**Private Equity Funds:** PE funds account for 7% of the NAV of all AIFs, or EUR 456bn. Among AIF types, PE funds experienced the largest growth in 2019 (+28% compared with 2018). They follow a range of strategies and are almost exclusively sold to professional investors. PE funds invest mainly in illiquid securities (unlisted securities), but liquidity risk is limited given that PE funds are overwhelmingly closed-ended.

**Other AIFs:** Other AIFs account for 60% of the NAV of EU AIFs, at around EUR 4tn (+15% compared with 2018). The category covers a range of strategies, with fixed income and equity strategies accounting for 68% of the NAV and an additional residual category amounting to 29%. Other AIFs are mainly sold to professional investors, although there is a significant retail investor presence. They make little use of financial or synthetic leverage. Although most types of Other AIFs have a limited liquidity risk at aggregate level, some funds are subject to liquidity mismatches.

**AIFs managed by Non-EU AIFMs:** EU Member States can allow non-EU asset managers to market alternative funds at national level under the National Private Placement Regime (NPPR), even though

such funds cannot subsequently be passported on to other EU Members States. The market for such non-EU funds is comparatively large: The NAV of non-EU AIFs marketed under NPPRs' rules amounts to EUR 2.1tn, i.e. more than one-fifth of the AIF market. NPPR fund marketing is concentrated in a small number of Member States, and 98% of investors are professional investors. Hedge funds marketed under the NPPR are predominantly domiciled in the Cayman Islands, 'other AIFs' marketed under the NPPR are predominantly US-based exchange-traded funds (ETFs). Overall, risk profiles for NPPR funds are comparable to EU AIFs. However, the geographical investment focus is different as NPPR funds invest predominantly in non-EU areas.

## Statistical methods

**AIFMD data quality improvements – an overview:** This article focuses on ongoing work to improve AIFMD data quality. High-quality data is key for identifying and assessing risks to investors and financial stability in the EU and support risk-based supervision and regulatory activities. National Competent Authorities (NCAs) and ESMA have been working closely to promote the usability and quality of the AIFMD data and other reporting regimes, given the cross-border implications of the financial sector. This article presents the main initiatives improving AIFMD data quality and provides an outlook of future work.

## Editorial note

**Brexit implications for EU AIF statistics:** *The UK asset management industry was an important part of the EU single financial market, and with that also of the EU AIF market. As of our latest figures, AIFs managed by UK-domiciled AIFMs accounted for 14% of the EU's AIFs by number of funds and 20% by net assets. The picture was even more pronounced in the important category of hedge funds, where 42% of the funds and 76% of net hedge-fund assets originated from the UK.*

*The UK formally withdrew from the EU on 31 January 2020, and its participation in the European Single Market ceased on 31 December 2020. As of this departure, UK data are no longer directly reported into the EU's AIFMD reporting system.*

*This Report covers reporting periods up to end-2019, i.e. periods during which the UK still was an EU Member State, and the statistics in this Report, therefore, present the EU market as the EU28, including the UK. The table of essential EU AIF market statistics below details the share of the UK market for broad market metrics, illustrating the potential impact that the withdrawal will have on AIF statistics in the future.*

## EU AIFs: Essential statistics

	Funds of Funds	Real Estate	Hedge Funds	Private Equity	Other AIFs	Total
<b>Size</b>						
Number of funds (Absolute number)	5,780	4,178	1,449	5,286	15,444	<b>32,585</b>
<i>of which from UK</i>	591	776	612	1,159	1,525	4,718
Number of leveraged funds (Absolute number)	365	1,385	623	149	2,546	<b>5,116</b>
<i>of which from UK</i>	103	87	281	34	274	780
Net Asset Value (EUR bn)	1,029	802	354	456	4,099	<b>6,785</b>
<i>of which from UK</i>	187	104	269	184	591	1,338
Average fund size (EUR mn per fund)	180	190	245	85	265	<b>210</b>
<i>Average UK fund size</i>	315	135	440	160	390	283
Proportion of total market (NAV % of all AIFs)	15%	12%	5%	7%	61%	<b>100%</b>
<i>UK share in EU AIF NAV</i>	3%	2%	4%	3%	9%	20%
<b>Distribution</b>						
EU passport (% of total)	76%	90%	35%	60%	90%	<b>76%</b>
Retail participation (% of total)	28%	21%	2%	5%	12%	<b>15%</b>
<b>Exposures</b>						
Main exposures (Asset type)	CIU	PA	IRD	S	S	<b>IRD</b>
Main exposures (% of exposures)	71%	67%	85%	90%	54%	<b>55%</b>
<b>Leverage</b>						
Gross leverage (% of NAV)	120%	136%	6,450%	109%	245%	<b>517%</b>
Adjusted leverage (% of NAV)	119%	133%	991%	109%	144%	<b>182%</b>
Borrowing (% of NAV)	1%	8%	227%	2%	5%	<b>17%</b>
<b>Liquidity</b>						
Open ended AIFs (% of total NAV)	74%	54%	78%	3%	73%	<b>66%</b>
Monthly portfolio liquidity (% of NAV)	77%	3%	38%	1%	90%	<b>68%</b>
Monthly investor liquidity (% of NAV)	69%	17%	26%	1%	74%	<b>61%</b>

Note: All values refer to AIFs managed and/or marketed by EU AIFMs at the end of 2019, AIFs reported to ESMA by National Competent Authorities (NCAs). AIFs sold under a National Private Placement Regime (NPPR) are excluded. UK is included in EU data. Statistics for all EU AIFs include 448 funds with no predominant type, for which NAV amounts to EUR 44bn. 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. CIU=collective investment units; PA=Physical assets; IRD=Interest rate derivatives; S=Securities.

Sources: AIFMD database, National Competent Authorities, ESMA.

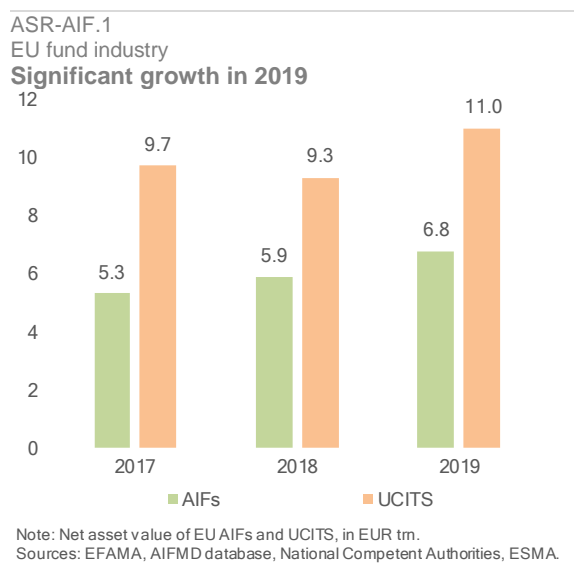
# Market monitoring

# Market structure and developments

The size of the EU AIF universe continued to expand to reach EUR 6.8tn in net asset value (NAV) at the end of 2019, a 15% increase from 2018. The growth of the EU AIF market results from the launch of new AIFs in 2019 and positive valuation effects. Overall, AIFs accounted for 40% of the EU fund industry at the end of 2019. Among AIF types, Funds of Funds (FoFs) account for 15% of the NAV, followed by Real Estate (RE) funds (12%), Private Equity (PE) funds (7%) and Hedge Funds (HFs) (5%). The category of 'other AIFs' accounts for 60% of the NAV, pointing to continued classification issues for Alternative Investment Fund Managers (AIFMs). Professional investors own most of the shares of AIFs, yet retail investor share is significant at 15% of the NAV, with more retail participation in FoFs (28%) and RE funds (21%). AIFs invest predominantly in the European Economic Area (EEA) and across a broad range of asset classes (securities, derivatives and funds). At the aggregate level adjusted leverage declined slightly to 182% of NAV (compared with 193% in 2018). Overall, there are signs of potential liquidity mismatch at short horizons, as the liquidity offered to investors is greater than the liquidity of the assets, especially for RE funds. This section also reviews the impact of the COVID-19 related market stress on AIFs in 2020.

## EU Alternative Investment Funds 2019: EUR 6.8tn

The AIF industry continued to expand in 2019, with a 15% increase from 2018, to reach a NAV of around EUR 6.8tn at the end of 2019 (ASR-AIF.1). By comparison, the NAV of Undertakings for the Collective Investment in Transferable Securities (UCITS) amounted to EUR 11tn at the end of 2019, according to the European Fund and Asset Management Association (EFAMA). Overall, AIFs account for close to 40% of the EU fund industry. The NAV of UK-domiciled AIFMs amounted to EUR 1.3trn (20% of the EU total)<sup>1</sup>.



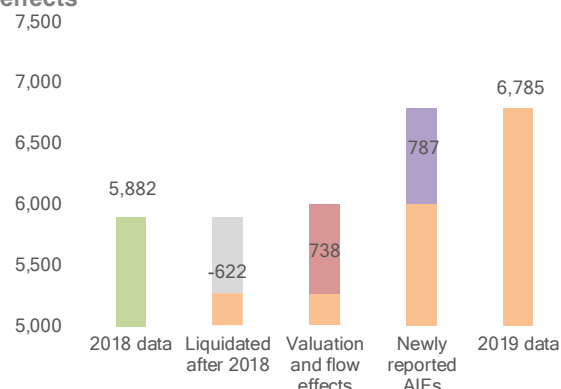
The growth in the EU AIF market is attributable to the launch of new AIFs in 2019 (EUR 790bn), and positive valuation and flow effects (EUR 740bn), which compensated for the liquidation of funds in 2019 (ASR-AIF.2).

<sup>1</sup> This Annual Statistical Report refers to 2019 data hence the UK is included in EU data.



ASR-AIF.2

EU AIFs growth decomposition  
Growth owing to new AIFs, flows and valuation effects

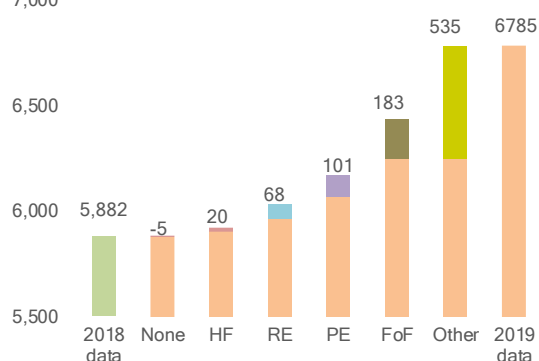


Note: Decomposition of NAV by reporting and surviving AIFs, EUR bn. Newly reported funds including AIFs inception in 2019. Sources: AIFMD database, National Competent Authorities, ESMA.

By AIF types, PE funds, FoFs and 'other AIFs' contributed most to the growth of the AIF sector (ASR-AIF.3).

ASR-AIF.3

EU AIFs growth decomposition by types  
Growth mainly owing to PE and FoFs and 'other AIFs'



Note: NAV by type of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in EUR bn. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.4

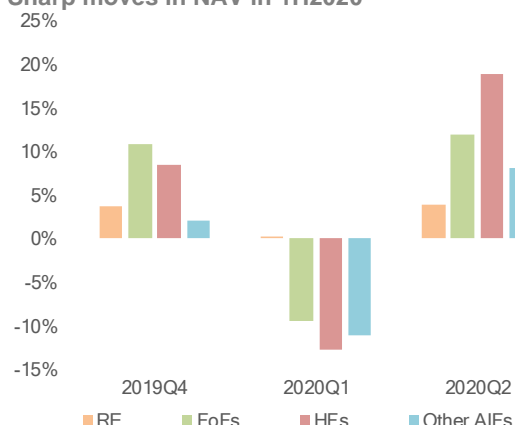
2020 snapshot: the COVID-19 turmoil  
Sharp drop in NAV and valuation issues for some AIFs

During the initial stage of the crisis (mid-February to March 2020), the rise in infections across the globe and the entry into force of lockdown measures in many European countries triggered a global sell-off across asset classes. EU AIFs were directly impacted through mark-to-market losses, outflows and valuation issues.

In 2020Q1, the NAV of AIFs reporting at a quarterly frequency (a subsample of the AIF universe accounting for around 75% of the AIF industry) declined by 7%, with the largest drop for hedge funds, other AIFs and funds of funds (ASR-AIF.5). In absolute terms, the decline in NAV amounted to EUR 460bn, mainly related to 'Other AIFs' (decline of EUR 382bn), and to a lesser extent FoFs (decrease of EUR 76bn).

ASR-AIF.5

Impact of COVID-19 related market stress  
Sharp moves in NAV in 1H2020



Note: Change in NAV (QoQ), in % based on AIFs reporting at a quarterly frequency. Sources: AIFMD database, National Competent Authorities, ESMA.

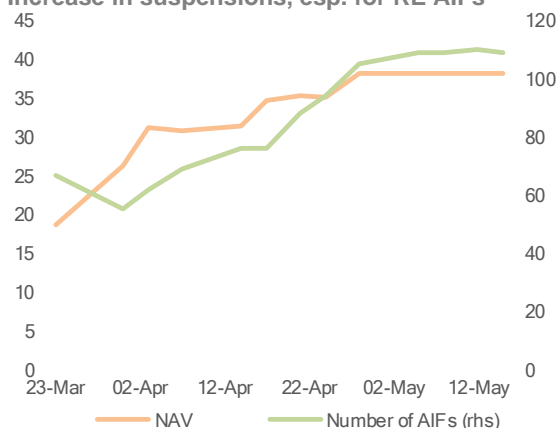
In 2Q20, markets rebounded swiftly on the back of policy actions. Given the unprecedented shocks to financial markets and the real economy, policymakers quickly took several steps to support financial stability. Fiscal authorities announced a range of measures, including fiscal stimulus, loan guarantees and tax holidays. Central banks provided support to banks by injecting liquidity and supported markets by announcing large-scale purchases of corporate and government bonds, resulting in another sizeable increase of their balance sheets.

Following such policy support measures, the NAV of AIFs rebounded in 2Q20, with the size of most AIF types surging by 10% or more.

During the acute phase of the COVID-19 related market stress in 1Q20, some AIFs experienced substantial valuation issues, leading AIFMs to suspend redemptions. Early May, the NAV of AIFs with suspension of redemptions amounted to close to EUR 40bn across 109 funds (ASR-AIF.6). While suspensions increased, the NAV of suspended funds amounted to less than 1% of overall AIF NAV.

ASR-AIF.6

COVID-19 turmoil  
Increase in suspensions, esp. for RE AIFs



Note: Net asset value of AIFs with suspension of redemptions, in EUR bn. Sources: National Competent Authorities, ESMA.

Such suspensions were mostly in RE funds, most of them domiciled in the UK and were related to valuation uncertainty. In several cases, the impact of the COVID-19 market stress on RE funds' market was not immediate. The analysis of the largest EU RE funds outside the UK revealed that at the end of June, 38% of funds (29% by AuM) were affected by valuation uncertainties and 42% (48% by AuM) by material distortions in the incoming cash-flows, such as rental income defaults (ESMA, 2020a). Two of the largest EU RE funds

(EUR 3bn AuM) were also suspended in June 2020 due to the material uncertainty over valuation of their holdings.

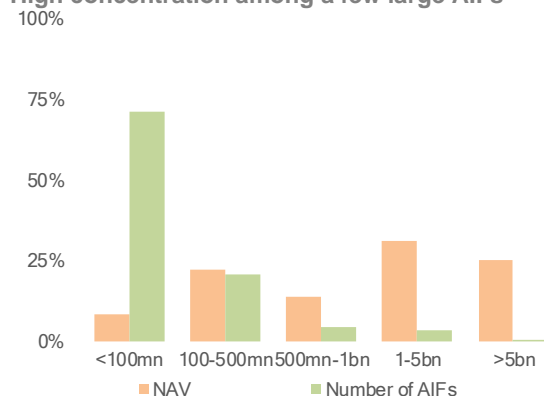
In light of the deterioration in market liquidity and rising redemption requests experienced during the COVID-19 market turmoil, some large AIFs heavily exposed to corporate debt took recourse to temporary borrowings, while other Liquidity Management Tools (LMTs) such as gates, swing pricing mechanisms and anti-dilution levies have been activated only in a very limited number of cases. Some of these large corporate debt funds also faced valuation issues: around 11% of AIFs reported unusual difficulties in asset valuation (ESMA, 2020a).<sup>2</sup>

**AIF types:** The composition of the AIF market by type was broadly stable in 2019, with incremental changes. FoFs account for 15% of the NAV (+1pp compared with 2018), followed by RE funds (12%), PE funds (7%, +1pp) and HFs (5%, -1pp). Finally, 'other AIFs' remain by far the largest type, accounting for 60% of NAV (ASR-AIF.20). Within this category, around 30% of NAV is attributed to a residual category (which amounts to 17% of the NAV of all AIFs), pointing to continued classification issues for AIFMs, as detailed in the 'Other AIF section'.

**AIF size:** The AIF market remains highly concentrated, with a few large AIFs accounting for most of the market. In 2019, AIFs with a NAV larger than EUR 1bn accounted for less than 4% of all AIFs but for 56% of the NAV (ASR-AIF.7). Smaller AIFs (NAV lower than EUR 500mn) account for 92% of all AIFs but only 30% of NAV. The large concentration implies that by focusing on the largest AIFs, one should be able to monitor a dominant part of the market at a relatively high frequency (as reporting requirements are quarterly for funds from AIFMs with Assets under management (AuM) above EUR 1bn).

ASR-AIF.7

Size and number of AIFs

**High concentration among a few large AIFs**

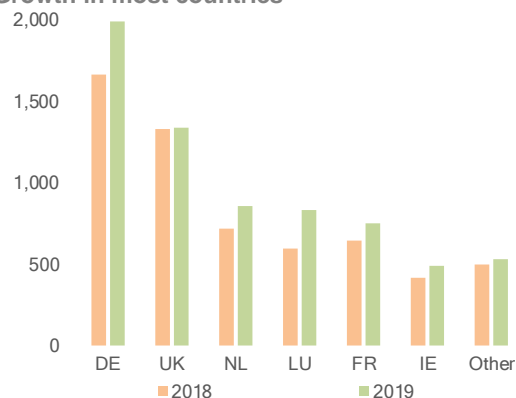
Note: Share of AIFs by size, end of 2019, in %. AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions.

Sources: AIFMD database, National Competent Authorities, ESMA.

**AIF domicile and distribution:** In terms of domicile of the AIFM, the AIF industry is concentrated in a few countries, with the top six accounting for more than 90% of the NAV (ASR-AIF.22). In 2019, Germany remained the country with the largest AIF industry in the EU (29%, +1pp), followed by the UK (20%, -3pp), the Netherlands (13%, +1pp), Luxembourg (12%, +2pp), France (11%) and Ireland (7%). Compared to 2018, the size of the AIF industry expanded by more than 15% in almost all countries with the exception of the UK (ASR-AIF.8). The stability of the AIFs managed by UK AIFMs might be partly explained by relocation of UK managers in other EU countries, although such relocation is hard to track (ASR-AIF.9).

ASR-AIF.8

AIF size by country

**Growth in most countries**

Note: NAV by type of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.9

AIFMs

**Very limited relocation of UK AIFMs to the EU in 2019**

With the withdrawal of the UK from the EU, UK AIFs can no longer be sold in the EU on the basis of the AIFMD's passporting regime. In the absence of an authorisation and passporting regime for non-EU AIFMs, UK fund managers seeking to retain the possibility of marketing fund shares/units in the EU have the choice of relocating to the EU (to get access to the passporting regime) or marketing the fund under the National Private Placement Regime.

Such relocations of managers of AIFs can be tracked when AIFs provide their Legal Entity Identifier (LEI), since the related AIFM identifier changes as a result. LEI movements can be a helpful proxy for identifying relocation cases. They do not, however, show market movements in their entirety: LEIs are available only for part of the AIF population, namely around 10,700 AIFs (i.e. less than one-third of the registered entities) representing a NAV of 2.9 EUR tn.

Within this sample, only around 50 funds had a change in the domicile of the manager in 2019. For 39 funds with a NAV of EUR 13bn, the AIFM moved from the UK to Luxembourg

<sup>2</sup> For further details on liquidity risks in UCITS and AIFs during the March-April period, see ESMA (2020b).

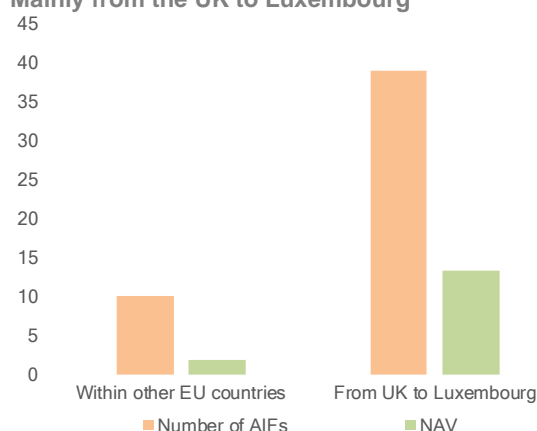
(ASR-AIF.10). 10 funds with a NAV of around EUR 1.9bn moved domicile within the EU27.

One reason for the relatively low figures is that many UK market participants already had a group entity in the EU27 which could be appointed as UCITS manager or AIFM of the relevant EU funds. ESMA is aware that some of these entities expanded their presence in the EU27 and applied for additional licenses to continue providing their services. In many cases, these entities in the EU27 delegated some of collective portfolio management functions set out in Annex I of the AIFMD and Annex II of the UCITS Directive to UK group entities.

Another potential explanation for the low number of relocations is the possibility to make use of white-label service providers. (i.e. authorised EU27 fund managers that provide a platform to business partners by setting up funds at the initiative of the latter and typically delegating investment management functions to those initiators/business partners or appointing them as investment advisers).

ASR-AIF.10  
AIFM relocation

**Mainly from the UK to Luxembourg**



Note: Change in the domicile of AIFMs for AIFs with a LEI, in number of funds and in EUR bn for NAV.  
Sources: AIFMD database, National Competent Authorities, ESMA

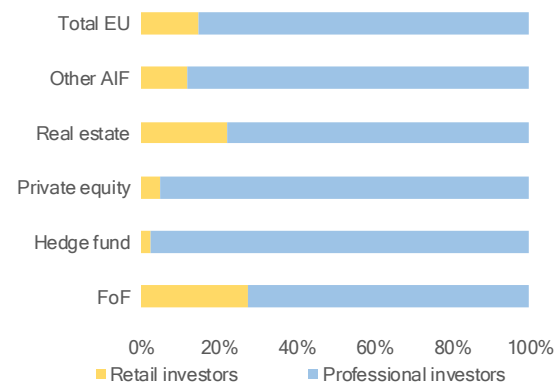
FoFs are mainly domiciled in countries with a large asset management industry such as Germany, the UK, France, Ireland and Luxembourg. The HF industry remains heavily concentrated in the United Kingdom, with more than 75% of the NAV managed by UK AIFMs. UK managers also account for a large share of the NAV of PE funds (40%), although it has been declining (-7pp), while the share of Luxembourg has increased (23%, +5pp). In most EU Member States, 'other AIFs' account for the majority of the NAV. Most AIFs have access to the **EU passport** (76%), allowing AIFs to be sold throughout the EU (ASR-AIF.23).

**AIF investors:** The AIFMD provides the regulatory framework for marketing AIFs primarily to professional investors, rather than retail investors. The marketing of AIFs to retail investors remains at the discretion of each Member State. Professional investors account for around 85% of the NAV (+1pp compared with 2018), and direct retail investors' participation is slightly declining but remains significant at 15%

of the NAV (ASR-AIF.11). Retail investor participation might be underestimated since they could purchase banking or insurance products that are invested in AIFs.

ASR-AIF.11  
AIF investors

**Mainly professional investors**



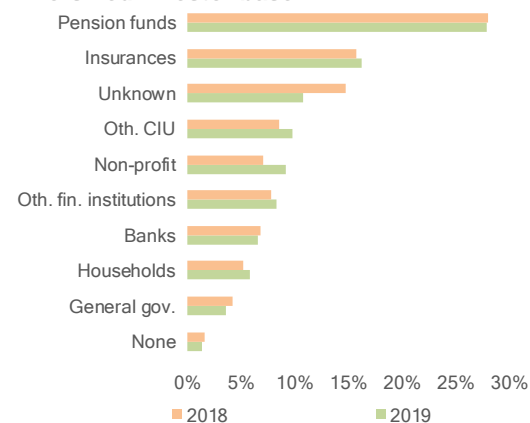
Note: Clients of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. FoF=Fund of funds. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

Among professional investors, unitholders are diversified across AIF types (ASR-AIF.12). Pension funds and insurance companies are the main investors and account for 28% and 16% of the NAV respectively. Banks account for 7%, other financial institutions for 8% and funds for 10%. Remaining investor categories are small, except for 'unknown' investors (11%). Still, data issues remain. First, the relatively large proportion of banks might indicate a lack of look-through approach by some AIFMs, since they should report the ultimate owners of the AIF shares. Second, the relatively large proportion of 'unknown' investors is difficult to explain given the highly concentrated ownership of AIFs and warrants further investigation. While the 'unknown' category has decreased by 6pp since 2017, efforts should continue as this residual category remains the fourth largest by NAV.

ASR-AIF.12

AIF investor types

**Diversified investor base**



Note: Ownership of units in AIFs managed and/or marketed by authorised EU AIFMs, in % of NAV. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

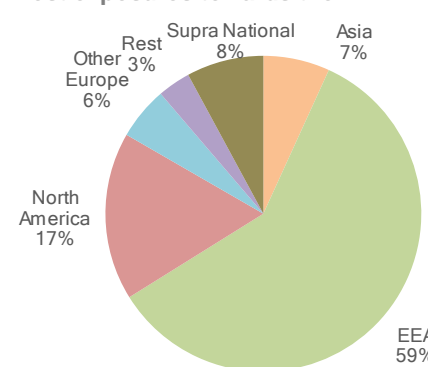
**AIF shares:** The ownership of AIFs continues to be highly concentrated: the top five investors account for more than 75% of the NAV across AIF types. More than 50% of all AIFs are entirely held by their top five investors, as indicated by the median of 100% for all AIF types (except PE funds). The high ownership concentration is explained by the dominant role played by institutional investors. In some cases, AIFs can be set up for a single institutional investor that prefers to hold all of the AIF shares, as the fund can be set up to fulfil its specific investment objective.

**AIF geographical investment focus:** AIFs invest mainly in the EEA (59%, -2pp), which includes the UK in 2019, followed by North America (17%) and supranational issuers (8%), with the last category also including investments without predominant geographical focus. Other regions account for around 16% of the NAV (ASR-AIF.13).

ASR-AIF.13

Regional investment focus

**Most exposures towards the EEA**



Note: Regional investment focus of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments, supra national category including investments without predominant geo-focus. Sources: AIFMD database, National Competent Authorities, ESMA.

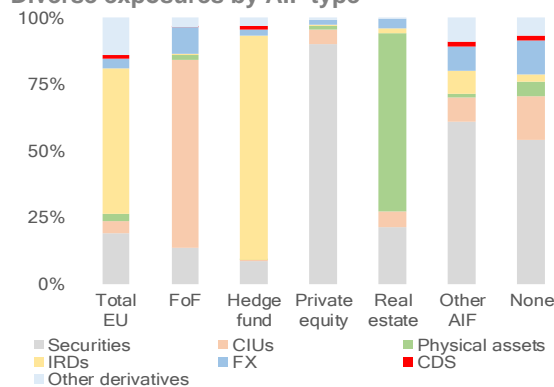
**Leverage and liquidity risks**

**Gross exposures:** AIFs are exposed to a wide range of asset classes, with variation across AIF types (ASR-AIF.14). RE funds, PE funds and FoFs are by construction heavily exposed to the underlying assets (physical assets for RE funds, (unlisted) securities for PE funds and collective investment units for FoFs). HF exposures are overwhelmingly biased towards interest rate derivatives (IRDs), because of the way IRDs are reported.<sup>3</sup> The exposures of ‘other AIFs’ are more diversified, reflecting the diversity of strategies used in this residual category.

ASR-AIF.14

Gross exposures

**Diverse exposures by AIF type**



Note: Share of gross exposures by AIF type, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

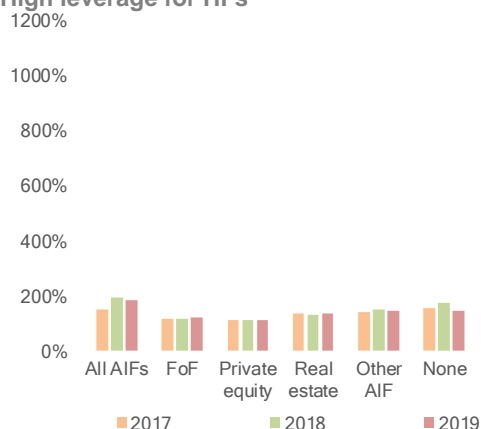
**Leverage:** Leverage remained broadly stable across most AIF types (ASR-AIF.24). Using the

<sup>3</sup> Gross notional exposures use the gross notional value of the IRDs, with no adjustment for duration. However, under the commitment approach, IRDs are adjusted for duration. The International Organisation of Securities Commissions (IOSCO) recommends that regulators

collect data on gross notional exposures, including by adjusting notional for IRDs by duration or expressing positions as 10-year bond equivalent (IOSCO, 2019).

adjusted leverage measure (calculated as gross exposures to NAV excluding IRDs), leverage declined slightly to 182% of NAV compared with 193% in 2018. In contrast, leverage measured by the ratio of AuM to NAV points to a slight increase from 440% to 460%. The aggregate measure does not reflect important differences across AIFs, with HF leverage hovering around 1000%, while for other AIF types leverage is below 150% (ASR-AIF.15). The high leverage of HFs stems mainly from the use of derivatives (synthetic leverage) rather than outright borrowing (financial leverage). In addition, aggregate measures of leverage are upward biased due to extreme outliers: the median adjusted leverage remains below 130% for all AIF types, except HFs with a median leverage at 170% (compared with an aggregate leverage of close to 1000%).

ASR-AIF.15  
Adjusted leverage by AIF type  
**High leverage for HFs**

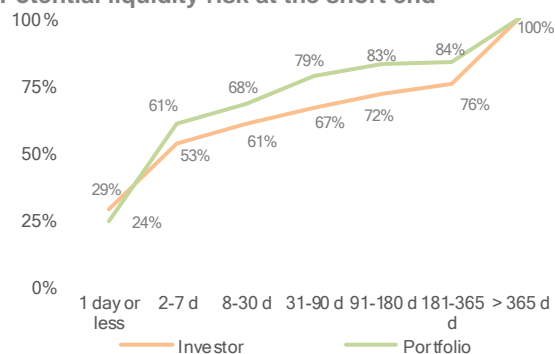


Note: Adjusted leverage by AIF type in % of NAV.  
Sources: AIFMD database, National Competent Authorities, ESMA

**Liquidity risk:** Most AIFs are open-ended funds (66% of NAV, -4pp compared with 2018), with variation across types. Within open-ended funds, around 66% offer daily liquidity to investors (+4pp compared with 2018), and 25% offer weekly to monthly redemptions (ASR-AIF.25)

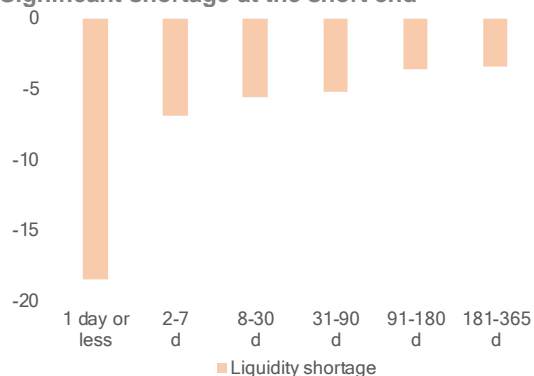
At the aggregate level, the **liquidity profile** of AIFs points to potential liquidity risk at the short end: within one day, investors can redeem up to 29% of the NAV, whereas only 24% of the assets can be liquidated within this time frame (ASR-AIF.16). For funds with a liquidity mismatch, the liquidity shortage amounts to around 18% (ASR-AIF.17) of the NAV of all AIFs (more than EUR 810bn). Such relatively large estimates can be partly explained by the fact the liquidity shortage measure does not take into account the levels of portfolio and investor liquidity (ASR-AIF.18).

ASR-AIF.16  
Liquidity profile  
**Potential liquidity risk at the short end**



Note: Portfolio and investor liquidity profiles of AIFs managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.17  
Liquidity shortage  
**Significant shortage at the short end**



Note: Liquidity shortage of AIFs, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as non compensated by liquidity surplus.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.18

Liquidity profile

**Measuring liquidity shortage**

Aggregating liquidity profiles across funds is challenging. As explained in the 2020 Annual Statistical Report (ESMA, 2020b), the method was revised to avoid having funds with excess liquidity compensating for liquidity mismatch in other funds, i.e. where the investor liquidity is higher than the portfolio liquidity.

However, even with the adjusted measure, the liquidity profile tends to underestimate liquidity mismatch risk, since it is based on the weighted average liquidity profile of each AIF. For example, if we assume two funds of equal size with one having a liquidity mismatch of 20% of NAV and the other having no liquidity mismatch, the aggregate mismatch will be equal to 10% of NAV. Therefore, we introduce a complementary measure based on the liquidity shortage for funds with a liquidity mismatch.

For funds with a liquidity mismatch, we estimate the liquidity shortage. The shortage measure at fund level is equal to the difference between the investor liquidity (in % of NAV) and the portfolio liquidity (where the percentage is divided by the AUM/NAV ratio to adjust for the use of leverage by funds). Once estimates at fund level are done, they are converted in EUR and then summed up for each bucket. The final measure is the ratio of the EUR liquidity shortage divided by the NAV of the AIFs (including funds without shortage).

Since this approach focuses on the liquidity mismatch, it does not take into account the levels of portfolio and investor liquidity. For example, assume two funds of equal size. Fund A has an investor liquidity of 80% and a portfolio liquidity of 70%, resulting in a mismatch of 10%. Fund B has an investor liquidity of 25% and a portfolio liquidity of 15%, resulting in a mismatch of 10% too.

Both funds would be treated similarly for the liquidity shortage measure, even though fund B is riskier. If investors redeem more than 15% of the NAV, fund B would not be able to raise cash sufficiently quickly, while for fund A, redemptions would need to be above 70% to generate such liquidity strains.

Overall, the liquidity shortage measure complements the analysis based on the liquidity profile.

A final assessment of fund liquidity risks requires a supervisory analysis at entity level, along with a review of **liquidity management tools** (LMTs) available at the fund level. Under Article 24(2), AIFMs have to report the measures adopted to ensure consistency between the redemption policies and the liquidity profiles of the managed AIFs. LMTs are generally communicated upfront in fund disclosure documents.

A variety of LMTs are available to AIFMs, including: the presence of a lock-up and/or a redemption notice period, and special liquidity arrangements such as side pockets, the adoption of redemption gates, the suspension of dealing, and other special arrangements that may arise from illiquid assets.

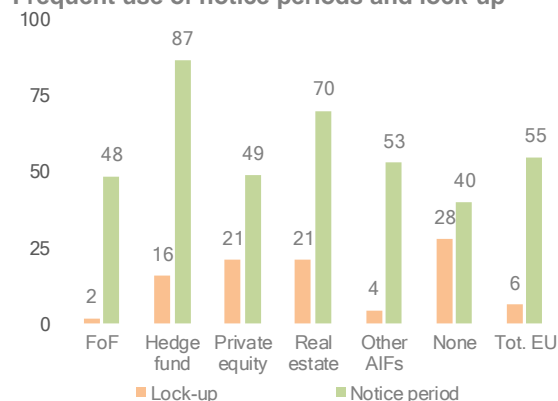
Data on special liquidity arrangements applied by open-ended AIFs are scarce. Close to 80% of AIFs do not report these data. A total of 20% of all AIFs declare that they do not apply LMTs, and only 1% report applying LMTs.

More information is available on the contractual definition of an initial amount of time investors are prohibited from withdrawing their investment (i.e. lock-up period) and/or redemption notice periods that specify how many days in advance investors have to notify that they wish to redeem.

Around half of the open-ended EU AIFs require a notice period for withdrawals. The widespread adoption of these contractual terms shows that EU AIFMs have a strong preference not only for 'sticky money' and term investments, but also to manage liquidity mismatch risks (ASR-AIF.19).

ASR-AIF.19

Liquidity management tools

**Frequent use of notice periods and lock-up**

Note: Number of open-end EU AIFs imposing lock-up periods to investors and requiring advance notice before redemptions, end of 2019, in %.

Sources: AIFMD database, National competent authorities, ESMA.

## References

European Securities and Markets Authority, (2019), "[Annual Statistical Report on EU Alternative Investment Funds](#)", March.

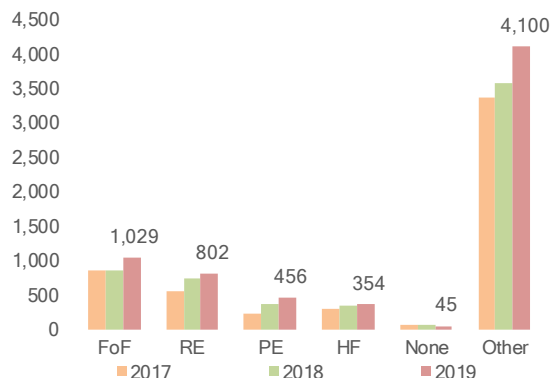
European Securities and Markets Authority, (2020a), "[Recommendation of the European Systemic Risk Board \(ESRB\) on liquidity risk in investment funds](#)", November.

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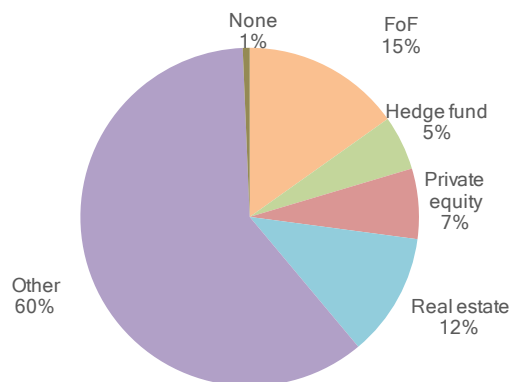
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**ASR-AIF.20**  
Size of the AIF industry  
**Growing market**



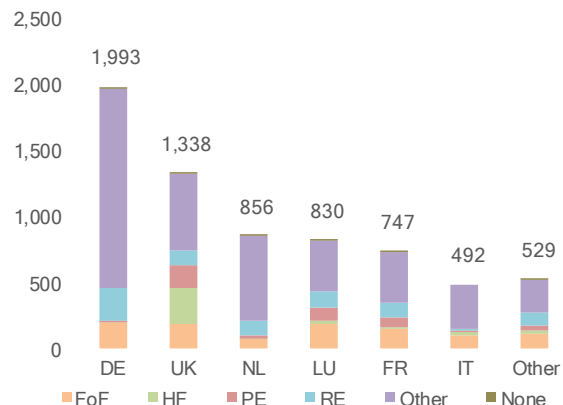
Note: NAV by type of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in %. FoF=Fund of funds, None=No predominant type. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.21**  
AIF industry by type  
**'Other AIFs' largest type**



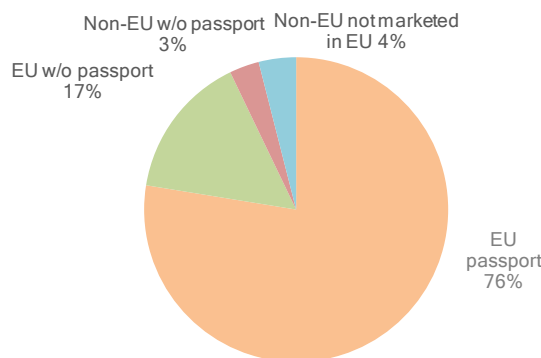
Note: NAV by type of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in %. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.22**  
Size of AIF by type and country  
**Concentration in a few countries**



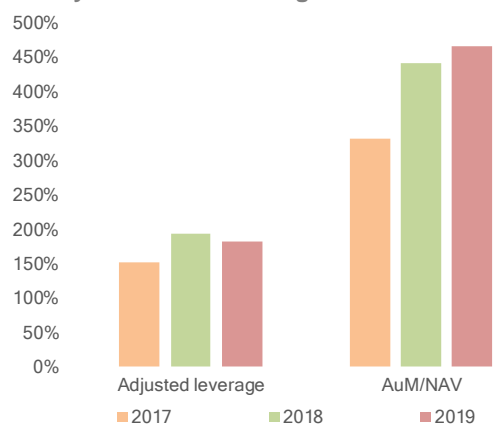
Note: NAV by type of AIFs managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.23**  
EU passport  
**Most AIFs can be passported**



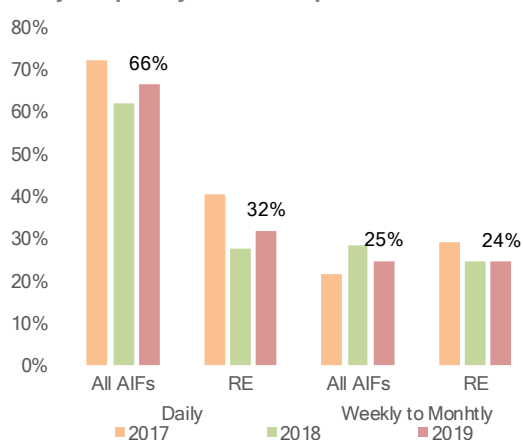
Note: NAV of AIFs by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.24**  
Leverage  
**Steady increase in leverage**



Note: Leverage of all AIF in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.25**  
Redemption frequency  
**Daily frequency for most open-ended AIFs**



Note: Share of open-end AIFs by redemption frequency. Sources: AIFMD database, National Competent Authorities, ESMA.

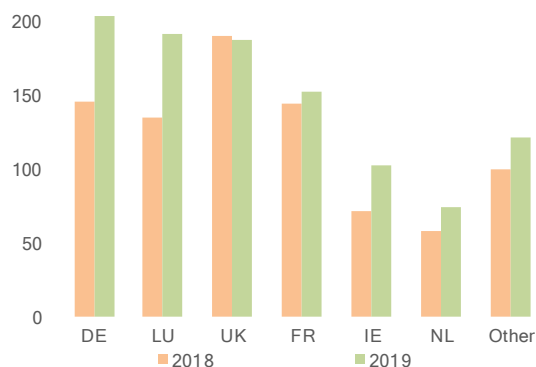
# Funds of Funds

FoFs account for 15% of the NAV of EU AIFs, at around EUR 1tn (+22% compared with 2018). FoFs invest mainly in equity and bond UCITS (72% of identified fund exposures) rather than AIFs. At the very short end, investors are able to redeem 39% of the NAV within one day, whereas only 29% of assets could be liquidated within this time frame. If large redemptions were to occur, AIFs would face challenges due to this liquidity mismatch.

## Funds of Funds: market size and structure

**Size:** As of the end of 2019, the NAV of FoFs sold in the EU by European AIFMs amounted to EUR 1tn, a 22% increase (EUR 183bn) compared with 2018, resulting also in a slight increase in their relative size (+1 pp at 15% of all AIFs). Unlike ‘other AIFs’, FoFs are spread across EU Member States (ASR-AIF.26), with a larger presence in countries with a large asset-management industry.

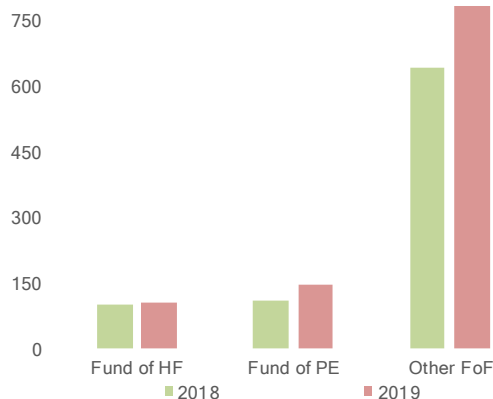
ASR-AIF.26  
Funds in FoFs' portfolios  
**Spread across countries**  
250



Note: NAV by FoFs managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

**Funds of funds strategies:** Funds of funds invest in underlying collective investment undertakings and serve the purpose of diversifying fund-specific risk, relieving burdens for investors to perform due diligence on individual fund managers. FoFs pursuing strategies beyond PE funds or HFs have registered the largest growth in the segment (+22pp) and account for more than 75% of NAV (ASR-AIF.27).

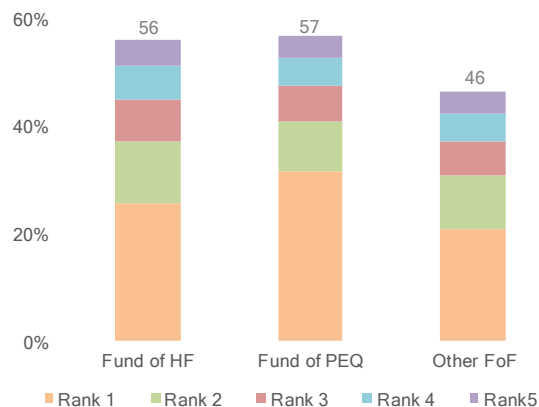
ASR-AIF.27  
FoF strategies  
**Mainly outside of PE funds and HFs**



Note: NAV of FoFs by strategy, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

Information on the most traded instruments provided by AIFMs on behalf of the managed funds allows to classify the CIUs in which FoFs invest and ultimately better understand their activity. For FoFs investing in PE funds and HFs the top five traded instruments account for more than 50% for of the portfolio, while the remaining FoFs have only a slightly more diversified portfolio (ASR-AIF.28).

ASR-AIF.28  
Main instruments  
**Concentrated portfolios**



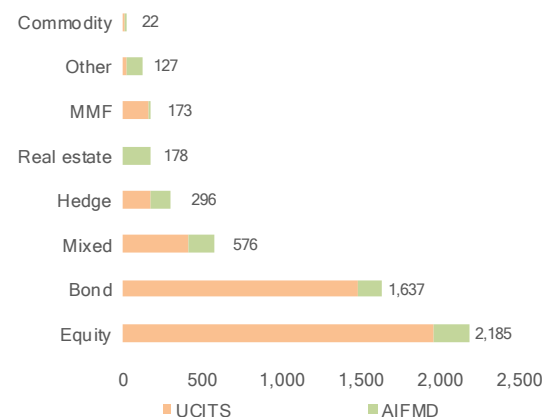
Note: Portfolio concentration of funds of funds, end of 2019, in % of AuM. Portfolio concentration computed as the value of top 5 instruments traded with respect to AuM.

