

ESMA Market Report

EU Alternative Investment Funds 2023

ESMA Market Report: EU Alternative Investment Funds 2023

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ISBN 978-92-95235-02-1, DOI 10.2856/258406, ISSN 2599-8951, EK-AE-23-001-EN-N
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Executive Summary

EU Alternative Investment Fund (AIF) market: The size of the EU AIF universe declined slightly to EUR 6.8trn in net asset value (NAV) in 2022 (-3% compared with 2021). Overall, AIFs accounted for around 36% of the NAV of the EU fund industry at the end of 2022. Among AIF types, Funds of Funds (FoFs) account for 17% of the NAV, followed by Real Estate (RE) funds (16%), Private Equity (PE) funds (11%) and Hedge Funds (HFs) (2%). At the aggregate level, adjusted leverage declined to 123% of the NAV (compared with 127% in 2021).

Funds of funds: The NAV of FoFs remained stable at EUR 1.1trn (+0.6%). FoFs primarily invested in other funds (82% exposures), with limited exposures to derivatives. Leverage stayed low while liquidity mismatch remains significant: around 46% of the NAV can be redeemed within a week while only 35% of the portfolio can be liquidated within that time frame.

Real estate funds: The NAV of RE funds increased by 12% to EUR 1.1tn. Regional concentration in the RE fund sector remains high, with the top-five countries of domicile accounting for 90% of the NAV. Commercial real estate (CRE) funds make up 58% of the NAV. Leverage remained stable at 133%. Liquidity mismatch remains a key risk: around 21% of open-ended RE funds (in terms of NAV) offer daily redemptions to investors. These risks are material, especially in the fast-changing interest-rate environment, and we therefore dedicate a detailed article on RE risks in the market analysis section below.

Hedge funds: HF assets increased slightly to EUR 113bn (+4%), with most HFs domiciled in two EU Member States. Exposures relate mainly to derivatives (EUR 235bn). Leverage remains high, albeit declining, at 265% of the NAV, with some HF strategies such as relative value or macro exhibiting leverage above 600% of the NAV.

Private equity funds: The NAV of PE funds surged by 25% to EUR 725bn, primarily exposed to unlisted equities (EUR 509bn, 67% of gross exposures). Liquidity risk remains low as PE funds are mainly closed-ended (96% of the NAV).

Other AIFs: The NAV of other AIFs declined significantly by 13% to EUR 3.5tn. The fall reflects adverse bond and equity market developments. Adjusted leverage remained contained at aggregate level at 124% of the NAV, with moderate and varying liquidity risks.

Non-EU AIFs: Non-EU funds marketed under the National Private Placement Regime (NPPR) remained stable at around EUR 1.9tn, mainly domiciled in the United States (US) (67% of the NAV) and off-shore domiciles (24%). The segment consists of other AIFs (68% of the NAV, mainly exchange-traded funds investing in equities), HFs (16%) with very large derivatives exposures (EUR 4.6tn) and high leverage (600% of the NAV), and PE funds (11%).

EU Real Estate funds – risks in an evolving economic environment

The market landscape and structural changes in CRE markets had a negative impact on RE funds in 2022. RE funds face multiple risks related to leverage, market footprint, valuation discrepancies and liquidity mismatches. The investor base remains stable, composed mostly of professional investors (80% of the NAV). Geographically, exposures are concentrated in Europe (91%). RE funds are not substantially leveraged and are highly exposed to illiquid assets (66%). Their liquidity profile has deteriorated over time. 57% of RE funds in terms of the NAV are open-ended, 21% of which offered daily liquidity in 2022, with differences across strategies (for CRE 34%). Liquidity mismatches therefore remain a key vulnerability for open-ended RE funds, especially for funds that offer redemptions at high frequency, with CRE funds as the most exposed to liquidity mismatches. At the end of 2022 only 16% of RE funds envisaged a lock-up period for their investors and around 64% of open-ended RE funds required investors to redeem shares after a notice period.

Essential statistics

EU AIFs

	Fund of funds	Real estate	Hedge funds	Private Equity	Other AIFs	Total EU
Size						
Number of funds (Absolute number)	6,614	5,272	1,035	7,279	14,728	35,361
Number of leveraged funds (Absolute number)	422	1,873	350	295	2,844	5,912
Net asset value (EUR bn)	1,152	1,074	113	752	3,467	6,770
Total assets (EUR bn)	1,415	1,509	429	861	5,210	9,733
Average fund size (NAV in EUR bn)	0.2	0.2	0.1	0.1	0.2	0.2
Proportion of total market (NAV in % of all AIFs)	17%	16%	2%	11%	51%	100%
Distribution						
EU passport (% of total NAV)	96%	98%	89%	78%	93%	92%
Retail participation (% of total NAV)	18%	20%	9%	4%	10%	13%
Exposures						
Main exposures (Asset type)	CIU	Physical assets	IRDs	Securities	Securities	Securities
Main exposures (% of exposures)	72%	66%	29%	81%	58%	46%
Leverage						
Gross leverage (% of total NAV)	117%	141%	396%	116%	152%	145%
Adjusted leverage (% of total NAV)	109%	133%	265%	110%	124%	123%
Borrowing (% of total NAV)	1%	9%	31%	2%	4%	4%
Liquidity						
Open ended AIFs (% of total NAV)	64%	57%	63%	4%	79%	65%
Monthly portfolio liquidity (% of total NAV)	40%	2%	28%	0%	63%	44%
Monthly investor liquidity (% of total NAV)	50%	11%	31%	1%	68%	49%

Note: All values refer to AIFs managed and/or marketed by EU AIFMs at the end of 2022, AIFs reported to ESMA by National Competent Authorities (NCAs). AIFs sold under a National Private Placement Regime (NPPR) are excluded. Statistics for all EU AIFs include 433 funds with no predominant type, for which NAV amounts to EUR 211bn. Leveraged funds are identified using the AIF reporting code as specified in the Annex 2 of the 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; IRD=Interest rate derivatives. Aggregate leverage and liquidity values are calculated as a weighted average of individual funds values (using the NAV).