Identifiers are available for 73% of the top traded instruments listed as funds by the AIFs. Using



institutional and commercial data sources, almost 90% of these funds in FoFs holdings are retrieved.<sup>4</sup> Overall, based on the above sample of identified Collective Investment Units (CIUs), FoFs invest 72% in UCITS and 17% in AIFs, with a preference for EU domiciled equity and bond funds (ASR-AIF.29).

ASR-AIF.29  
Funds in FoF portfolios  
**Majority of UCITS investing in equities**



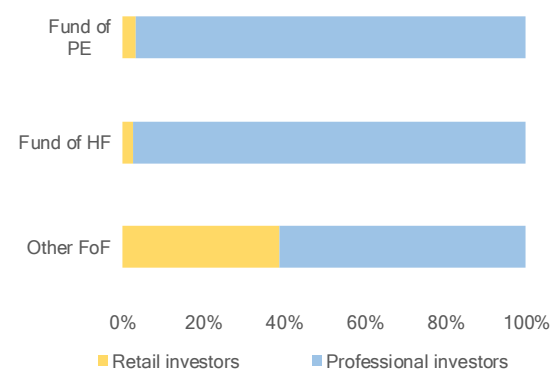
Note: Funds listed as toptradedinstruments in FoF portfolios, end of 2019.  
Sources: AIFMD database, Lipper, National Competent Authorities, ESMA.

**Distribution:** Most FoFs have access to the EU passport to a large extent, with 96% licensed to be sold throughout the EU (ASR-AIF.37).

**Funds of Fund investors:** Among AIF types, FoFs have the largest proportion of retail investors (28%), although they are sold mainly to professional investors (72%) (ASR-AIF.30). FoFs are diversified and usually require less initial investment than other types of sophisticated vehicles, so are easier to access, especially for retail investors.

Nevertheless, retail participation varies significantly between FoF strategies — 3% and 4% for, respectively, funds of PE funds and funds of HF, and around to 35 % for ‘other FoFs’ (-5 pp compared to 2018). Among professional investors, pension funds and insurance companies are the main investors, accounting for 19% and 10% of the NAV respectively. Around 10% of FoFs’ NAV is instead held by other CIUs, (ASR-AIF.37). In particular pension funds and other CIUs have a large participation in FoFs investing in PE and HF (~30%).

ASR-AIF.30  
AIF investors  
**Relevant retail participation**



Note: Clients of funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions at end of 2019, in % of NAV. FoF=Fund of funds, PE= Private equity fund, HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

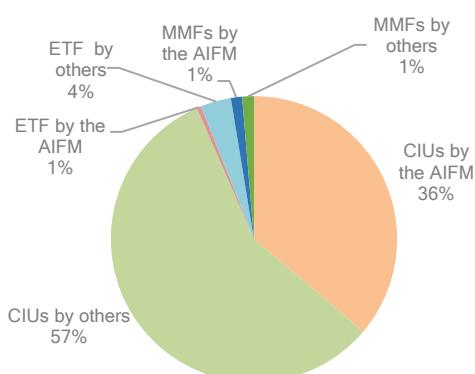
**Geographical investment focus:** FoFs invest primarily in the EEA (55%), followed by supranational issuers (25%) and North America (10%) (ASR-AIF.39). Since the supranational issuers category also covers ‘multiple regions’, FoFs may invest in geographically diversified funds, rather than in supranational issuers specifically.

**Leverage and liquidity risks**

**Gross exposures:** In line with the strategy adopted, FoFs are predominantly exposed to other collective investment undertakings (ASR-AIF.39). FoFs have a large proportion of their fund holdings invested in funds from the same manager (38%) of all funds holdings including Money Market Funds and ETFs by the same AIFMs (ASR-AIF.31).

<sup>4</sup> The European Central Bank (ECB) publishes the list of EU investment funds collected by the European System of Central Banks (ESCB).

## ASR-AIF.31

Proportion of fund holdings for FoFs  
Significant cross investment

Note: Share of collective investment undertakings held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA

This results also from the analysis of the main traded instruments of FoFs investing in funds different from PE funds and HFs. For this large residual category of FoFs, 18% of total portfolio exposure resulting from the top five instruments in portfolio relates to cross investment. For funds of PE funds and HFs the shares of CIUs managed by other management companies is, respectively, around 39% and 29%. Looking at the use of derivatives, funds of HFs rely to some extent on FX derivatives (ASR-AIF.32 and ASR.AIF.40). The use of these derivatives may serve to hedge the exposures arising from foreign currency share classes held in portfolio.

## ASR-AIF.32

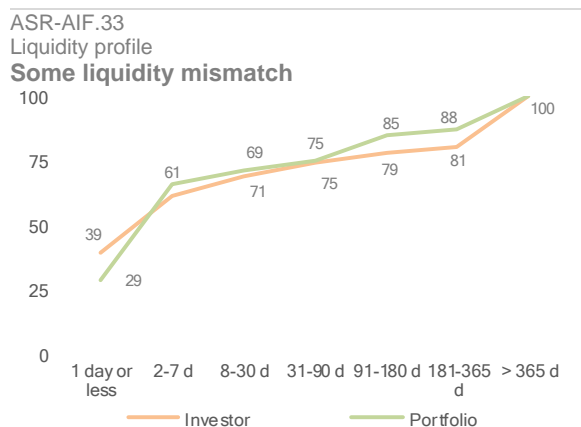
## Main traded instruments

Instruments (%)	Funds of HFs	Funds of PE	Other FoFs
Cash	0.8	2.7	1.3
Equities	0.5	3.9	1.5
Corporate bonds			0.2
Sovereign bonds			0.4
Convertible bonds			
Loans	1.0	0.1	0.1
Structured products	0.1		0.1
CDS & equity derivatives			1.0
IRDs and FX	15.7	0.3	5.1
Other derivatives			0.6
Real assets			0.1
MMFs by other AIFMs	0.1	0.2	0.6
MMFs by the same AIFM	0.1		0.8
ETFs by other AIFMs	0.2		1.1
ETFs by the same AIFM			0.3
CIUs by other AIFMs	28.6	38.6	15.6
CIUs by the same AIFM	8.5	7.1	16.9
Other assets	0.5	3.8	0.7
Total	56.1	56.8	46.3

Note: Main traded instruments, end of 2019, % of total exposures. Sources: AIFMD database, National Competent Authorities, ESMA.

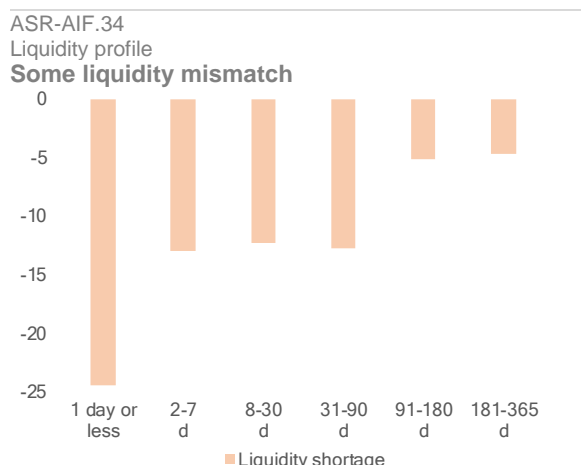
**Leverage:** FoFs display limited use of leverage: regulatory AuM to NAV is 140% on aggregate, with some variation by type (ASR-AIF.41). Relatively low leverage levels come from limited exposures to derivatives and little use of financial leverage (less than 1% of NAV). Leverage appears even more limited in funds investing in HFs and PE funds.

**Liquidity risk:** Most FoFs are open-ended funds (74% by NAV), with the exception of funds of PE funds. Among open-ended FoFs, most of funds investing in strategies beyond HFs and PE funds offer daily liquidity to investors (ASR-AIF.41). At the aggregate level, the **liquidity profile** of FoFs points to liquidity mismatch at the very short end: within one day investors can redeem up to 39% of the NAV, whereas 29% of the assets can be liquidated within this time frame (ASR-AIF.33).



Note: Portfolio and investor liquidity profiles of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. d= Days. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

Most FoFs, and in particular those investing beyond HF and PE strategies, usually hold UCITS in their portfolios, which offer predominantly daily liquidity to investors. The relatively low proportion of fund units that can be liquidated within one day and the related liquidity gap may then depend on the settlement period required by the underlying funds. Another explanation for the liquidity gap could be that when FoFs own a large proportion of a fund, they no longer consider the underlying fund liquidity on a daily basis, since the fund might not be able to convert such large amounts of shares into cash very quickly. When considering only FoFs with a liquidity deficit, the potential liquidity shortage in the very short term (within 1 day) is around 20% of NAV and it reduces significantly within the six-months horizon (ASR-AIF.34).



Note: Liquidity shortage of funds of funds, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as non compensated by liquidity surplus. Sources: AIFMD database, National Competent Authorities, ESMA.

FoFs offering daily redemptions and not requiring any notice period to investors for redeeming their

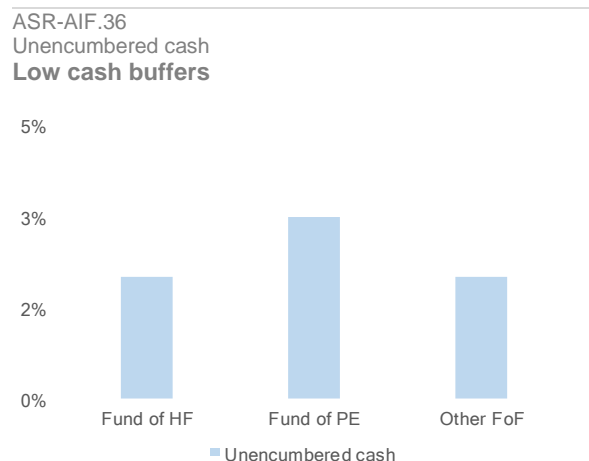
share represent 40% of the NAV. A notice period ranging from 1 to 7 days for FoFs allowing to redeem on a daily basis is instead requested on a more limited basis. Overall, around 50% by NAV of FOFs do not require any redemption notice to investors (ASR.AIF.35).

ASR-AIF.35  
Redemption frequency and notice period  
**Majority of daily funds with not notice period**

Redemption Frequency	0 days	1 day	2-7 days	8-30 days	>30 days	Total
Daily	43	21.5	5.5			70
Weekly to Monthly	7.4	5.5	1.3	2.9	5.1	22.2
Quarterly	0.6			0.1	2.4	3.2
Longer than quarterly	0.2			2.7	0.8	3.7
Other	0.1		0.6	0.1	0.1	0.9
Total	51.4	27	7.4	5.8	8.4	100

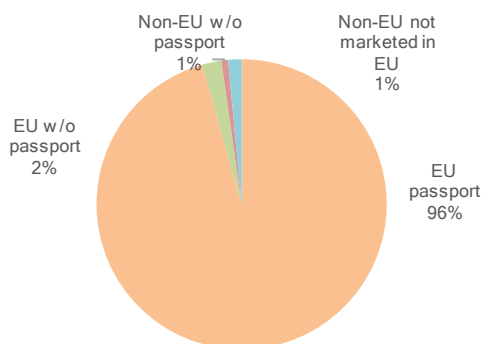
Note: Fund of funds by redemption frequency and notice period given to investors, in % of NAV, end of 2019. Source: AIFMD database, National Competent Authorities, ESMA.

Unencumbered cash, i.e. a fund's position in cash or cash-like securities not subject to legal claims by another party (e.g. from collateral pledges or securities lending activities), is an important indicator of a fund's ability to mobilise funds fast to meet redemption claims. FoFs have relatively low levels of unencumbered cash, between 2% and 3% of the NAV across types (ASR-AIF.36).



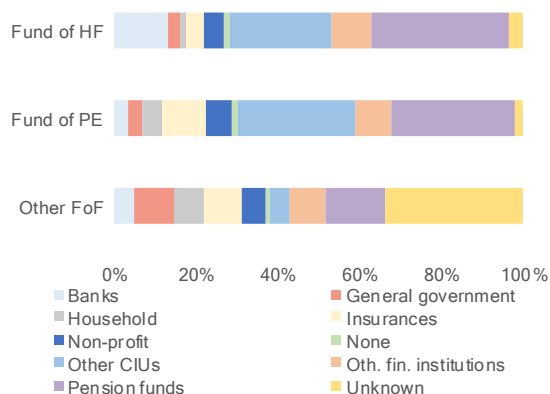
Note: Unencumbered cash held by funds of funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of funds, HF=Hedge fund, PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.37**  
EU passport  
**Most FoFs can be passported**



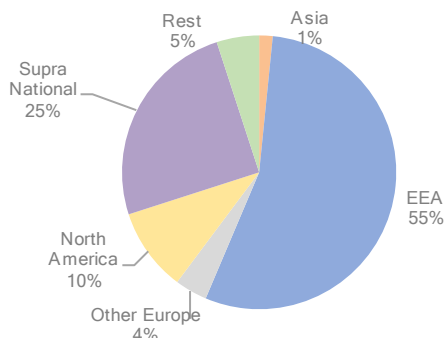
Note: NAV of funds of funds by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers are registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.38**  
FoF investors  
**Mainly professional investors**



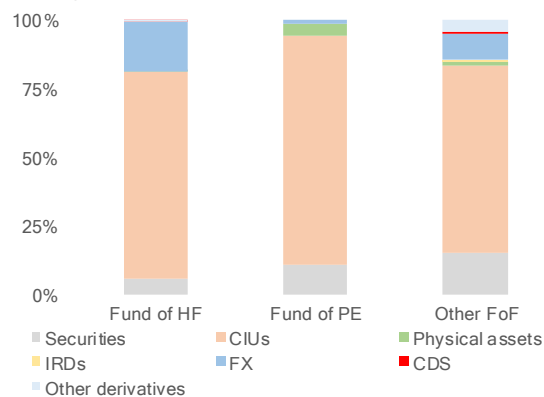
Note: Ownership of units in funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. FoF=Fund of funds; PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.39**  
Regional investment focus  
**Mainly EEA**



Note: Regional investment focus of funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.40**  
Gross exposures  
**Mainly investment in funds**



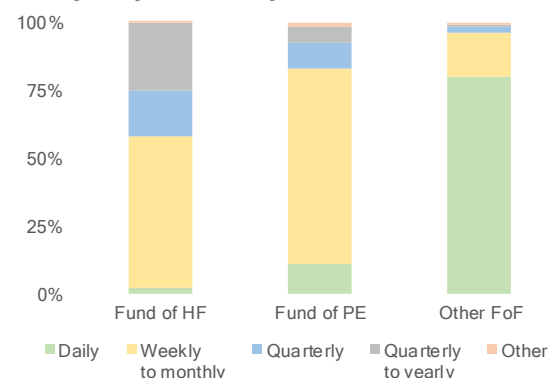
Note: Share of exposures by funds of funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.41**  
Leverage  
**Limited leverage**



Note: Adjusted gross leverage of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. FoF= Funds of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.

**ASR-AIF.42**  
Redemption frequencies  
**Mostly daily and weekly**



Note: Investor redemption frequencies allowed by open-end funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, PE=Private equity fund, HF=Hedge Fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

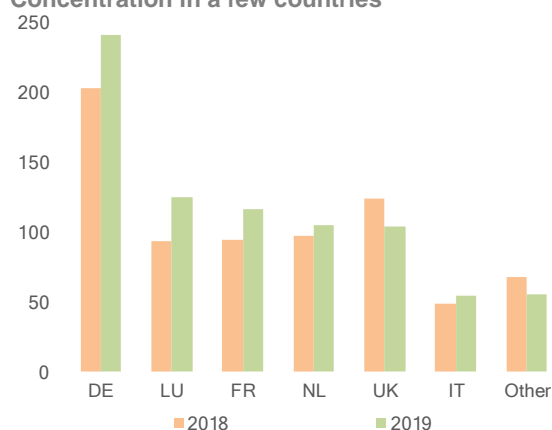
# Real Estate Funds

RE funds account for 12% of the NAV of AIFs, at EUR 802bn. RE funds continued to grow in 2019, albeit at a more moderate pace (+9% compared with 2018). Compared with 2018, the proportion of retail investors was stable (21%) but remains high compared with other AIF categories. RE funds are exposed mostly to illiquid physical assets which take time to sell (usually months). Liquidity risk in RE funds remains a concern: around 54% are open-ended, and almost half of Commercial Real Estate (CRE) funds — the largest category — offer daily liquidity to investors. At the aggregate level, RE funds face liquidity mismatch across all time periods, an indication of a structural vulnerability as the maturities of assets and liabilities are not aligned.

## Real Estate Funds: market size and structure

**Size:** RE funds are the third-largest AIF type by size, with a NAV of EUR 802bn, or 12% of all AIFs. The size of the RE fund industry increased by 9% in 2019, a more moderate pace compared to 2018 (35% increase), as the result of positive developments in housing markets. The RE fund industry remains concentrated in a few countries (ASR-AIF.43), with the top five accounting for 85% of the NAV. Except UK, fund NAV increased for the countries with the largest RE fund industry.

ASR-AIF.43  
Size of RE funds  
**Concentration in a few countries**

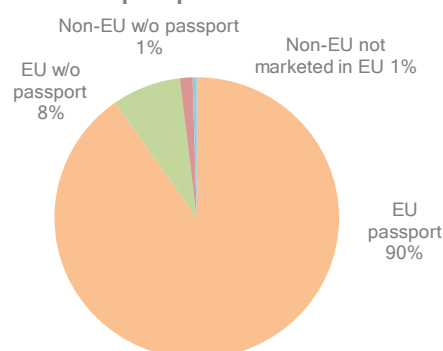


Note: NAV of RE managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn.  
Sources: AIFMD database, National Competent Authorities, ESMA

**Real Estate fund types:** RE investment strategies continue to be dominated by CRE with 67% of the NAV (+8pp compared with 2018); and exposure to residential markets slightly decreased to 14% of NAV (-3pp, ASR-AIF.50).

**Distribution:** Among AIFs, RE funds have an extensive access to the EU passport, with 90% able to be sold throughout the EU which is a substantial increase of +14 pp from 2018 (ASR-AIF.44).

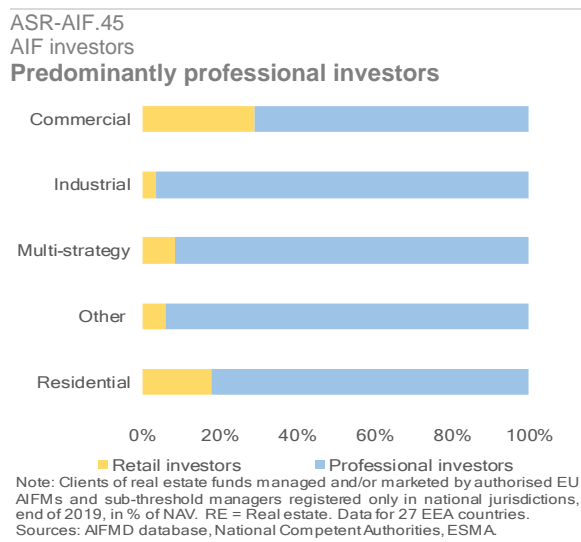
ASR-AIF.44  
EU passport  
**High access to passport**



Note: NAV of real estate AIFs by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers are registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA

**Real Estate fund investors:** RE funds are sold mainly to professional investors (79%), with the proportion of retail investors remaining stable at 21% in 2019. The retail investor share is however higher for CRE funds, at 29% of the NAV (-2pp) and increased to 18% for the residential category (+4pp, ASR-AIF.45). Among professional investors, pension funds and insurance companies are the main investors, accounting for 25% and 16% of the NAV respectively (ASR-AIF.51). Other funds also account for a sizeable percentage of RE fund ownership, with 12% of the NAV. Banks have limited exposures to RE funds, except for residential RE funds for which banks hold 13% of NAV.

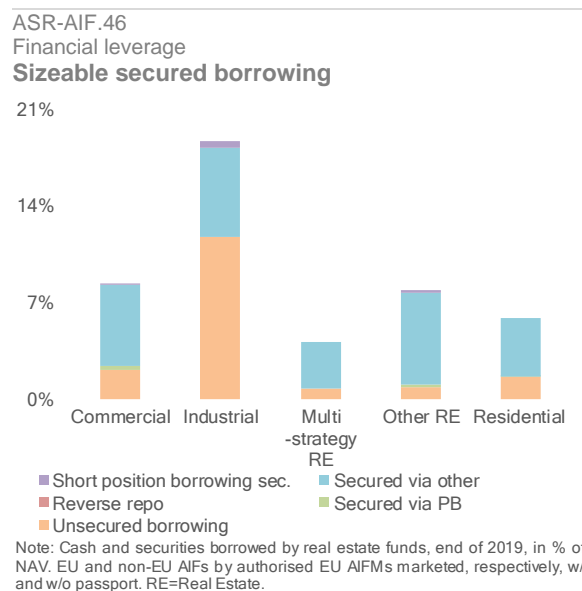


**Geographical investment focus:** RE funds invest overwhelmingly in the EEA (84%, +6pp compared with 2018, ASR-AIF.52), followed by North America (6%), whose relative proportion narrowed significantly (-8pp) after nearly tripling the year before, as RE fund exposures to North American assets decreased from EUR 101bn to EUR 42bn.

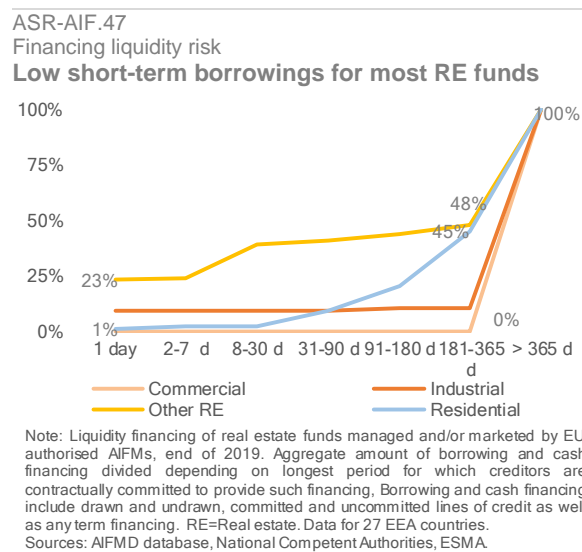
### Leverage and liquidity risks

**Gross exposures:** RE gross exposures are concentrated in physical assets (around 67% of exposures, across most RE types), in line with the strategy used (ASR-AIF.53).

**Leverage:** RE funds make limited use of leverage. Regulatory AuM to NAV is 136% on aggregate, as they have limited exposures to derivatives, with low dispersion across RE fund types (ASR-AIF.54). However, RE funds do use **financial leverage**, with outright borrowing amounting to 8% of the NAV, the second largest by AIF type, after HFs (ASR-AIF.46). Most of the borrowing is secured, with non-securities as collateral (possibly real estate assets owned by the fund).



Most borrowing is available for relatively long periods, implying limited financing liquidity risk for most RE funds. For 'other' RE funds, very short-term borrowing (overnight) slightly increased by 3 pp since 2018 to amount to 23% of financing liquidity. A higher demand for short-term liquidity is noticed for residential RE funds (+12pp for 91-180 days; +38pp for 181-365 days as compared to 2018, ASR-AIF.47).



**Liquidity risk:** In terms of NAV, 54% of RE funds are open-ended funds compared with around 60% in 2018 and there is considerable heterogeneity regarding redemption frequencies for open-ended RE funds (ASR-AIF.55)<sup>5</sup>. RE funds offering daily to monthly liquidity account for 50% of the NAV compared with 47% in 2018.

<sup>5</sup> The form (open-ended vs closed-ended) that RE funds can have is not harmonized at the EU level. Accordingly, in some Member States, RE funds shall be closed-ended

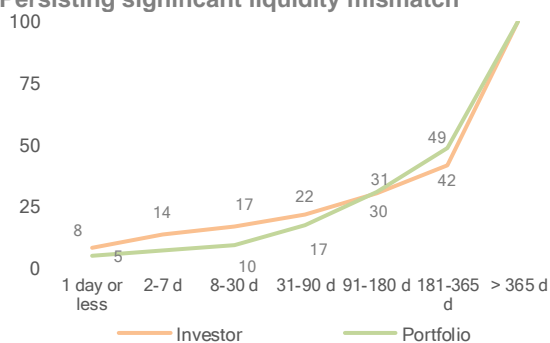
based on national law, and in other Member States they can either be open-ended or closed-ended.

However, 44% of CRE funds still offer daily liquidity to investors (-1pp). At the aggregate level, the **liquidity profile** of RE fund points to significant liquidity mismatch: within a month, investors can redeem up to 17% of the NAV, whereas only 10% of the assets can be liquidated within this time frame. The liquidity mismatch occurs across all time buckets within one year and is most prevalent for the two main strategies (CRE and residential) which account for 81% of NAV (ASR-AIF.48). The aggregate level of liquidity masks important differences across Member States, as in some countries RE funds can only be closed-ended.

ASR-AIF.48

Liquidity profile

Persisting significant liquidity mismatch



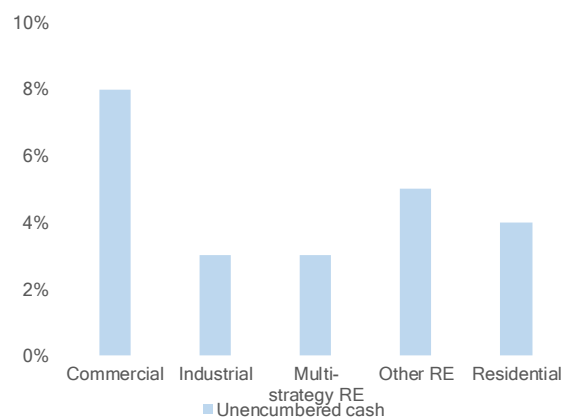
Note: Portfolio and investor liquidity profiles of real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio profile determined by percentage of the funds' portfolios capable of being liquidated within each specified period, investor liquidity profile depend on shortest period within each fund could be withdrawn or investors could receive redemption payments. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries.

The liquidity mismatch at the short-end can be mitigated by cash, albeit to a lesser extent: **unencumbered cash** for RE funds has decreased for most RE categories in 2019 (ASR-AIF.49). Furthermore, cash buffers are significantly lower than the potential liquidity mismatch that could arise if investors were to redeem over longer time horizons. In that context, funds might have to rely on liquidity management tools, provided that they were available at the fund level. Around 70% of open-ended RE funds require a notice period, which in most cases is at least three months, and 21% have lock-up periods.

ASR-AIF.49

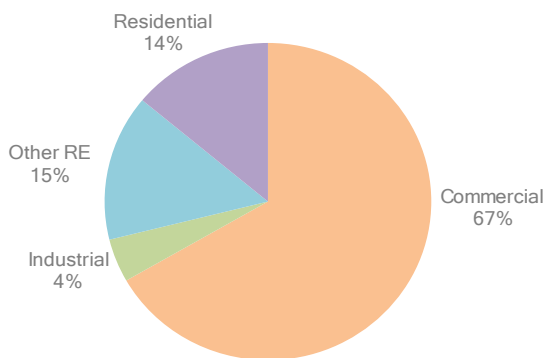
Unencumbered cash

Cash buffers lower than liquidity gap



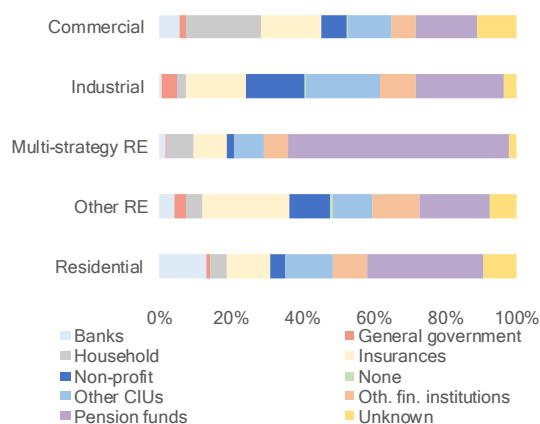
Note: Unencumbered cash held by real estate funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.50  
RE fund strategies  
Mainly CRE



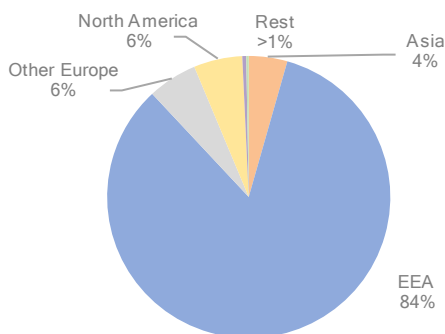
Note: Investment strategies of real estate funds, end of 2019, in % of NAV. Real estate funds managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. RE= Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.51  
RE funds investors  
Pension funds as largest investors



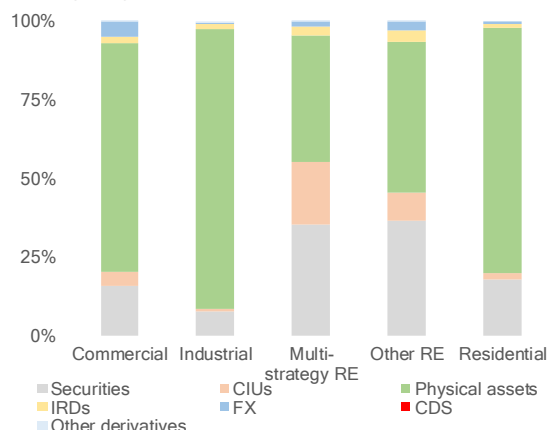
Note: Ownership of units in real estate funds AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.52  
Regional investment focus  
Investments mainly in EEA



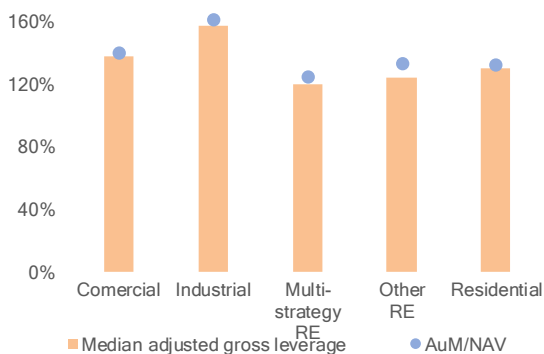
Note: Regional investment focus of real estate funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.53  
Gross exposures  
Mainly physical assets



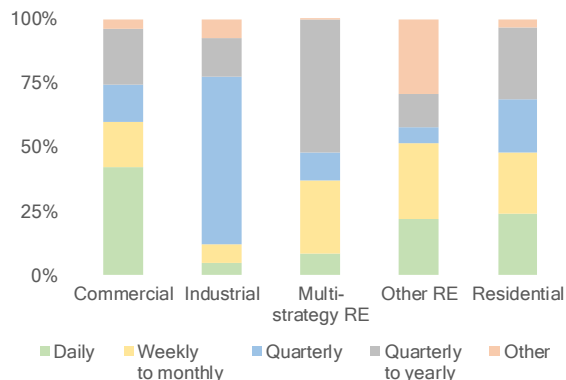
Note: Share of exposures by real estate funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.54  
Leverage  
Limited use of leverage



Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.

ASR-AIF.55  
Redemption frequencies  
Large dispersion



Note: Investor redemption frequencies allowed by open-end real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries.



# Hedge Funds

The size of the EU HF sector remained stable in 2019 at EUR 354bn, or 5% of all AIFs. However, when measured by gross exposures, HFs account for 62% of AIFs since they rely heavily on derivatives. The majority of HFs are managed and domiciled outside the EU, with HFs sold through the National Private Placement Regime (NPPR) 160% larger than HFs managed by EU AIFMs. Leverage is very high, particularly for some strategies highly reliant on derivatives. HFs using derivatives tend to maintain large unencumbered cash positions, possibly to meet future margin calls relating to derivatives positions. HFs are exposed to little liquidity mismatch, as their assets can be liquidated quickly to meet investor redemptions. However, HFs are exposed to financing risk, as for some strategies more than half of their funding is overnight, implying potential rollover risk.

## Hedge Funds: market size and structure

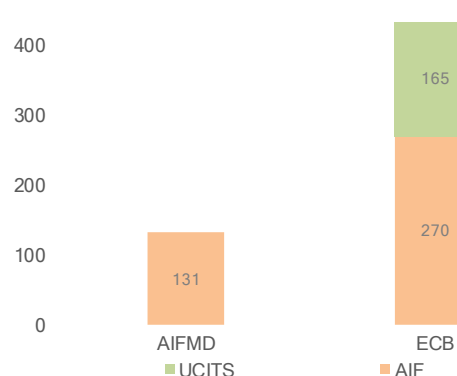
HFs are funds that employ complex strategies, usually through the use of derivatives, and rely on leverage to generate returns.

**Size:** As of the end of 2019, the NAV of HFs sold in the EU by European AIFMs amounted to EUR 354bn, a 6% increase compared with 2018. Although HFs account for only 5% of the NAV of all AIFs, they account for 62% of regulatory AuM of the AIF industry (at close to EUR 21tn).

Most of the European HF industry remains concentrated in one Member State: UK AIFMs account for 76% of the NAV compared with 75% in 2018 (ASR-AIF.63).

The NAV of AIF HFs domiciled in the euro area amounts to EUR 131bn (with EUR 58bn managed by UK AIFMs and EUR 73bn by other AIFMs domiciled in the EU), based on the definition and regulatory reporting under AIFMD. Outside the AIF framework, funds have been identified that apply investment strategies comparable to hedge funds, whose size has been found to be significant. For example, the ECB estimates the total size of the euro area market for funds pursuing hedge-fund style strategies to amount to EUR 435bn, including EUR 270bn registered as AIFs, and EUR 165bn of funds registered under the UCITS framework (ASR-AIF.56)<sup>6</sup>. Most strikingly, the size of AIF HFs cited by the ECB amounts to more than twice the volume found under formal AIF reporting. This represents a significant case of reporting inconsistencies resulting from the AIF categorisation.

ASR-AIF.56  
Classification of EA hedge funds  
**Large reporting differences**  
500



Note: NAV of the hedge fund sector for funds domiciled in the euro area in EUR bn, end-2019.  
Sources: AIFMD database, National Competent Authorities, ECB, ESMA.

There are also AIF HFs which are neither domiciled nor managed in the EU but are sold in individual Member States under NPPR. Those HFs had a NAV of EUR 568bn at the end of 2019. Therefore, the majority of HFs are managed and domiciled outside the EU; the size of such HFs being 160% larger than HFs managed by EU AIFMs. Most of HFs sold under NPPR are domiciled in offshore centres such as the Cayman Islands (61% of NAV) and the British Virgin Islands (18%), and around 18% are domiciled in the United States. Overall, those HFs tend to be less leveraged than their EU counterparts, with an adjusted leverage of around 660% compared with 1000% for EU HFs.

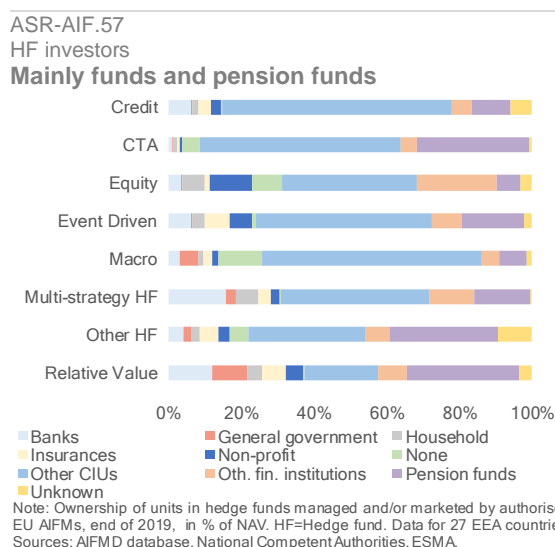
**Hedge Fund types:** HFs pursue a wide range of strategies. Strategies relating to equities (such as long/short) remain dominant (48%, +6pp), followed by macro (10%, -2pp) and commodity trading advisors (CTA) (9%, -1pp), and relative value (8%, +1pp).

<sup>6</sup> The ECB defines hedge funds as funds “which apply relatively unconstrained investment strategies to achieve positive absolute returns, and whose managers, in

addition to management fees, are remunerated in relation to the fund’s performance’ (ECB, 2017).

**Distribution:** Unlike other types of AIFs, most HFAs do not have access to the EU passport. Only 35% of HFAs are able to be sold throughout the EU, although the use of passport has increased compared with 2019 (+5 pp). The low share of EU passport can be explained by the domicile of HFA AIFs: most of them are domiciled outside the EU but managed by sub-threshold AIFMs under national law and hence not eligible for passporting.

**Hedge Fund investors:** HFAs are almost exclusively owned by professional investors, with retail investors accounting for less than 2% of NAV. Among professional investors, investment funds are the main holders of HFA shares at 41% (ASR-AIF.57), followed by pension funds (14%) and other financial institutions (13%, +3pp). Similarly, for other types of AIFs, the ownership of HFA shares is highly concentrated, with the top five holders accounting for around 80% of the NAV for HFAs with passport and more than 90% for other HFAs.

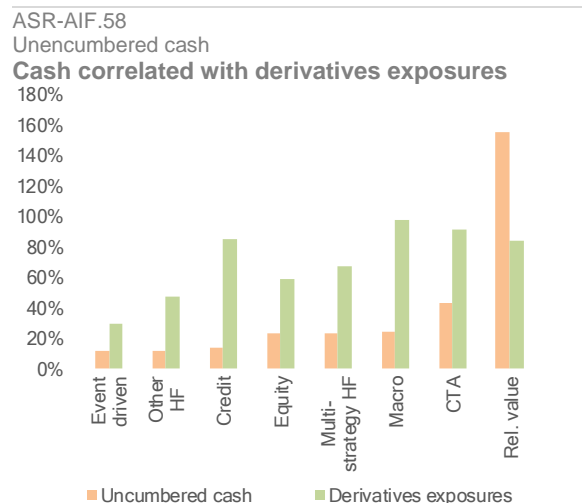


**Investment focus:** HFAs invest primarily in North America (48%, +2pp), followed by the EEA (32%, -1pp) and Asia (11%, +4pp).

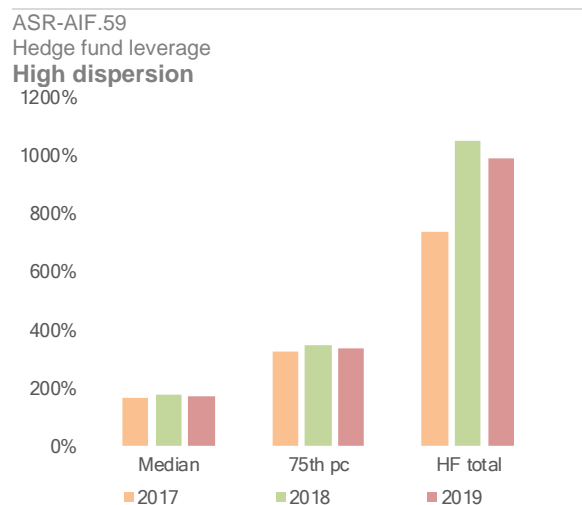
### Leverage and liquidity risks

**Gross exposures:** Gross exposures of HFAs are diverse and heterogeneous across strategies (ASR-AIF.65). Macro, CTA and relative value HFAs have high exposures relating to interest-rate derivatives, while credit HFAs are exposed mainly to credit derivatives (78% of exposures). Securities account for the main part of gross exposures for event-driven and equity HFAs (62% and 39% respectively).

HFAs have high levels of **unencumbered cash** compared to other types of AIFs (31% for HFAs versus 5% for all AIFs). The highest levels of cash are for strategies that have the highest exposures to interest-rate derivatives, such as relative value, macro, credit and CTA (ASR-AIF.58). This suggests that part of the unencumbered cash is used to cover future margin calls.



**Leverage:** HFAs are in general highly leveraged, with adjusted leverage at around 1000% of NAV (ASR-AIF.59), although leverage declined slightly in 2019. The high levels of aggregate leverage are driven by a few very large outliers: half of HFAs have a leverage below 200%, as indicated by the median leverage which remained stable at 171%. In addition, 3/4<sup>th</sup> of HFAs have leverage below 330% (75<sup>th</sup> percentile). Among HFA strategies (ASR-AIF.65), CTAs have the highest median leverage (at 660%), followed by macro (570%) and relative value (340%).

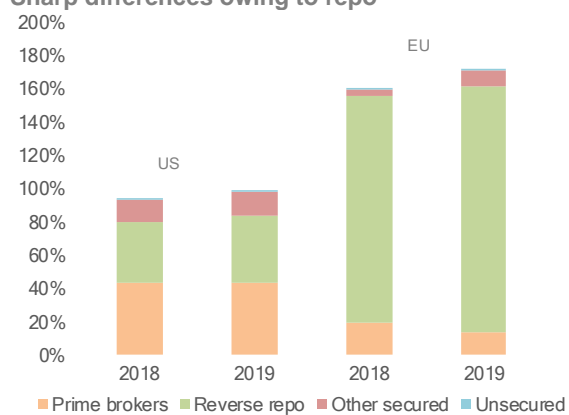


Although most of the leverage is synthetic leverage, i.e. due to the use of derivatives, **financial leverage** is also significant for HFs (ASR-AIF.60), amounting to around 170% (+10pp) of the NAV (compared with 6% for all AIFs). Such direct borrowings are estimated to amount to close to EUR 610bn in 2019, compared with EUR 540bn in 2018. Secured borrowing through repo and reverse repo accounts for 150% of the NAV and funding from prime brokers accounts for 12% of the NAV. In contrast, HFs reporting to the US SEC have more limited borrowings (close to 100%, with a higher share from prime brokers).

ASR-AIF.60

Direct borrowing

Sharp differences owing to repo



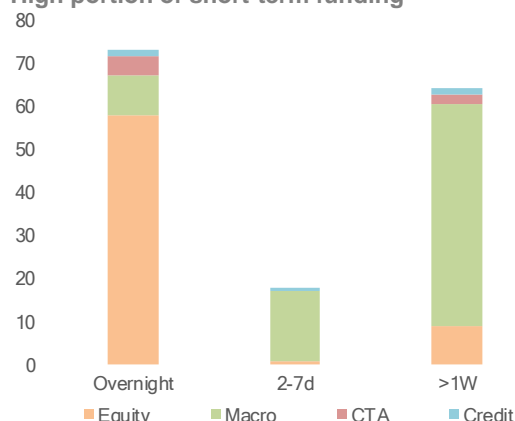
Note: Cash and securities borrowed by hedge funds, end of 2018 and 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Sources: AIFMD database, National Competent Authorities, SEC, ESMA.

**Liquidity risk:** HFs reliant on short-term borrowings are exposed to **financing liquidity risk** (ASR-AIF.67). The risk would crystallise if HFs were to use most of their available financing, and then their counterparts were to cut or reduce their funding. Overall, 18% of the funding is overnight, with heterogeneity across strategies. For some strategies, such as CTA and equity, most of their available borrowing is overnight (70% and 86% respectively), exposing them to potential rollover risk. Around EUR 75bn of estimated borrowing is overnight, mainly for equity and macro HFs (ASR-AIF.61).

ASR-AIF.61

Liquidity financing

High portion of short-term funding



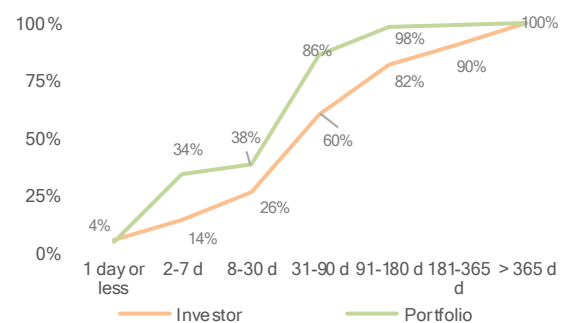
Note: Estimated borrowings by maturity and HF types, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

Regarding liquidity risk, most HFs are open-ended funds (78% of NAV) which offer weekly to monthly liquidity to investors across strategies (ASR-AIF.67). HFs offering daily liquidity account for only 8% of the NAV. At the aggregate level, the **liquidity profile** of HFs points to very little liquidity mismatch: within one week, investors can only redeem up to 14% of the NAV, whereas 34% of the assets can be liquidated within this time frame (ASR-AIF.62). This pattern is evident across all HF strategies, despite different levels of portfolio and investor liquidity. In addition, among AIFs, HFs make the most use of notice periods (close to 90%, ASR-AIF.19), which are on average around one month.

ASR-AIF.62

Liquidity profile

Limited liquidity mismatch

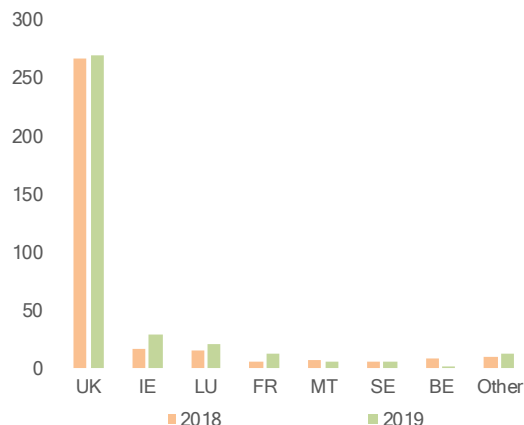


Note: Portfolio and investor liquidity profiles of hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.63

Size of HFs by country

**High concentration in the UK**

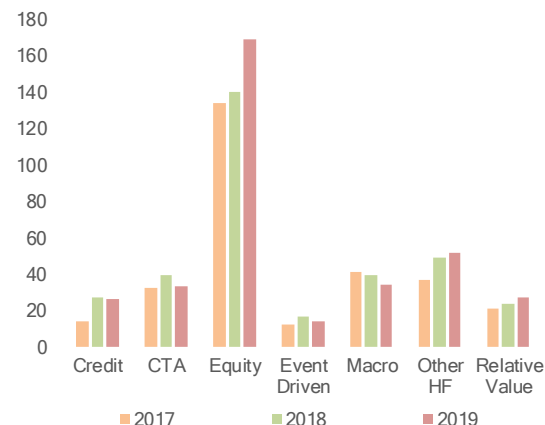


Note: NAV by HF managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.64

HF strategies

**Mainly equity strategies**

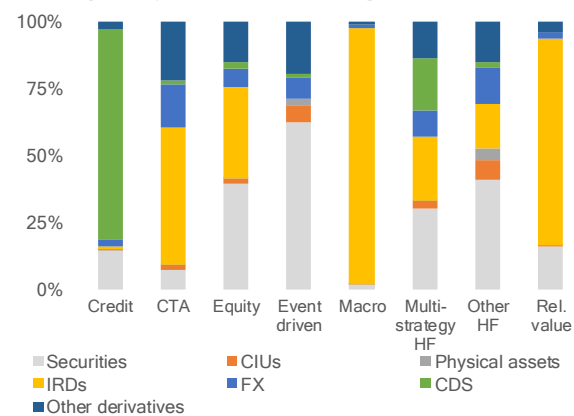


Note: NAV of HFs by strategy, in EUR bn. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.65

Gross exposures

**Heterogeneity across HF strategies**

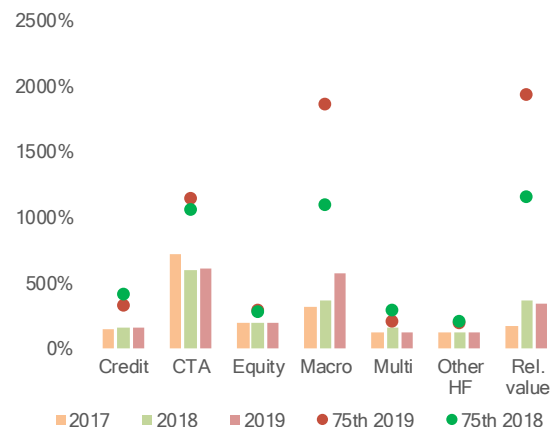


Note: Share of exposures by hedge funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.66

Leverage

**Very high leverage**

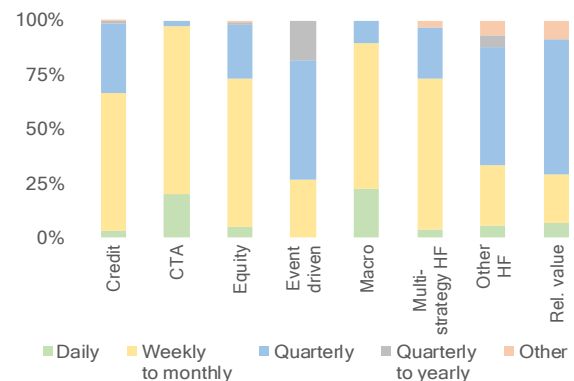


Note: Median adjusted leverage, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.67

Redemption profile

**Mostly weekly to monthly frequency**

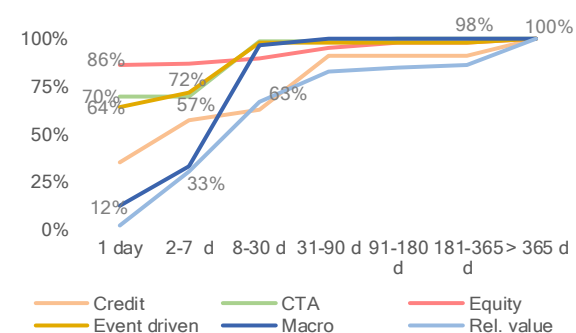


Note: Investor redemption frequencies allowed by open-end hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.68

Liquidity financing

**High short-term funding**



Note: Liquidity financing of hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

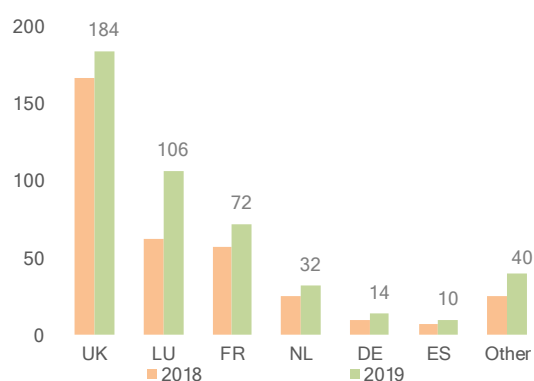
# Private Equity Funds

PE funds account for 7% of the NAV of all AIFs, or EUR 456bn. Among AIF types, PE funds experienced the largest growth in 2019 (+28% compared with 2018). They follow a range of strategies and are almost exclusively sold to professional investors. PE funds invest mainly in illiquid securities (unlisted securities), but liquidity risk is limited given that PE funds are overwhelmingly closed-ended.

## Private Equity Funds: market size and structure

**Size:** PE funds surged in 2019 with a 28% rise in NAV at EUR 456bn, or 7% of all AIFs (which represents +1pp compared with 2018). The PE fund industry is concentrated in a few countries (ASR-AIF.69), with the top five accounting for 89% of the NAV and the UK accounting for almost half of the NAV (40%, -7pp compared with 2018).

ASR-AIF.69  
Size of PE funds  
Concentration in a few countries

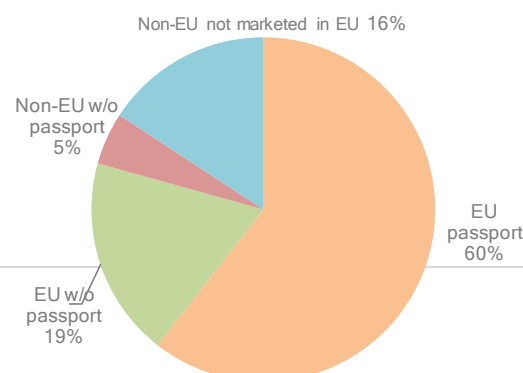


Note: NAV by PE managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn.  
Sources: AIFMD database, National Competent Authorities, ESMA.

**Private Equity Fund types:** PE investment strategies are diversified, with 41% of the NAV invested in growth capital, followed by venture capital (13%) and mezzanine capital (4%). A large part of the NAV (41%) is related to other unspecified strategies (ASR-AIF.75). The large residual category can be explained by classification issues, as PE fund types do not include leveraged buyouts, which account for a significant proportion of the PE industry (around 72% of fundraising in 2019 according to Invest Europe)<sup>7</sup>.

**Distribution:** As for other types of AIFs, the majority of PE funds have access to the EU passport, with 60% able to be sold throughout the EU (ASR-AIF.70).

ASR-AIF.70  
EU passport  
High access to passport



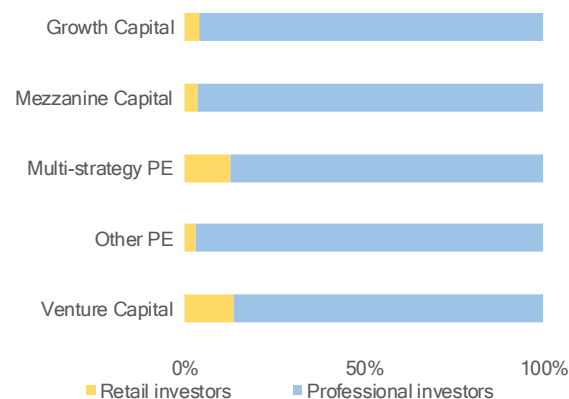
Note: NAV of private equity funds by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport, subthreshold managers registered only in national jurisdictions w/o passport. Data for 27 EEA countries  
Sources: AIFMD database, National Competent Authorities, ESMA.

**Private Equity Fund investors:** Among AIFs, PE funds have the second lowest proportion of retail investors (5%). Among PE fund types, venture capital has a larger proportion of retail investors, at 13% of the NAV (ASR-AIF.71). Among professional investors, no important shifts in composition occurred in 2019. The main investor type is other CIUs with 19% of the NAV in 2019, followed by pension funds (15%) and non-profit funds (15%). The distribution of the investors remains similar to the one of 2018 (ASR-AIF.74).

<sup>7</sup> See Invest Europe (2020).

ASR-AIF.71

AIF investors

**Predominantly professional investors**

Note: Clients of private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. PE = Private equity fund. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

**Geographical investment focus:** PE funds continue to invest mainly in the EEA (67% of NAV (ASR-AIF.75) and the relative share remain stable (-1pp). The second region of investments for PE funds is still North America (17% of the NAV)

## Leverage and liquidity risks

**Gross exposures:** PE gross exposures are concentrated in securities (around 90%, +11pp) but 2019 saw a decrease in physical assets (2%, -9pp), especially for other PE funds. Unlisted equities account for around 90% of PE exposures.

**Leverage:** PE funds make limited use of leverage. The AuM-to-NAV ratio is at 111% on aggregate, the lowest among AIF types, with low dispersion across PE fund types (ASR-AIF.77). PE funds make limited use of **financial leverage**, with outright borrowing amounting to less than 2% of the NAV. The borrowings are concentrated in Mezzanine capital and other PE funds (ASR-AIF.70). Around half of available financing is

around one month, implying limited **financing liquidity risk** for most PE funds.

ASR-AIF.72

Financial leverage

**Limited and concentrated borrowing**

Note: Borrowing of cash and securities or embedded in derivatives by private equity funds, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs marketed. OTC and exchange-traded derivatives net of margins. PE=Private equity fund. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

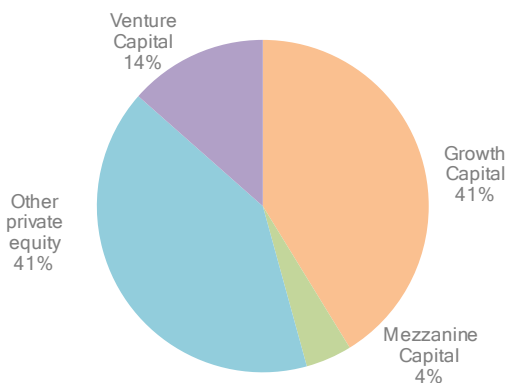
The low level of leverage is explained by the structures used by PE funds. PE funds are not usually leveraged but they invest in a portfolio company that could be leveraged. According to the AIFMD, leverage should not be reported by the AIF at the portfolio company level.<sup>8</sup> However, in the context of the on-going AIFMD review, ESMA recommended to change this approach in order to include the leverage at the portfolio company level in the future.<sup>9</sup>

**Liquidity risk:** Most PE funds are closed-ended funds (93% of the NAV, ASR-AIF.78) and the redemption frequency for open-ended PE funds is usually weekly to monthly. PE funds have low levels of **unencumbered cash** compared with 2018 at 2% of the NAV (-24pp), with a similar share compared with NAV across PE fund types. Other PE funds and Growth capital funds account for the most of unencumbered cash (respectively 50% and 32%).

<sup>8</sup> According to recital 78 of the AIFMD: "for private equity and venture capital funds this means that leverage that exists at the level of a portfolio company is not intended to be included".

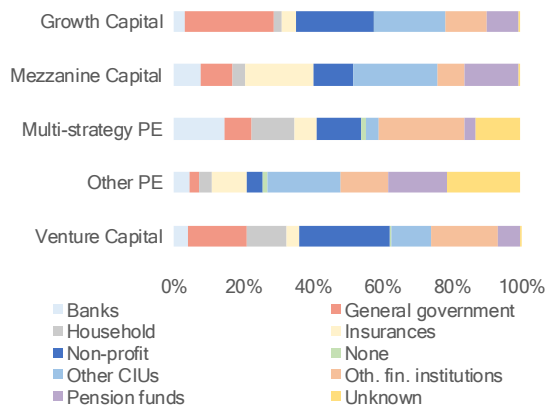
<sup>9</sup> ESMA's proposed changes to AIFMD regarding the reporting regime and data use (section 9 in ESMA (2020a).

**ASR-AIF.73**  
PE fund strategies  
**Diversified strategies**



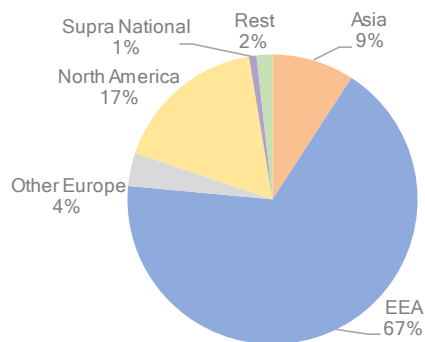
Note: Investment strategies of private equity funds, end of 2019, in % of NAV. Private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.74**  
PE fund investors  
**Stable distribution of investors**



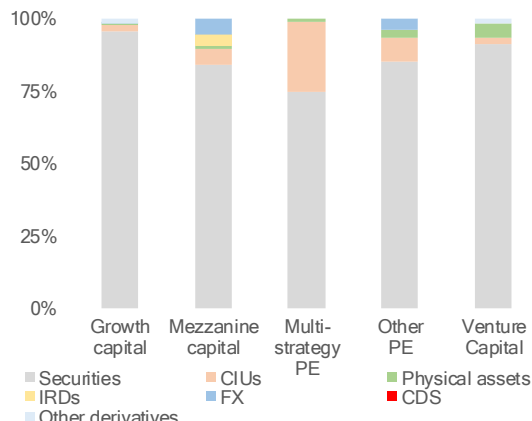
Note: Ownership of units in real estate funds AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.75**  
Regional investment focus  
**Mostly EEA**



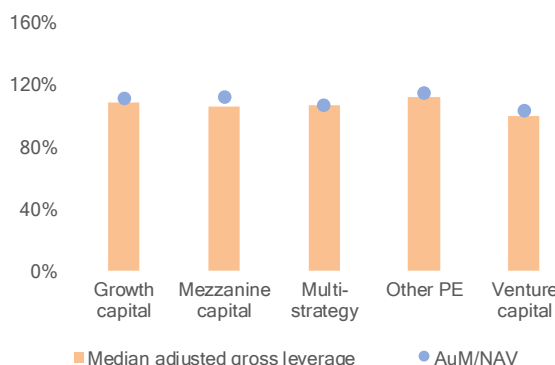
Note: Regional investment focus of private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments, and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.76**  
Gross exposures  
**Mainly unlisted securities**



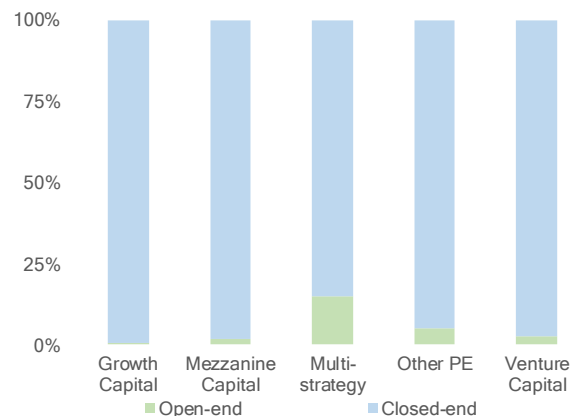
Note: Share of exposures by private equity funds' investment strategies, end of 2019, in % of total, AIFs managed and/or marketed by authorised EU AIFMs. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

**ASR-AIF.77**  
Leverage  
**Limited use of leverage**



Note: Adjusted gross leverage of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. PE=Private equity fund. Data for 27 EEA countries.

**ASR-AIF.78**  
Redemption rights  
**Mainly closed-ended funds**



Note: Redemption rights provided in the ordinary course to investors in private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

# Other AIFs

'Other AIFs' account for 60% of the NAV of EU AIFs, at around EUR 4,099bn (+15% compared with 2018). This category of the AIFMD reporting regime covers a range of strategies, with fixed income and equity strategies accounting for 68% of the NAV and an additional residual category amounting to 29%. 'Other AIFs' are mainly sold to professional investors, although there is a significant retail investor presence in the residual category. They make little use of financial or synthetic leverage. Although most types of 'other AIFs' have a limited liquidity risk at aggregate level, some funds in this residual category may be subject to liquidity deficit.

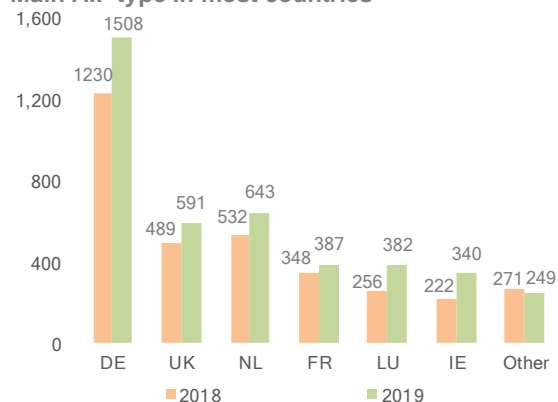
## 'Other AIFs': market size and structure

**Size:** At the end of 2019, the size of the 'other AIFs' amounted to EUR 4,099bn (+15% compared with 2018), concentrated in a few countries (ASR-AIF.79). According to the AIFMD fund classification the category of 'other AIFs' is to be a residual category. However, almost half of the reported AIFs, accounting for 60% of total NAV, fall in this category that comprehend an heterogeneous group of strategies.<sup>10</sup> In relative terms, "other AIFs" constitutes the main AIF type in most EU countries, accounting for around 80% of the NAV in Germany, the Netherlands, Poland, Spain, Ireland and between 40% and 50% in France, Luxembourg and the United Kingdom.

ASR-AIF.79

Size of 'other AIFs'

### Main AIF type in most countries



Note: NAV by AIFs classified as 'other' managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn.

Sources: AIFMD database, National Competent Authorities, ESMA.

**'Other AIF' types:** 'other AIFs' can use very different strategies (ASR-AIF.80). The main strategies are related to fixed income (40% of the NAV) — which includes money-market AIFs — and equity (28%).

ASR-AIF.80

'Other' AIFs strategies admitted under AIFMD

### Diversified set of strategies

Real estate strategies	Number of AIFs (%)	NAV (EUR bn)
Equity	18	1,129
Fixed income	28	1,636
Infrastructure	2	118
Commodity	1	33
Other-other	50	1,183
<b>Total 'other AIFs'</b>	<b>15,419 AIFs</b>	<b>4,099</b>

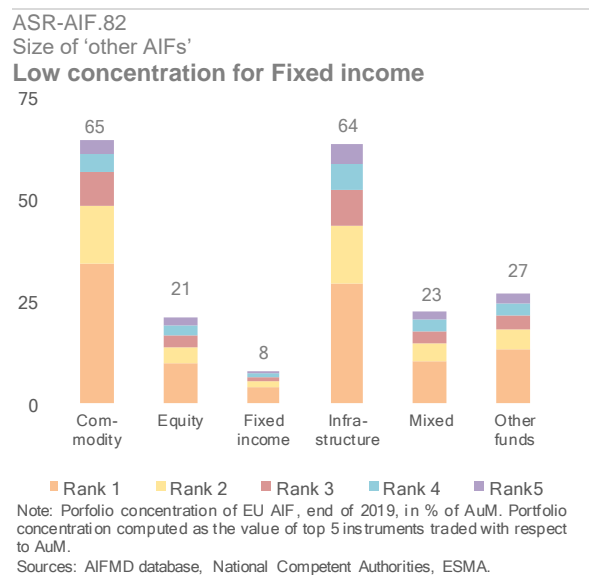
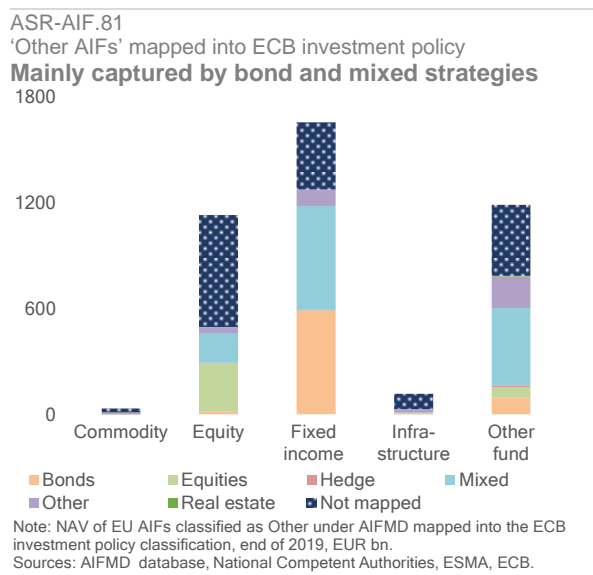
Note: AIFs classified as "other AIFs" under the AIFMD, end of 2019. Strategies identified according to the fund primary strategy. Sources: AIFMD database, National Competent Authorities, ESMA.

Within 'other AIFs' there is an additional residual fund category, the so-called 'other-other' AIFs, accounting for a significant portion of the NAV (29%) which is difficult to identify as managers did not refer to a specified strategy. Benchmarking the strategies self-reported under the AIFMD with the information collected by the ECB allows to clarify the characteristics of the investment policies of those AIFs classified in residual categories.<sup>11</sup> A relevant portion of 'other AIFs' with an undefined strategy could be largely described as mixed funds, that is investing in both equity and bonds with no prevalence of one instrument, while one third remain still unidentified (ASR.AIF-81).

<sup>10</sup> The transparency obligations established by the AIFMD require AIFMs to make available to investors and NCAs a description of the fund strategy and the type of assets in which it may invest. For a detailed description of this category and a discussion of the related potential classification issues, see the section "AIFMD fund classification – shedding light on 'other AIFs' in ESMA (2020b).

<sup>11</sup> The ECB publishes the list of European investment funds based on information provided regularly by all members of the ESCB. Funds domiciled in Denmark, Norway and the United Kingdom are not covered. MMF and Pension funds are excluded from the definition of investment fund adopted for ESCB data collection.





**Traded instruments and portfolio characteristics:** Commodity and infrastructure AIFs appear highly concentrated with more than 60% invested in the top-five assets (ASR-AIF.82). Equity AIFs have around 20% of their long-position assets invested in their five largest positions. When not considering outliers (i.e. a limited number of funds heavily exposed to unspecified derivatives), the typical fixed income AIFs appear rather diversified, with the top five positions representing 8% of total AuM. Mixed funds and unidentified 'other-other' AIFs show instead a higher degree of asset concentration, implying that the returns of these AIFs depend on the performance of a small number of key assets. For all strategies, the highest ranked asset accounts for half of the main instruments in which AIFs are trading.

For mixed and 'other-other' AIFs, the top five instruments show sizable shares of CIUs and sovereign bonds, 6.8% and 6.3%, respectively. Looking at the use of derivatives, these AIFs rely to some extent on IRDs, FX derivatives and CDS (ASR-AIF.83). Derivatives may be used by funds engaging into bond trading as risk management tool<sup>12</sup> or as a flexible and less capital-intensive alternative to other assets to enhance the risk-return profile of the fund through leverage.

<sup>12</sup> For example, managers investing in debt securities could use derivatives to adjust exposures to interest rate, credit, and currency risk

## ASR-AIF.83

## Main traded instruments

Instruments (%)	Commodity	Infra-structure	Equity
Cash	44.4	1.2	0.6
Equities	0.0	23.0	11.0
Corporate bonds	0.1	1.8	0.0
Sovereign bonds	1.5	0.0	0.5
Convertible bonds		1.2	0.0
Loans	0.0	10.3	0.1
Structured products	0.1	0.1	0.0
CDS & equity derivatives	0.0		3.7
IRDs and FX	0.3	1.0	2.2
Commodity and other derivatives	16.5	0.0	0.2
Real assets	1.3	11.7	0.0
MMFs	0.4	0.3	0.1
ETFs	0.0	0.0	0.4
Other CIUs	0.2	10.4	2.0
Other assets	0.0	2.9	0.2
Total	64.9	63.9	21.1

Instruments (%)	Fixed income	Mixed	'other-Other'
Cash	0.5	1.6	1.2
Equities	0.2	1.2	3.1
Corporate bonds	0.4	1.1	0.5
Sovereign bonds	1.5	1.8	6.3
Convertible bonds	0.0	0.0	0.0
Loans	0.2	0.7	1.8
Structured products	0.2	0.4	0.7
CDS & equity derivatives	0.8	4.0	2.4
IRDs and FX	2.2	4.1	5.2
Commodity and other derivatives	0.6	0.5	0.6
Real assets	0.0	0.3	0.2
MMFs	0.2	0.1	0.7
ETFs	0.0	0.7	0.4
Other CIUs	1.1	6.1	2.8
Other assets	0.0	0.2	1.0
Total	7.9	22.7	26.8

Note: Main traded instruments, end of 2019, % of total exposures. Sources: AIFMD database, National Competent Authorities, ESMA.

**Distribution:** Like most types of AIF, “other AIFs” have access to the EU passport to a large extent, with 90% (+10pp) able to be sold throughout the EU (ASR-AIF.90).

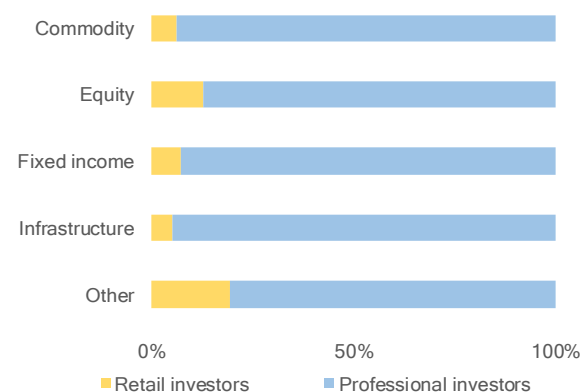
**‘Other AIF’ investors:** ‘other AIFs’ are sold mainly to professional investors (88%, +2pp), although retail investor presence is higher for the residual category (‘other-other’), accounting for 19% of the NAV (ASR-AIF.84). Overall, retail

clients participate in ‘other AIFs’ for EUR 480bn. Among professional investors, pension funds and insurance companies are the main investors, accounting for 31% and 21% of the NAV respectively. However, there are large differences by strategy with insurances holding one-third of fixed income AIFs’ NAV and pension funds highly exposed also to equity and infrastructure funds (ASR-AIF.90). The high proportion of pension funds might be partly explained by country-specific factors.<sup>13</sup>

## ASR-AIF.84

## AIF investors

## Predominantly professional investors



Note: Clients of AIFs classified as Other AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

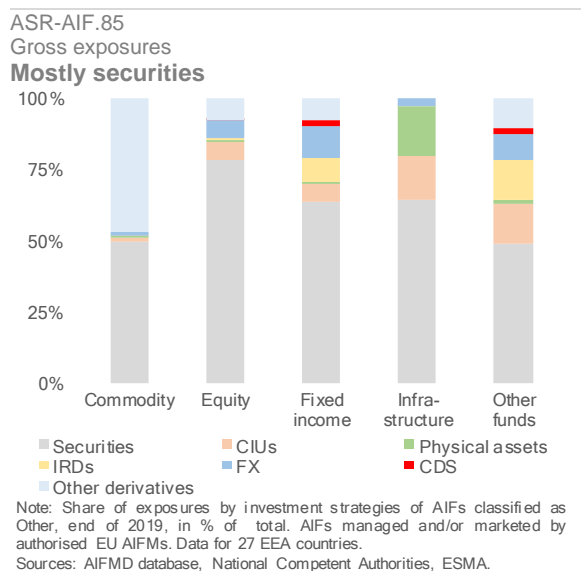
**Geographical investment focus:** ‘other AIFs’ are primarily exposed to securities issued in the EEA (57%), with a significant geo-focus also on North America (19%) and Asia (8%) (ASR-AIF.92).

## Leverage and liquidity risks

**Gross exposures:** AIF gross exposures are in line with the strategy used (ASR-AIF.85). Equity and fixed-income AIFs are exposed mainly to securities (listed equities for equity AIFs and mainly sovereign and investment grade corporate bonds for fixed income AIFs). Infrastructure AIFs have significant exposures to physical assets, and commodity AIFs have significant exposures to other derivatives, which include commodity derivatives. As indicated above, the residual category (‘other-other’) is more diversified, reflecting a variety of strategies pursued by the AIFMs.

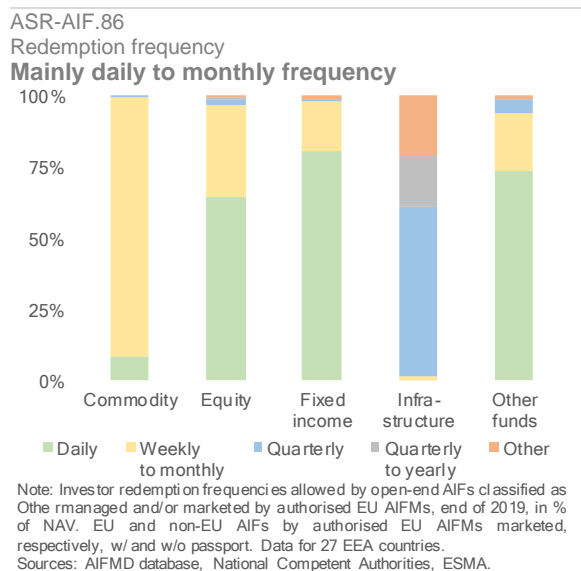
<sup>13</sup> Pension funds in Netherlands hold the majority of the NAV of AIFs, typically investing in equity and fixed income AIFs, partially explaining the higher proportion of pension funds in ‘other AIFs’ at European level. A large share of

German ‘Spezialfonds’ are also classified in this category. For a detail discussion see ESMA (2020b).



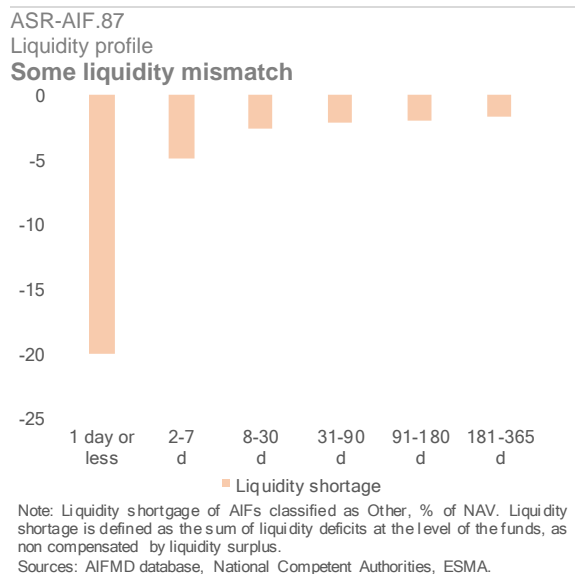
**Leverage:** ‘Other AIFs’ display limited use of leverage: regulatory AuM to NAV is 156% on aggregate as their exposures to derivatives is overall limited (ASR-AIF.92) and is accompanied by a limited use of financial leverage (around 5% of the NAV).

**Liquidity risk:** Open-ended ‘other AIFs’ represent around 75% of the NAV of this segment, with the exception of infrastructure funds that have instead mostly a closed structure. Open-ended AIFs offer mainly daily liquidity to investors (75%) or weekly and monthly liquidity (22%; ASR-AIF.86).



At the aggregate level, the **liquidity profile** of ‘other AIFs’ indicates that within one week, investors can redeem up to 65% of the NAV, whereas 76% of the assets can be liquidated within this time frame. The liquidity shortage of those funds with a liquidity deficit is 20% of the NAV in the very short term (within 1 day) and it

reduces significantly already within one week (ASR-AIF.87).



The majority of AIFs in the broad ‘other’ category that offer to investors the possibility to redeem on a daily basis do not require any notice period (37% of the NAV). A similar proportion of funds allowing daily redemptions require a notice period ranging from 1 to 7 days. Overall, around 40% by NAV of ‘other-AIFs’ do not require any redemption notice to investors. (ASR-AIF.88).

ASR-AIF.88  
Redemption frequency and notice period

Redemption Frequency	0 days	1 day	2-7 days	8-30 days	>30 days	Total
Daily	37.2	20.8	15.2	0.7	0.2	74.2
Weekly to Monthly	3.3	2.4	2	13.2	1.3	22.2
Quarterly	0.2	0.5	0.2	0.4	0.9	2.3
Longer than quarterly		0.1		0.1	0.3	0.5
Other	0.3	0.2	0.1	0.2	0.1	0.9
<b>Total</b>	<b>41</b>	<b>24</b>	<b>17.6</b>	<b>14.6</b>	<b>2.8</b>	<b>100</b>

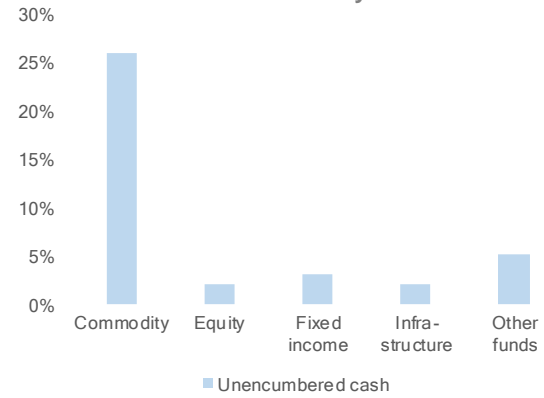
Note: AIFs classified as ‘other’ by redemption frequency and notice period given to investors, in % of NAV, end of 2019.  
Source: AIFMD database, National Competent Authorities, ESMA.

Some types of ‘other AIFs’ report high levels of **unencumbered cash** (ASR-AIF.89): for commodity funds cash accounts for 25% of the NAV (-17pp). Such a high level of cash is in line with the reliance on commodity derivatives for this type of AIF.

ASR-AIF.89

Unencumbered cash

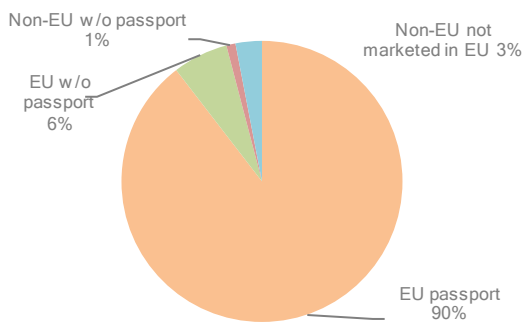
**Sizeable buffers for commodity funds**



Note: Unencumbered cash held by AIFs classified as Other, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

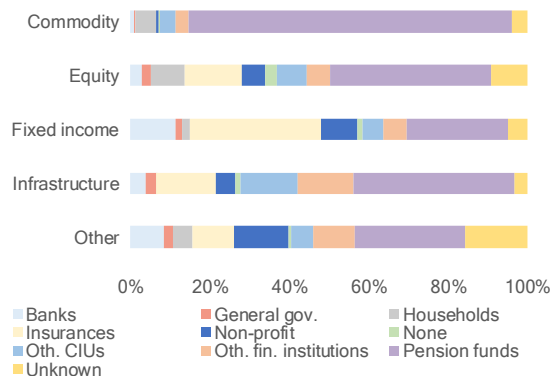
ASR-AIF.90  
EU passport

Most 'other AIFs' can be passported



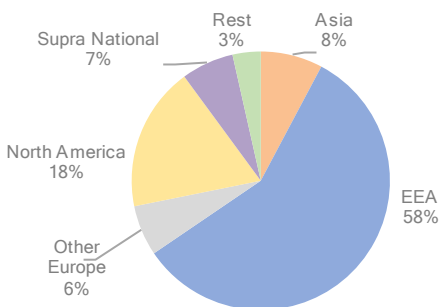
Note: NAV of AIFs classified as Other by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.91  
'other AIFs' investors types  
Mainly pension funds



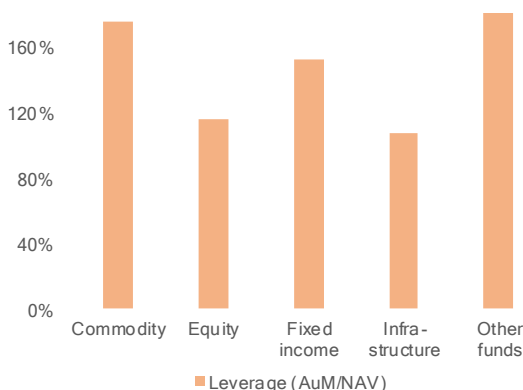
Note: Ownership of units in AIFs classified as Other AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. CIUs=Collective investment undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.92  
Regional investment focus  
Mostly EEA



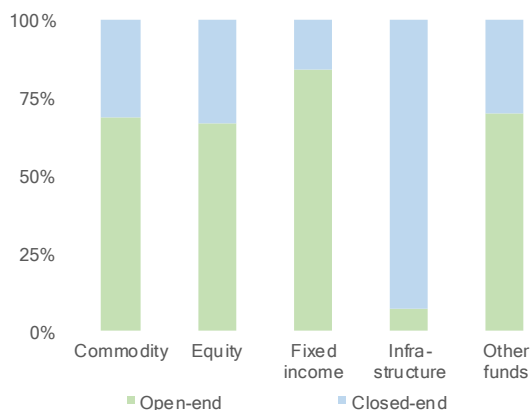
Note: Regional investment focus of EU AIFs classified as Other managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.93  
Leverage  
Limited use of leverage



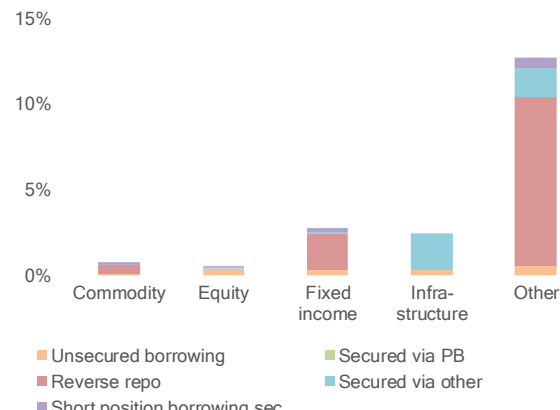
Note: Leverage of AIFs classified as Other managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Leverage computed as AuM/NAV ratio. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.

ASR-AIF.94  
Redemption rights  
Mostly open-ended



Note: Redemption rights provided in the ordinary course to investors in AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.95  
Financial leverage  
Reliance on repos



Note: Cash and securities borrowed by AIFs classified as Other, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Sources: AIFMD database, National Competent Authorities, ESMA.

# Non-EU AIFs (NPPR)

EU Member States can allow non-EU asset managers to market alternative funds at national level under the National Private Placement Regime (NPPR), even though such funds cannot subsequently be passported on to other EU Members States. The market for such non-EU funds is comparatively large: The NAV of non-EU AIFs marketed under NPPRs' rules amounts to EUR 2.1tn, i.e. more than one-fifth of the AIF market. NPPR fund marketing is concentrated in a small number of Member States, and 98% of investors are professional investors. Hedge funds marketed under the NPPR are predominantly domiciled in the Cayman Islands, 'other AIFs' marketed under the NPPR are predominantly US-based exchange-traded funds (ETFs). Overall, risk profiles for NPPR funds are comparable to EU AIFs. However, the geographical investment focus is different as NPPR funds invest predominantly in non-EU areas

## AIFs marketed under the NPPR: market size and structure

**AIF size:** At a minimum estimated EUR 2.1tn NAV, the NPPR market is equivalent to more than one-fifth of the EU AIF market.

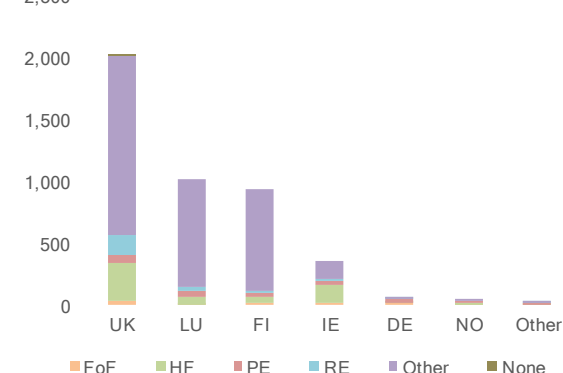
ASR-AIF.96  
ART. 42 AIFMD

### Non-EU AIFMs under National Private Placement

The NPPR is a mechanism to allow non-EU managers to market investment funds that are not allowed to be marketed under the AIFMD domestic marketing or passporting regimes. This principally relates to the marketing of non-EU AIFs by non-EU AIFMs. NPPRs are not a form of cross-border distributions and NPPRs' rules vary significantly across jurisdictions. Non-EU AIFMs are subject to reporting under the AIFMD in each jurisdiction in which they are authorised to market their products. Because under the NPPR rules the same AIFs can be marketed under different jurisdictions, the full assessment of the non-EU AIF market in terms of size, composition and risks for financial stability depends on the possibility of uniquely identifying AIFs. International identifiers (i.e., Legal Entity Identifiers (LEIs) or International Securities Identification Numbers (ISINs)) are used to analyse this segment of the AIF industry to avoid overestimating market shares for funds reporting in different countries.

**AIF domicile and EU jurisdictions:** According to data reported by National Competent Authorities, non-EU AIFs are marketed in 12 EU member states. A total of 911 non-EU AIFs marketed under the NPPR can be uniquely identified.<sup>14</sup> The total regulatory AuM of these uniquely identified AIFs reach EUR 11.7tn for the NPPR market. The difference between the regulatory AuM and the NAV is owing to the large exposure of off-shore HFs to IRDs. In terms of cross-country distribution, the AIF industry is concentrated in four countries, with UK as the largest hub of non-EU AIFs (ASR-AIF.97).

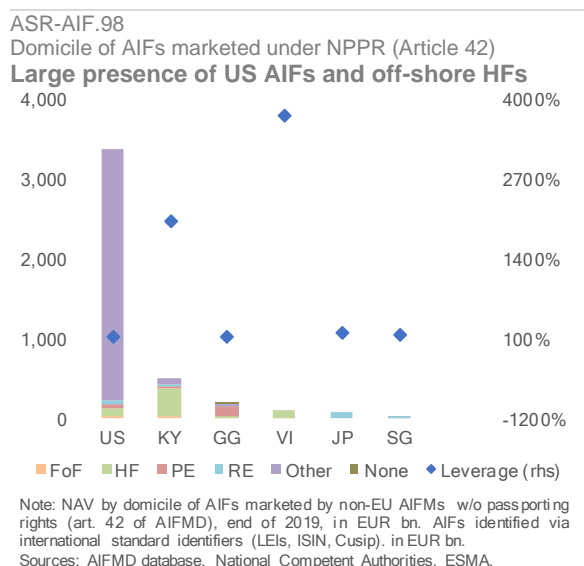
ASR-AIF.97  
NPPR market by country  
Non-EU AIF markets across jurisdictions  
2,500



Note: NAV by authorising EU country of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

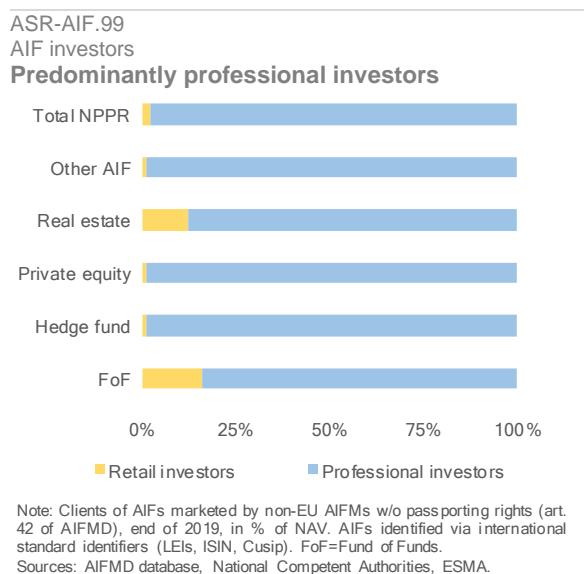
In terms of NAV, the NPPR segment is dominated by US ETFs (mostly equity) that are classified as 'other AIFs' (ASR-AIF.98). When considering the total exposure, the top 20 AIFs marketed under NPPR account for almost 75% of the regulatory AuM. Out of the top 20 AIFs, 15 are off-shore HFs all domiciled in the Cayman and Virgin Islands and marketed in UK (ASR-AIF.98).

<sup>14</sup> Around 1,500 AIFs marketed under NPPR in different EU jurisdictions cannot be uniquely identified owing to the lack of international identifiers.



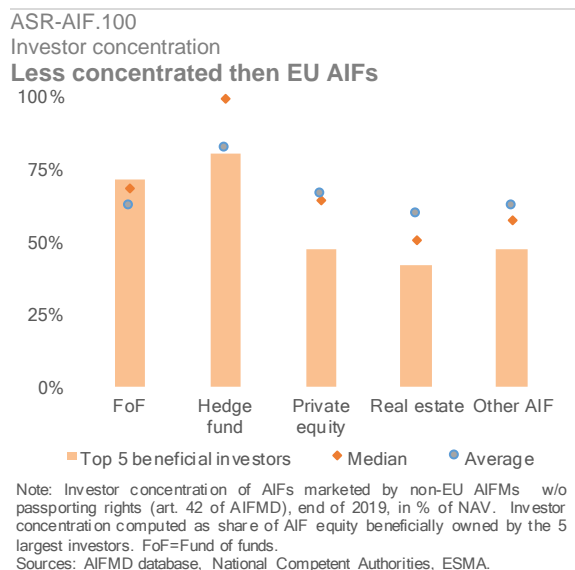
The AIF market regulated by Article 42 of the AIFMD appears extremely concentrated: 7% of NPPR AIFs have a NAV higher than EUR 5bn — these funds represent 70% of the NPPR NAV.

**Non-EU AIF investors:** RE funds and FoFs marketed under the NPPR by non-EU AIFMs see a retail participation of, respectively, 12% and 16% (ASR-AIF.99). Overall non-EU AIFs sold by non-EU AIFMs are owned almost entirely to professional investors (98%).



On average, the top-5 holders of US ETFs, FoFs and RE funds shares account for around 60% of the NAV (ASR-AIF.100) Only HFs display a more concentrated ownership (above 80% NAV). A large proportion of NPPR investors cannot be identified (25% of the NAV). Banks, pension funds and insurance companies have only a

limited exposure, amounting to 8% of NAV (ASR-AIF.106).