Sources: AIFMD database, National Competent Authorities, ESMA.

Gross notional exposures

Asset class	Asset type	2021 EUR bn	2022 EUR bn	Change % change 21-22	Share in total Asset in % of 2022 total
Securities		4,888	4,392	-10	46%
	Deposits	64	69	+8	1%
	Other cash and cash equivalent	353	368	+4	4%
	EU sovereign bonds	389	323	-17	3%
	G10 sovereign bonds	436	283	-35	3%
	Non-G10 sovereign bonds	123	82	-33	1%
	IG corporate bonds	439	348	-21	4%
	IG financial bonds	320	293	-8	3%
	Non-IG financial bonds	45	38	-16	<1%
	Non-IG corporate bonds	164	149	-9	2%
	Non-financial convertible bonds	44	41	-7	<1%
	Financial convertible bonds	12	6	-50	<1%
	Municipal bonds	24	18	-25	<1%
	MBS	23	19	-17	<1%
	ABS	24	21	-13	<1%
	CDO/CLO	26	35	+35	<1%
	Other structured products	39	32	-18	<1%
	Loans	394	425	+8	4%
	Leveraged loans	118	130	+10	1%
	Financial listed equities	148	107	-28	1%
	Non-financial listed equities	1064	727	-32	8%
	Unlisted equities	601	835	+39	9%
	Other securities	42	44	+5	<1%
Derivatives		2,180	1,996	-8	21%
	Foreign exchange derivatives	827	822	-1	9%
	Interest rate derivatives	719	665	-8	7%
	Fixed income derivatives	245	189	-23	2%
	Equity derivatives	193	157	-19	2%
	Credit derivatives	89	94	+6	1%
	Other derivatives	90	63	-30	1%
	Commodity derivatives	17	7	-59	<1%
Collective Investment Undertakings		1,758	1,898	+8	20%
	Investment funds (excluding ETFs and MMFs)	1533	1678	+9	18%
	ETFs	140	120	-14	1%
	MMFs	85	100	+18	1%
Physical assets		547	1,002	+83	11%
	Physical real estate	996	960	-4	10%
	Other physical assets	26	44	+69	<1%
Other assets		150	192	+28	2%
Total exposures		9,998	9,480	-5	100%

Note: All values refer to AIFs managed and/or marketed by EU AIFMs at the end of 2021 and 2022, AIFs reported to ESMA by National Competent Authorities (NCAs). AIFs sold under a National Private Placement Regime (NPPR) are excluded. All data items are in EUR bn.
Sources: AIFMD database, National Competent Authorities, ESMA.

Market monitoring

EU AIF market overview

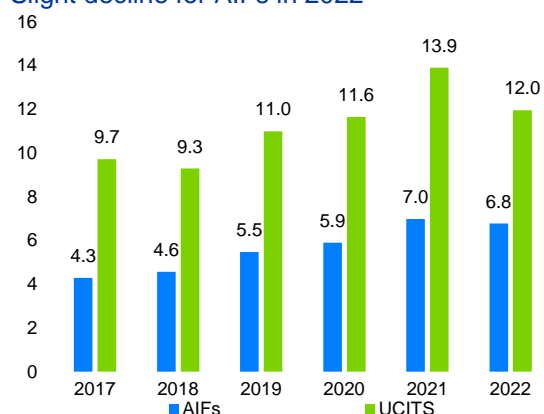
Summary

The size of the EU AIF universe declined slightly to EUR 6.8trn in net asset value (NAV) in 2022 (-3% compared with 2021). Overall, AIFs accounted for around 36% of the EU fund industry at the end of 2022. Among AIF types, Funds of Funds (FoFs) account for 17% of the NAV, followed by Real Estate (RE) funds (16%), Private Equity (PE) funds (11%) and Hedge Funds (HFs) (2%). The category of 'other AIFs' accounts for 51% of the NAV, a 6-percentage point (pp) decline since 2021. The decline in the share of other AIFs is explained by a decline in NAV related to their exposures to fixed income markets, which fell in 2022 amid a tightening of monetary policies and global financial conditions. At the aggregate level, adjusted leverage declined to 123% of the NAV (compared with 127% in 2021). However, leverage remained very high for some entities, in particular among Hedge Funds. Overall, there are signs of potential liquidity mismatch, as the liquidity offered to investors is generally greater than the liquidity of the assets, especially for RE funds and FoFs.