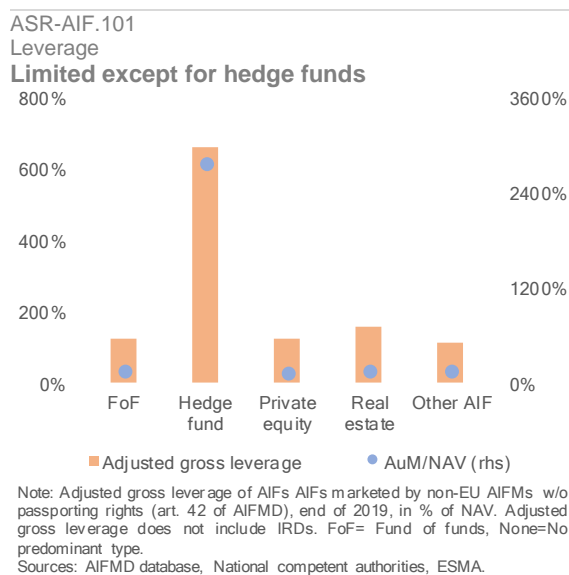
**Geographical investment focus:** Non-EU funds appear not to be focused on EU assets. Their investments are domiciled mostly in North America (66%) and Asia (15%) (ASR-AIF.108). This result is driven by the high number of US domiciled ETFs identified through their ISINs.

### Leverage and liquidity risks

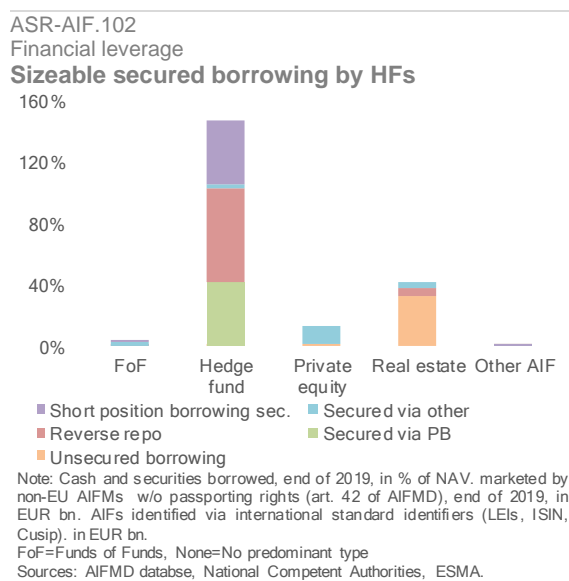
**Gross exposures:** The asset exposure of non-EU AIFs is similar to that of EU-domiciled funds with RE funds exposed to physical assets, FoFs investing in collective investment schemes and hedge funds heavily exposed to interest rate derivatives (ASR-AIF.108).

**Leverage:** With the exception of HFs, non-EU funds make limited use of leverage. Regulatory AuM to NAV is 147% on aggregate when excluding HFs, as the exposures to derivatives are limited. When the effect of IRDs is netted, HFs pass from a level of leverage of 2,800% to 660% (ASR-AIF.101). The ratio of regulatory AuM to NAV reaches 3,320% for HFs domiciled offshore (Cayman Islands, Virgin Islands, Bahamas, Bermuda).<sup>15</sup>

<sup>15</sup> This includes 230 HFs uniquely identified.

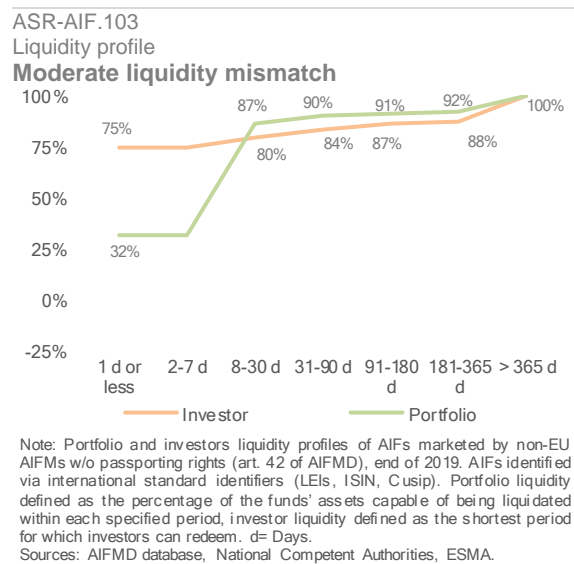


Non-EU HFs borrowings stand at 150% of their NAV (ASR-AIF.102). Whereas EU HFs increase their financial leverage by engaging in repo trades, non-EU HFs borrow comparatively more from their prime broker (42% of NAV). Non-EU RE funds also use financial leverage extensively but, in contrast to EU RE funds, most of the borrowing is unsecured (33% of NAV).



**Liquidity risk:** In absolute terms, 55% of non-EU AIFs uniquely identified are open-ended. Around 85% of NAV of AIFs regulated by art. 42 AIFMD is held by open-ended funds, with variation across fund types.

The vast majority offer daily or weekly liquidity to their investors. In the case of US ETFs, 95% of their NAV is redeemable on a daily basis (ASR-AIF.107). At the aggregate level, the liquidity profile of non-EU AIFs points to potential liquidity risk at the short end: within a day, investors can redeem up to 75% of the NAV, whereas only 32% of the assets can be liquidated within this time frame. The liquidity gap reduces within the one-month bucket (ASR-AIF.103).

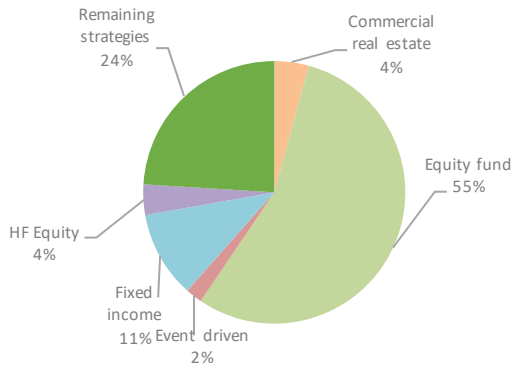


As for EU AIFs, the assessed proportion of NAV covered by LMTs and special liquidity arrangements is negligible. This result could also reflect the limited coverage of LMTs as reported by non-EU AIFMs. However, 50% of the analysed non-EU AIFs adopt and report contractual liquidity arrangements. The notice period for investors varies substantially across fund types, depending on the relative illiquidity of the underlying assets. Contractual arrangements like a notice period for redeeming are common across non-EU hedge funds (90%). Non-EU PE and RE funds require on average more than four months' notice from investors to redeem their fund shares. The notice periods for HFs and AIFs classified in the residual 'other' category (including US ETFs) is, respectively, of one month and two weeks.



ASR-AIF.104  
NPPR strategies

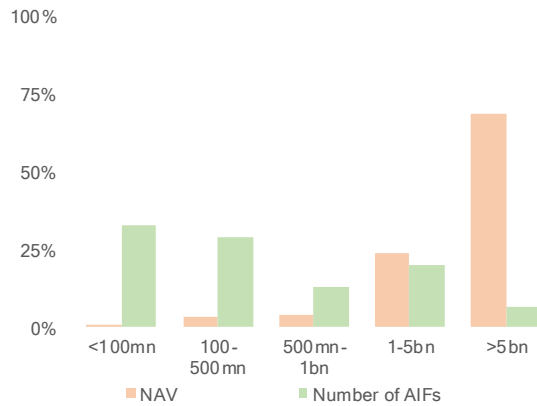
**US ETFs dominant in terms of NAV**



Note: Investment strategies of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.105  
Size distribution

**Large funds dominating the segment**

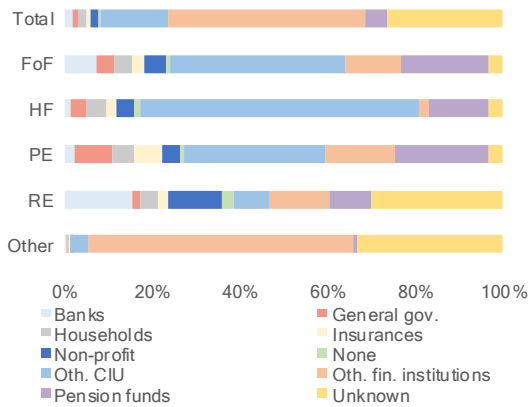


Note: Share of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD) by size, end of 2019. In %. AIFs identified via international standard identifiers (LEI, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.106

NPPR investors types

**Large proportion of ownership unidentified**

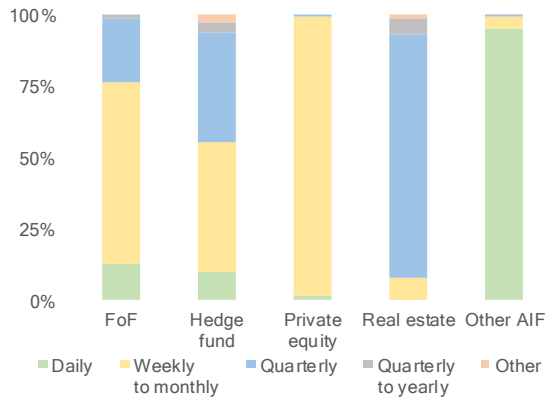


Note: Ownership of units in AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds;  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.107

Redemption frequency

**Mainly weekly to monthly frequency**

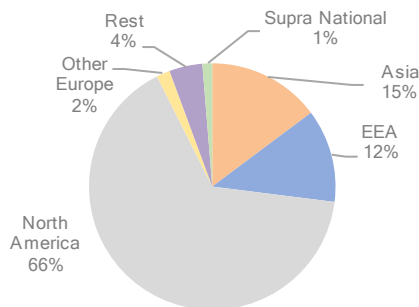


Note: Investor redemption frequencies allowed by open-end AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds, None=No Predominant Type.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.108

Regional investment focus

**Mostly North America**

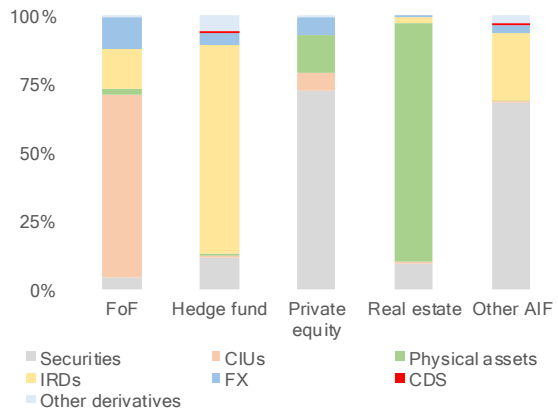


Note: Regional investment focus of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Geo-focus determined according to the domicile of investments, supra national category including investments without predominant geo-focus.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF.109

Exposures

**Use of derivatives limited to HFs**



Note: Share of gross exposures by AIF type, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, None=No predominant type.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## References

European Central Bank, (2017), "[Manual on investment fund statistics](#)", December.

European Securities and Markets Authority, (2020a), "[Letter to the European Commission on the Review of the Alternative Investment Fund Managers Directive](#)", August.

European Securities and Markets Authority, (2020b), "[Annual Statistical Report on EU Alternatives Investment Funds](#)", March.

Invest Europe, (2020), "[Investing in Europe: private Equity Activity 2019](#)".

# Statistical methods

# AIFMD data quality improvement – an overview

High-quality data is key for identifying and assessing risks to investors and financial stability in the EU and support risk-based supervision and regulatory activities. National Competent Authorities (NCAs) and ESMA have been working closely to promote the usability and quality of the AIFMD data and other reporting regimes, given the cross-border implications of the financial sector<sup>16</sup>. The current article presents the main initiatives that aim at improving AIFMD data quality and provides an outlook of future work.

## Introduction

Approaches to data quality improvement can be broadly classified depending on when they are implemented. *Ex-ante* approaches seek to improve the data before transmission, while *ex-post* approaches aim at improving the data after it has been transmitted and preliminary accepted by supervisors.

The *ex-ante* approach is composed by all elements that reduce the possibility of transmission of low-quality data, including those that apply divergent definitions. This is achieved through the publication of Guidelines, Q&As and through IT technical guidance and schema validations<sup>17</sup> as well as other actions that help clarifying the expected content.

This is completed by *ex-post* monitoring of quality of the reported data and reacting through the request of corrections to be performed by reporting entities, as detailed further below.

In addition, as part of the AIFMD review by the European Commission, ESMA highlighted areas for improvement of the reporting framework. These areas are described in the last part of this section.

## The monitoring and corrective actions

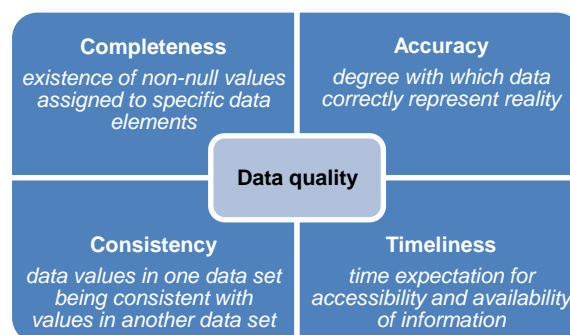
The data quality monitoring is performed both at national level and through a data quality action plan coordinated among NCAs through ESMA's Data Standing Committee. This committee promotes a convergent approach to data

reporting, including the implementation of remedial actions.

ESMA and the NCAs carry out a series of data quality tests on the available data, followed by supervisory reaction and monitor the final correction by reporting entities when needed. The scope of those data quality tests considered both the priorities of the users of this data and the feasibility to perform those tests and to react to the observed quality shortcomings.

Under the data quality action, new data quality tests were applied on the top of the IT data validations. Data quality is a multi-dimensional concept and the performed tests are categorised according to the targeted dimension (see Table ASR-AIF.110).

ASR-AIF.110  
Data quality dimensions



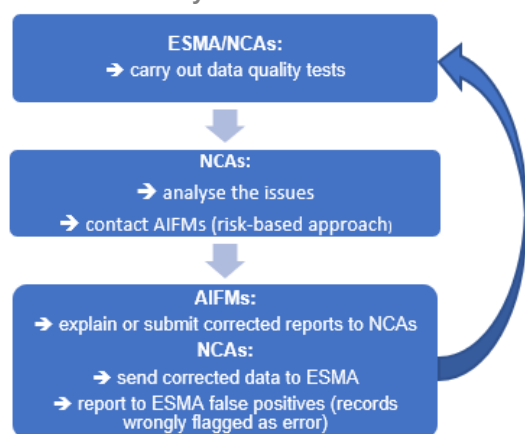
The tests focused on the completeness and timeliness of the reported data on entities; the provision of key identifiers as LEI on AIFs and AIFMs; plausibility analysis on key values as AuM, NAV and the leverage metrics; and consistency of the information on values of main instruments as well as other information on funds (e.g. reported liquidity).

<sup>16</sup> See [ESMA 2020 Annual Work Programme](#), section 4.2.6, for further details.

<sup>17</sup> These documents are available at <https://www.esma.europa.eu/policy-activities/fund-management/fund-management-reporting>.

This data correction cycle is summarised in the graph below (see ASR-AIF.111). The process starts with tests that could reveal an impossible value (i.e. an undisputed reporting error) or implausible value (e.g. an outlier that is likely to be erroneous, but which might constitute a correct value), or a correct value. The NCA follows up with the reporting entities asking to correct the data or inform on a possible false positive (i.e. a correct value classified as erroneous). The process is repeated during the year to monitor the effective correction of the data. In areas where a significant number of warnings were generated, the national competent authorities might adopt a risk-based approach in addressing those cases by prioritising the entities with a higher impact.

ASR-AIF.111  
Data correction cycle



In addition to the commonly agreed activities, several NCAs have drafted additional guidance or organised information meetings with the fund managers to clarify the reporting expectations. Moreover, some NCAs plan to implement selected data quality checks as validation rules – hence pre-emptively identifying issues and avoiding that errors enter in the AIFMD database.

The implementation of the above data quality actions during 2020 improved the AIFMD quality of data especially on completeness. For example, the manager LEI completeness in the AIFMD system almost doubled from 26% to 48% and increased from 50% to 63% for funds. Furthermore, we observe improvements regarding accuracy and consistency, for example

a slightly more plausible distribution of leverage data.

Despite these data quality improvements, it is important to notice that for the production of this ASR, ESMA staff still executes its own data quality review and performs specific statistical remedial actions to further ensure its quality (e.g. remove outliers, review aggregated results with the NCAs and avoid analyses that could be most affected by known issues).

## AIFMD review: ESMA proposed priorities to improve reporting

The previous data quality activities monitor compliance within the obligations foreseen in the current Directive and Delegated Regulation. Therefore, they do not include shortcomings in the usability of the data that are related to the lack of data not requested by the current reporting rules, both in terms of granularity, frequency, completeness or the use of identifiers as ISINs.

To address those issues and increase the usability and the quality of the AIFMD data, ESMA submitted several proposals<sup>18</sup> to the European Commission for the AIFMD review on data items. An important proposal aims to improve the identification of the managers and their funds by making the LEI reporting mandatory. Besides transparency and better risk assessments, LEI reporting is directly contributing to the improvement of the quality of financial data. The quest for higher transparency is further supported by the proposal to include in the ESMA public register information on AIFMs and AIFs for all reporting regimes instead of only the authorised AIFMs and their AIFs as it is currently. Moreover, ESMA proposed to support the request of more granular information and ask for having detailed information on the composition of assets (at ISIN level) and liabilities of the fund. In all those proposals to the European Commission, ESMA has made a conscious effort to ensure consistency with other reporting regimes to which AIFMs might be subject to reduce overall reporting costs.

<sup>18</sup> ESMA proposed changes to AIFMD regarding the reporting regime and data use (Annex II) are available at:

[https://www.esma.europa.eu/sites/default/files/library/esma34-32-551\\_esma\\_letter\\_on\\_aifmd\\_review.pdf](https://www.esma.europa.eu/sites/default/files/library/esma34-32-551_esma_letter_on_aifmd_review.pdf)

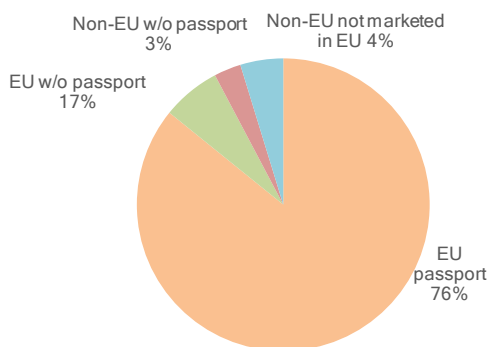
# Statistics

# Market overview

## AIF characteristics

ASR-AIF-S.1

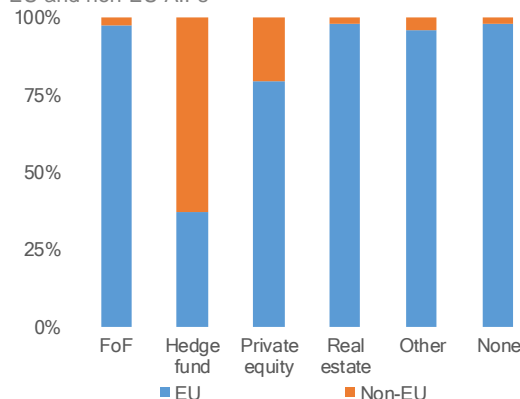
AIFMD passport



Note: NAV of AIFs by manager's access to AIFMD passport, end of 2019, in %.  
 Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries.  
 Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.2

EU and non-EU AIFs

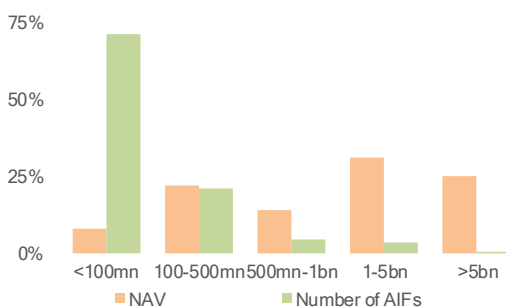


Note: Share of EU and non-EU AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % on NAV. Non-EU AIFs marketed w/o passport. Data for 27 EEA countries.  
 Sources: AIFMD database, National competent Authorities, ESMA.

ASR-AIF-S.3

AIF distribution by size

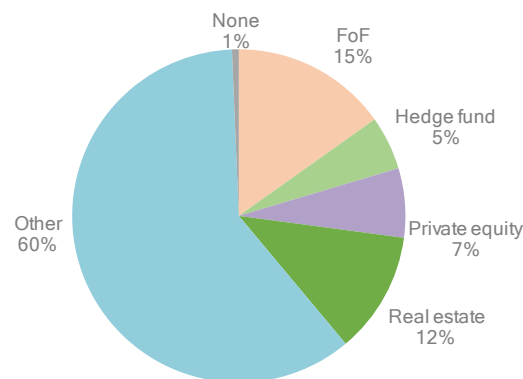
100%



Note: Share of AIFs by size, end of 2019, in %. AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions.  
 Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.4

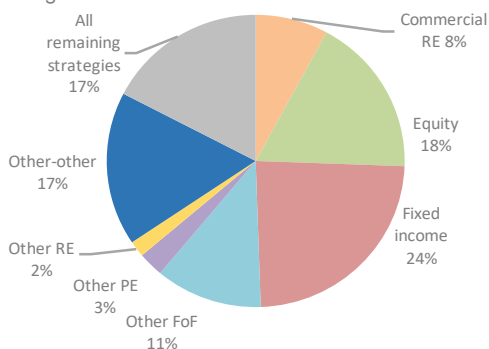
AIF types



Note: NAV by type of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in %. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries.  
 Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.5

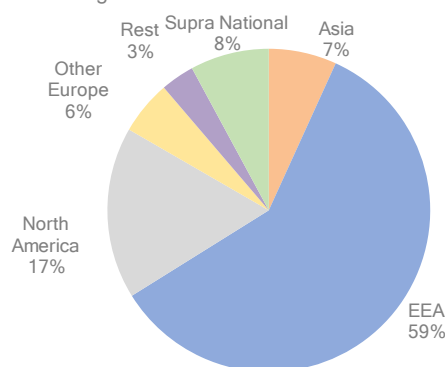
AIF strategies



Note: Investment strategy of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. FoF=Fund of funds, PE=Private equity funds, RE=Real estate. Data for 27 EEA countries.  
 Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.6

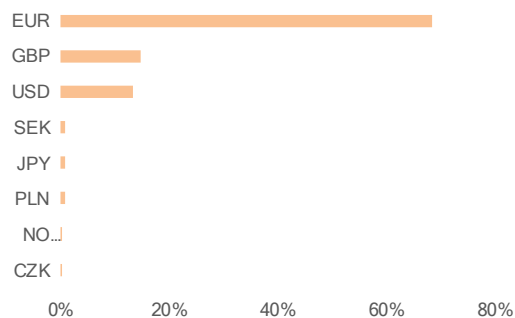
Investment regions



Note: Regional investment focus of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments, supra national category including investments without predominant geo-focus. Data for 27 EEA countries.  
 Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.7

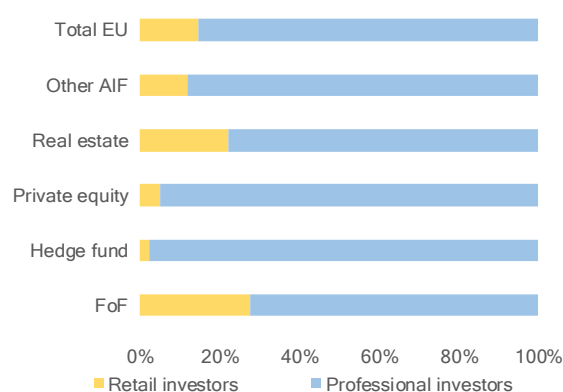
Base currencies



Note: Base currency managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.8

Clients

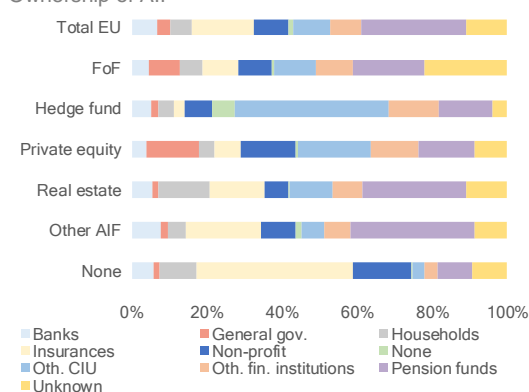


Note: Clients of AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. FoF=Fund of funds. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.9

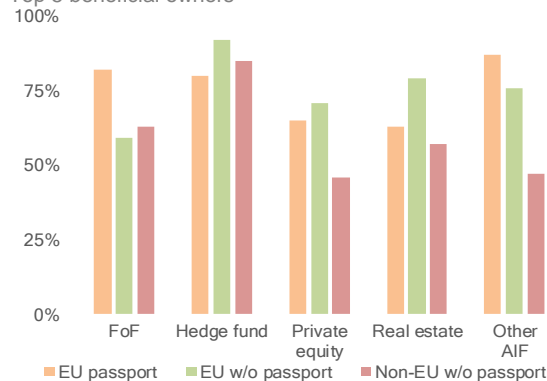
Ownership of AIF



Note: Ownership of units in AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. FoF=Fund of funds; None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.10

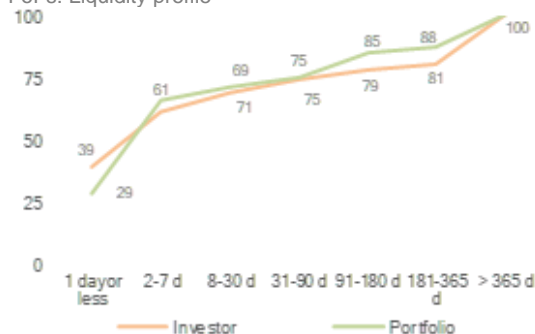
Top 5 beneficial owners



Note: Investor concentration of AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.11

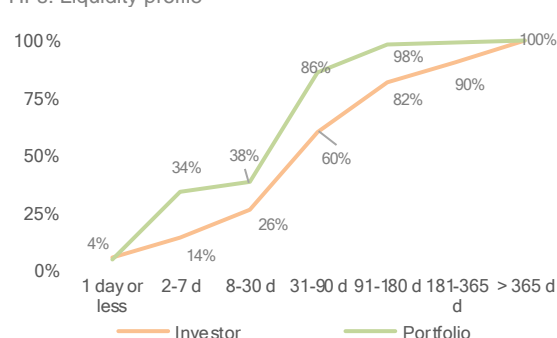
FoFs: Liquidity profile



Note: Portfolio and investor liquidity profiles of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. d= Days. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.12

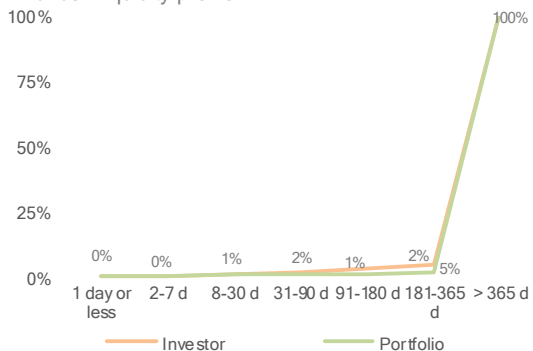
HFs: Liquidity profile



Note: Portfolio and investor liquidity profiles of hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

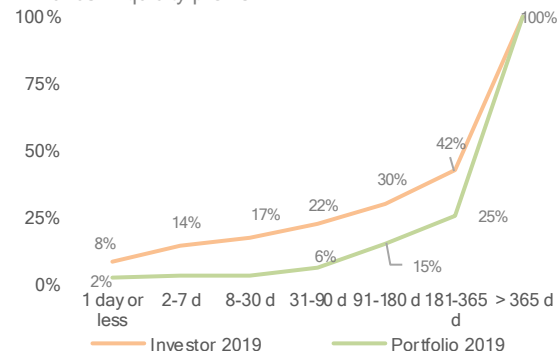


ASR-AIF-S.13  
PE funds: Liquidity profile



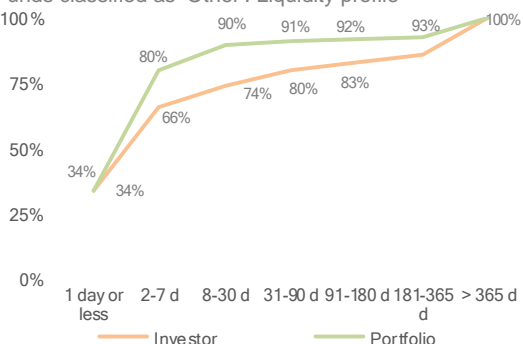
Note: Portfolio and investor liquidity profiles of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.14  
RE funds: Liquidity profile



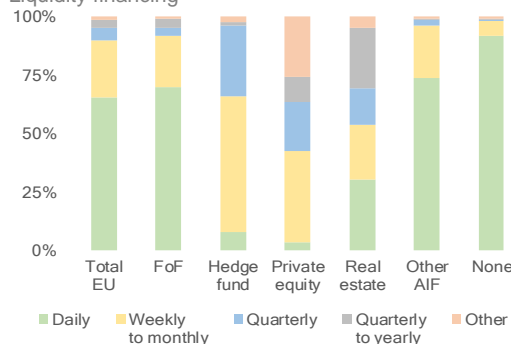
Note: Portfolio and investor liquidity profiles of real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.15  
Funds classified as 'Other': Liquidity profile



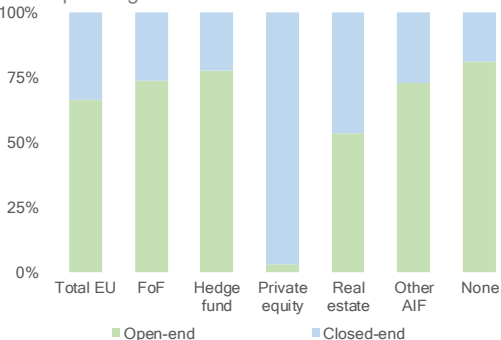
Note: Portfolio and investor liquidity profiles of AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.16  
Liquidity financing



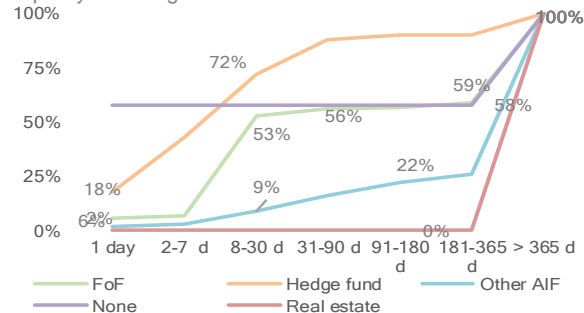
Note: Investor redemption frequencies allowed by open-end AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of Funds, None=No Predominant Type. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.17  
Redemption rights to investors

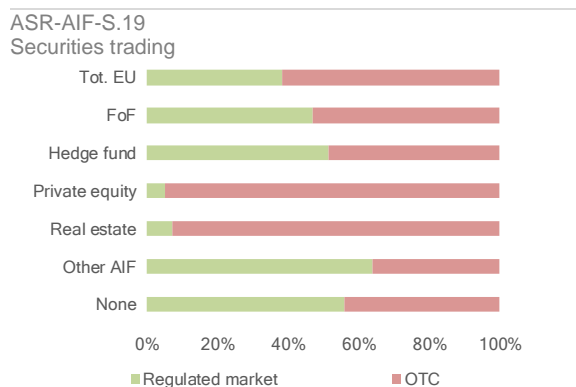


Note: Redemption rights provided in the ordinary course to investors in AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

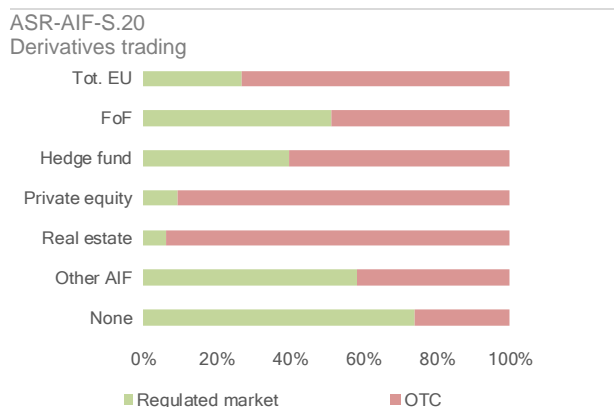
ASR-AIF-S.18  
Liquidity financing



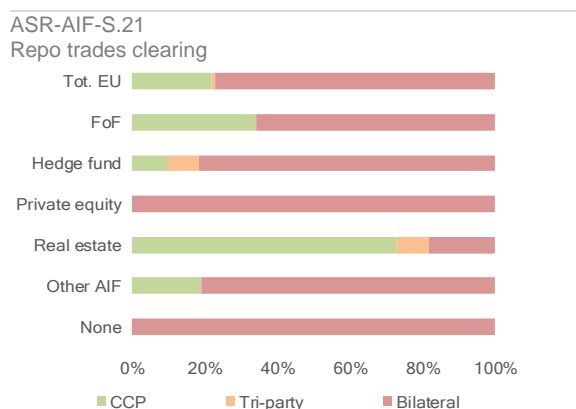
Note: Liquidity financing of AIFs managed and/or marketed by authorised EU AIFMs, end of 2019. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. FoF=Fund of funds, None=No Predominant type. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.



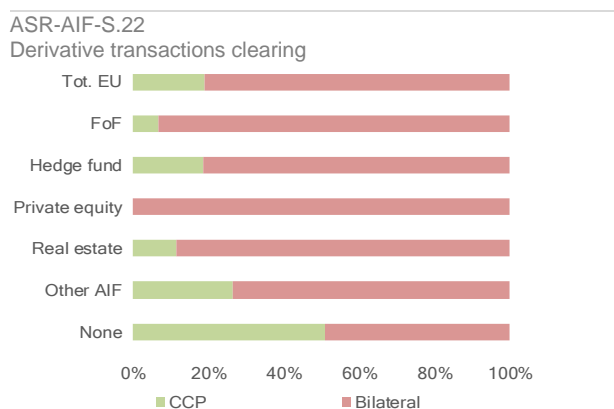
Note: Estimated market value of securities traded on OTC and regulated exchange markets by AIFs managed and/or marketed by authorised EU AIFMs, in % of NAV. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.



Note: Estimated volume of derivatives traded on OTC and regulated market by AIFs managed and/or marketed by authorised EU AIFMs, in % of NAV. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

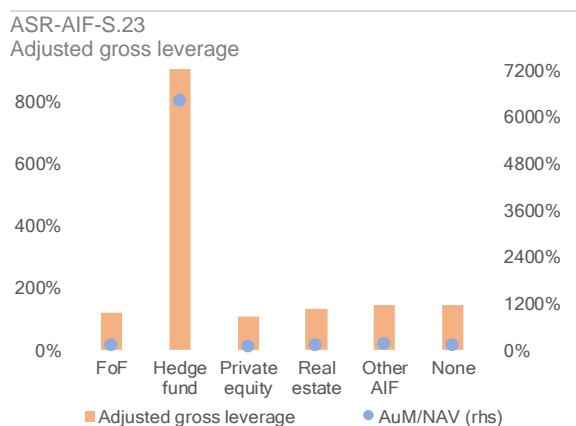


Note: Estimated market value of repo trades cleared by AIFs managed and/or marketed by authorised EU AIFMs, in % of NAV. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

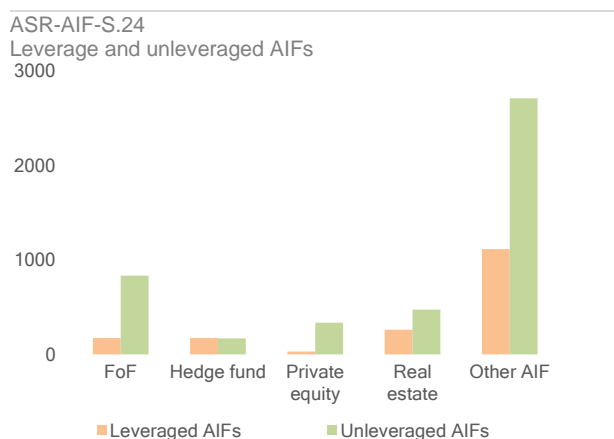


Note: Estimated volume of derivatives cleared bilaterally and via CCP by AIFs managed and/or marketed by authorised EU AIFMs, in % of NAV. None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

## Leverage and exposure

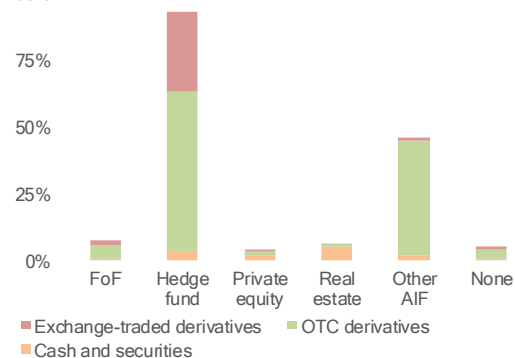


Note: Adjusted gross leverage of AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage does not include IRDs. FoF= Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.



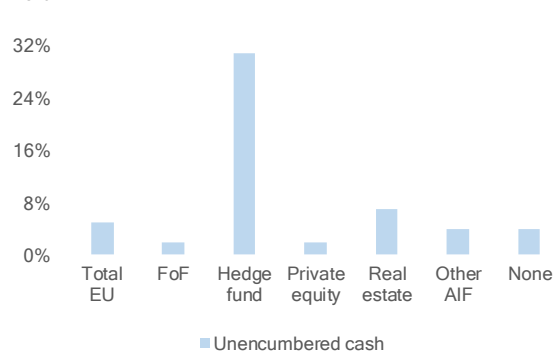
Note: Leveraged and unleveraged AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, EUR bn. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations. FoF=Fund of funds. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.25  
Borrowing embedded in financial instruments  
100%



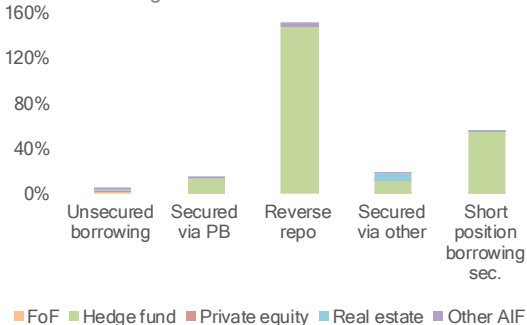
Note: Borrowing of cash and securities or embedded in derivatives, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs. OTC and exchange-traded derivatives net of margins. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.26  
Unencumbered cash  
40%



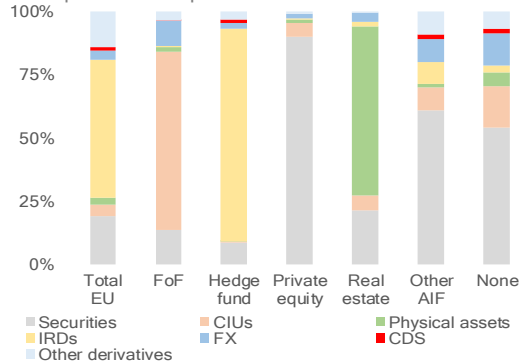
Note: Unencumbered cash, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.27  
Financial leverage  
160%



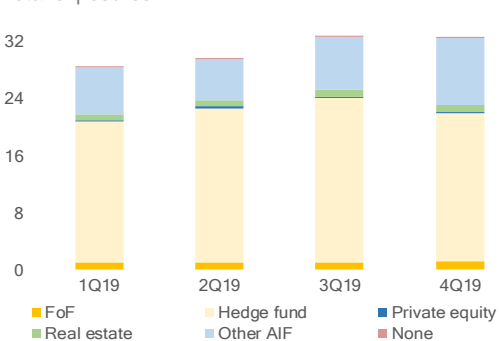
Note: Cash and securities borrowed, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, None=No predominant type. FoF=Funds of Funds. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.28  
Decomposition of exposures  
100%



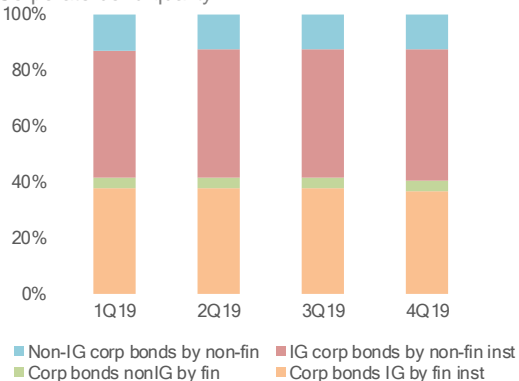
Note: Share of gross exposures by AIF type, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.29  
Total exposures  
32



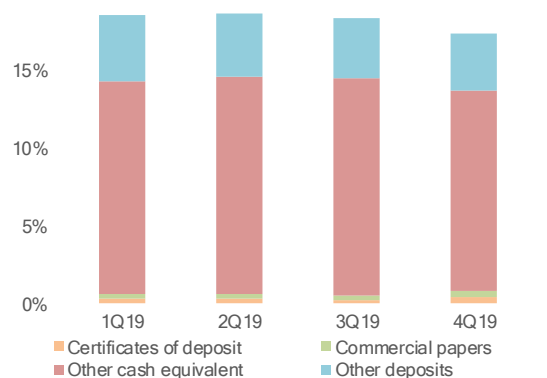
Note: Exposures of AIFs managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, None=No predominant type. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.30  
Corporate bond quality  
100%



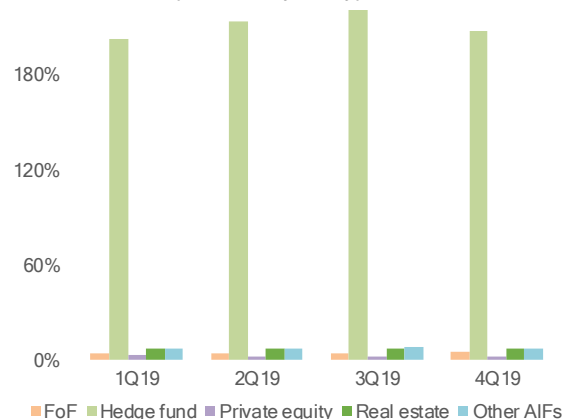
Note: Corporate bonds exposure, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.31  
Cash and cash equivalents  
20%



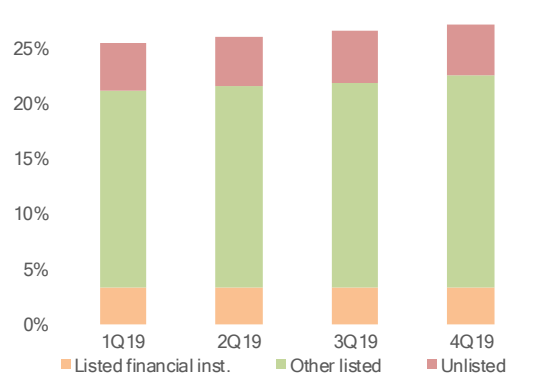
Note: Cash and cash equivalents exposure, funds reported quarterly, in % of NAV. Government bonds excluded from other cash equivalents. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.32  
Cash and cash equivalents by AIF type



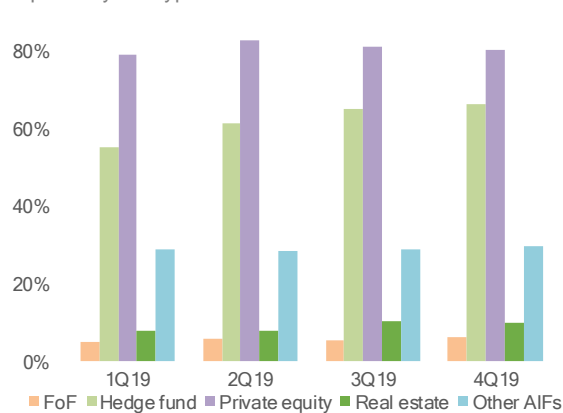
Note: Cash and cash equivalents exposure by AIF type, funds quarterly reported, in % of NAV. Data for 27 EEA countries. FoF=Funds of funds.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.33  
Equities  
30%



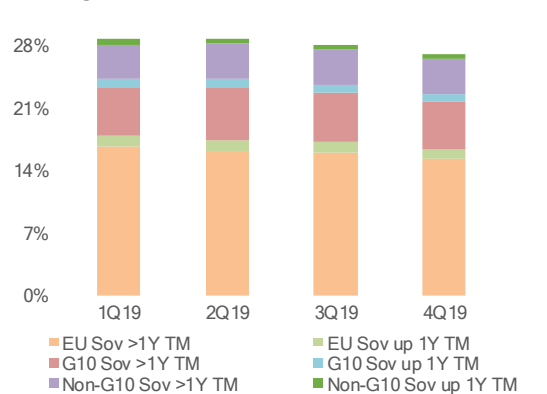
Note: Exposure to equities, funds quarterly reported, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.34  
Equities by AIF type



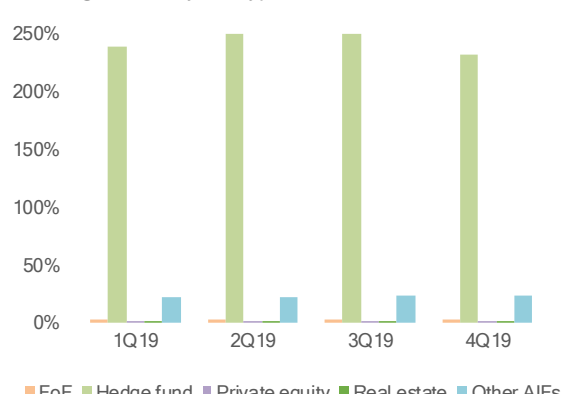
Note: Equities exposure by AIF type, funds quarterly reported, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. FoF=Funds of Funds.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.35  
Sovereign bonds



Note: Sovereign bonds exposure, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Sov=Sovereign bonds, TM=Time to Maturity. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

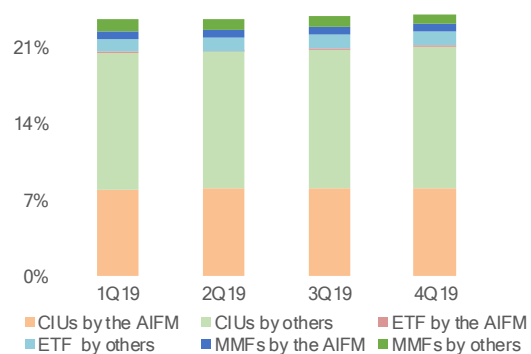
ASR-AIF-S.36  
Sovereign bonds by AIF type



Note: Sovereign bonds exposure by AIF type, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Funds of Funds. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.37

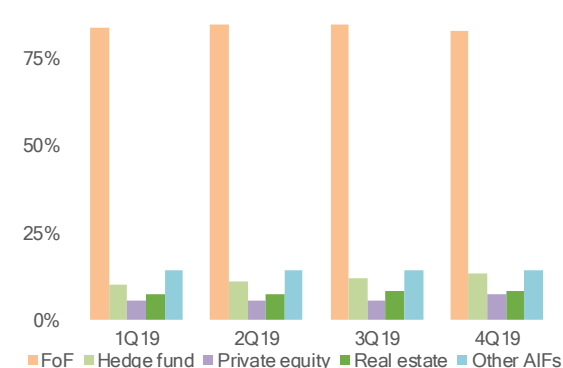
CIUs  
28%



Note: Collective investment undertakings exposure, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.38

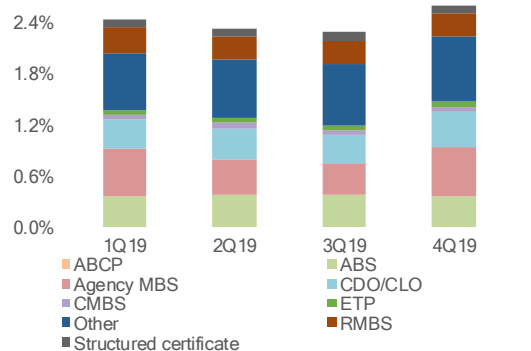
CIUs by AIF type  
100%



Note: Collective investment undertakings exposure by AIF type, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Funds of Funds. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.39

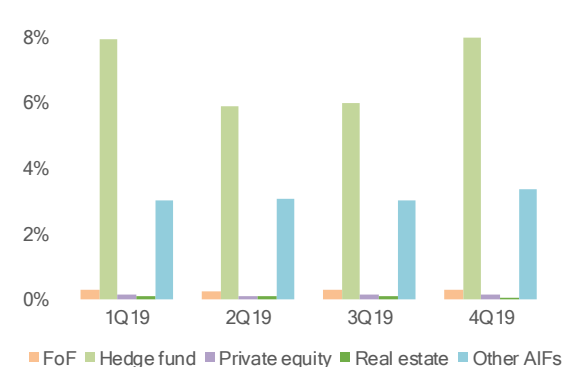
Structured products  
3.0%



Note: Structured products exposure, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.40

Structured products by AIF type  
10%

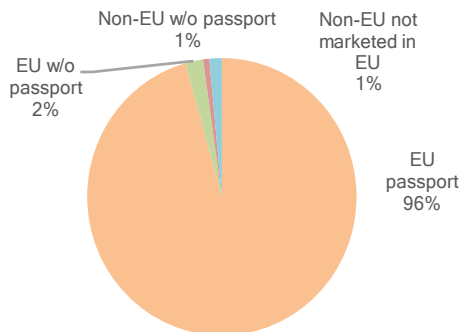


Note: Structured products exposure by AIF type, funds reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Funds of funds. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

# Funds of Funds

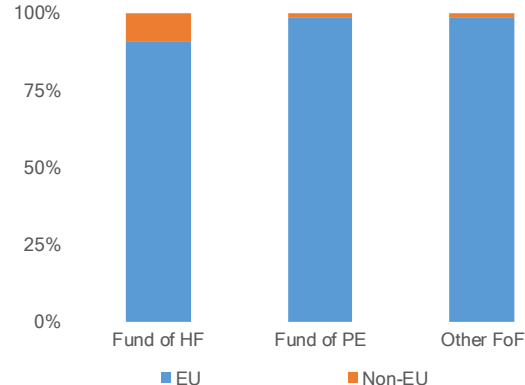
## AIF characteristics

ASR-AIF-S.41  
AIFMD passport



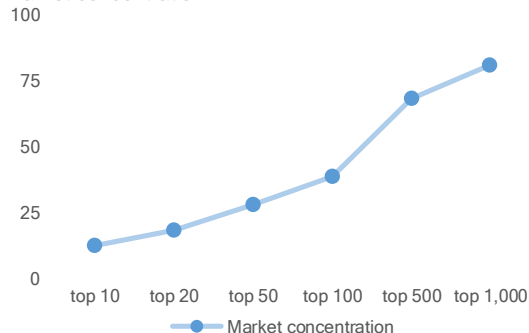
Note: NAV of funds of funds by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers are registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.42  
EU and non-EU AIFs



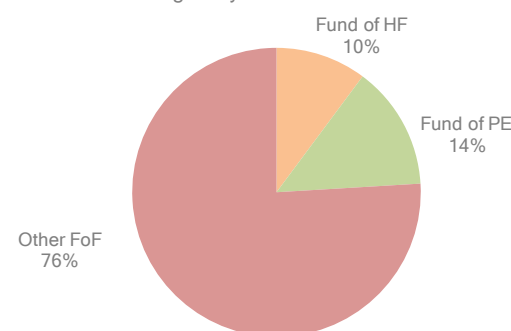
Note: Share of EU and non-EU funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Non-EU AIFs marketed w/o passport. FoF=Fund of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries.

ASR-AIF-S.43  
Market concentration



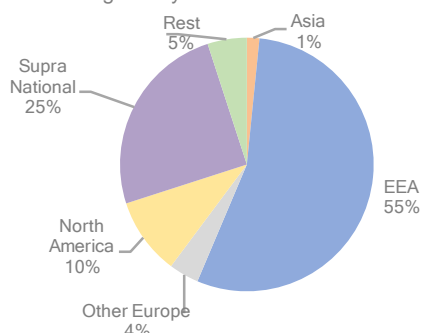
Note: Market concentration of the largest 10-to-1,000 funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.44  
Investment strategies by NAV



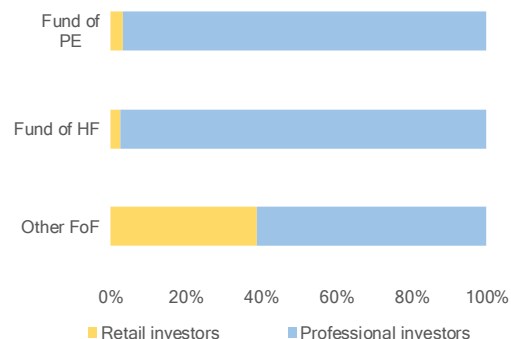
Note: Investment strategies of funds of funds, end of 2019, in % of NAV. Funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. FoF=Fund of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.45  
Investment regions by NAV



Note: Regional investment focus of funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries.

ASR-AIF-S.46  
Investor type

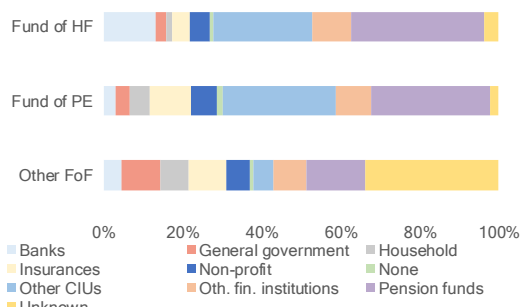


Note: Clients of funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. FoF=Fund of funds, PE= Private equity fund, HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.47

Ownership of AIFs

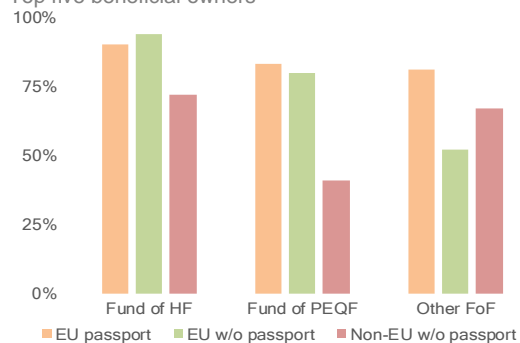


Note: Ownership of units in funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. FoF=Fund of funds; PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.48

Top five beneficial owners

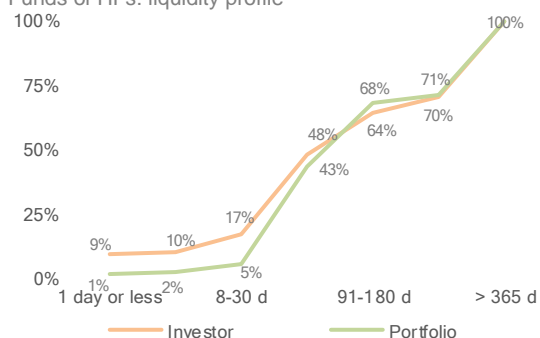


Note: Investor concentration of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. FoF=Fund of Funds, PEQF=Private Equity Fund, HF=Hedge Fund. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.49

Funds of HFs: liquidity profile

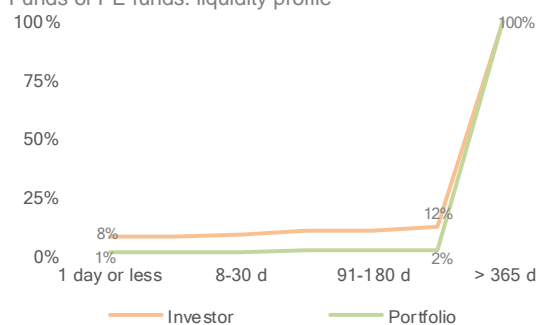


Note: Portfolio and investor liquidity profiles of funds of hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. Liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.50

Funds of PE funds: liquidity profile

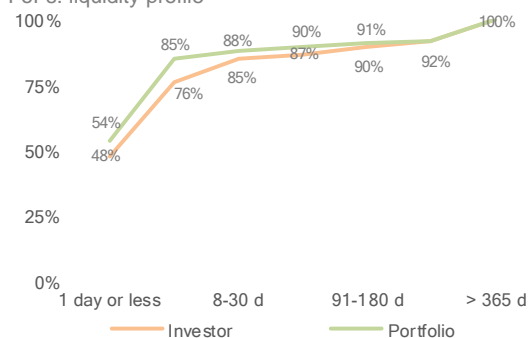


Note: Portfolio and investor liquidity profiles of funds of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019. Liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.51

FoFs: liquidity profile

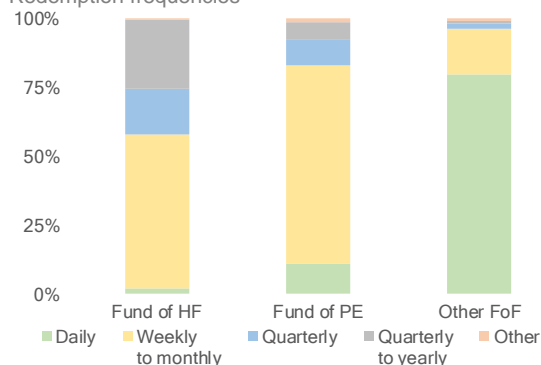


Note: Portfolio and investor liquidity profiles of funds of funds pursuing strategies classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019. Liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

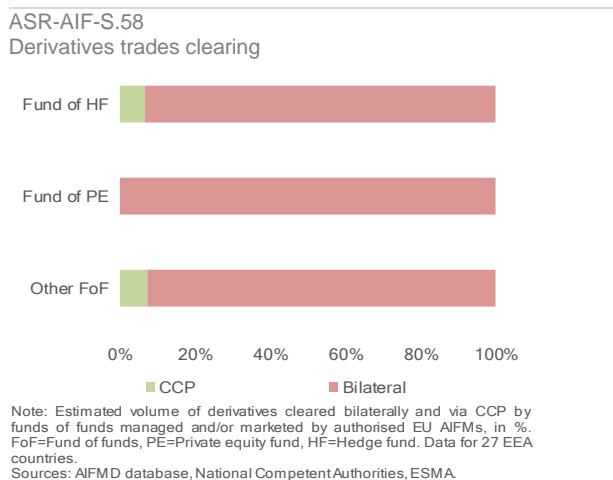
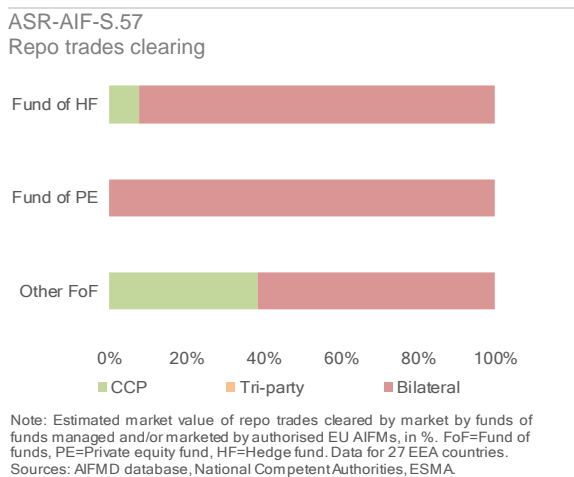
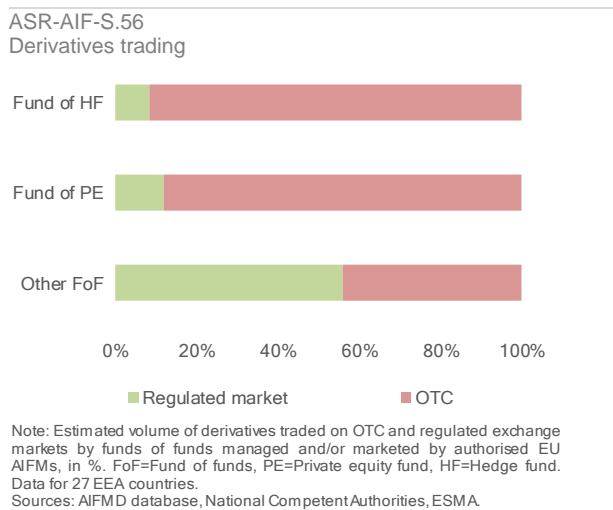
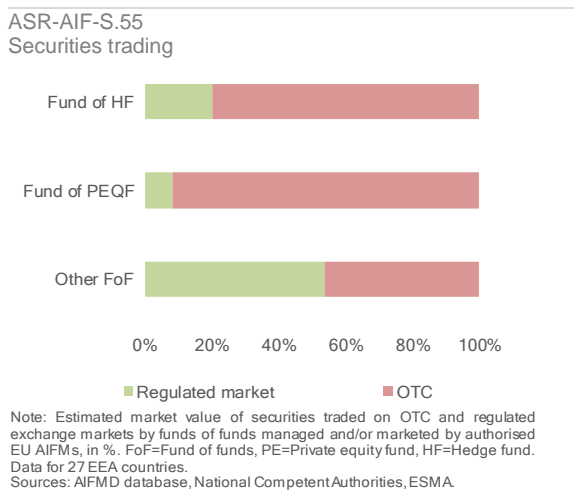
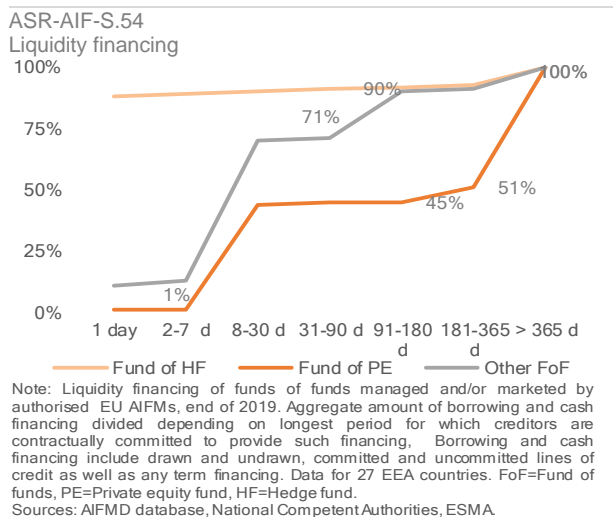
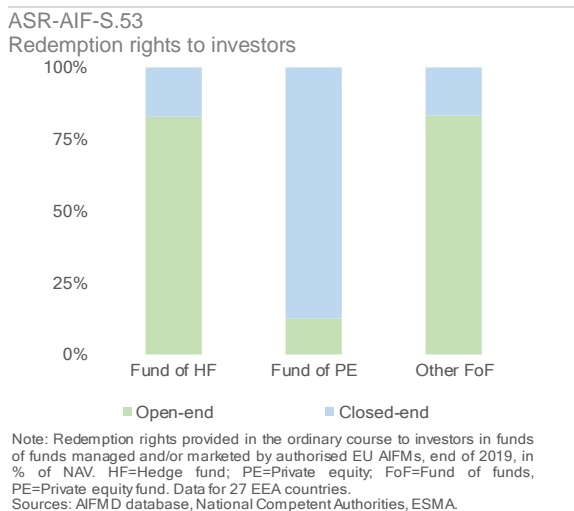
ASR-AIF-S.52

Redemption frequencies



Note: Investor redemption frequencies allowed by open-end funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, PE=Private equity fund, HF=Hedge Fund. Data for 27 EEA countries.

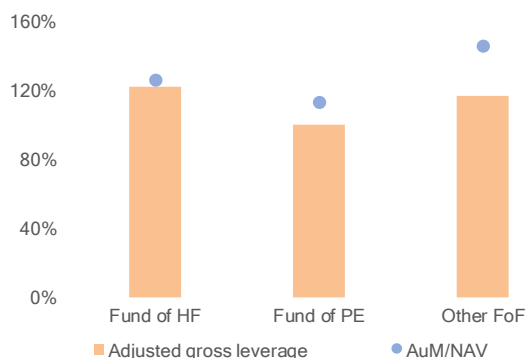
Sources: AIFMD database, National Competent Authorities, ESMA.





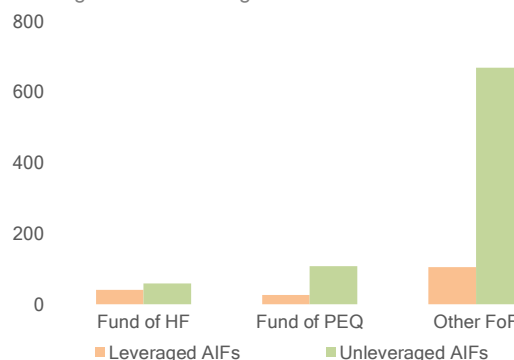
## Leverage and exposure

ASR-AIF-S.59  
Adjusted gross leverage



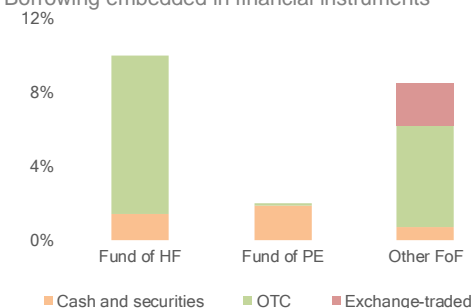
Note: Adjusted gross leverage of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. FoF= Funds of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.

ASR-AIF-S.60  
Leveraged and unleveraged AIFs



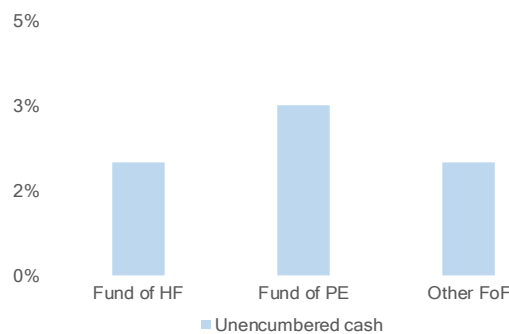
Note: Leveraged and unleveraged funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, EUR bn. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations. FoF=Funds of funds, HF=Hedge funds, PEQ=Private equity funds. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.61  
Borrowing embedded in financial instruments



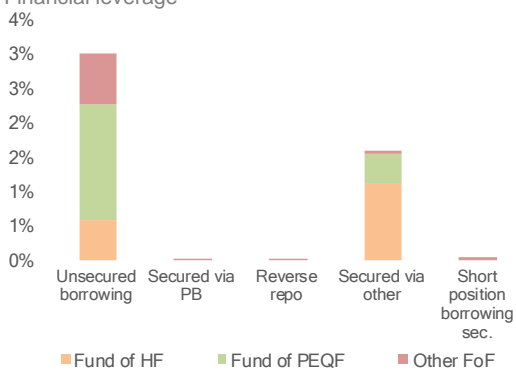
Note: Borrowing of cash and securities or embedded in derivatives by funds of funds, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, HF=Hedge fund, PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.62  
Unencumbered cash



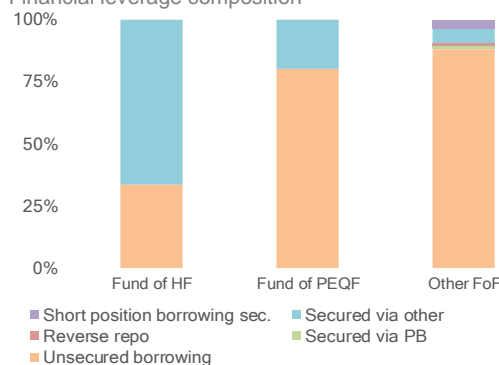
Note: Unencumbered cash held by funds of funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of funds, HF=Hedge fund, PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.63  
Financial leverage



Note: Cash and securities borrowed by funds of funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, PEQF= Private Equity Fund. Sources: AIFMD database, National Competent Authorities, ESMA.

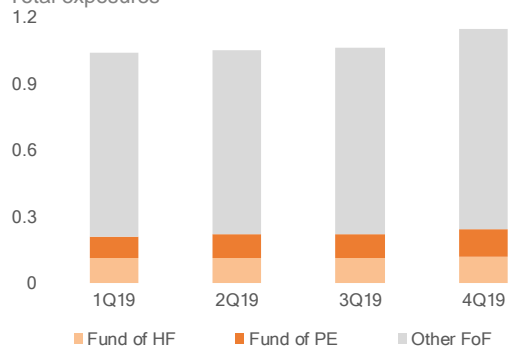
ASR-AIF-S.64  
Financial leverage composition



Note: Share of cash and securities borrowed by funds of funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.65

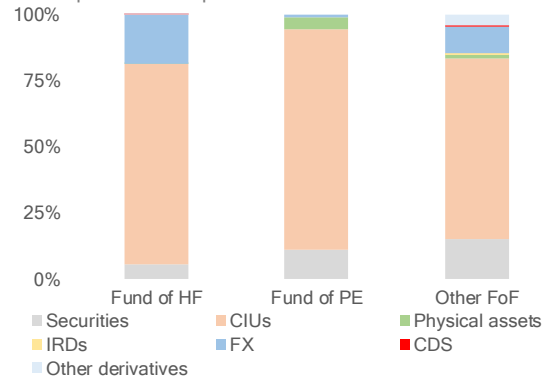
Total exposures



Note: Exposures of funds of funds managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of Funds, HF=Hedge fund, PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.66

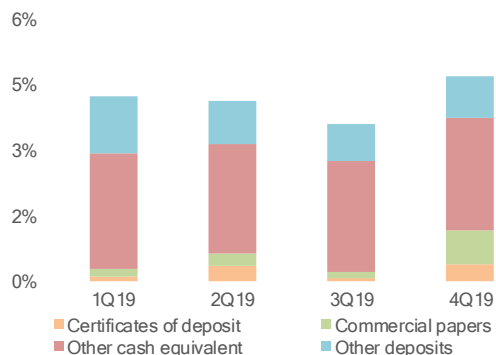
Decomposition of exposures



Note: Share of exposures by funds of funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.67

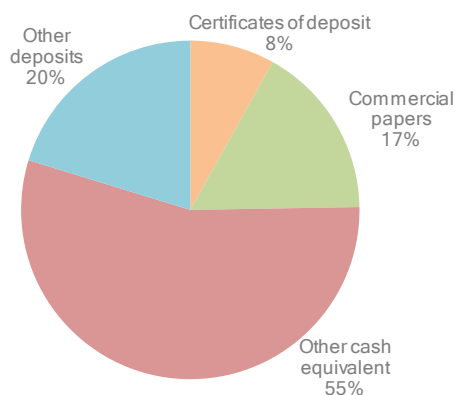
Cash and cash equivalents



Note: Cash and cash equivalents exposure of funds of funds, AIFs reported quarterly, in % of NAV. Government bonds excluded from other cash equivalents. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.68

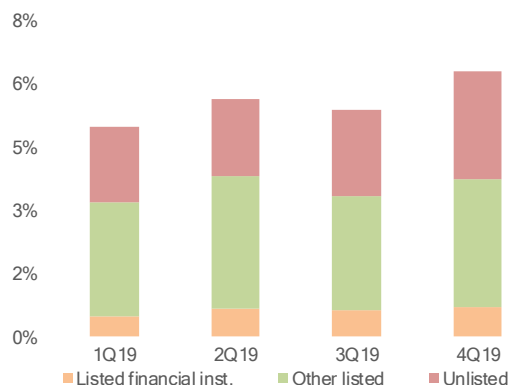
Cash and cash equivalents in 4Q19



Note: Share of cash and cash equivalents held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.69

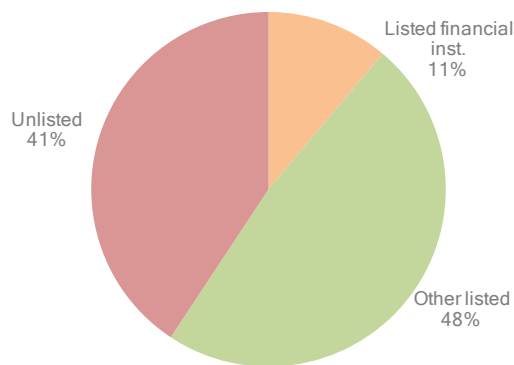
Equities



Note: Funds of funds' exposure to equity, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

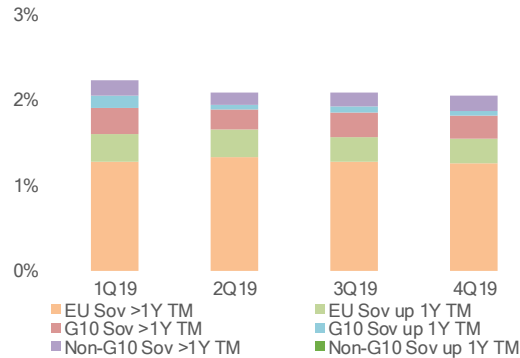
ASR-AIF-S.70

Equities in 4Q19



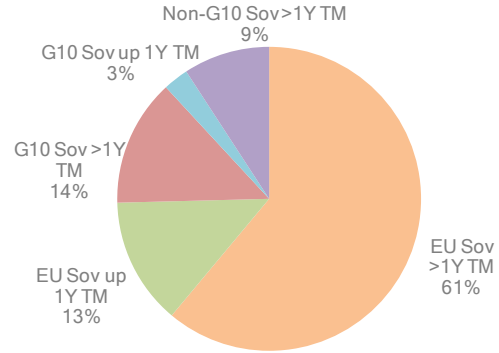
Note: Share of equities held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.

ASR-AIF-S.71  
Sovereign bonds



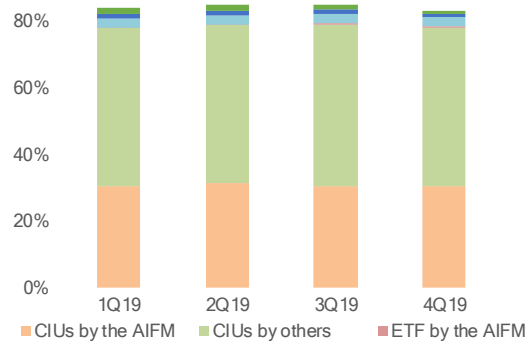
Note: Sovereign bonds exposure exposure of funds of funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Sov=Sovereign bonds, TM=Time to Maturity. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.72  
Sovereign bonds in 4Q19



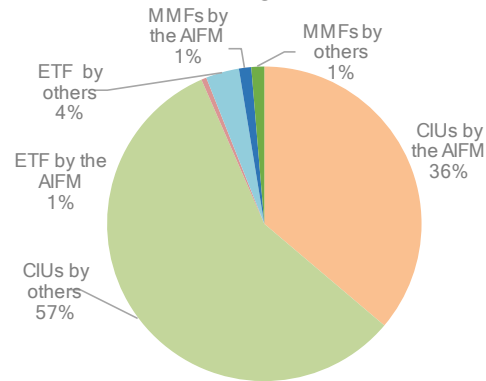
Note: Share of sovereign bonds held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sov=Sovereign bonds, TM=Time to Maturity. Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.73  
Collective investment undertakings



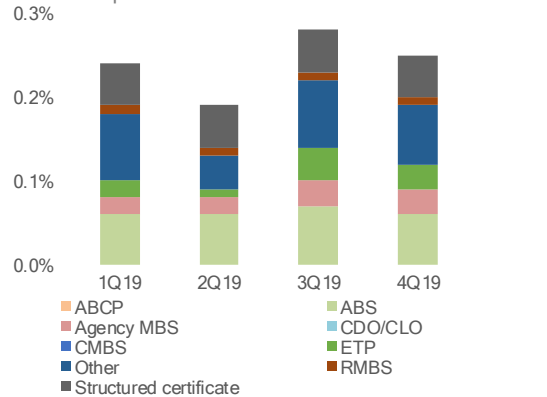
Note: Collective investment undertakings exposure exposure of funds-of-funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries.

ASR-AIF-S.74  
Collective investment undertakings in 4Q19



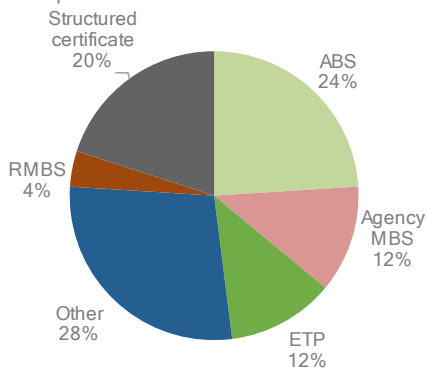
Note: Share of collective investment undertakings held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.75  
Structured products



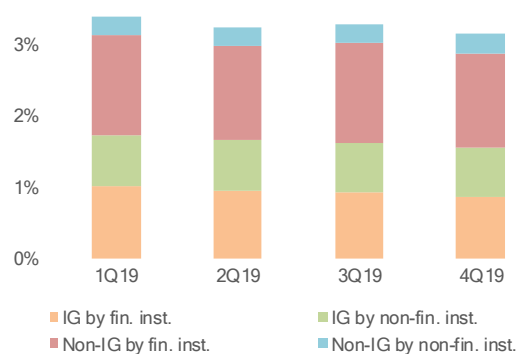
Note: Structured and securitised products exposure of funds of funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.76  
Structured products in 4Q19



Note: Share of structured and securitised products held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA

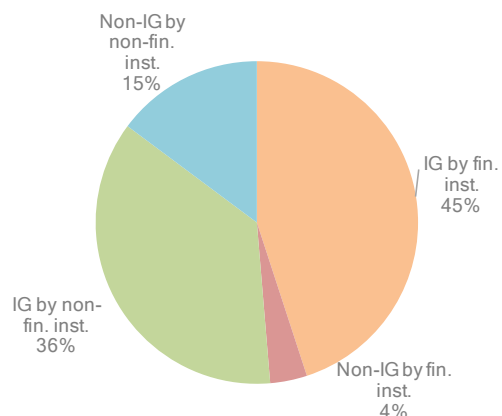
ASR-AIF-S.77  
Corporate bond quality  
4%



Note: Corporate bonds exposure of funds of funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.78  
Corporate bonds in 4Q19



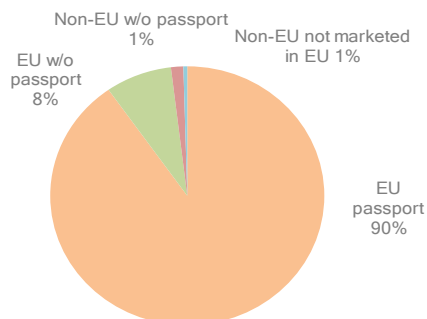
Note: Share of corporate bonds held by funds of funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

# Real Estate Funds

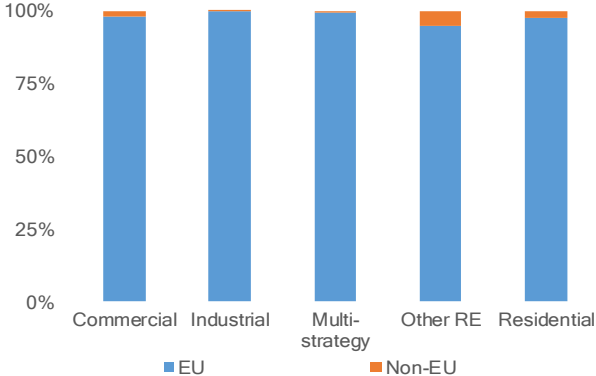
## AIF characteristics

ASR-AIF-S.79  
AIFMD passport



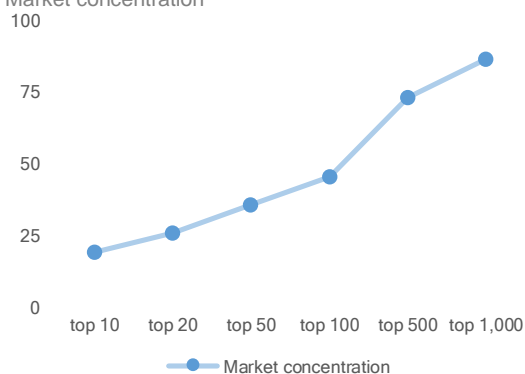
Note: NAV of real estate AIFs by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers are registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.80  
EU and non-EU AIFs



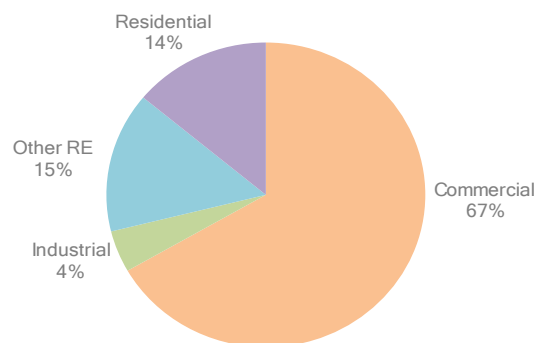
Note: Share of EU and non-EU real estate funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Non-EU AIFs marketed w/o passport RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National competent Authorities, ESMA.

ASR-AIF-S.81  
Market concentration



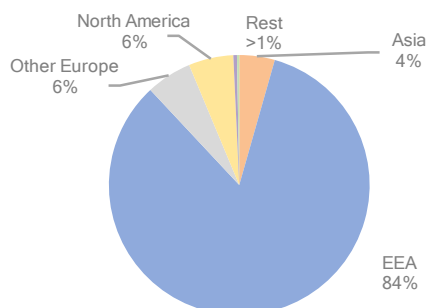
Note: Market concentration of the largest 10-to-1,000 real estate funds managed and/or marketed by authorised EU AIFMs accessing AIFMD passport and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.82  
Investment strategies by NAV



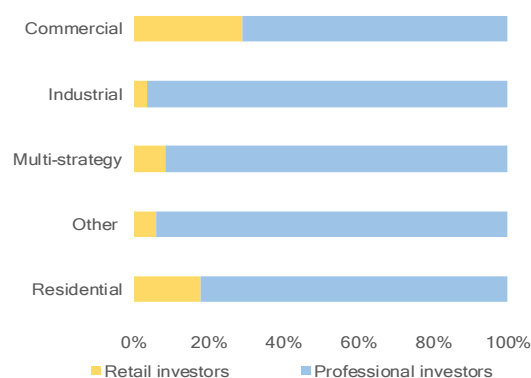
Note: Investment strategies of real estate funds, end of 2019, in % of NAV. Real estate funds managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. RE= Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.83  
Investment regions by NAV



Note: Regional investment focus of real estate funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries.

ASR-AIF-S.84  
Investor type

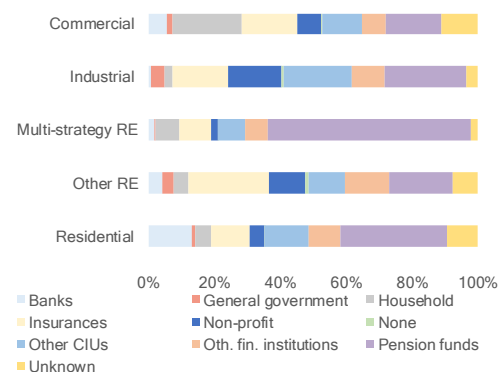


Note: Clients of real estate funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. RE = Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.85

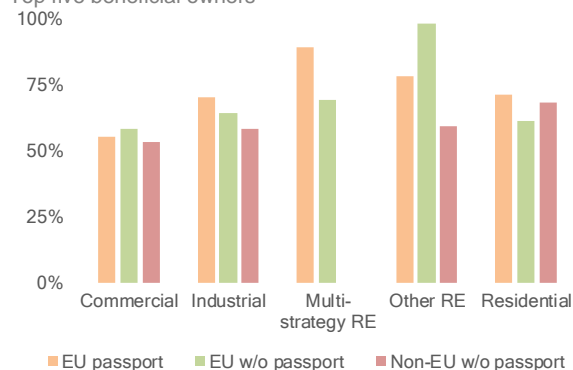
Ownership of RE funds



Note: Ownership of units in real estate funds AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.86

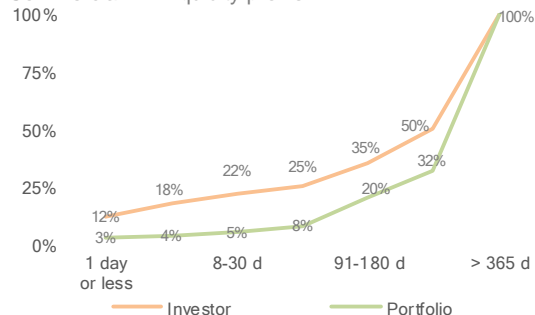
Top five beneficial owners



Note: Investor concentration of real estate managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.87

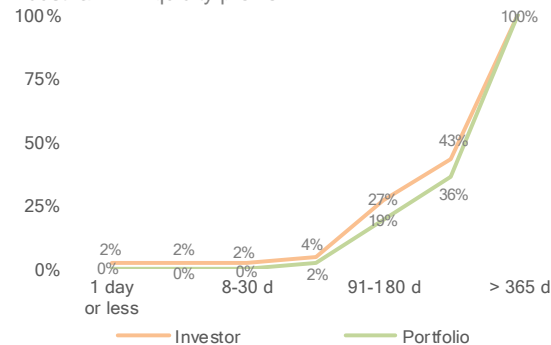
Commercial RE: liquidity profile



Note: Portfolio and investors liquidity profiles of funds of commercial real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.88

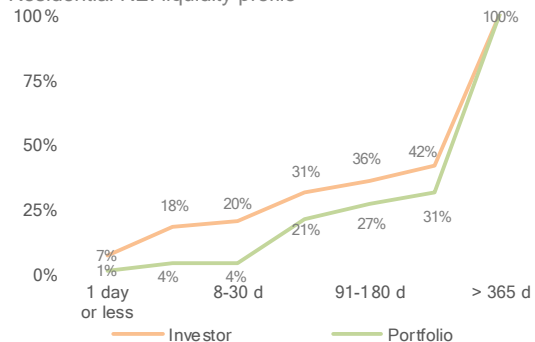
Industrial RE: liquidity profile



Note: Portfolio and investors liquidity profiles of funds of industrial real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.89

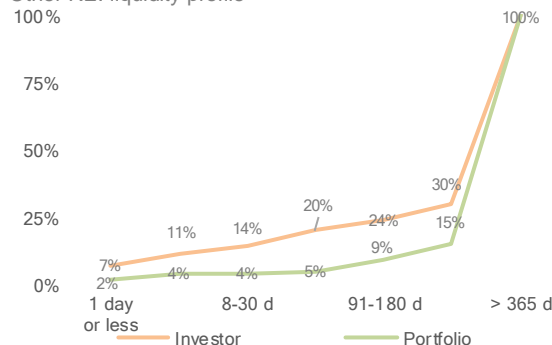
Residential RE: liquidity profile



Note: Portfolio and investors liquidity profiles of funds of residential real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

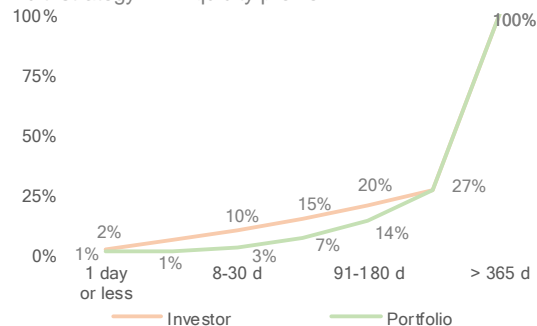
ASR-AIF-S.90

Other RE: liquidity profile



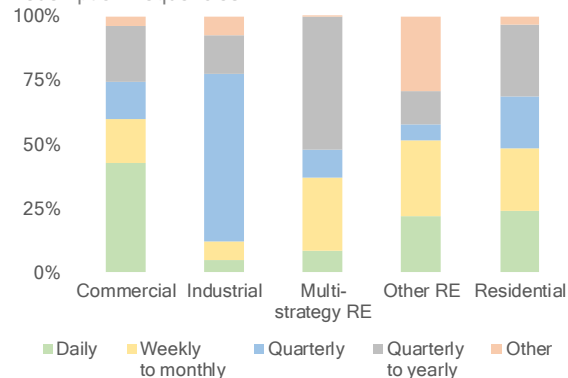
Note: Portfolio and investors liquidity profiles of real estate funds pursuing strategies classified as "other" managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.91  
Multi-strategy RE: liquidity profile



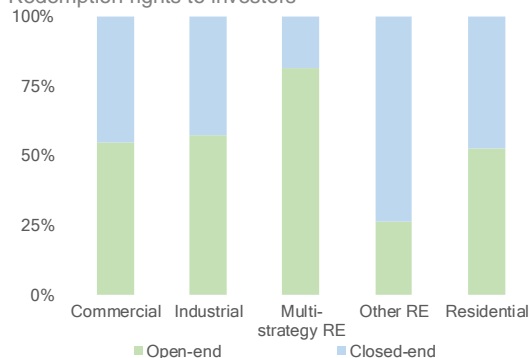
Note: Portfolio and investor liquidity profiles of multi-strategy real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.92  
Redemption frequencies



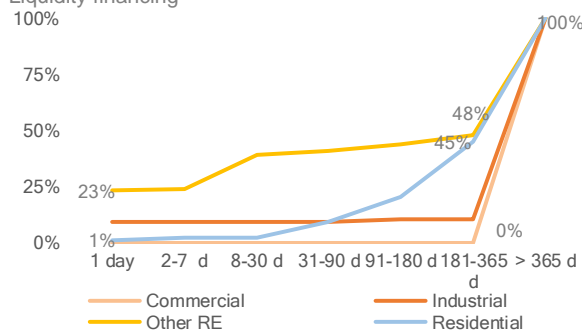
Note: Investor redemption frequencies allowed by open-end real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries.