EU Alternative Investment Funds 2022: EUR 6.8tn

The AIF industry slightly declined in 2022 (-3%) to a NAV of around EUR 6.8tn at the end of 2022 (SR-AIF.S.1). By comparison, the NAV of Undertakings for the Collective Investment in Transferable Securities (UCITS) declined by 14% to EUR 12tn at the end of 2022, according to the European Fund and Asset Management Association (EFAMA). The decline in NAV was mainly related to adverse developments in financial markets following a global tightening of financial conditions. Overall, AIFs account for 36% of the EU fund industry.

SR-AIF.S.1 EU fund industry Slight decline for AIFs in 2022

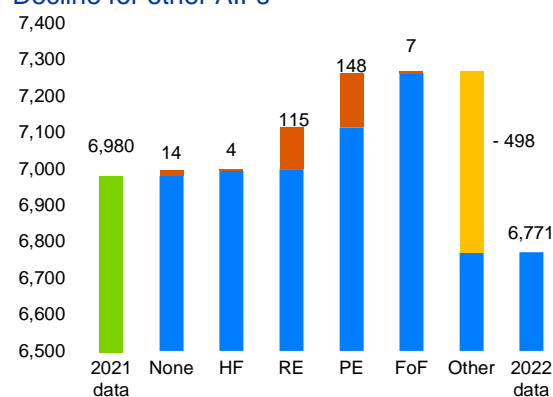


Note: NAV by type of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, EFAMA, ESMA.

By AIF types, private equity funds (PE) and real estate funds (RE) experienced a significant increase in NAV in 2022 (by 25% and 12%

respectively), while the size of hedge funds (HF) and funds of funds (FoF) remained broadly stable (+4% and +1% respectively). In contrast, other AIFs saw a 13% decline in NAV in 2022, mainly related to adverse developments in fixed income and equity markets they are exposed to (SR-AIF.S.2). Part of the decline of other AIFs can also be attributed to funds pursuing liability-driven investment strategies (SR-AIF.S.3).

SR-AIF.S.2 EU AIF growth decomposition by types Decline for other AIFs



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. Data for the EEA30. HF= Hedge funds, RE=Real estate funds, PE= Private equity funds, FoF= Funds of funds. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.3

Funds using Liability Driven Investment Strategies (LDI)

Most EU AIFs pursuing LDI strategies are targeted at UK pension funds and their shares are issued in GBP. Such funds faced acute stress in September 2022, following the sharp increase in GBP yields in the UK¹.

At the end of 2021, the NAV of EU LDIs amounted to EUR 250bn. Following the stress episode, National Competent Authorities (NCAs) in Ireland and Luxembourg have asked GBP LDI managers to maintain their levels of resilience — measured by the increase in yield that a fund can withstand before its NAV turns negative — at around 300-400bps, an initiative supported by ESMA².

In November 2023, the Central Bank of Ireland and the CSSF published consultation reports to codify the resilience requirement through the use of Article 25 of AIFMD, and proposed targeted guidance on liquidity so that LDI funds should maintain sufficient holdings of assets eligible for margin or collateral calls³.

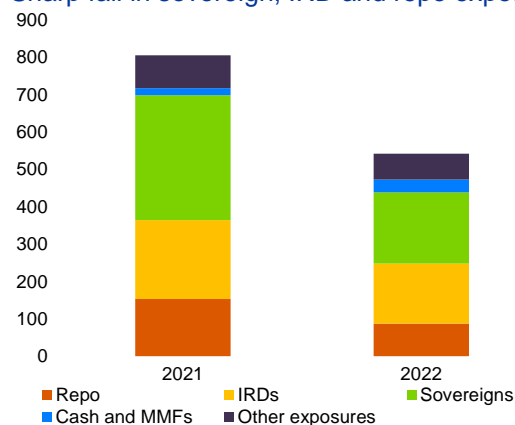
The NAV of GBP LDIs has sharply declined from EUR 215bn in 2021 to EUR 138bn in 2022 (-36%). LDI funds reduced their gross exposures by around EUR 260bn (SR-AIF.S.4), mainly related to lower sovereign exposures (-144bn), lower repo borrowing (-62bn) and less exposures to interest rate derivatives (-50bn).

While gross leverage measures remained stable, with an assets under management to NAV ratio of 393% in 2022 compared with 382% in 2021, GBP LDI funds increased the share of liquid assets holdings: cash and money market funds (MMFs) amounted to EUR 34bn in 2022 (25% of the NAV) compared with EUR 19bn in 2021 (9% of the NAV).

SR-AIF.S.4

GBP LDI funds exposures

Sharp fall in sovereign, IRD and repo exposures



Note: Gross exposures of GBP LDI funds, in EUR bn.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF types: Changes in the composition of the AIF market by type reflects the NAV developments. FoFs account for 17% of the NAV (+1 percentage point (pp) compared with 2021), followed by RE funds (16%, +2pp), PE funds (11%, +2pp), funds with no predominant strategy (3%, stable) and

HF (2%, stable). Finally, 'other AIFs' remain by far the most common type, despite a decline of 6pp from 57% to 51% (SR-AIF.S.15). Within this category, around 30% of the 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 previous reports⁴.

AIF size: The AIF market remains highly concentrated, with a few large AIFs accounting for most of the market. In 2022, AIFs with a NAV larger than EUR 1bn accounted for less than 4% of all AIFs but for 51% of the NAV (SR-AIF.16). Smaller AIFs (NAV lower than EUR 500mn) account for 93% of all AIFs but only 32% of the 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).