ASR-AIF-S.93  
Redemption rights to investors



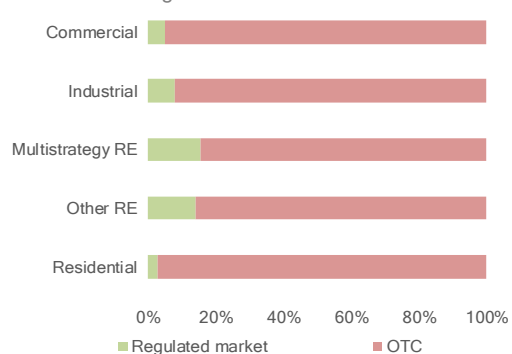
Note: Redemption rights provided in the ordinary course to investors in real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.94  
Liquidity financing



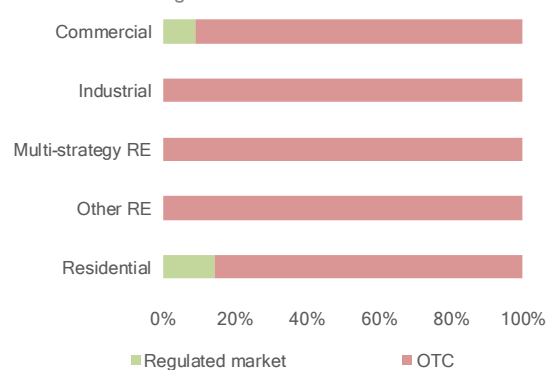
Note: Liquidity financing of real estate funds managed and/or marketed by EU authorised AIFMs, end of 2019. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.95  
Securities trading



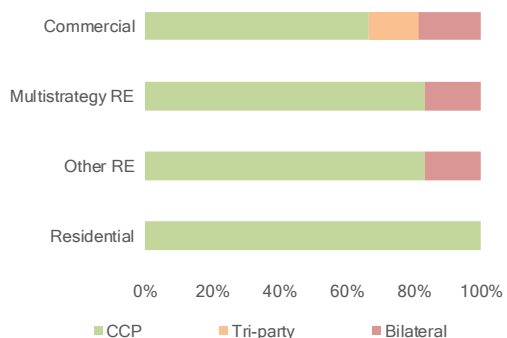
Note: Estimated market value of securities traded on OTC and regulated exchange markets by real estate funds managed and/or marketed by authorised EU AIFMs, in %. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.96  
Derivatives trading



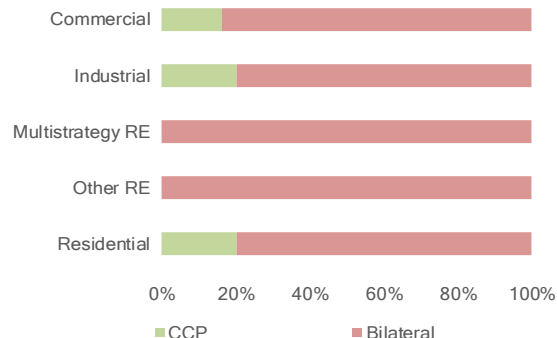
Note: Estimated volume of derivatives traded on OTC and regulated exchange markets by real estate funds managed and/or marketed by authorised EU AIFMs, in %. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.97  
Repo trades clearing



Note: Estimated market value of repo trades cleared by real estate funds managed and/or marketed by authorised EU AIFMs, in %. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

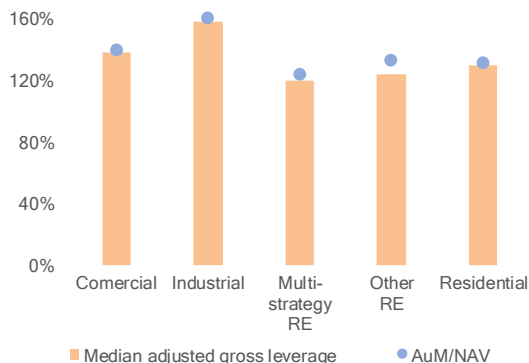
ASR-AIF-S.98  
Derivatives clearing



Note: Estimated volume of derivatives cleared bilaterally and via CCP by real estate funds managed and/or marketed by authorised EU AIFMs, in %. RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

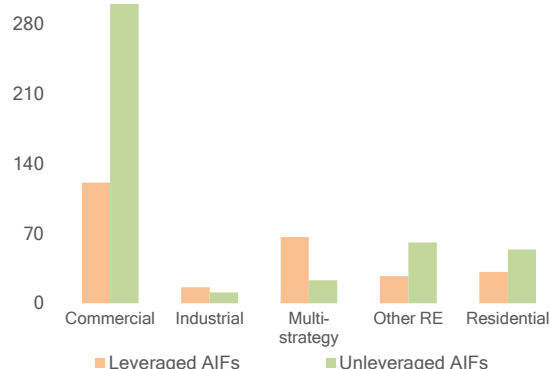
## Leverage and exposure

ASR-AIF-S.99  
Adjusted gross leverage



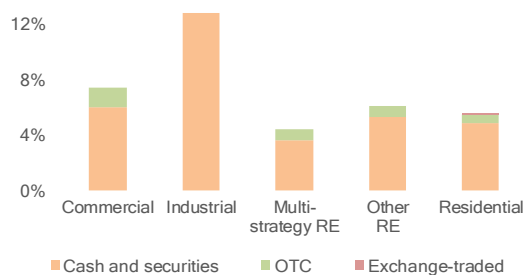
Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National competent authorities, ESMA

ASR-AIF-S.100  
Leveraged and unleveraged AIFs



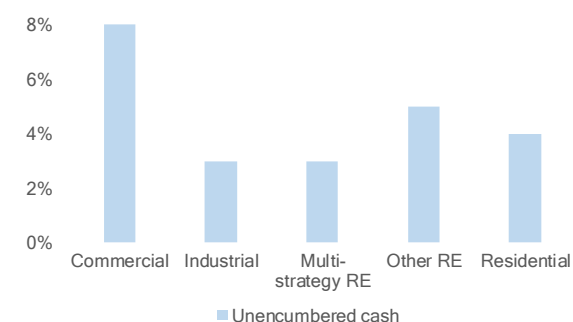
Note: Leveraged and unleveraged real estate AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2018, EUR bn. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.101  
Borrowings embedded in derivatives  
16%



Note: Borrowing of cash and securities or embedded in derivatives by real estate funds, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs marketed. OTC and exchange-traded derivatives net of margins. RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

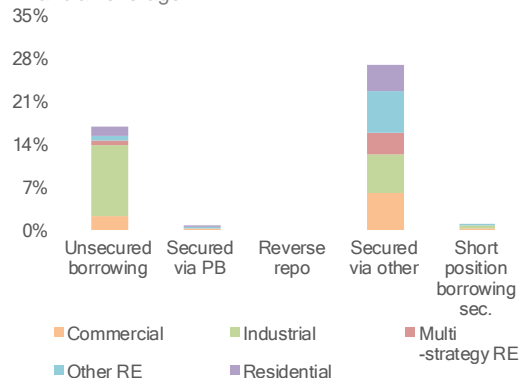
ASR-AIF-S.102  
Unencumbered cash  
10%



Note: Unencumbered cash held by real estate funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

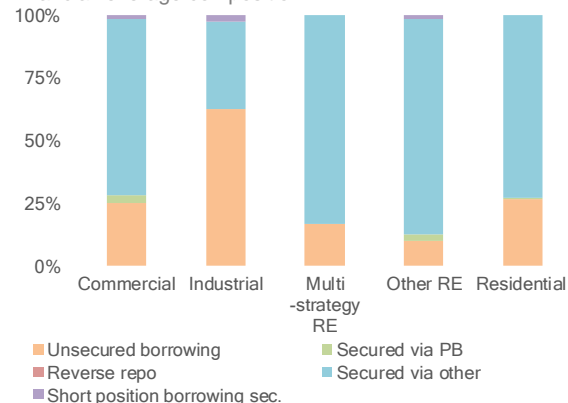


ASR-AIF-S.103  
Financial leverage



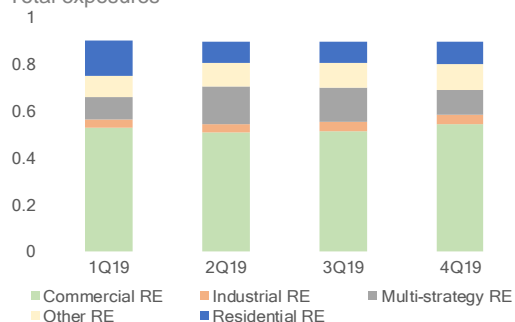
Note: Cash and securities borrowed by real estate funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real Estate. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.104  
Financial leverage composition



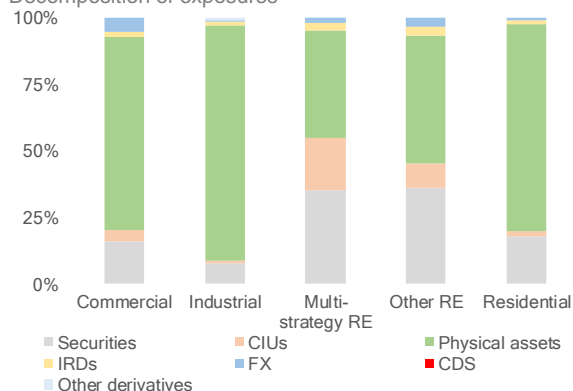
Note: Share of cash and securities borrowed by real estate funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real Estate. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.105  
Total exposures



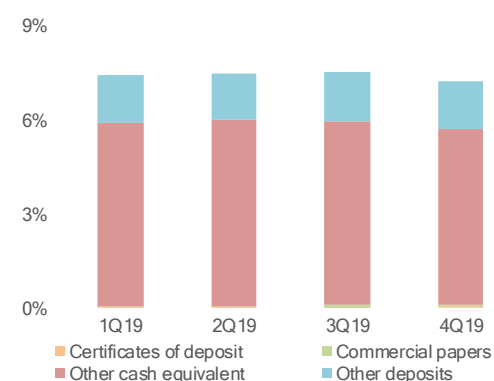
Note: Exposure of real estate funds managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.106  
Decomposition of exposures



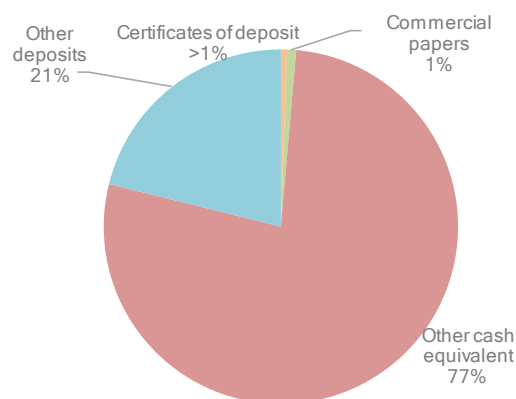
Note: Share of exposures by real estate funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. RE=Real estate. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.107  
Cash and cash equivalents



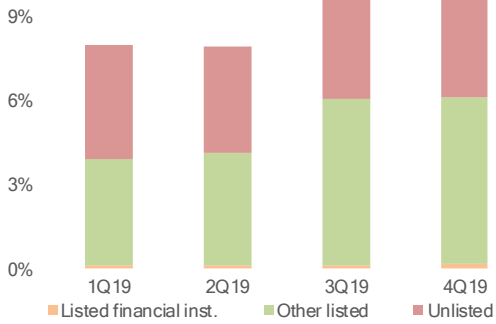
Note: Cash and cash equivalents exposure of real estate funds, AIFs reported quarterly, in % of NAV. Government bonds excluded from other cash equivalents. Data for 27 EEA countries; Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.108  
Cash and cash equivalents in 4Q19



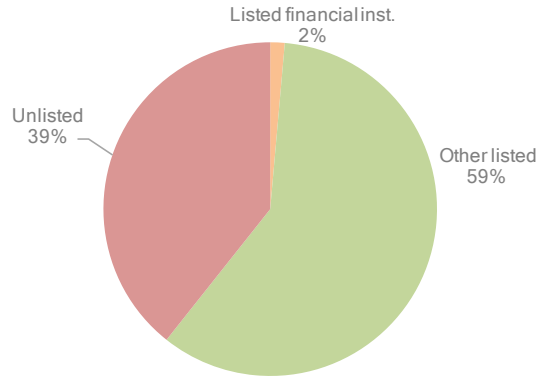
Note: Share of cash and cash equivalents held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.109  
Equities  
12%



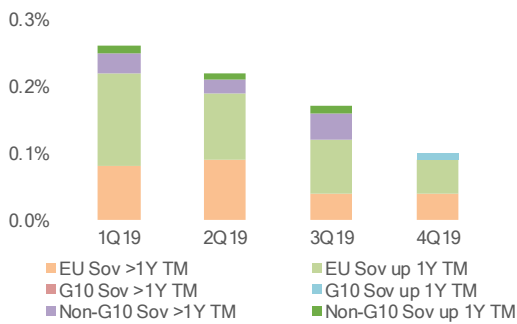
Note: Real estate funds' exposure to equity, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.110  
Equities in 4Q19



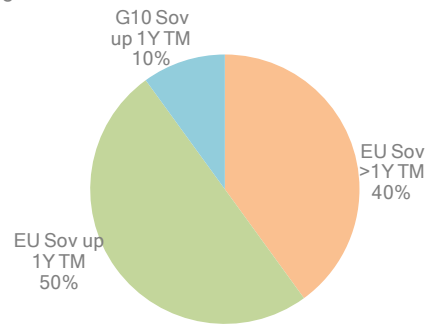
Note: Share of equities held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.111  
Sovereign bonds  
0.4%



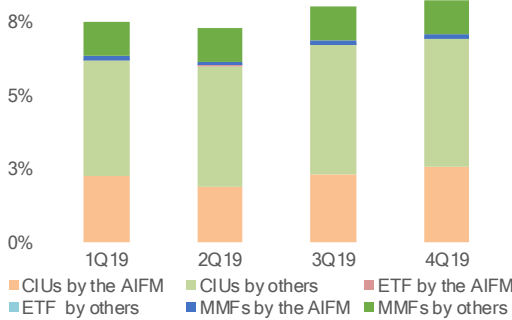
Note: Sovereign bonds exposure of real estate funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Sov=Sovereign bonds, TM=Time to Maturity. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.112  
Sovereign bonds in 4Q19



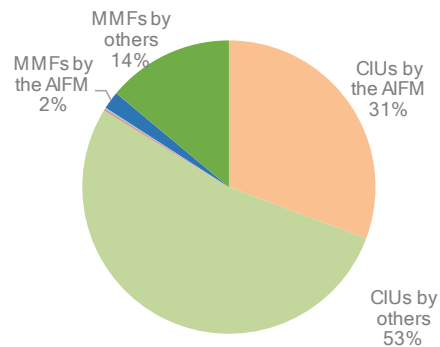
Note: Share of sovereign bonds held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sov=Sovereign bonds, TM=Time to Maturity.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.113  
Collective investment undertakings  
10%



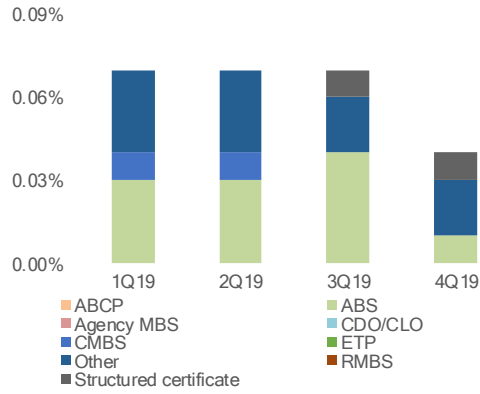
Note: Note: Collective investment undertakings exposure of real estate funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.114  
Collective investment undertakings in 4Q19



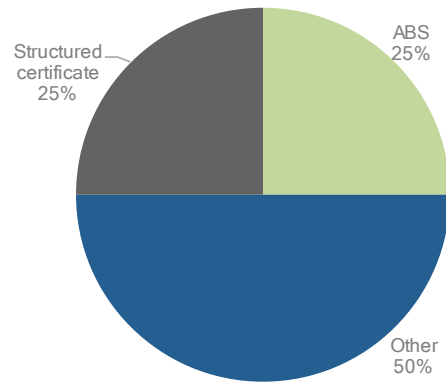
Note: Share of collective investment undertakings held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.115  
Structured products



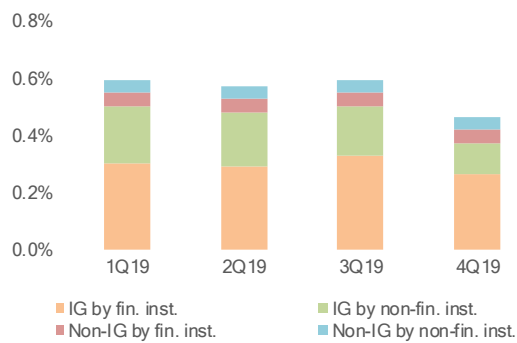
Note: Structured and securitised products exposure of real estate funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.116  
Structured products in 4Q19



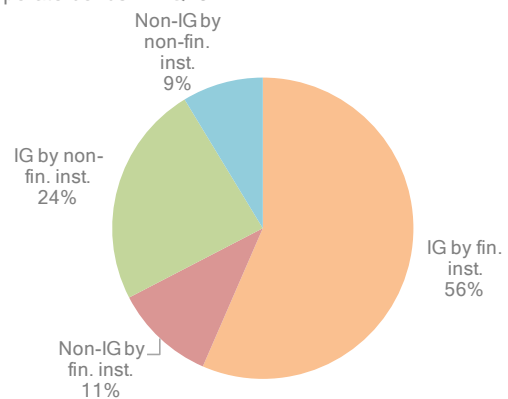
Note: Share of structured and securitised products held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.117  
Corporate bond quality



Note: Corporate bonds exposure of real estate funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.118  
Corporate bonds in 4Q19

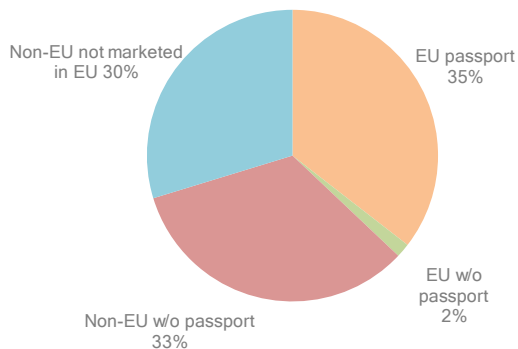


Note: Share of corporate bonds held by real estate funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

# Hedge Funds

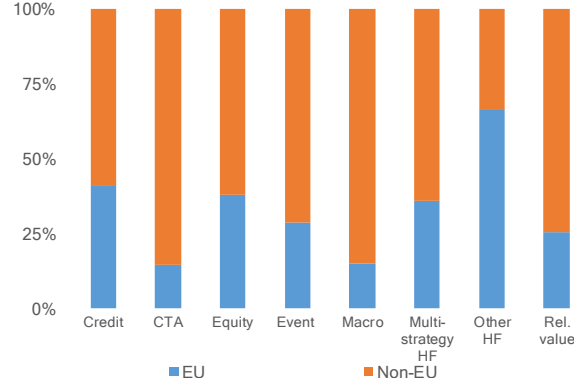
## AIF characteristics

ASR-AIF-S.119  
AIFMD passport



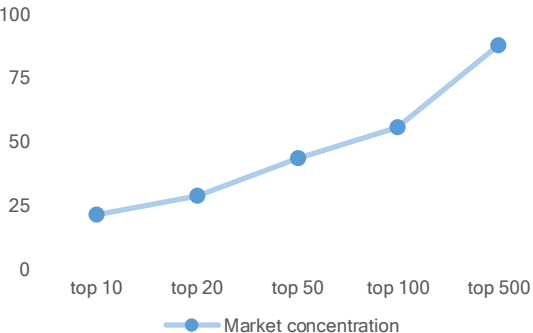
Note: NAV of hedge funds by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access AIFMD passport or marketing non-EU AIFs w/o passport, subthreshold managers are registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.120  
EU and non-EU AIFs



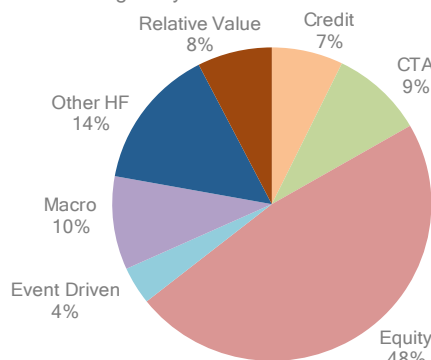
Note: Share of EU and non-EU hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Non-EU AIFs marketed w/o passport. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National competent Authorities, ESMA.

ASR-AIF-S.121  
Market concentration



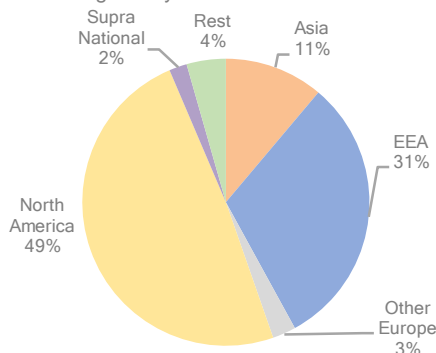
Note: Market concentration of the largest 10-to-500 hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.122  
Investment strategies by NAV



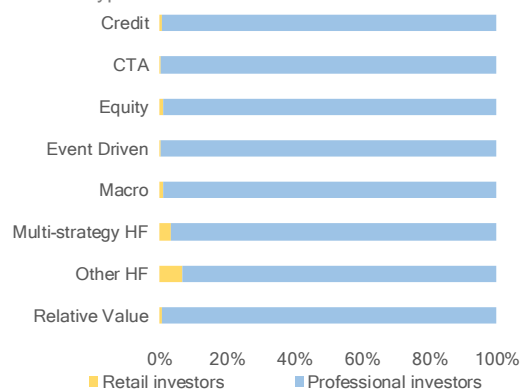
Note: Investment strategies of hedge funds, end of 2019, in % of NAV. Hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.123  
Investment regions by NAV



Note: Regional investment focus of hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments, and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.124  
Investor type

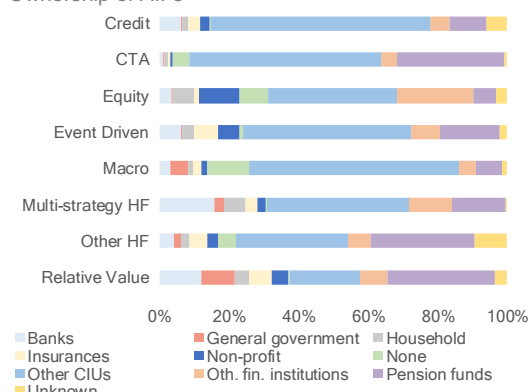


Note: Clients of hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.125

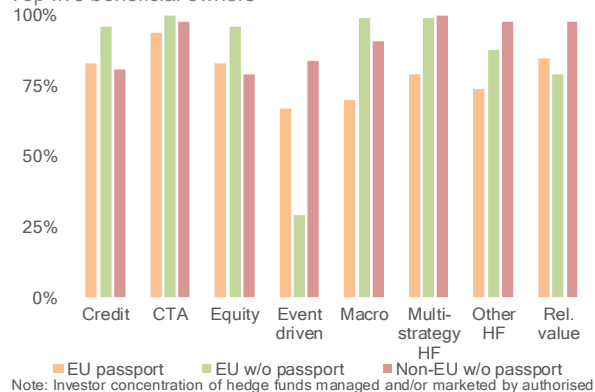
Ownership of AIFs



Note: Ownership of units in hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.126

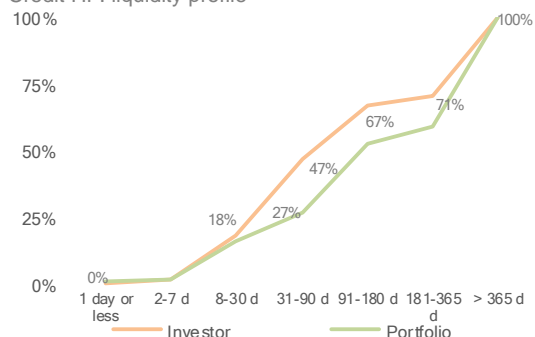
Top five beneficial owners



Note: Investor concentration of hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. HF=Hedge Fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.127

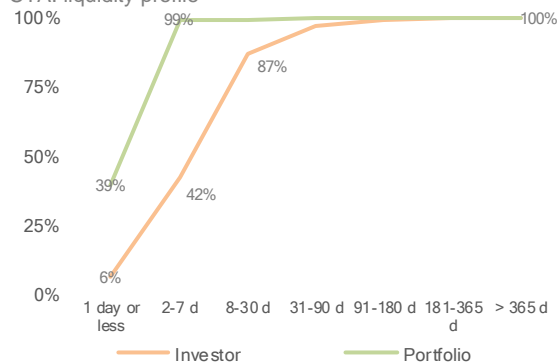
Credit HF: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of credit hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.128

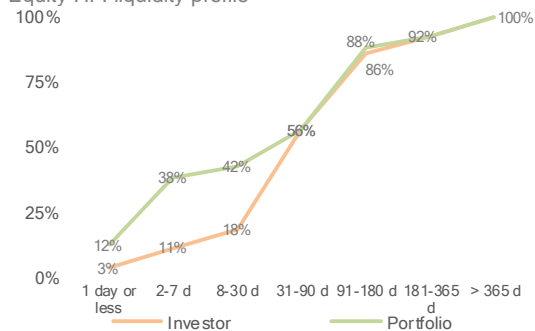
CTA: liquidity profile



Note: Portfolio and investor liquidity profiles of CTA managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.129

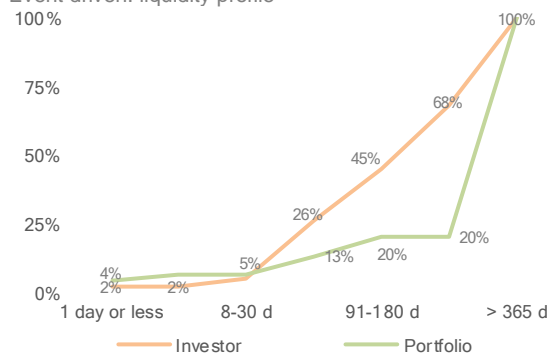
Equity HF: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of equity hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.130

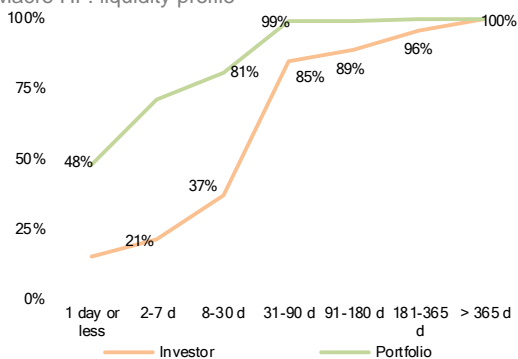
Event driven: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of event driven hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.131

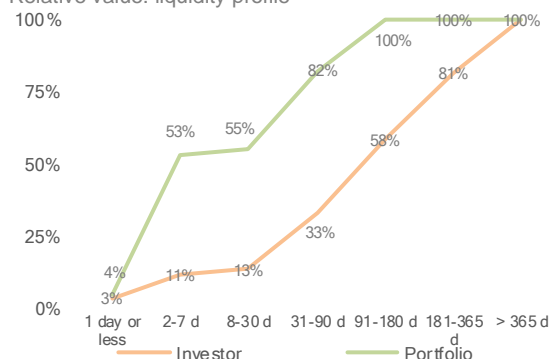
Macro HF: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of macro hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.132

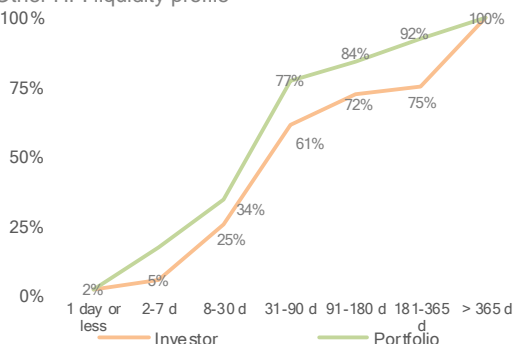
Relative value: liquidity profile



Note: Portfolio and investor liquidity profiles of relative value hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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 EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.133

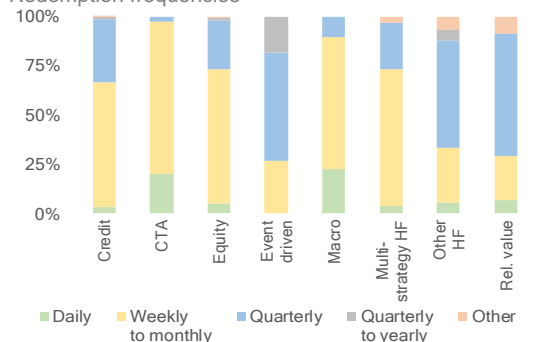
Other HF: liquidity profile



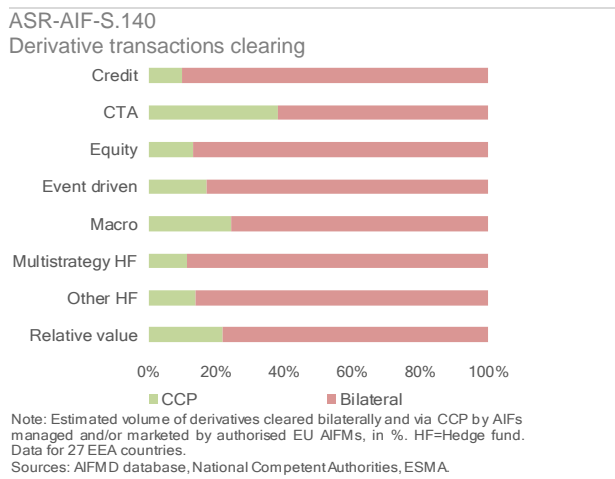
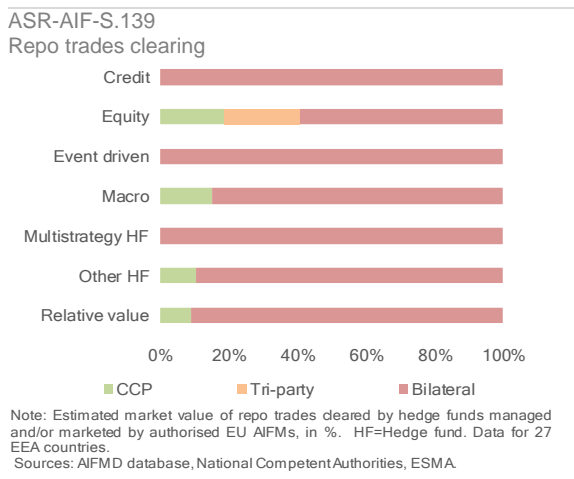
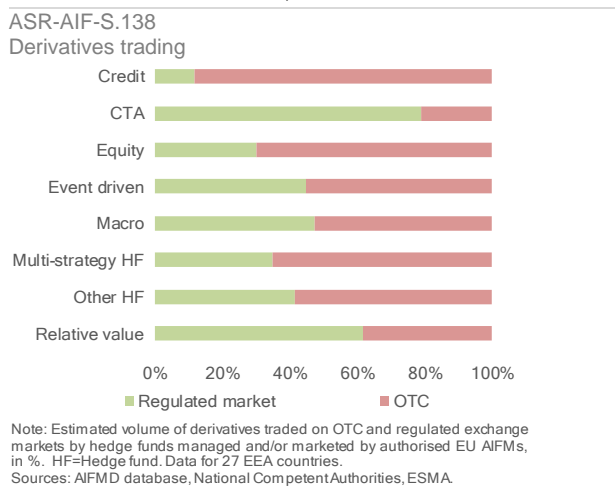
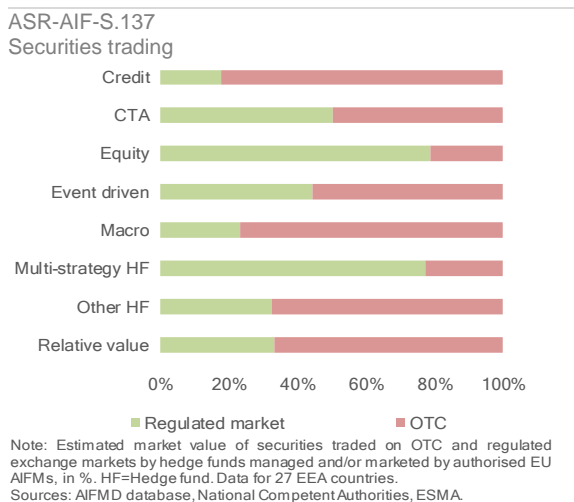
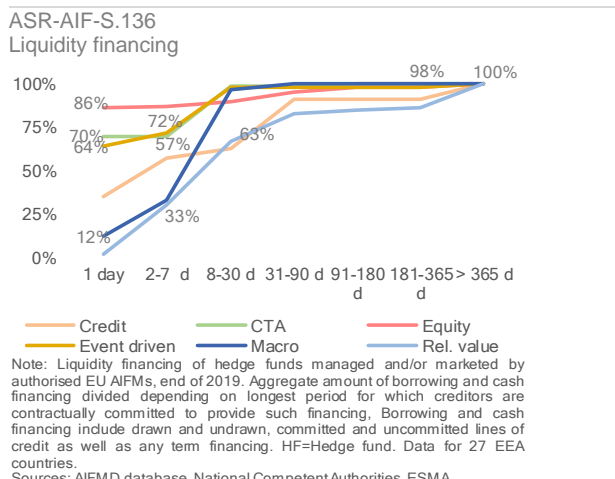
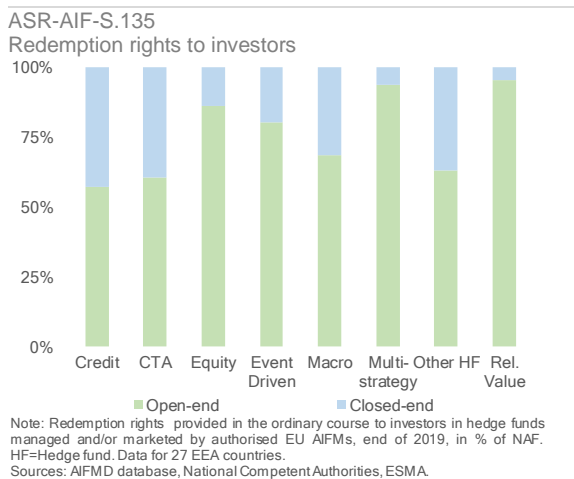
Note: Portfolio and investor liquidity profiles of hedge funds pursuing strategies classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.134

Redemption frequencies



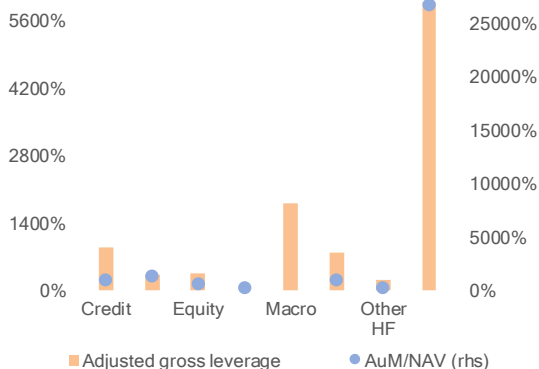
Note: Investor redemption frequencies allowed by open-end hedge funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.



## Leverage and exposure

ASR-AIF-S.141

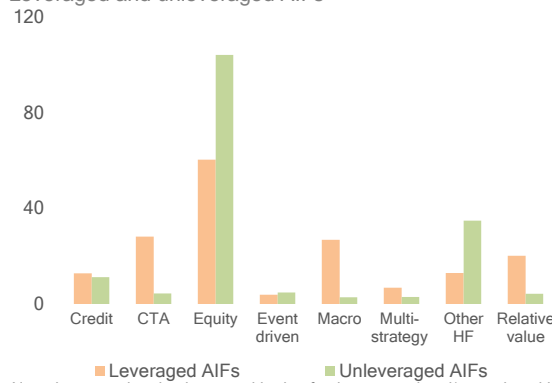
Adjusted gross leverage



Note: Adjusted gross leverage of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. FoF= Funds of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National competent authorities, ESMA.

ASR-AIF-S.142

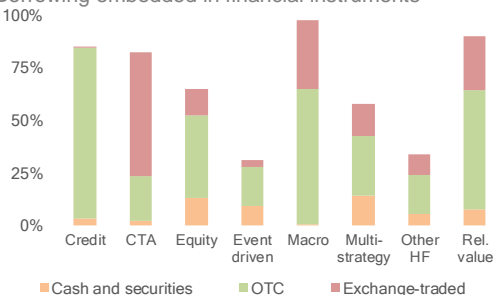
Leveraged and unleveraged AIFs



Note: Leveraged and unleveraged hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, EUR bn. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.143

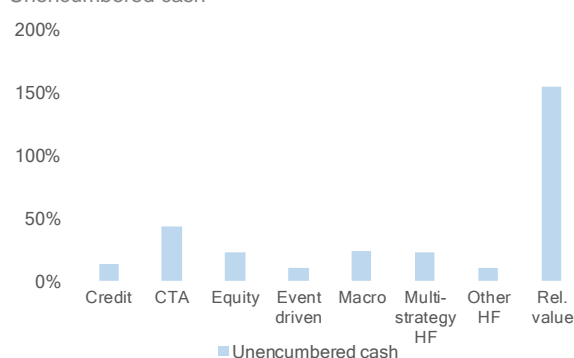
Borrowing embedded in financial instruments



Note: Borrowing of cash and securities or embedded in derivatives by hedge funds, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs. OTC and exchange-traded derivatives net of margins. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.144

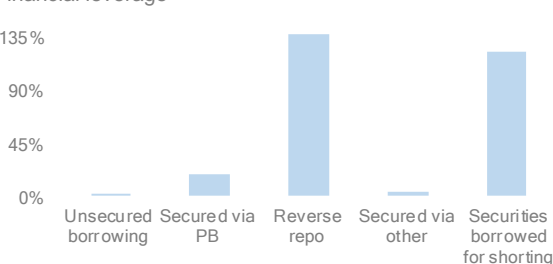
Unencumbered cash



Note: Unencumbered cash held by hedge funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. HF=Hedge fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.145

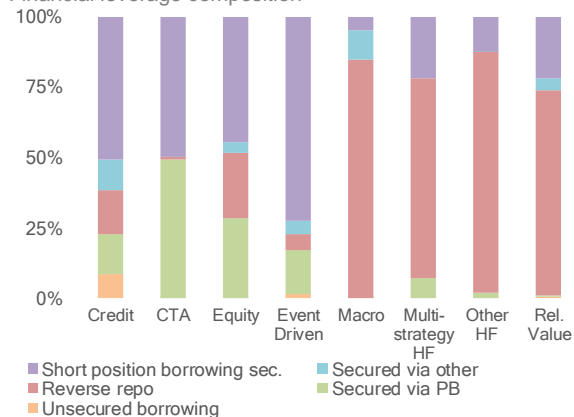
Financial leverage



Note: Cash and securities borrowed by hedge funds, end of 2018, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, None=No predominant type. Data for 25 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.146

Financial leverage composition

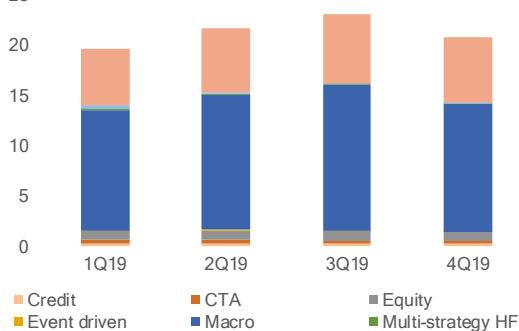


Note: Share of cash and securities borrowed by hedge funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Sources: AIFMD database, National Competent Authorities, ESMA.



ASR-AIF-S.147

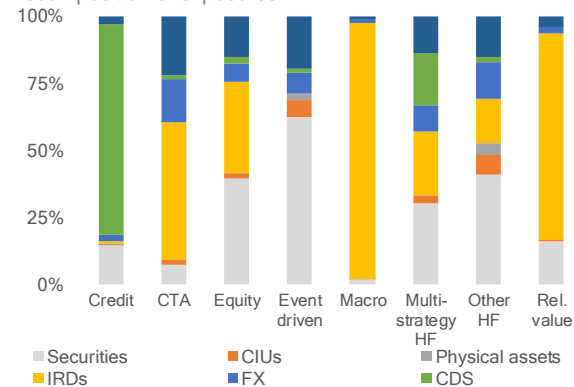
Total exposures  
25



Note: Exposures of hedge funds managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.148

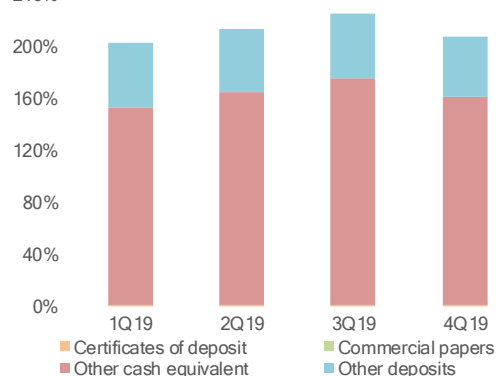
Decomposition of exposures



Note: Share of exposures by hedge funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.149

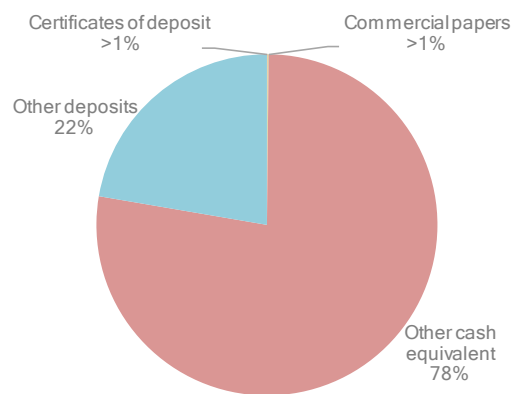
Cash and cash equivalents  
240%



Note: Cash and cash equivalents exposure of hedge funds, AIFs reported quarterly, in % of NAV. Government bonds excluded from the other cash equivalents. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.150

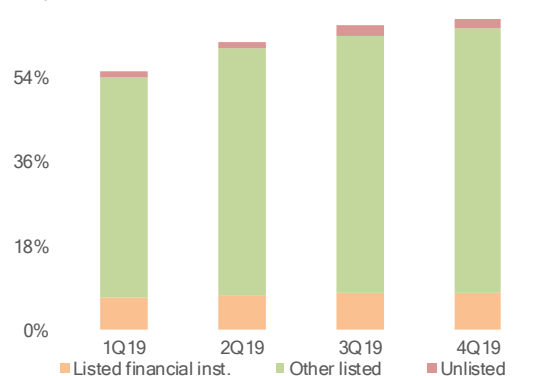
Cash and cash equivalents in 4Q19



Note: Share of cash and cash equivalents held by hedge funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.151

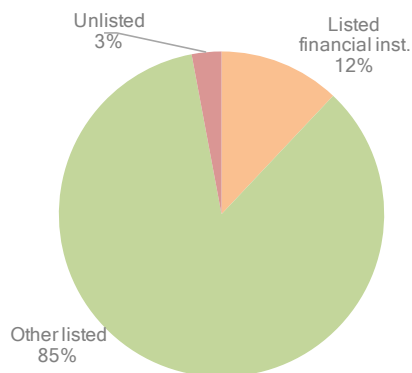
Equities  
72%



Note: Hedge funds' exposure to equity, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries;  
Sources: AIFMD database, National Competent Authorities, ESMA.

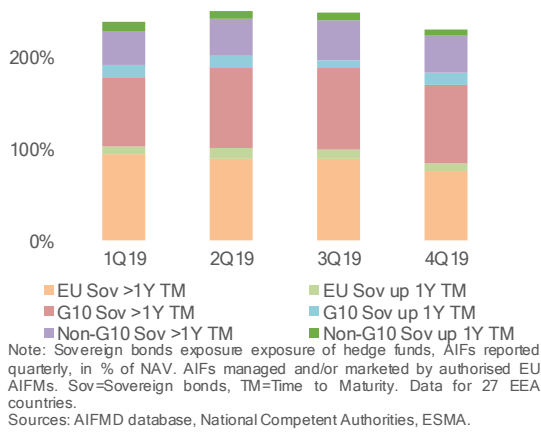
ASR-AIF-S.152

Equities in 4Q19

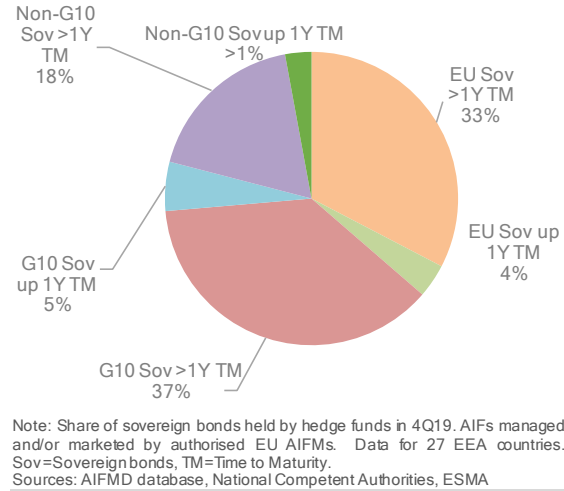


Note: Share of equities held by hedge funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.