AIF domicile and distribution: In terms of domicile of the AIFM, the AIF industry is concentrated in a few countries, with the top five accounting for 90% of the NAV (SR-AIF.S.17). In 2022, Germany remained the country with the largest AIF industry in the EEA30 (32%, -2pp), followed by Luxembourg (24%, +5pp), France (14%, stable) and the Netherlands (10%, -4pp).

FoFs are mainly domiciled in countries with a large asset management industry such as Germany, Ireland, France and Luxembourg. These four countries account for 78% of the NAV (SR-AIF.S.5).

The HF industry is heavily concentrated in Ireland Luxembourg (74% of the NAV). Managers of PE funds are mainly domiciled in Luxembourg and France (72% of the NAV). In contrast, RE funds and 'other AIFs' are spread out across several countries. In most EU Member States, 'other AIFs' account for the majority of the NAV.

¹ For further details, see ESRB, [EU Non-bank Financial Intermediation Risk Monitor 2023](#), June 2023.

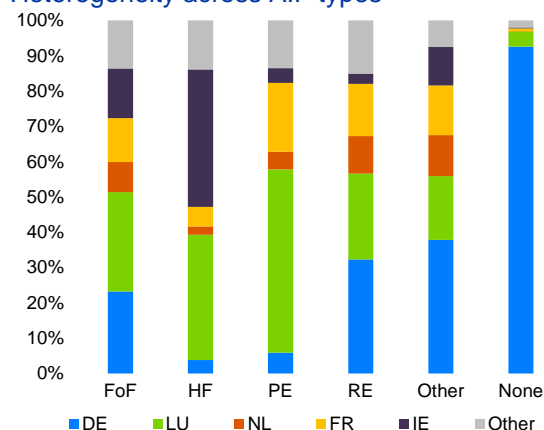
² See [CSSF, Central Bank of Ireland](#) and [ESMA](#) communications in November 2022.

³ See Central Bank of Ireland, [Macroprudential measures for GBP Liability Driven Investment funds](#), Consultation

Paper 157, November 2023 and CSSF, [Macroprudential measures for GBP Liability Driven Investment funds](#), November 2023.

⁴ ESMA, [Annual Statistical Report on EU Alternative Investment Funds](#), February 2022.

SR-AIF.S.5

Country share by AIF type
Heterogeneity across AIF types

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

AIF investors: Professional investors hold around 80% of the NAV, a share that has remained stable over time, with retail clients playing a more minor role. However, retail investor participation might be underestimated since they could purchase banking or insurance products that are invested in AIFs. In terms of investor types, pension funds and insurance companies remain the main investors (28% and 16% of the NAV respectively, SR-AIF.S.18), followed by investment funds (10%), non-profit organisations (9%), other financial institutions (8%) and banks (7%).

AIF geographical exposures and currencies:

EU AIFs remain predominantly exposed to the European Economic Area (EEA) (59% of the NAV, +2pp) and North America (16%, stable). Most AIFs shares are denominated in EUR (79% of the NAV, -3pp compared with 2020), followed by USD (12%, +5pp) and GBP (5%, -1pp), with other currencies accounting for less than 4% of the NAV.

Leverage and liquidity risks

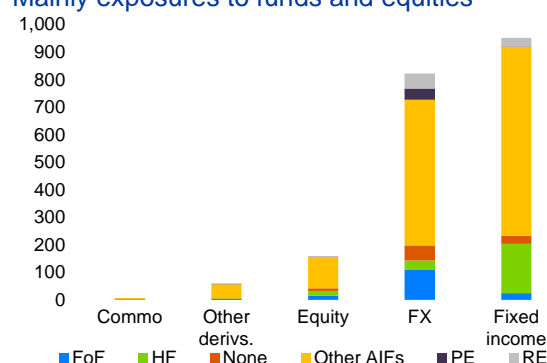
Gross exposures: AIFs are exposed to a wide range of asset classes, with variation across AIF types corresponding to their investment policies (SR-AIF.S.19). RE funds, PE funds and FoFs are heavily exposed to the underlying assets related to their investment policies (physical assets for RE funds, (unlisted) securities for PE funds and collective investment schemes for FoFs). HF exposures are overwhelmingly biased towards fixed income derivatives (CDS and interest rate swaps) because exposures are reported using gross notional values. The exposures of 'other

AIFs' are more diversified, reflecting the range of strategies used in this residual category. Overall, non-derivatives exposures of AIFs consist mainly of funds (EUR 1.9trn, 25% of securities exposures, SR-AIF.S.6) and equities (EUR 1.7trn, 22% of exposures), followed by physical assets (EUR 1trn mainly related to RE funds), corporate and sovereign bonds (respectively EUR 875bn and EUR 705bn) and loans (EUR 554bn).

SR-AIF.S.6

Gross exposures to securities, funds and physical assets

Mainly exposures to funds and equities



Note: Gross derivative exposures by asset class (absolute values of long and short positions except for FX and fixed income) and AIF type, end of 2022, in EUR bn. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, None=No predominant type, HF= hedge funds, PE= private equity funds, RE= real estate funds. Data for the EEA30.