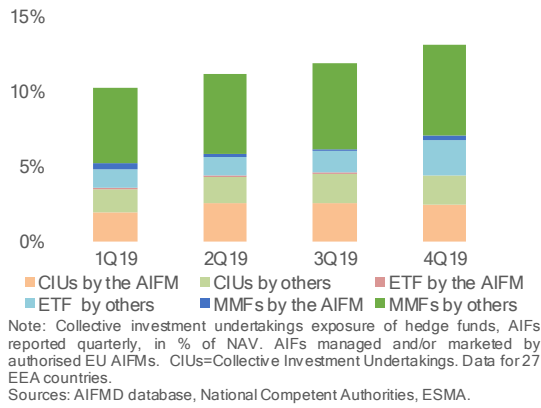
ASR-AIF-S.153  
Sovereign bonds  
300%



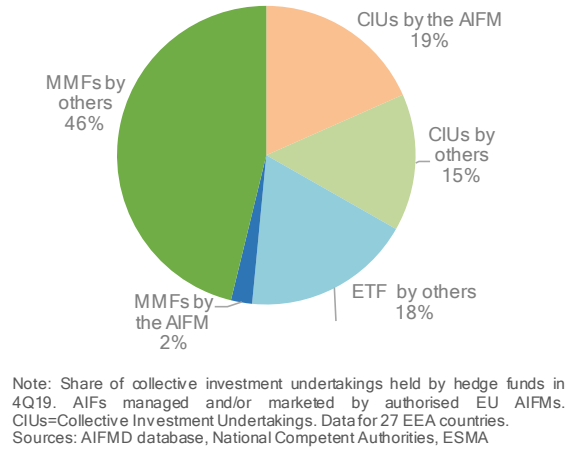
ASR-AIF-S.154  
Sovereign bonds in 4Q19



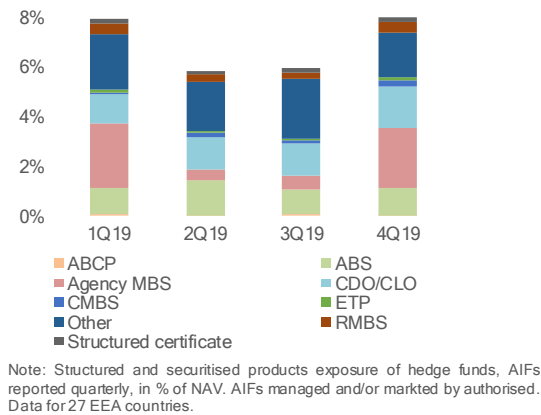
ASR-AIF-S.155  
Collective investment undertakings  
20%



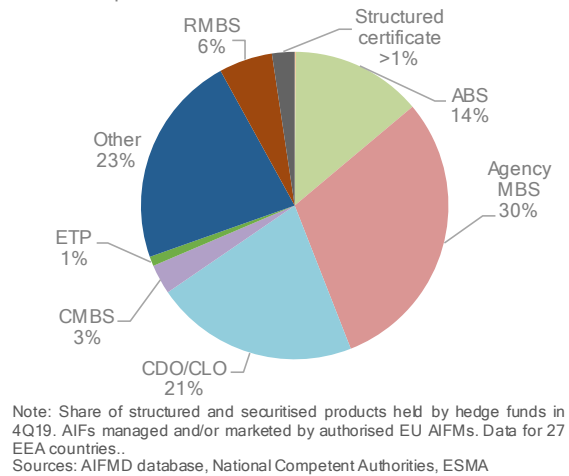
ASR-AIF-S.156  
Collective investment undertakings in 4Q19



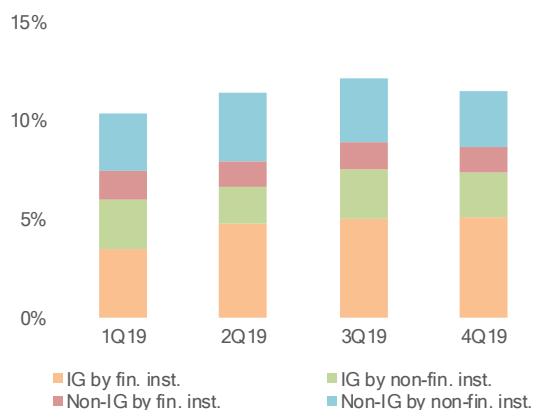
ASR-AIF-S.157  
Structured products  
10%



ASR-AIF-S.158  
Structured products in 4Q19

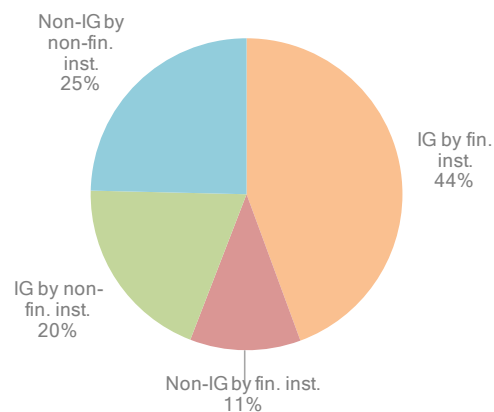


ASR-AIF-S.159  
Corporate bond quality



Note: Corporate bonds exposure of hedge funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.160  
Corporate bonds in 4Q19

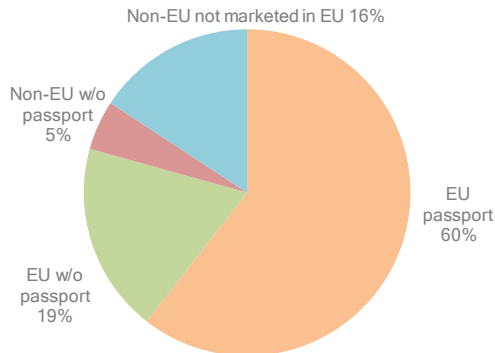


Note: Share of corporate bonds held by hedge funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

# Private Equity Funds

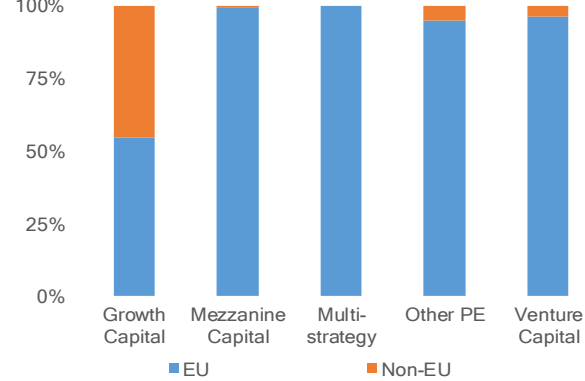
## AIF characteristics

ASR-AIF-S.161  
AIFMD passport



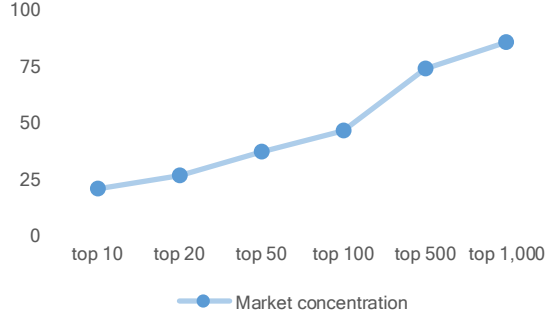
Note: NAV of private equity funds by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport, sub-threshold managers registered only in national jurisdictions w/o passport. Data for 27 EEA countries  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.162  
EU and non-EU AIFs



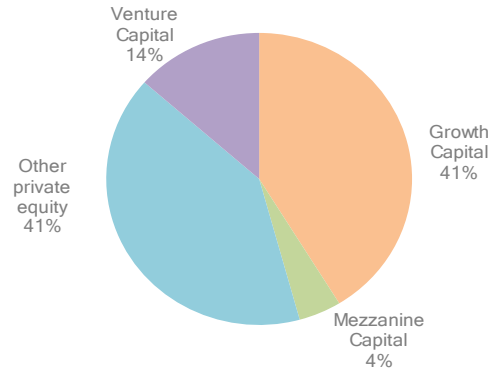
Note: Share of EU and non-EU private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Non-EU AIFs marketed w/o passport. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National competent Authorities, ESMA.

ASR-AIF-S.163  
Market concentration



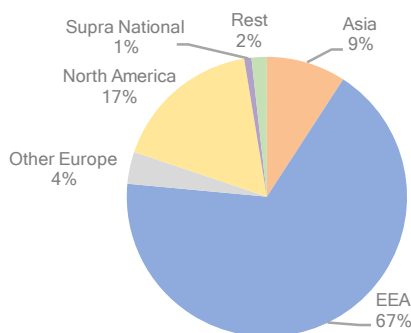
Note: Market concentration of the largest 10-to-1,000 private equity funds managed and/or marketed by authorised EU AIFMs accessing AIFMD passport and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.164  
Investment strategies by NAV



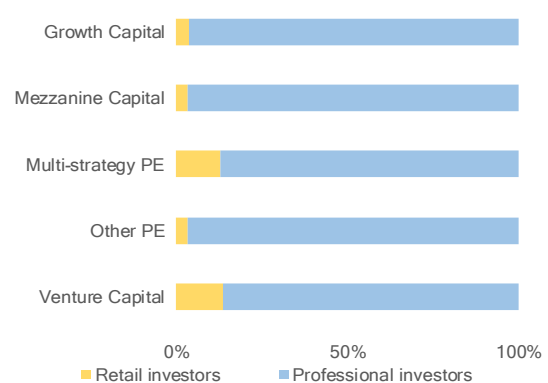
Note: Investment strategies of private equity funds, end of 2019, in % of NAV. Private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.165  
Investment regions by NAV



Note: Regional investment focus of private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments, and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.166  
Investor type

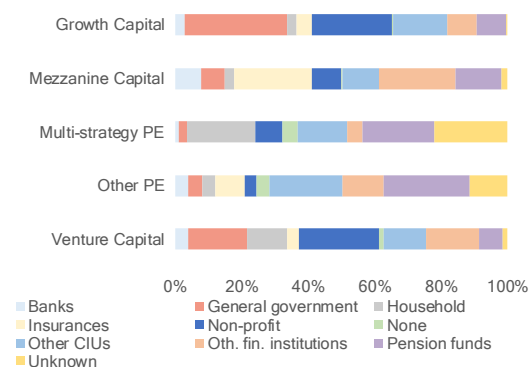


Note: Clients of private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. PE = Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.167

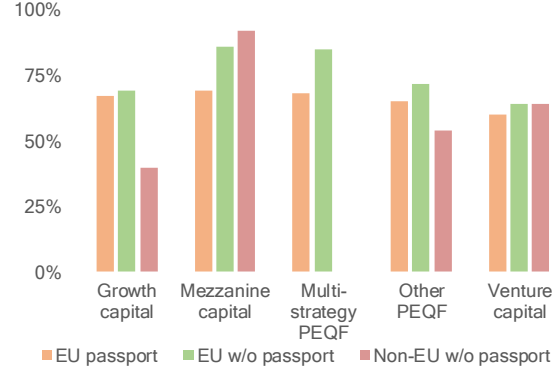
Ownership of PE funds



Note: Ownership of units in private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.168

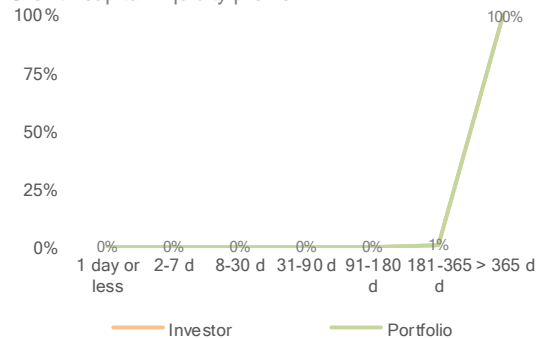
Top five beneficial owners



Note: Investor concentration of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.169

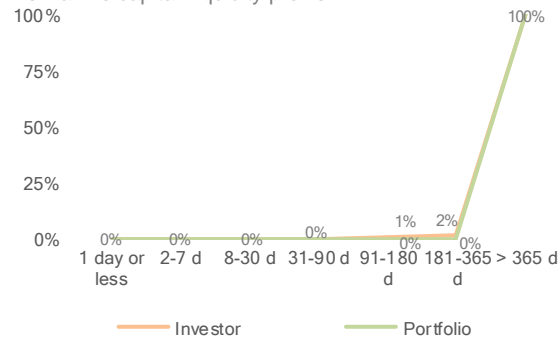
Growth capital: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of growth capital funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.170

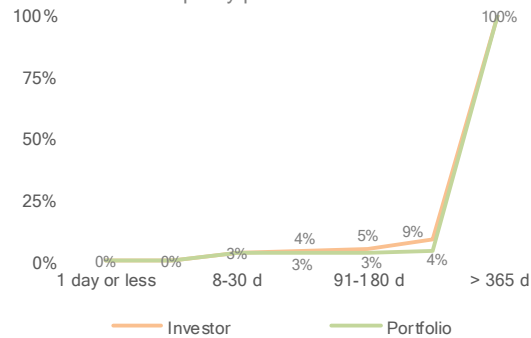
Mezzanine capital: liquidity profile



Note: Portfolio and investor liquidity profiles of mezzanine capital funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.171

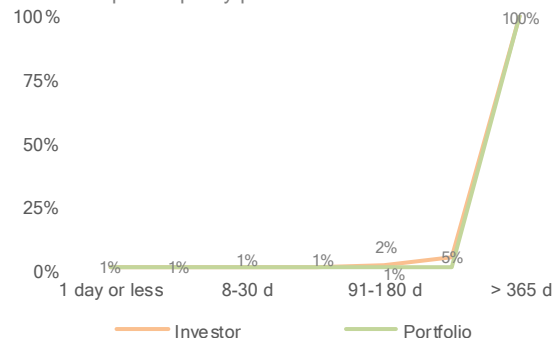
Other PE funds: liquidity profile



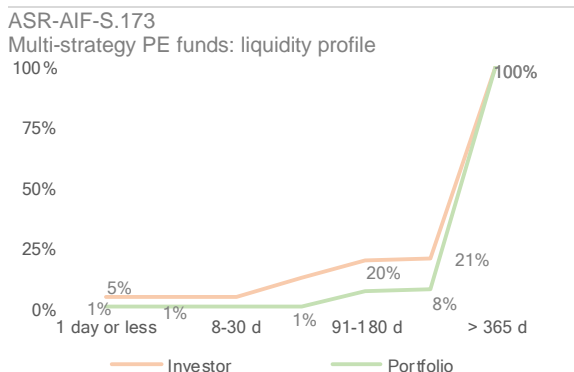
Note: Portfolio and investor liquidity profiles of private equity funds pursuing strategies classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.172

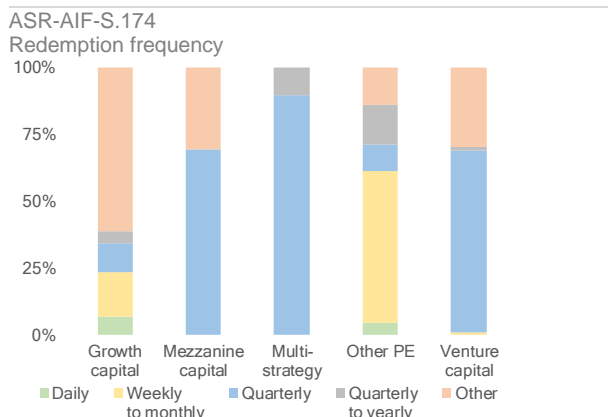
Venture capital: liquidity profile



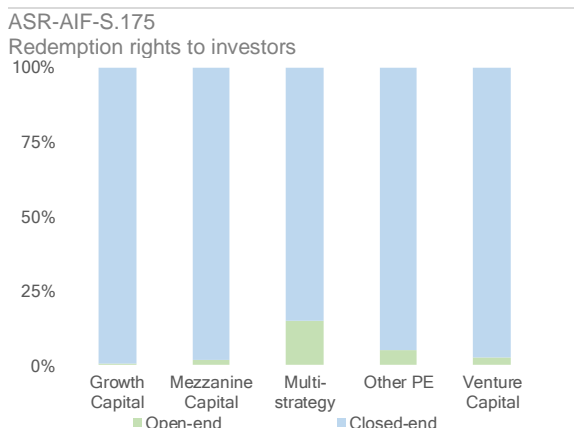
Note: Portfolio and investor liquidity profiles of venture capital funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.



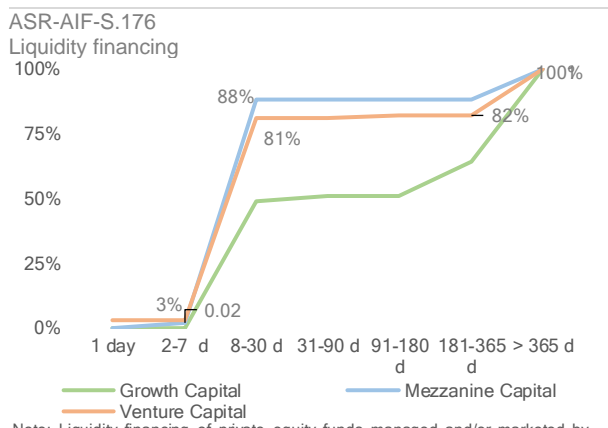
Note: Portfolio and investor liquidity profiles of multi-strategy private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.



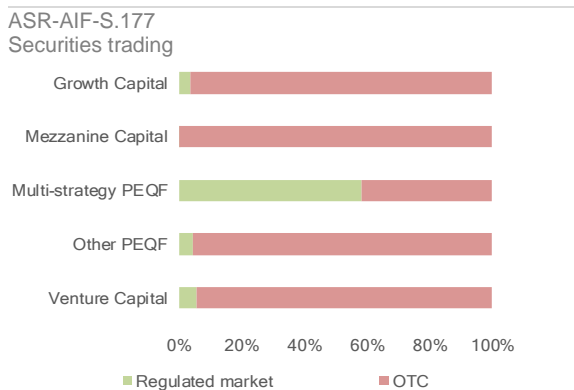
Note: Investor redemption frequencies allowed by open-end private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.



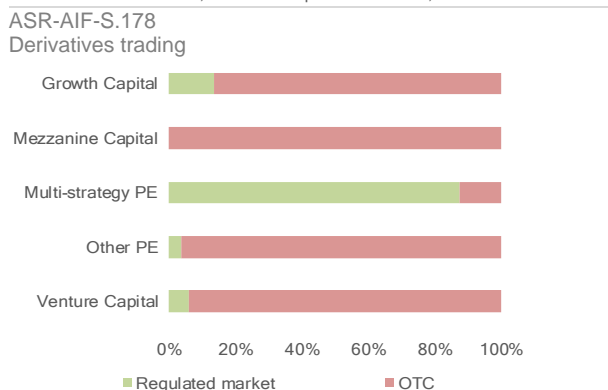
Note: Redemption rights provided in the ordinary course to investors in private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.



Note: Liquidity financing of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

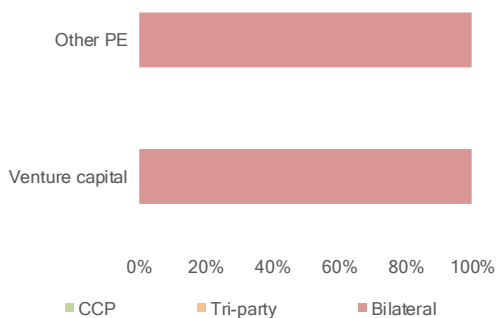


Note: Estimated market value of securities traded on OTC and regulated exchange markets by private equity funds managed and/or marketed by authorised EU AIFMs, in %. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.



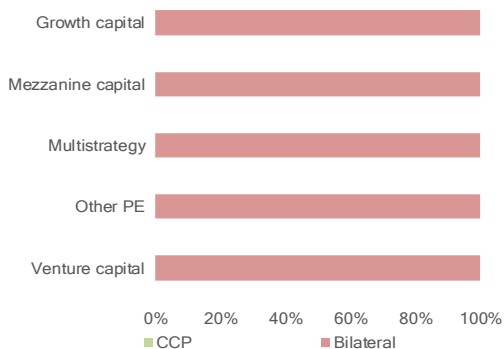
Note: Estimated volume of derivatives traded on OTC and regulated exchange markets by private equity funds managed and/or marketed by authorised EU AIFMs, in %. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.179  
Repo trades clearing



Note: Estimated market value of repo trades cleared by private equity funds managed and/or marketed by authorised EU AIFMs, in %. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

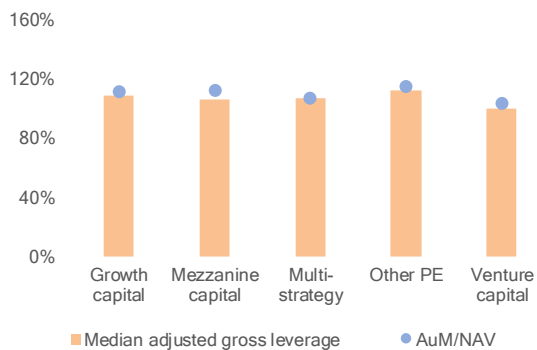
ASR-AIF-S.180  
Derivatives transactions clearing



Note: Estimated volume of derivatives cleared bilaterally and via CCP by private equity funds managed and/or marketed by authorised EU AIFMs, in %. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

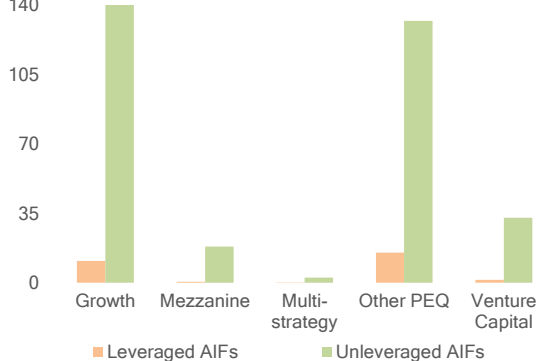
## Leverage and exposure

ASR-AIF-S.181  
Adjusted gross leverage



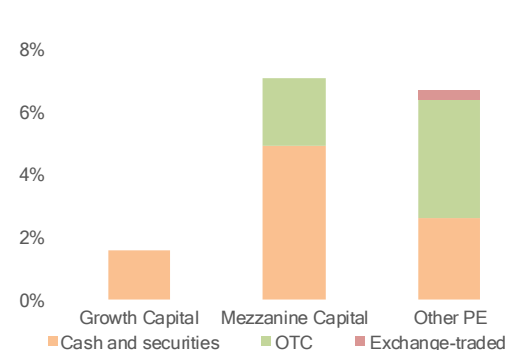
Note: Adjusted gross leverage of private equity funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. PE=Private equity fund. Data for 27 EEA countries.

ASR-AIF-S.182  
Adjusted gross leverage



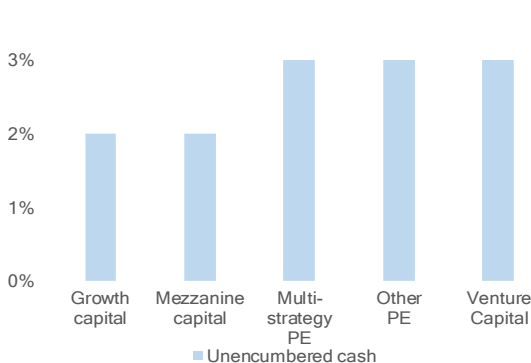
Note: Leveraged and unleveraged private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, EUR bn. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.183  
Borrowing embedded in financial instruments



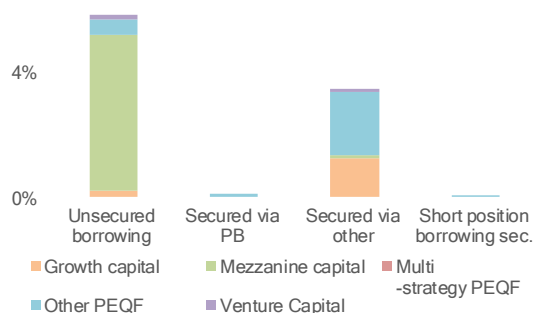
Note: Borrowing of cash and securities or embedded in derivatives by private equity funds, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs marketed. OTC and exchange-traded derivatives net of margins. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.184  
Unencumbered cash



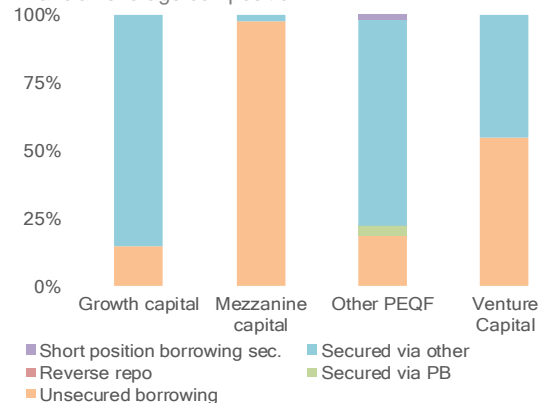
Note: Unencumbered cash held by private equity funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. PE=Private equity fund. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.185  
Financial leverage  
8%



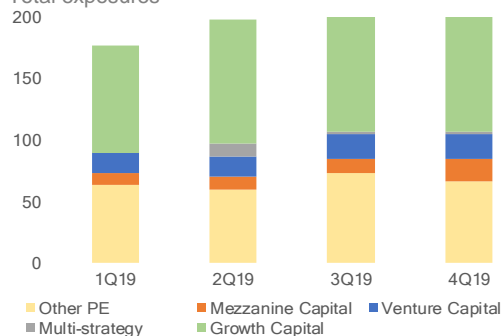
Note: Cash and securities borrowed by private equity funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.186  
Financial leverage composition  
100%



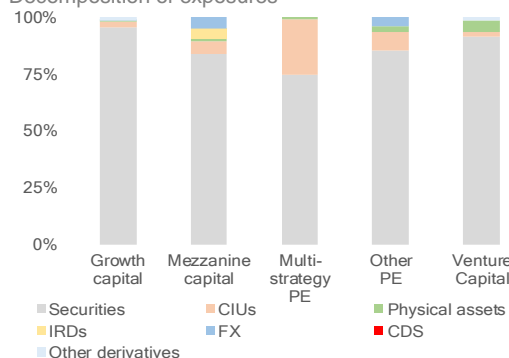
Note: Share of cash and securities borrowed by private equity funds, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.187  
Total exposures  
200



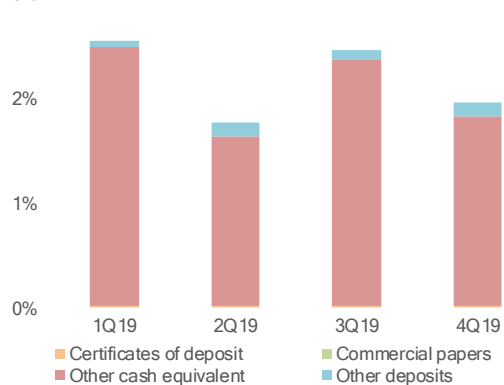
Note: Exposure of private equity funds managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.188  
Decomposition of exposures  
100%



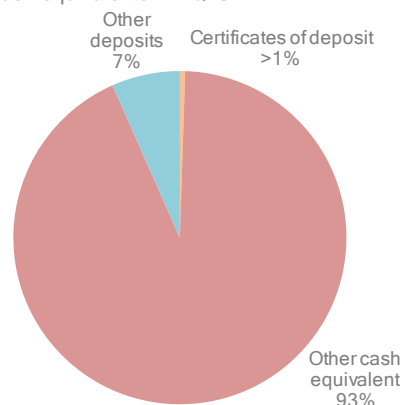
Note: Share of exposures by private equity funds' investment strategies, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. PE=Private equity fund. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.189  
Cash and cash equivalents  
3%



Note: Cash and cash equivalents exposure of private equity funds, AIFs reported quarterly, in % of NAV. Government bonds excluded from other cash equivalents. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

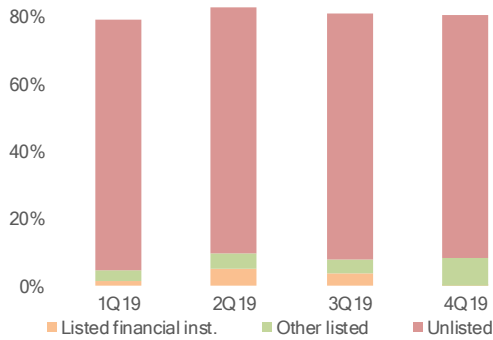
ASR-AIF-S.190  
Cash and cash equivalents in 4Q19



Note: Share of cash and cash equivalents held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

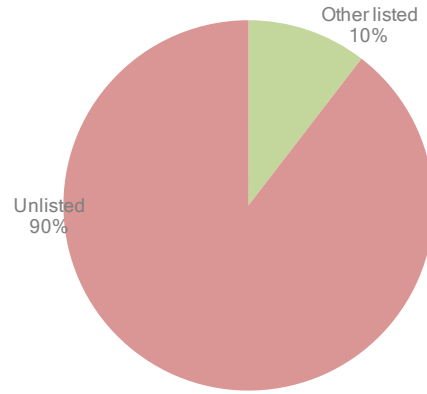


ASR-AIF-S.191  
Equities  
100%



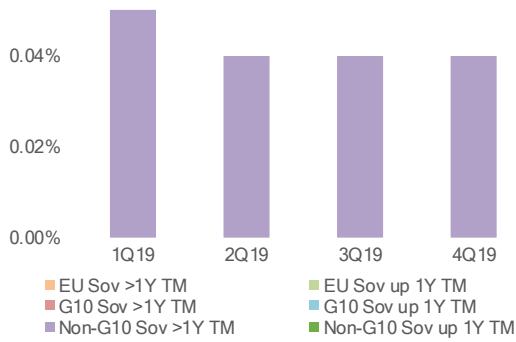
Note: Private equity funds' exposure to equity, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.192  
Equities in 4Q19



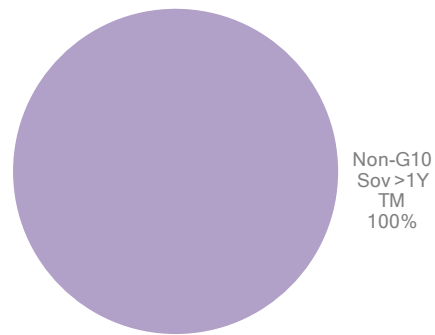
Note: Share of equities held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.

ASR-AIF-S.193  
Sovereign bonds  
0.06%



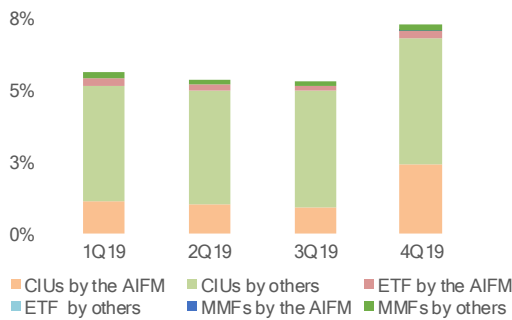
Note: Sovereign bonds exposure of private equity funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Sov=Sovereign bonds, TM=Time to Maturity. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.194  
Sovereign bonds in 4Q19



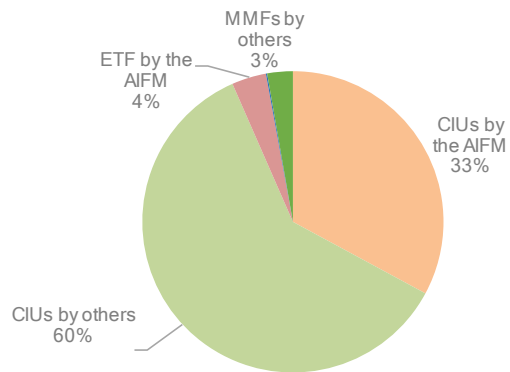
Note: Share of sovereign bonds held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sov=Sovereign bonds, TM=Time to Maturity.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.195  
Collective investment undertakings  
10%



Note: Collective investment undertakings exposure of private equity funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.196  
Collective investment undertakings in 4Q19

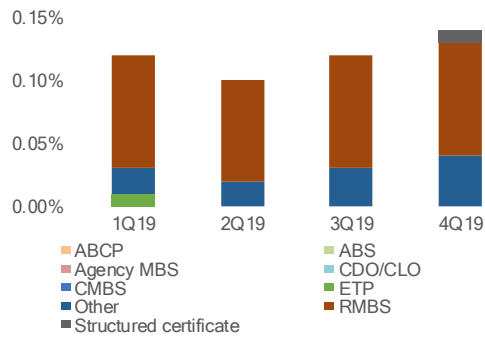


Note: Share of collective investment undertakings held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.197

Structured products in 4Q19

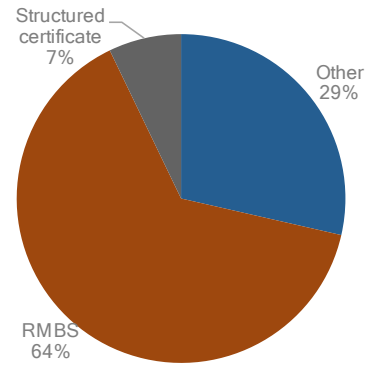
0.20%



Note: Structured and securitised products exposure of private equity funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.198

Structured products in 4Q19

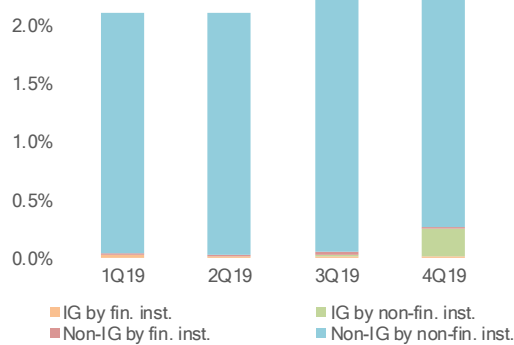


Note: Share of structured and securitised products held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.199

Corporate bond quality

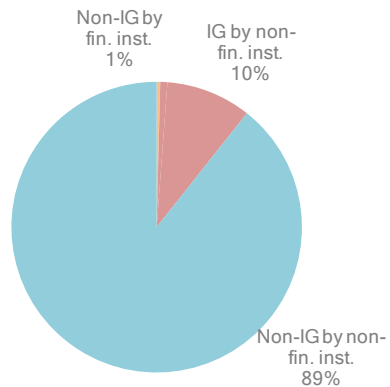
2.5%



Note: Corporate bonds exposure of private equity funds, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.200

Corporate bonds in 4Q19

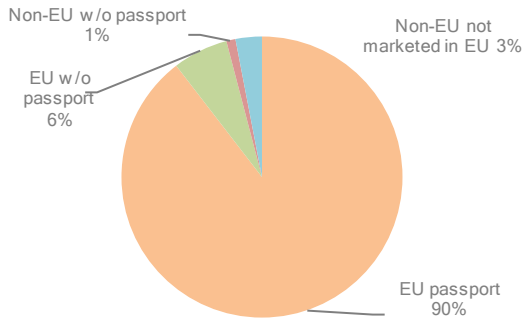


Note: Share of corporate bonds held by private equity funds in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

# 'Other AIFs'

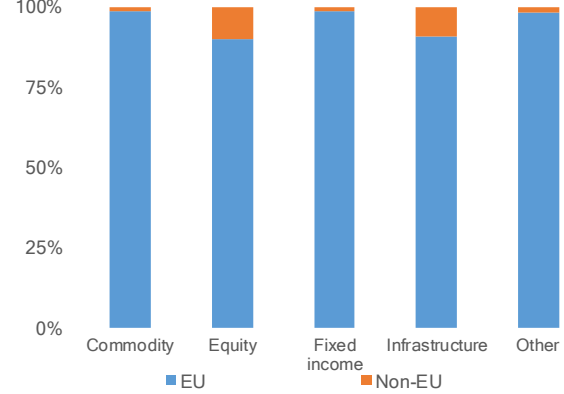
## AIF characteristics

ASR-AIF-S.201  
AIFMD passport



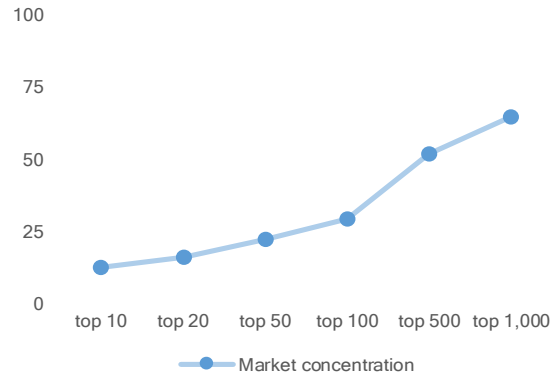
Note: NAV of AIFs classified as Other by manager's access to AIFMD passport, end of 2019, in %. Authorised EU AIFMs with access to AIFMD passport or marketing non-EU AIFs w/o passport, sub-threshold managers registered only in national jurisdictions w/o passporting rights. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.202  
EU and non-EU AIFs



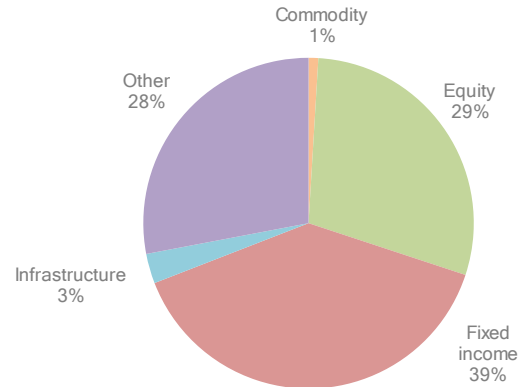
Note: Share of EU and non-EU AIFs classified as Other managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Non-EU AIFs marketed w/o passport. Data for 27 EEA countries.

ASR-AIF-S.203  
Market concentration



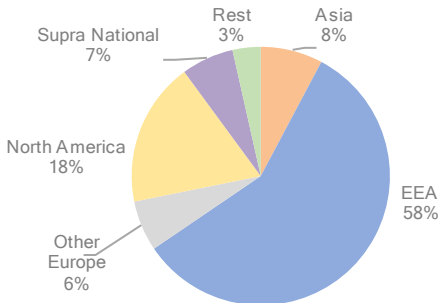
Note: Market concentration of the largest 10-to-1,000 AIFs classified as Other managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.204  
Investment strategy by NAV



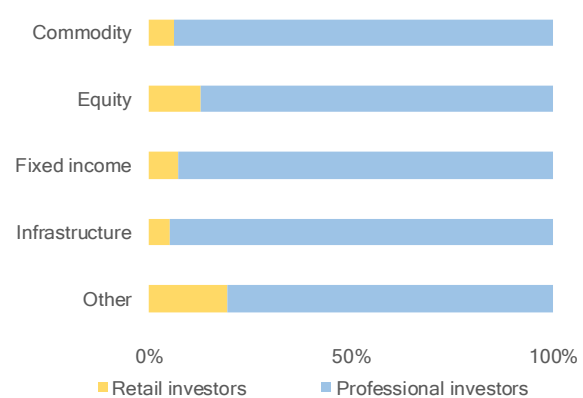
Note: Investment strategies of AIFs classified as Other, end of 2019, in % of NAV. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for 27 EEA countries.  
Sources: National Competent Authorities, ESMA.

ASR-AIF-S.205  
Investment regions by NAV



Note: Regional investment focus of EU AIFs classified as Other managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.206  
Investor type

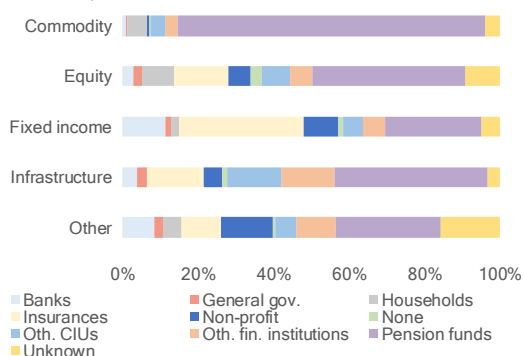


Note: Clients of AIFs classified as Other AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019, in % of NAV. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.207

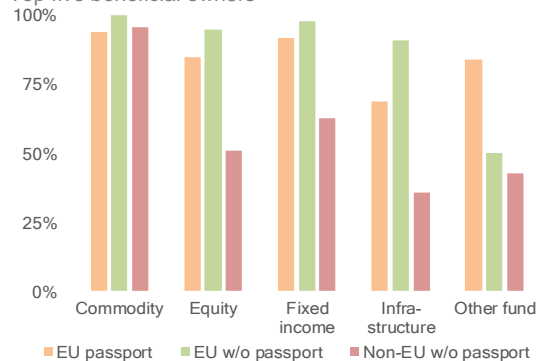
Ownership of 'other AIFs'



Note: Ownership of units in AIFs classified as Other AIFs managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. CIUs=Collective investment undertakings. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.208

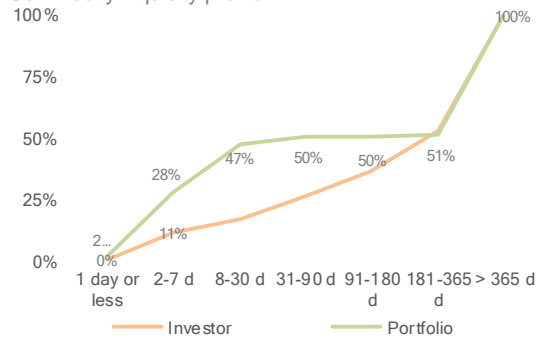
Top five beneficial owners



Note: Investor concentration of AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.209

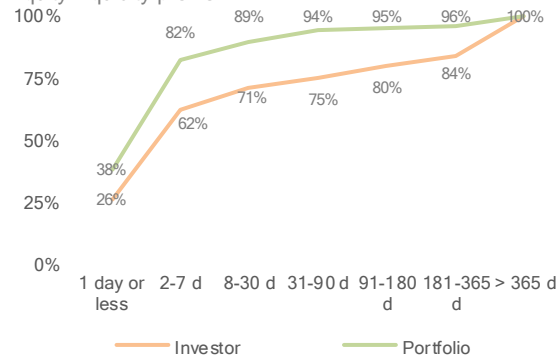
Commodity: liquidity profile



Note: Portfolio and investor liquidity profiles of funds of commodity funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.210

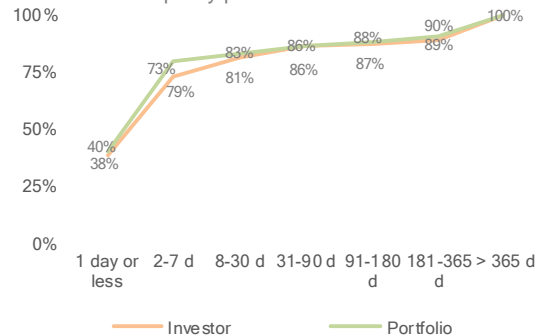
Equity: liquidity profile



Note: Portfolio and investor liquidity profiles of equity funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.211

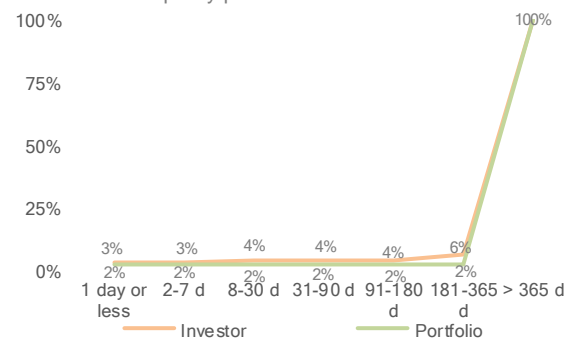
Fixed income: liquidity profile



Note: Portfolio and investor liquidity profiles of fixed income funds managed and/or marketed by authorised EU AIFMs, end of 2019. 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. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

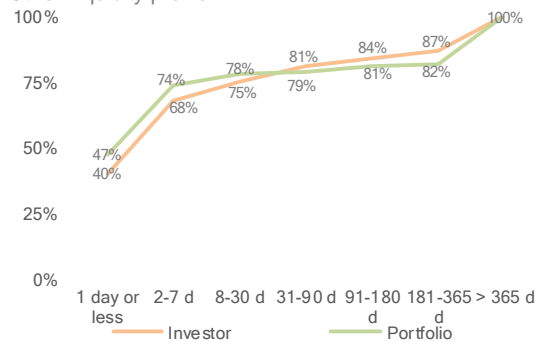
ASR-AIF-S.212

Infrastructure: liquidity profile



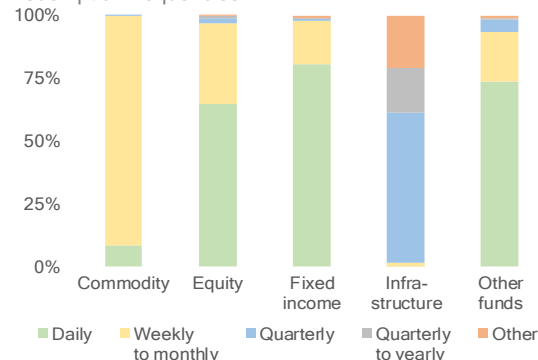
Note: Portfolio and investor liquidity profiles of funds of infrastructure funds managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.213  
Other: liquidity profile



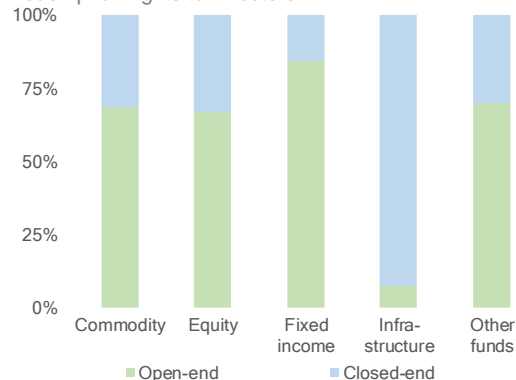
Note: Portfolio and investor liquidity profiles of AIFs classified as Other and pursuing "other" strategies managed and/or marketed by authorised EU AIFMs, end of 2019. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.214  
Redemption frequencies



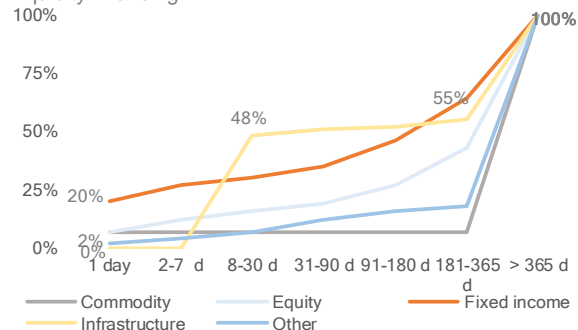
Note: Investor redemption frequencies allowed by open-end AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.215  
Redemption rights to investors



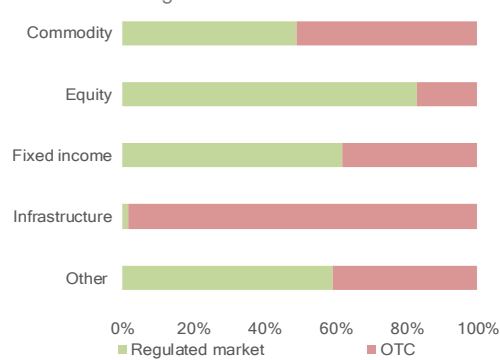
Note: Redemption rights provided in the ordinary course to investors in AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.216  
Liquidity financing



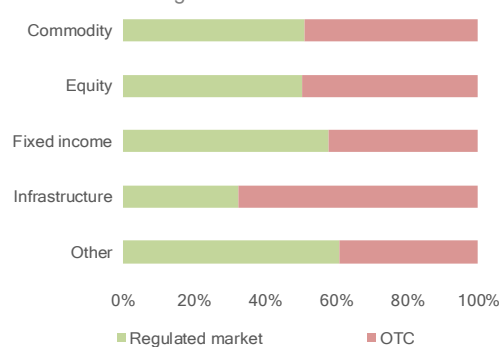
Note: Liquidity financing of AIFs classified as Other managed and/or marketed by authorised EU AIFMs, end of 2019. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.217  
Securities trading



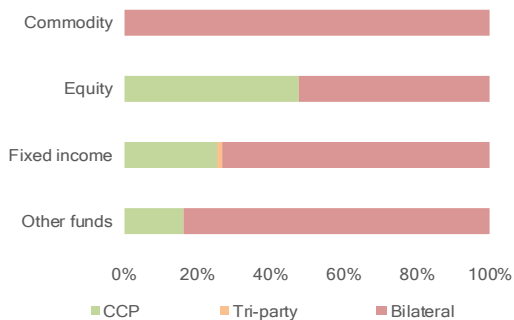
Note: Estimated market value of securities traded on OTC and regulated exchange markets by AIFs classified as Other managed and/or marketed by authorised EU AIFMs, in %. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.218  
Derivatives trading



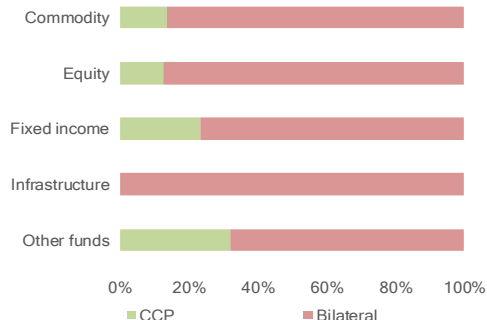
Note: Estimated volume of derivatives traded on OTC and regulated exchange markets by AIFs classified as Other managed and/or marketed by authorised EU AIFMs, in %. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.219  
Repo trades clearing



Note: Estimated market value of repo trades cleared by AIFs classified as Other managed and/or marketed by authorised EU AIFMs, in %. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

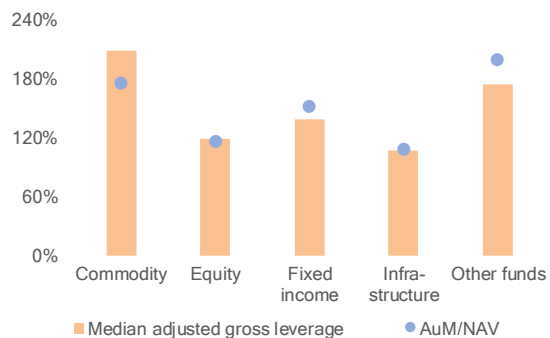
ASR-AIF-S.220  
Derivative transactions clearing



Note: Estimated volume of derivatives cleared bilaterally and via CCP by AIFs classified as Other managed and/or marketed by authorised EU AIFMs, in %. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

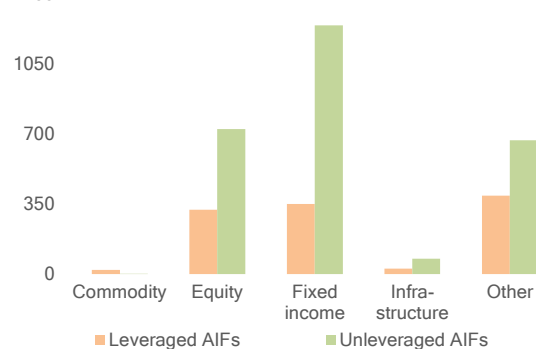
## Leverage and exposure

ASR-AIF-S.221  
Adjusted gross leverage



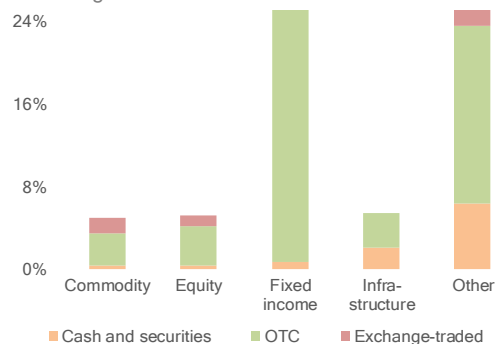
Note: Adjusted gross leverage of funds of funds managed and/or marketed by authorised EU AIFMs, end of 2019, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. FoF= Funds of funds, PE=Private equity fund, HF=Hedge fund. Data for 27 EEA countries.  
Sources: AIFMD database, National competent authorities, ESMA

ASR-AIF-S.222  
Leveraged and unleveraged AIFs



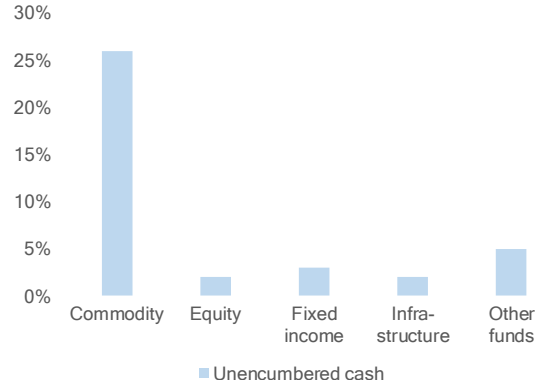
Note: Leveraged and unleveraged of AIFs classified as Other and managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2019. Leveraged funds identified using the AIF reporting code as specified in Annex 2 of ESMA guidelines on AIFMD reporting obligations Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.223  
Borrowing embedded in financial instruments



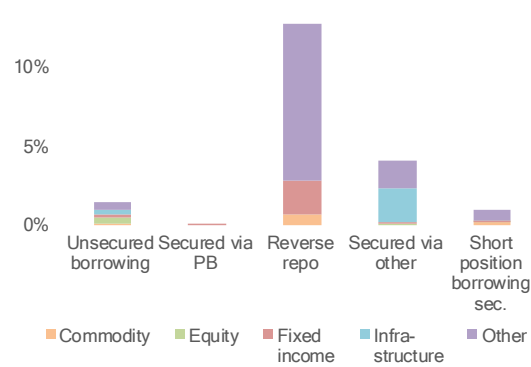
Note: Borrowing of cash and securities or embedded in derivatives by AIFs classified as Other, end of 2019, in % of total exposure. AIFs managed and/or marketed by authorised EU AIFMs. OTC and exchange-traded derivatives net of margins. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.224  
Unencumbered cash



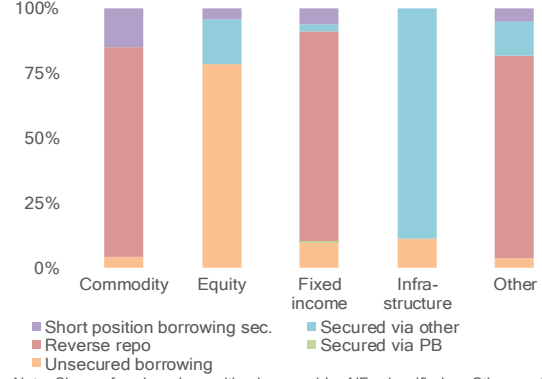
Note: Unencumbered cash held by AIFs classified as Other, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.225  
Financial leverage  
15%



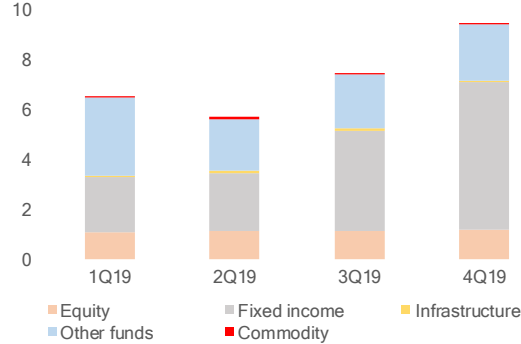
Note: Cash and securities borrowed by AIFs classified as Other, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.226  
Financial leverage composition



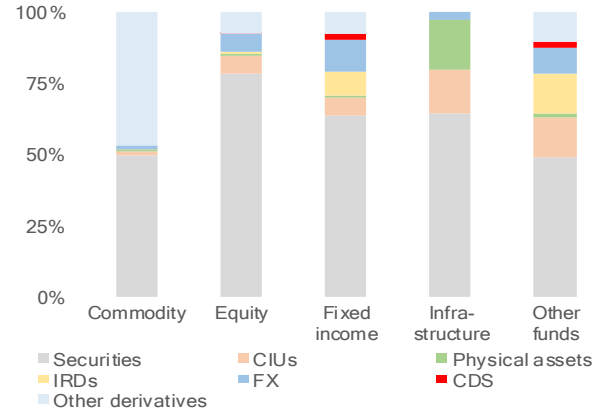
Note: Share of cash and securities borrowed by AIFs classified as Other, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.227  
Total exposures  
10



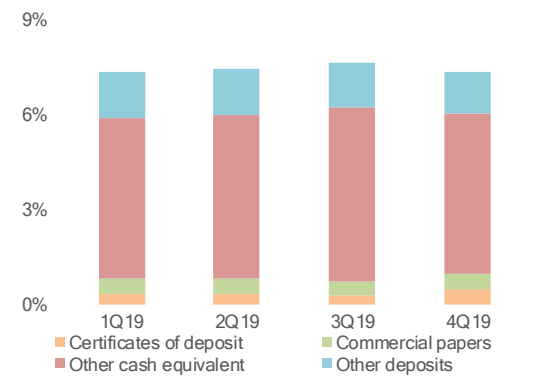
Note: Exposures of AIFs classified as Other managed and/or marketed by authorised EU AIFMs, funds quarterly reported, EUR tn. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.228  
Decomposition of exposures



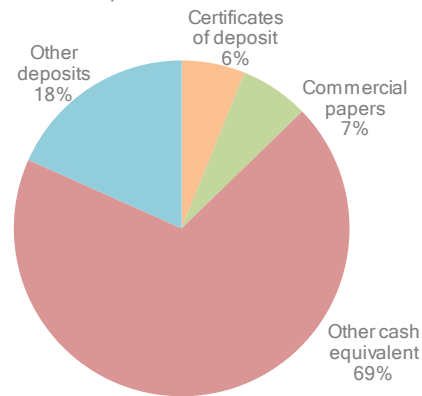
Note: Share of exposures by investment strategies of AIFs classified as Other, end of 2019, in % of total. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.229  
Cash and cash equivalents



Note: Cash and cash equivalents exposure funds classified as Other, AIFs reported quarterly, in % of NAV. Government bonds excluded from other cash equivalents. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

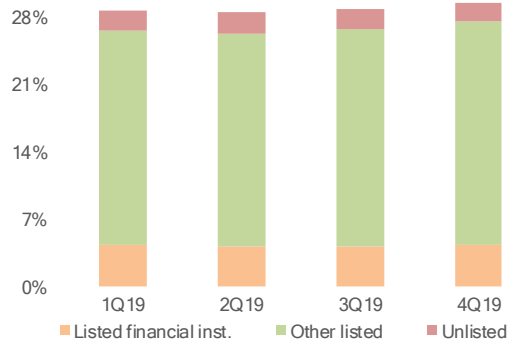
ASR-AIF-S.230  
Cash and cash equivalents in 4Q19



Note: Share of cash and cash equivalents held by funds classified as Other in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

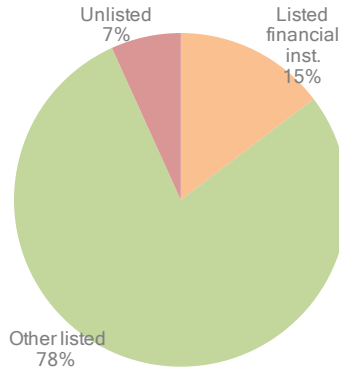
ASR-AIF-S.231

Equities  
35%



Note: Exposure to equity of funds classified as Other, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

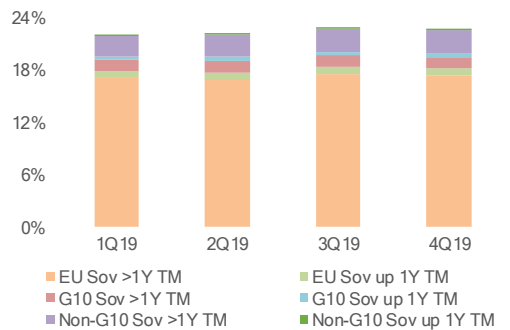
ASR-AIF-S.232  
Equities in 4Q19



Note: Share of equities held by funds classified as Other in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.233

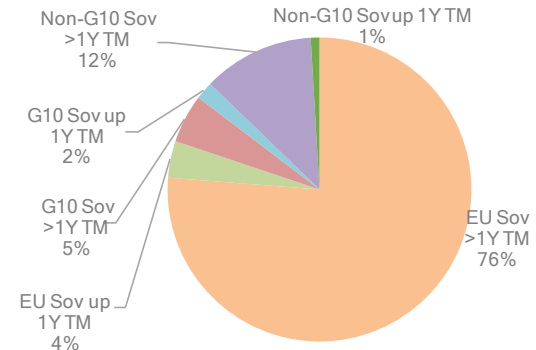
Sovereign bonds  
30%



Note: Sovereign bonds exposure of funds classified as Other, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Sov=Sovereign bonds, TM=Time to Maturity. Data for 27 EEA countries.

ASR-AIF-S.234

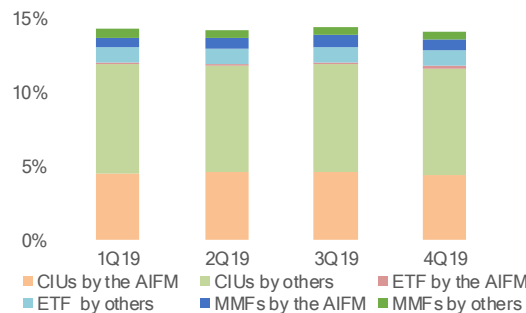
Sovereign bonds in 4Q19



Note: Share of sovereign bonds held by funds classified as Other in 4Q19 AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries. Sov=Sovereign bonds, TM=Time to Maturity. Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.235

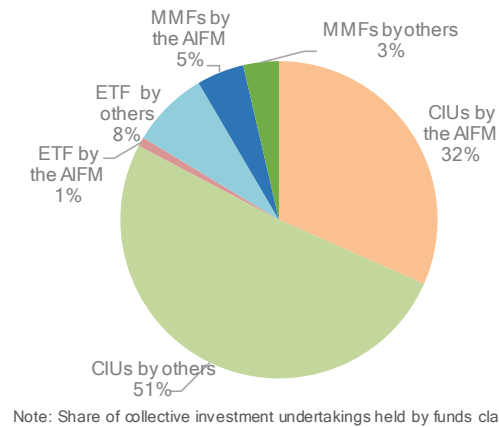
Collective investment undertakings  
20%



Note: Collective investment undertakings exposure of funds classified as Other, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.236

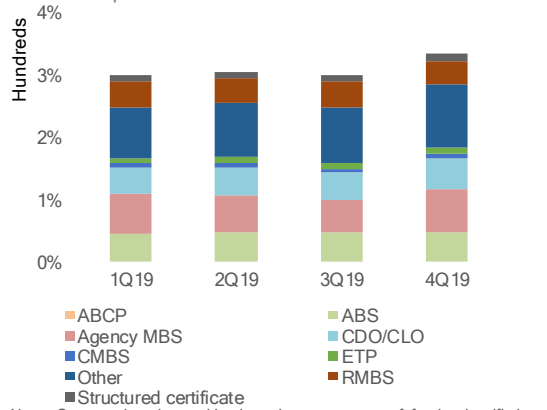
Collective investment undertakings in 4Q19



Note: Share of collective investment undertakings held by funds classified as Other in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. CIUs=Collective Investment Undertakings. Data for 27 EEA countries. Sources: AIFMD database, National Competent Authorities, ESMA

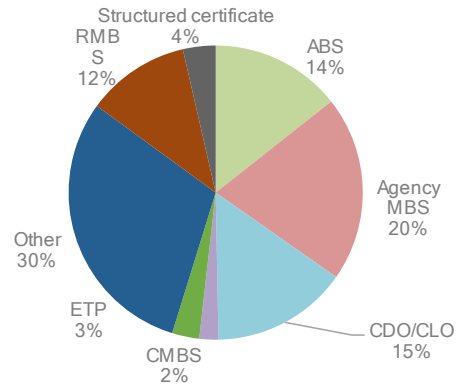


ASR-AIF-S.237  
Structured products



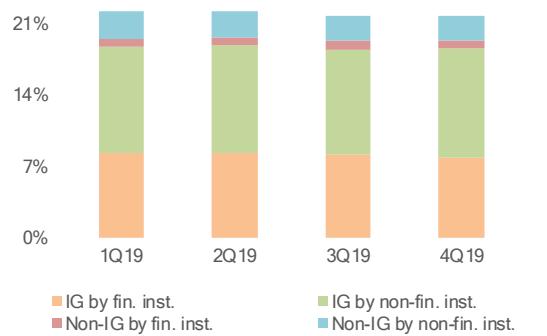
Note: Structured and securitised products exposure of funds classified as Other, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.238  
Structured products in 4Q19



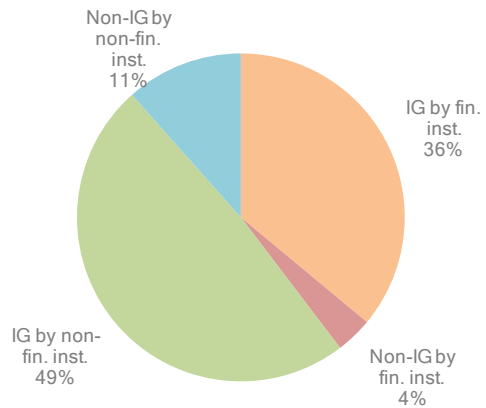
Note: Share of structured and securitised products held by funds classified as Other in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

ASR-AIF-S.239  
Corporate bond quality: 28%



Note: Corporate bonds exposure of funds classified as Other, AIFs reported quarterly, in % of NAV. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.240  
Corporate bonds in 4Q19

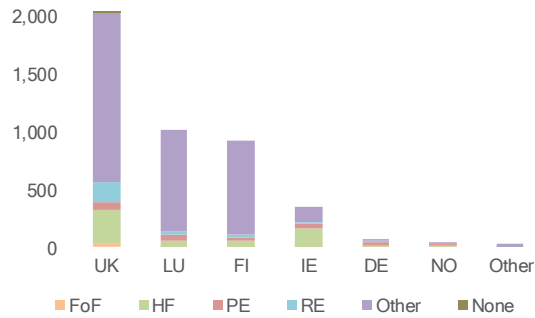


Note: Share of corporate bonds held by funds classified as Other in 4Q19. AIFs managed and/or marketed by authorised EU AIFMs. Data for 27 EEA countries.  
Sources: AIFMD database, National Competent Authorities, ESMA

# Non-EU AIFs (NPPR)

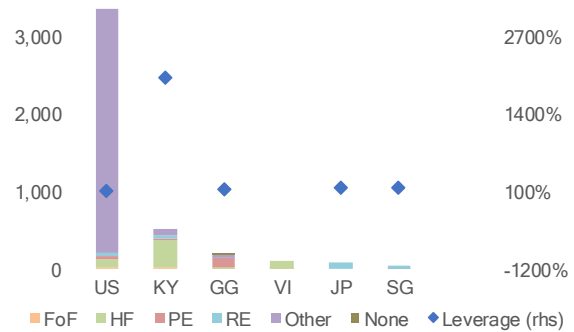
## AIF characteristics

ASR-AIF-S.241  
EU jurisdictions  
2,500



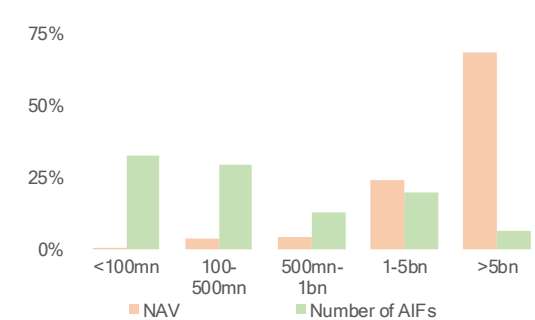
Note: NAV by authorising EU country of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.242  
Non-EU AIFs' domicile  
4,000



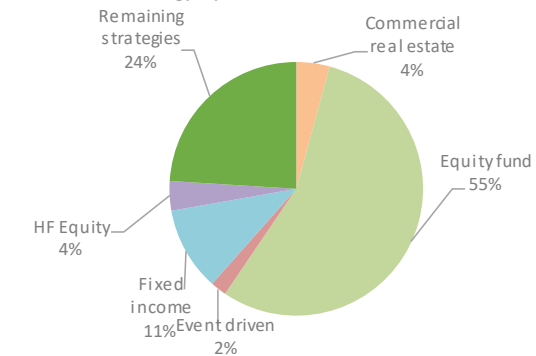
Note: NAV by domicile of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.243  
AIF distribution by size  
100%



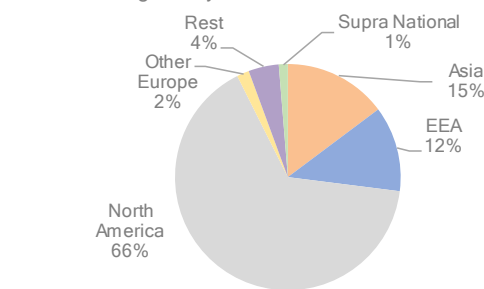
Note: Share of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD) by size, end of 2019. In %. AIFs identified via international standard identifiers (LEI, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.244  
Investment strategy by NAV



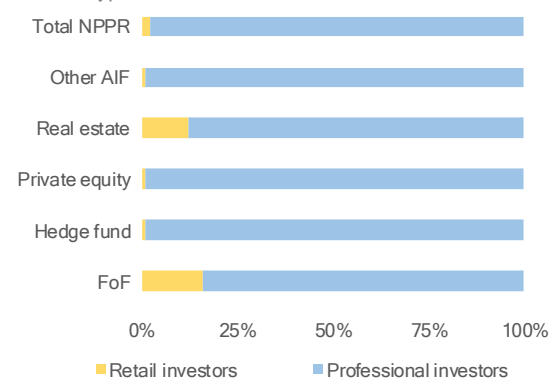
Note: Investment strategies of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.245  
Investment regions by NAV



Note: Regional investment focus of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Geo-focus determined according to the domicile of investments, supra national category including investments without predominant geo-focus.

ASR-AIF-S.246  
Investor type

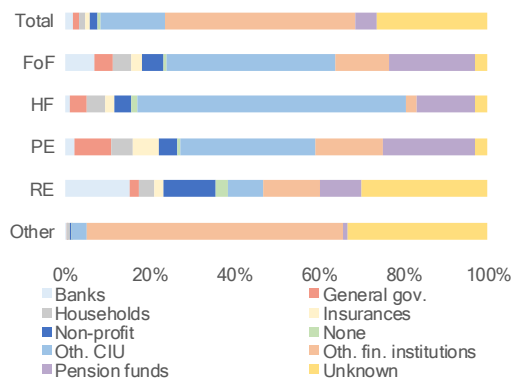


Note: Clients of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds.  
Sources: AIFMD database, National Competent Authorities, ESMA.

## Liquidity and counterparty risk profile

ASR-AIF-S.247

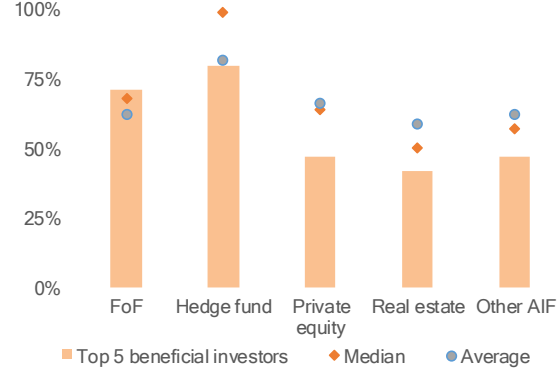
Ownership of 'other AIFs'



Note: Ownership of units in AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds; Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.248

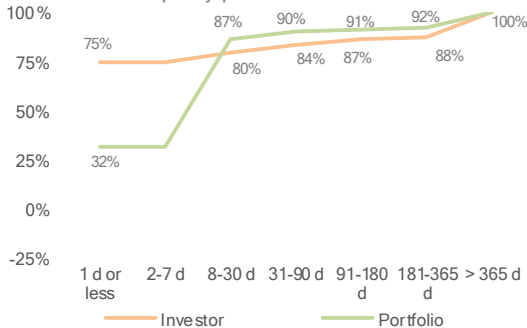
Top five beneficial owners



Note: Investor concentration of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. Investor concentration computed as share of AIF equity beneficially owned by the 5 largest investors. FoF=Fund of funds.

ASR-AIF-S.249

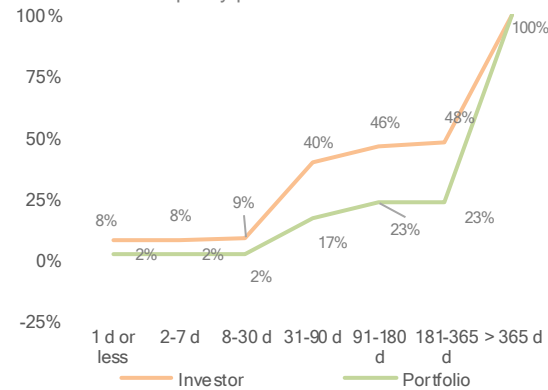
Non-EU AIFs: Liquidity profile



Note: Portfolio and investors liquidity profiles of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). 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. d= Days. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.250

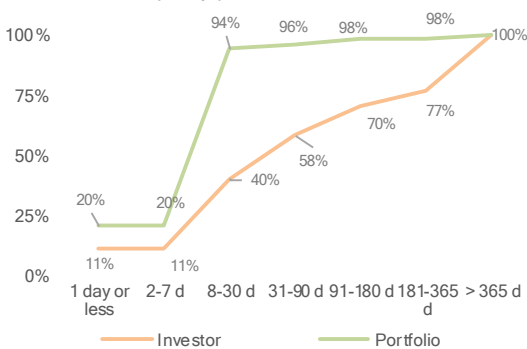
Non-EU FoFs: Liquidity profile



Note: Portfolio and investors liquidity profiles of funds of funds marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). 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. d= Days. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.251

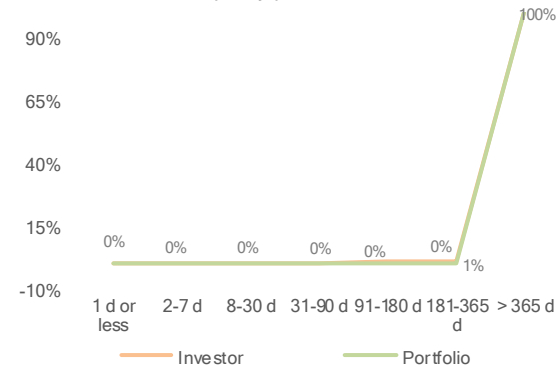
Non-EU HF: Liquidity profile



Note: Portfolio and investors liquidity profiles of hedge funds marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). 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. d= Days. Sources: AIFMD database, National Competent Authorities, ESMA.

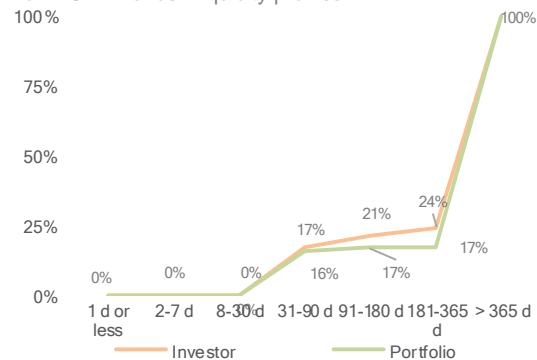
ASR-AIF-S.252

Non-EU PE funds: Liquidity profiles



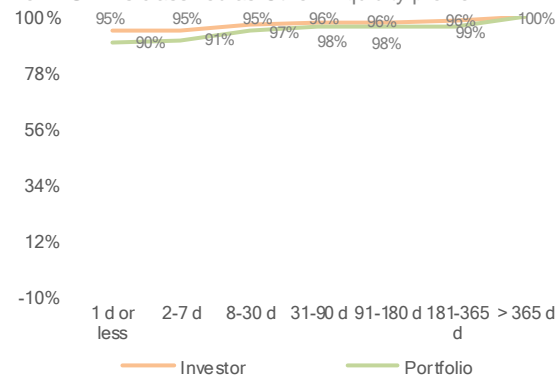
Note: Portfolio and investors liquidity profiles of private equity funds marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. d= Days. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.253d  
Non-EU RE funds: Liquidity profiles



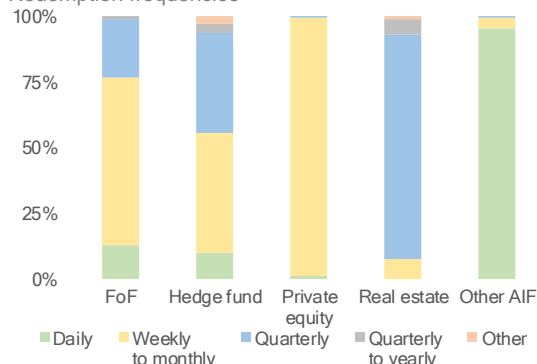
Note: Portfolio and investors liquidity profiles of real estate funds marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. d= Days.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.254  
Non-EU AIFs classified as Other: Liquidity profile



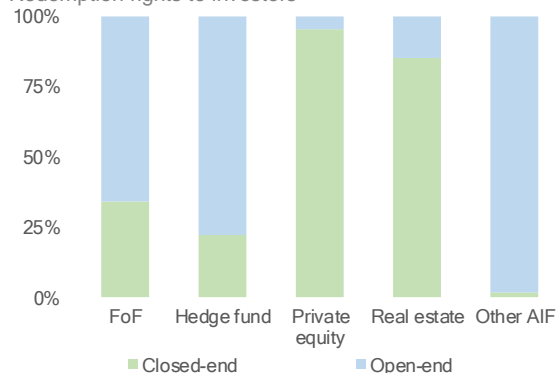
Note: Portfolio and investors liquidity profiles of AIFs classified as Other marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. d= Days.  
Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.255  
Redemption frequencies



Note: Investor redemption frequencies allowed by open-end AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds, None=No Predominant Type.

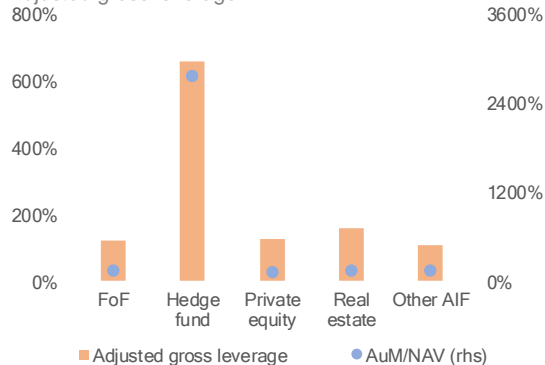
ASR-AIF-S.256  
Redemption rights to investors



Note: Redemption rights provided in the ordinary course to investors in AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Funds of Funds, None=No predominant type.  
Sources: AIFMD database, National Competent Authorities, ESMA.

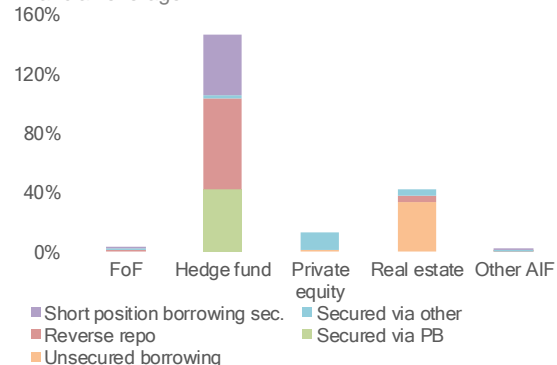
## Leverage and exposure

ASR-AIF-S.257  
Adjusted gross leverage



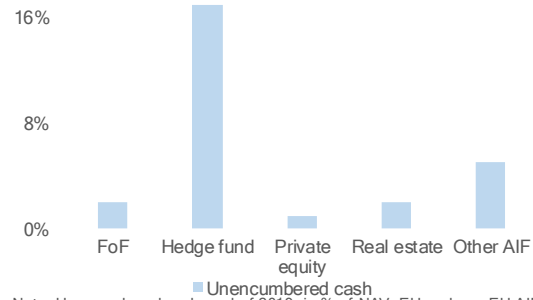
Note: Adjusted gross leverage of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in % of NAV. Adjusted gross leverage does not include IRDs. FoF= Fund of funds, None=No predominant type.

ASR-AIF-S.258  
Financial leverage



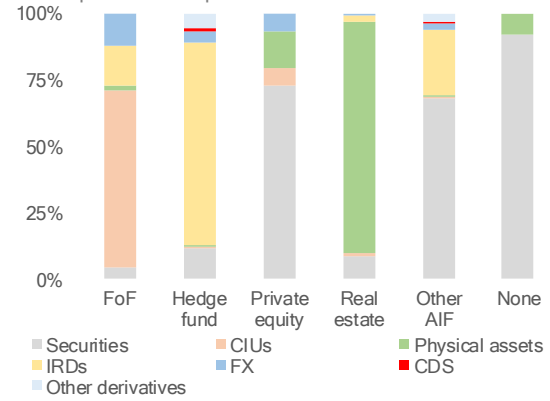
Note: Cash and securities borrowed, end of 2019, in % of NAV. marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2019, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Funds of Funds, None=No predominant type

ASR-AIF-S.259  
Unencumbered cash  
24%



Note: Unencumbered cash, end of 2019, in % of NAV. EU and non-EU AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, None=No predominant type. Sources: AIFMD database, National Competent Authorities, ESMA.

ASR-AIF-S.260  
Decomposition of exposures



Note: Share of gross exposures by AIF type, end of 2019, in % of total AIFs managed and/or marketed by authorised EU AIFMs. FoF=Fund of funds, None=No predominant type. Sources: AIFMD database, National Competent Authorities, ESMA.

# Annex

# EU AIFMD data reporting

## Scope of ESMA AIF reporting

This report is based on data submitted by National Competent Authorities (NCAs) to ESMA, covering authorised EU and sub-threshold AIFMs on behalf of the AIFs they manage. Data for products marketed by non-EU AIFMs under the ART 42 AIFMD (NPPR) are described in the specific section ‘Non-EU AIFs’ (see page 37). The EU data include the UK since this jurisdiction was part of the EU in 2019.

The data are based on reports transmitted to ESMA by 27 NCAs. Around 37,600 reports of EU AIFs were transmitted to ESMA. Of those reports, we excluded around 2,550 nil reports (empty reports sent by new AIFs) and 2,460 feeder funds to avoid double counting. The final sample is composed of around 32,590 AIFs.<sup>19</sup>

The report relies on a set of risk indicators, a subset of the data provided under the AIFMD. The risk indicators were chosen based on their relevance for risk analysis and the quality of the data.<sup>20</sup> Looking forward, ongoing cooperation with NCAs should allow ESMA to improve the set of risk indicators in future editions.

## Data quality

AIFMD reporting obligations cover a wide range of indicators with different degrees of complexity in their calculation. Some very important indicators, such as leverage reported by AIFs, cannot be used at this stage owing to data-quality issues. A variety of reporting errors (formatting, monetary values instead of percentages, etc.) prevent us from using the reported leverage indicators. Some other indicators are not always mandatory and may not be requested at national level (e.g. the redemption frequency for open-ended AIFs), which makes the use of aggregate data more difficult. In this report, when the data used for the analysis are based on a subset of our sample, this is specified. A detailed inventory of analysed data and indicators is provided in the inventory section at the end of the report. Moreover, the article “AIFMD data quality improvement – an overview” featured in this

report describes the ongoing work of National Competent Authorities and ESMA on AIFMD data quality.

## Definition of terms

Under the AIFMD, some concepts have a different meaning from that commonly used in the industry. For clarification a glossary is provided at the end of the report. The main concepts used are the following:

- **Regulatory 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 meaning of AuM is different from the typical meaning of AuM in the industry, which relates to the assets on the balance sheet of the AIF based on a mark-to-market valuation.
- **NAV:** The net value of the assets of the AIF (as opposed to the NAV per unit or proportion of the AIF). The NAV is equal to the unit shares of the AIF, i.e. the money placed in the AIF by investors, which corresponds to the concept of total net assets sometimes used in the industry.
- **Leverage:** In this report, leverage is measured by the ratio of regulatory AuM to NAV.
- **Adjusted leverage:** This measure excludes IRDs from the computation of leverage, following the approach used in the previous report (ESMA, 2019). Indeed, the use of IRDs tends to inflate leverage measures, since IRDs are measured using notional amount (rather than adjusted by duration as done under the commitment approach).

## AIF reference sample

AIF-specific information should be reported at the level of the compartments or sub-funds when the AIF takes the form of an umbrella fund.

<sup>19</sup> A description of the defined reference sample of AIFs used in the analysis is available in the Annex.

<sup>20</sup> The data inventory on pp. 86-87 summarises the coverage of each indicator used in this report.

ESMA Guidelines<sup>21</sup> specify that AIFMs and AIFs that have commenced have to start reporting from the first day of the calendar quarter following authorisation or registration.

AIFMs and AIFs that have not started any activity must still report a nil return to the home competent authority. Relatedly, AIFMs have to provide a report upon liquidation of the AIFs they manage.

Each AIF managed within the scope of the Directive must have only one AIFM, responsible for compliance with the requirements of the AIFMD. For this reason, the inclusion in the analysis of products marketed by non-EU sub-threshold managers does not introduce any bias or create double counting of entities, as their AIFs cannot be passported.

As of 6 October 2020, NCAs have gathered and made available to ESMA 37,590 reports for the end of 2019 of AIFs managed and/or marketed by authorised EU and sub-threshold AIFMs. Of the initial data intake, around 2,500 AIFs reported a nil return. The definition of the AIFs' reference sample for the analysis requires further data cleaning operations and consistency checks (ASR-AIF.111).

The final reference sample is constituted by 32,585 AIFs. Overall, 80% of them are managed by full-scope AIFMs benefiting from the EU passport. The final sample includes 448 AIFs without a predominant type (i.e., reported as 'None').

Feeder funds are excluded from analysis to avoid any double counting of assets (ASR-AIF.112).

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#### ASR-AIF.112

##### Data cleaning

##### Definition of the AIF reference sample

A series of preliminary operations are performed to define the sample of analysed AIFs and their characteristics. These include the following:

- Exclusion of reports that are not workable.
 

As for AIFMs, AIFs' reports may indicate that there is no information to be reported for the specified reporting period (nil return). Firms also have the opportunity to cancel previously submitted erroneous reports or amend existing ones. For this reason, multiple amended reports by the same fund for the same reporting period have to be detected so that the data can be properly consolidated.
  - Identification of feeder and master AIFs
  - Identification of each AIFM jurisdiction and managed and/o marketed AIFs domicile
- 

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#### ASR-AIF.113

##### Feeder AIFs

##### Prevalence of EU master-feeder AIFs

Feeder AIFs	EU	Non-EU	Total
		<b>AIFs filing</b>	
with EU master	1,157	477	1,634
without EU master	645	192	837
Total	1,802	669	2,471
		<b>NAV (EUR bn)</b>	
with EU master	160.5	173.2	333.7
without EU master	76.5	35.2	111.7
Total	237	208.4	445.4

Note: Number and NAV of feeder AIFs by domicile, end of 2019.  
Source: AIFMD database, National Competent Authorities, ESMA.

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<sup>21</sup> Link to the Guidelines on reporting obligations under Articles 3(3)(d) and 24(1), (2) and (4) of the AIFMD:



# Data inventory

Indicator	Description and reporting guidelines	Reporting content	Reporting items	Technical guidance	Data availability
<b>Investment regions</b>	Geographical breakdown of the investments held by the AIF by percentage of the total NAV of the AIF. See: ESMA guidelines, point 83; Q&As Section III, 4 and 73.	3(3)(d)- and 24(1)	78-85	Mandatory (all AIFs)	<b>Total</b> <b>100%</b> FoF 100% HF 100% PE 100% RE 100% OTH 100%
<b>Top five beneficial owners</b>	NAV held by the five beneficial owners that have the largest equity interests in the AIF. See: ESMA guidelines, point 100. Note: 11% of AIFs (sold mostly to retail investors), report 0.	3(3)(d) and 24(1)	118	Mandatory (all AIFs)	<b>Total</b> <b>100%</b> FoF 100% HF 100% PE 100% RE 100% OTH 100%
<b>Clients</b>	Investor concentration for retail and professional investors. See: ESMA guidelines, point 101; Q&As Section III, 80.	3(3)(d) and 24(1)	119-120	Mandatory (all AIFs)	<b>Total</b> <b>98%</b> FoF 97% HF 98% PE 100% RE 100% OTH 98%
<b>Ownership</b>	Ownership of units in the AIF beneficially owned by investor type. See: ESMA guidelines, point 123 and Annex II.	24(2)	208-209	Mandatory (all AIFs)	<b>Total</b> <b>98%</b> FoF 99% HF 99% PE 94% RE 99% OTH 99%
<b>Redemption frequencies</b>	Frequency of investor redemptions. In case of multiple classes of shares or units, the largest share class by NAV shall be considered. See: ESMA guidelines, point 121 and Annex II.	24(2)	194	Optional (AIFs must report if information is available)	<b>Total</b> <b>96%</b> FoF 98% HF 99% PE 97% RE 95% OTH 99%
<b>Liquidity profile – Portfolio</b>	Portfolio liquidity profile. See: ESMA guidelines, points 118-120; Q&As Section III, 10, 11, 42 and 78.	24(2)	178-184, 186-192	Mandatory (all AIFs reporting under Article 24(2))	<b>Total</b> <b>90%</b> FoF 94% HF 94% PE 85% RE 89% OTH 93%
<b>Liquidity profile – Investor</b>	Investor liquidity profiles. See: ESMA guidelines, points 118-120; Q&As Section III, 10, 11, 42 and 78.	24(2)	178-184, 186-192	Mandatory (all AIFs reporting under Article 24(2))	<b>Total</b> <b>86%</b> FoF 91% HF 92% PE 79% RE 81% OTH 94%
<b>Liquidity financing</b>	Total financing amount by the longest period during which the creditor is contractually committed to providing such financing. See: Q&As Section III, 2, 67	24(2)	211-217	Optional (AIFs must report if information is available)	<b>Total</b> <b>27%</b> FoF 22% HF 33% PE 32% RE 38% OTH 26%
<b>Unencumbered cash</b>	Value of unencumbered cash.	24(2)	185	Optional (AIFs must report if information is available)	<b>Total</b> <b>89%</b> FoF 94% HF 92% PE 73% RE 82% OTH 90%
<b>Securities trading</b>	Estimated % in terms of market value of securities traded on regulated exchange and OTC markets. See: Q&As Section III, 8 and 27.	24(2)	148-149	Optional (AIFs must report if information is available)	<b>Total EU</b> <b>52%</b> FoF 42% HF 69% PE 33% RE 16% OTH 66%

<b>Derivatives trading</b>	Estimated % in terms of trade volumes of derivatives that are traded on regulated exchange and OTC markets. See: Q&As Section III, 9.	24(2)	150-151	Optional (AIFs must report if information is available)	<b>Total EU</b> FoF HF PE RE OTH	<b>30%</b> 22% 57% 7% 9% 42%
<b>Derivatives clearing</b>	Estimated % in terms of trade volumes of derivatives transactions that are cleared by a CCP and bilaterally. See: ESMA guidelines, point 112; Q&As Section III, 22.	24(2)	152-153	Optional (AIFs must report if information is available)	<b>Total EU</b> FoF HF PE RE OTH	<b>22%</b> 17% 49% 3% 6% 30%
<b>Repo clearing</b>	Estimated % in terms of market value of repo trades that are cleared by a CCP, bilaterally and via tri-party repo. See: ESMA guidelines point 113; Q&As Section III, 23.	24(2)	154-156	Optional (AIFs must report if information is available)	<b>Total EU</b> FoF HF PE RE OTH	<b>5%</b> 2% 9% <1% 2% 8%
<b>Financial leverage</b>	Leverage created by direct borrowing of money or securities from counterparties. See: ESMA guidelines, point 124; Q&As Section III, 34, 44 and 69.	24(2) and 24(4)	283-286, 289	Optional (AIFs must report if information is available)	<b>Total EU</b> FoF HF PE RE OTH	<b>43%</b> 46% 54% 19% 35% 48%

Note: Main indicators and reporting template items analysed in the report. Relative coverage defined as the ratio of the total number of AIFs reporting it to the number of AIFs expected to report it. Optional items filled only when information is applicable.

# Glossary

**Alternative Investment Fund (AIF):** An AIF is a collective investment undertaking, including investment compartments of such an undertaking, that raises capital to invest it in accordance with a defined investment policy for the benefit of investors. An AIF does not include an undertaking that requires authorisation under the UCITS directive.

**Alternative Investment Fund Manager (AIFM):** An AIFM is an entity that provides portfolio-management and risk-management services to one or more AIFs as its regular business, irrespective of where the AIFs are located or what legal form the AIFM takes.

**AIFMD passport:** The AIFMD passport allows AIFMs to manage or market AIFs across the EU, on the basis of a single authorisation in one EU Member State. Currently, only EU-authorized AIFMs managing or marketing EU-domiciled AIFs have access to the passport.

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

**Authorised Alternative Investment Fund Manager (AIFM):** Authorised AIFMs are subject to more stringent requirements than registered AIFMs and can manage or market their AIFs across the EU.

**Commitment leverage:** Ratio of exposures to the NAV, where exposures are computed using the commitment approach, which takes into account netting and hedging, and adjusts IRDs by duration.

**Financial leverage:** The ratio of total assets to equity (NAV for funds), also called balance-sheet leverage. Financial leverage involves outright borrowing and is defined as the ratio of total assets to equity (or NAV for funds), in percentage. It can be measured by aggregating unsecured cash borrowing, the value of securities borrowed for short positions, collateralised/secured cash borrowing via prime broker, reverse repo or by other means.

**Gross exposure:** The absolute sum of all portfolio's positions, long and short. It includes gross notional value for derivatives. This measure provides a complete appreciation of all the leverage that is employed by a fund to gain market exposure.

**Gross leverage:** Leverage computed under the gross method, as indicated in Commission Delegated Regulation (EU) No 231/2013. It is expressed as the proportion of total gross exposure to NAV, in percentage. Under the gross method, exposures are calculated as the absolute value of all positions in the portfolio by including all assets and liabilities, relevant borrowings, derivatives (converted into their equivalent underlying positions) and all other positions, even those held purely for risk-reduction purposes. Cash held in the base currency of the AIF is excluded.

**Interest rate derivatives (IRDs):** Under the AIFMD reporting requirements, IRDs exposures are reported as the total gross notional value of the AIF's outstanding IRD contracts, including the total notional value of futures and the delta-adjusted notional value of options. For the purpose of computing the commitment leverage, IRDs are adjusted for duration.

**Leverage:** Ratio of fund market exposures to NAV. Market exposures can be defined according to a variety of approaches, including the gross approach and the commitment approach.

**Liquidity management tools (LMTs):** Provisions and techniques established by a fund manager as part of the share redemption policy for its funds. LMTs are generally communicated upfront in fund disclosure documents.

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

**Registered Alternative Investment Fund Manager:** Registered AIFMs are subject to lighter requirements than authorised AIFMs and do not have access to the AIFMD passport.

# List of abbreviations

AIF	Alternative Investment Fund
AIFM	Alternative Investment Fund Manager
AIFMD	Alternative Investment Fund Manager Directive
AuM	Assets under Management
CIU	Collective Investment Undertakings
CLO	Collateralised Loan Obligation
CRE	Commercial Real Estate
CTA	Commodity Trading Advisor
ECB	European Central Bank
EEA	European Economic Area
EFAMA	European Fund and Asset Management Association
ESCB	European System of Central Banks
ESMA	European Securities and Markets Authority
ETF	Exchange-traded fund
FoF	Fund of Funds
HF	Hedge Funds
IOSCO	International Organization of Securities Commissions
IRD	Interest rate derivative
ISIN	International Securities Identification Number
LEI	Legal Entity Identifier
LMT	Liquidity management tools
MMF	Money Market Fund
NAV	Net asset value
NCA	National Competent Authority
NPPR	National private placement regime
PE	Private Equity
PA	Physical Assets
pp	percentage point
QIF	Qualifying investor fund
RE	Real Estate
S	Securities
UCITS	Undertakings for the Collective Investment in Transferable Securities