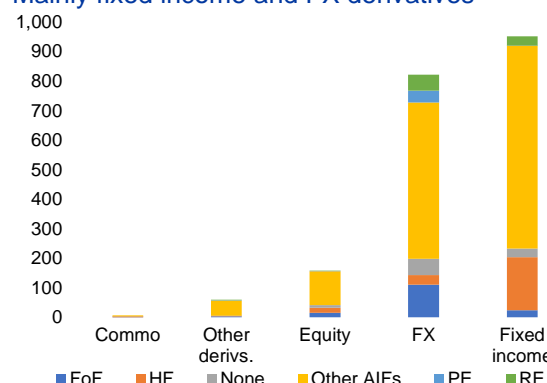
Sources: AIFMD database, National Competent Authorities, ESMA.

Regarding derivatives, exposures relate mainly to fixed income derivatives (EUR 951bn or 48% of derivatives exposures, SR-AIF.S.7), of which interest rate derivatives amount to EUR 665bn (70% of fixed income derivatives exposures), followed by foreign exchange derivatives (EUR 822bn, 41% of derivatives exposures). Most derivatives exposures relate to Other AIFs (70% of all AIF derivatives exposures).

SR-AIF.S.7

Gross derivative exposures

Mainly fixed income and FX derivatives



Note: Gross derivative exposures by asset class and AIF type, end of 2022, in EUR bn. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, None=No predominant type, HF= hedge funds, PE= private equity funds, RE= real estate funds. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

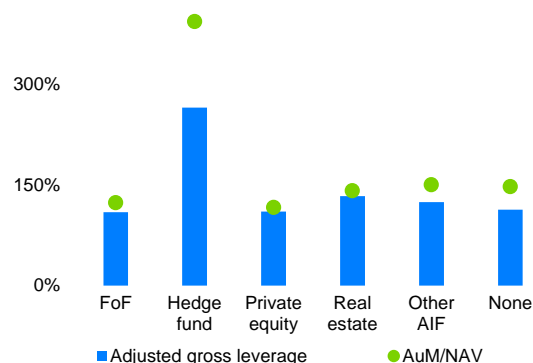
Leverage: Leverage declined slightly at aggregate level. Using the adjusted measure (calculated as gross exposures to NAV excluding IRDs and FX derivatives used for hedging purposes), leverage declined to 123% of the NAV compared with 127% in 2021. However, leverage measured by the ratio of AuM to NAV remained stable at 145%. The aggregate measure does not reflect important differences across AIF types, with HF adjusted leverage at 265% while for all other types of AIFs leverage is below 140% (SR-AIF.S.8).

SR-AIF.S.8

Adjusted leverage

High leverage for hedge funds

450%



Note: Adjusted gross leverage of AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. FoF= Fund of funds, None=No predominant type. Data for the EEA30.

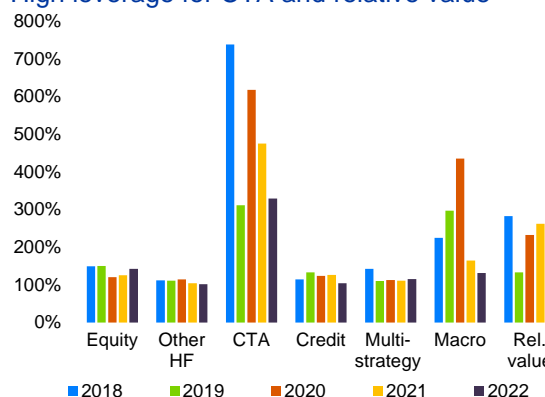
Sources: AIFMD database, National competent authorities, ESMA.

Looking at hedge fund strategies, the highest levels of leverage are observed for funds implementing commodity trading advisor (CTA) strategies: the median leverage was around 330% in 2022, a decline from 475% in 2021 (SR-AIF.S.9). Leverage stems almost exclusively from the use of derivatives ('synthetic leverage') for CTA funds. Hedge funds pursuing relative value strategies (which includes trading the cash futures basis on US Treasuries⁵) also had a high median leverage (257% of the NAV), which relies on repo borrowing (436% of the NAV for all relative value hedge funds).

SR-AIF.S.9

Median adjusted leverage for hedge funds

High leverage for CTA and relative value



Note: Median adjusted gross leverage of hedge funds managed and/or marketed by authorised AIFMs, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. CTA= Commodity Trading Advisor strategy, HF=Hedge fund. Data for the EEA30.

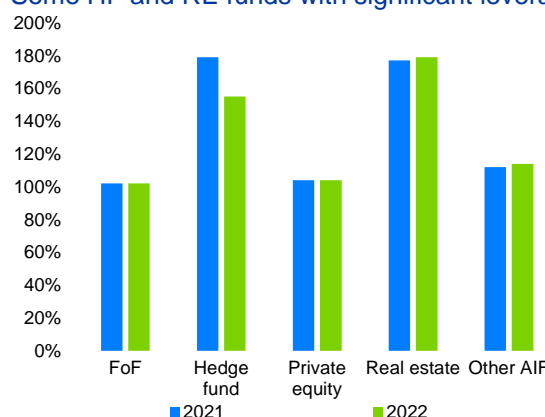
Sources: AIFMD database, National competent authorities, ESMA.

Leverage can vary widely across individual funds, with funds reporting high values warranting close monitoring⁶. Looking at funds with the highest leverage (75th percentile), HF report adjusted leverage values of 155% of the NAV and RE funds 179% of the NAV (SR-AIF.S.10)⁷.

SR-AIF.S.10

Funds with the highest leverage

Some HF and RE funds with significant leverage



Note: Adjusted gross leverage of by AIF types (75th percentile) managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

Liquidity risk: Most AIFs are open-ended funds (65%, -4pp compared to 2021) with some variations across fund types. Within open-ended funds, around 71% offer daily redemptions to

⁵ Relative value strategies seek to exploit pricing differences in correlated instruments by taking offsetting long and short positions and use leverage to magnify returns. One such strategy consists in taking short positions on US Treasury futures and long positions in US Treasury bonds and borrowing in the repo market using the bonds to finance the trade and obtain leverage. For further details, see Barth, D., Kahn, J. and R. Mann (2023). 'Recent Developments in Hedge Funds' Treasury

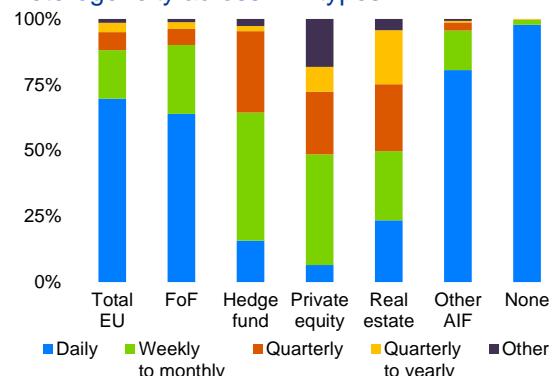
[Futures and Repo Positions: is the Basis Trade 'Back?'](#), FEDS Notes. August 30, 2023.

⁶ For further analysis of risks related to leverage for AIFs see [TRV RA article on Article 25](#).

⁷ In that context Ireland introduced in 2022 a leverage limit of 60% of the NAV for Irish property funds. See CBoI, [The Central Bank's macroprudential policy framework for Irish property funds](#), November 2022.

investors (+2pp), especially FoFs and other AIFs (SR-AIF.S.11).

SR-AIF.S.11 Redemption frequencies Heterogeneity across AIF types

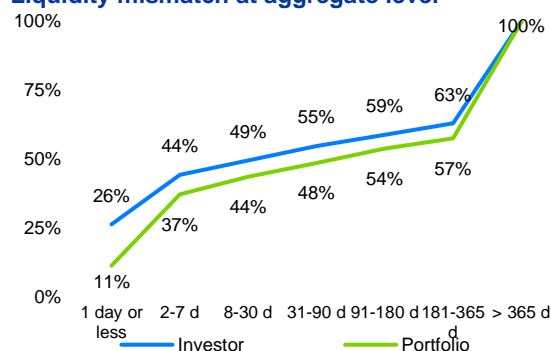


Note: Investor redemption frequencies allowed by open-end AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of Funds, None=No Predominant Type. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

At the aggregate level, the liquidity profile⁸ of AIFs points to a potential liquidity mismatch (SR-AIF.S.12): around 44% of the NAV can be redeemed within a week while only 37% of the portfolio can be liquidated over that time period. The potential liquidity mismatch is related to three AIF types. FoFs investors can redeem up to 46% of the NAV within a week compared with portfolio liquidity of 35%; real estate funds investors can redeem 9% of the NAV over the same period compared with a portfolio liquidity of 1% and other AIFs investors can redeem 60% of the NAV compared with a portfolio liquidity of 53%. However, the liquidity profile does not take into account the availability of liquidity management tools such as notice periods or deferral of redemptions, which can mitigate a liquidity mismatch.

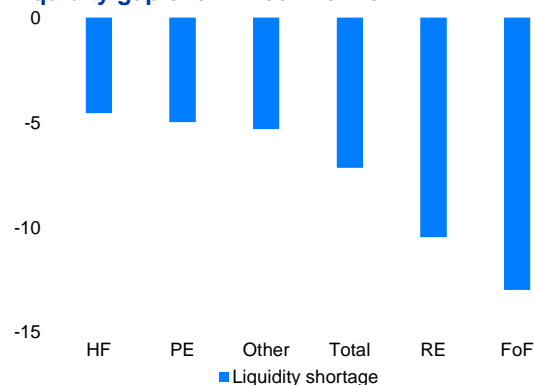
SR-AIF.S.12 Liquidity profile Liquidity mismatch at aggregate level



Note: Portfolio and investor liquidity profiles of AIFs managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d= Days. Data for the EEA30.

If liquidity risks were to materialise, it would create pressure on AIFs as funds might not have enough liquid assets to sell to meet redemptions. For funds with a liquidity mismatch, liquidity shortage amounts to 7.2% of the NAV of the sector over one-week horizon, with higher values for some AIF types: 13% of the NAV for funds of funds and 10.5% for real estate funds (SR-AIF.S.13)⁹.

SR-AIF.S.13 Liquidity shortage Liquidity gap over 1 week horizon



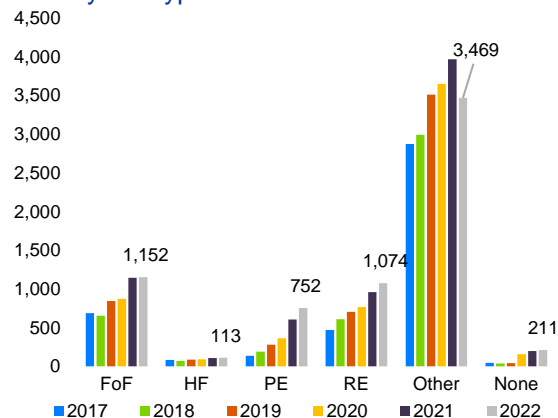
Note: Liquidity shortage by AIF type over 1 week, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as non compensated by liquidity surplus. Data for the EEA30. PE= Private equity funds, RE= Real estate funds, HF= Hedge funds, FoF= Funds of funds. Sources: AIFMD database, National Competent Authorities, ESMA.

⁸ The liquidity profile compares investor and portfolio liquidity over different time horizons. For a fund offering daily redemptions, investor liquidity over one day would be equal to 100% of the NAV. A liquidity mismatch arises when liquidity offered to investors is higher than portfolio liquidity over the same time horizon.

⁹ The liquidity shortage measure is equal to the sum of liquidity mismatches for all funds where investor liquidity is higher than portfolio liquidity. The resulting amount is then divided by the NAV of all AIFs. For further information see ESMA, [Annual Statistical Report on EU Alternative Investment Funds](#), April 2021

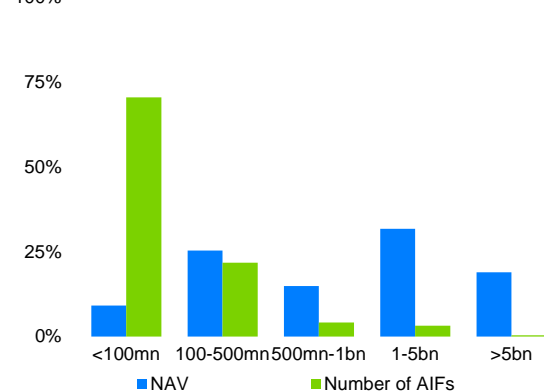
Key indicators

SR-AIF.S.14
NAV by AIF type



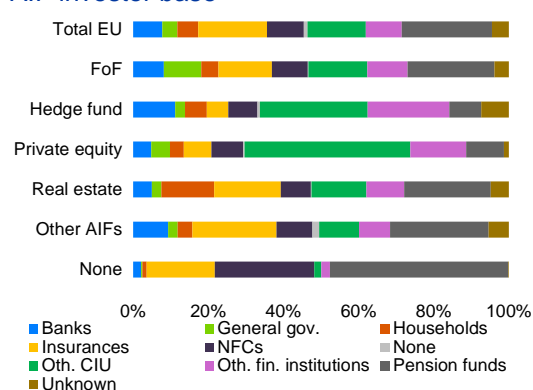
Note: NAV by type of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.16
AIF by size



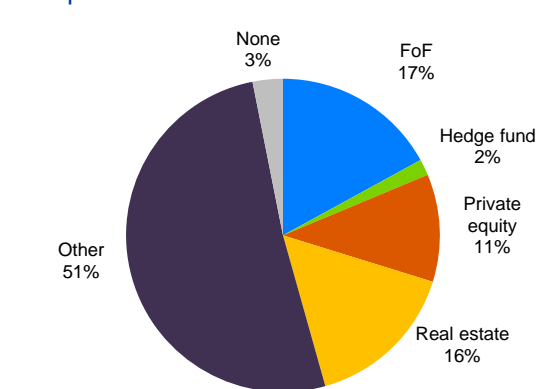
Note: Share of AIFs by size, end of 2022, in %. AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.18
AIF investor base



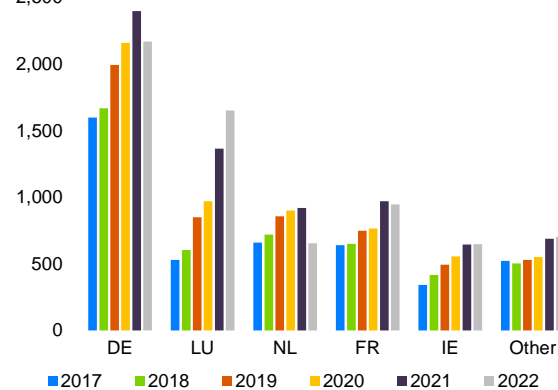
Note: Ownership of units in AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. FoF=Fund of funds. NFCs= Non-financial corporates. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.15
Composition of the AIF market



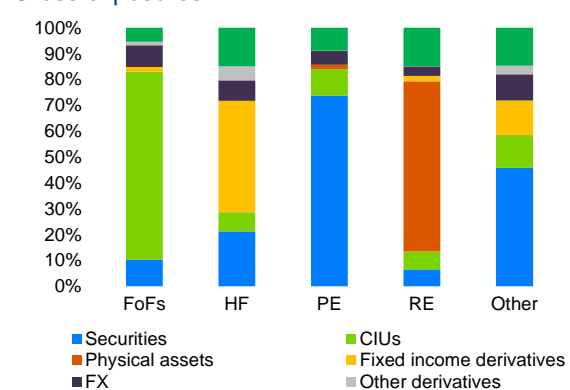
Note: NAV by type of AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in %. FoF=Fund of funds, None=No predominant type. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.17
AIF by domicile of the manager



Note: NAV of AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.19
Gross exposures



Note: Exposure by type of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in %. FoFs=Funds of funds, HF=Hedge funds, PE= Private equity funds, RE=Real estate funds.
Sources: AIFMD database, National Competent Authorities, ESMA.

Market analysis

EU Real Estate Funds: Risks in an evolving economic environment

Summary

The market landscape and structural changes in commercial real estate (CRE) market had a negative impact on RE funds in 2022. These funds face now multiple risks related to leverage, market footprint, valuation discrepancies and liquidity mismatches. RE funds play a more prominent role with 1.1tn in NAV at end 2022. CRE funds still dominate the industry (58% of the NAV), though their share is decreasing. The investor base remains stable, composed mostly by professional investors (80% NAV), with pension funds and insurances as main owners. Geographical exposures remain concentrated in Europe (91%). Despite RE funds not being substantially leveraged overall, in certain jurisdictions they have a large EU market footprint combined (DE, LU, FR), whereas in other jurisdictions such as IE and IT they only have a large domestic footprint. RE funds remain mostly invested in illiquid assets (66%), and the evolution of their portfolio liquidity profile over time points to an increase in the illiquidity of assets held. 57% of RE funds in terms of the NAV are open-ended, 21% of which offered daily liquidity in 2022, with differences across strategies (for CRE 34%). Liquidity mismatch remains a key vulnerability for open-ended RE funds, especially for funds that offer redemptions at high frequency, with CRE funds as the most exposed to liquidity mismatches. Liquidity management tools can be used by RE funds to mitigate liquidity mismatch but at the end of 2022 only 16% of RE funds envisaged a lock-up period for their investors and around 64% of open-ended RE funds required investors to redeem shares after a notice period.

Overview

The real estate (RE) sector is important for financial stability because of its size and its interconnectedness with the financial system and the real economy. Throughout 2022, the market landscape witnessed significant shifts, marked by a higher inflation rate and a consequent sharp increase in interest rates, which resulted in heightened borrowing costs and rising rental income. These developments had a pronounced negative impact on the RE market, particularly within the commercial property sector.

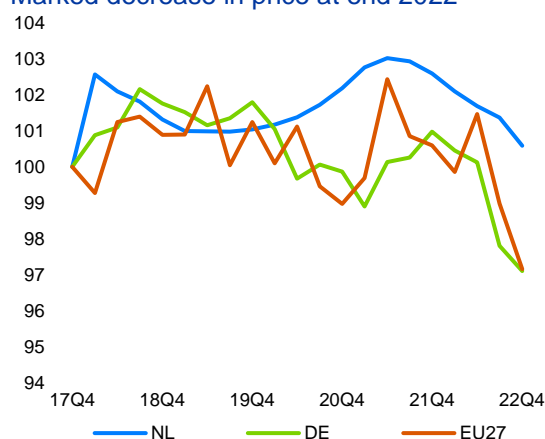
Furthermore, the RE market underwent a series of structural changes brought on by the Covid-19 pandemic. Among these shifts, one of the most noteworthy was the widespread adoption of hybrid working models, which led to a fall in demand for office space, and a consequent rising office vacancy rate in Europe, that reached around 7% at the end of 2022,¹⁰ together with a

fall in prices of commercial properties (-3% YoY at end 2022) (SR-AIF.20).

SR-AIF.S.20

Commercial property prices

Marked decrease in price at end 2022



Note: Quarterly commercial property price indicator by country, rebased (100= Q4 2017).

Sources: ECB, Bank for International Settlements, ESMA

This evolving economic landscape poses risks that could test the resilience of the RE funds. These funds play now a more prominent role across EU RE markets, with regulatory AuM that

¹⁰ The Financial Times, "[European commercial real estate: the cracks are starting to show](#)", 2023.

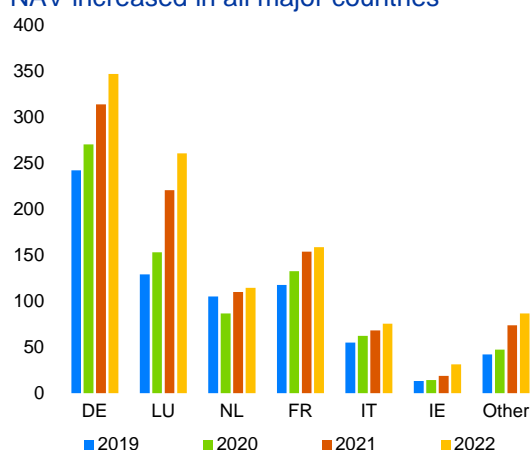
has increased from EUR 980bn in 2019 to EUR 1.5tn at end 2022.

There are several risks that RE funds face, related to leverage, market footprint, valuations discrepancies and liquidity mismatches. While RE funds are not substantially leveraged overall, their large market footprint could make them systemically relevant in some jurisdictions. Low-frequency asset valuations mean that RE funds reflect market developments with a time lag and valuations rely heavily on long-term models, which do not sufficiently take into account stress events or crisis scenarios or the specific characteristics of real estate assets (such as vacant estates or tenants' credit difficulties)¹¹. Valuation discrepancies are even more relevant in presence of liquidity mismatches, which remain a key vulnerability for open-ended RE funds. Mismatches in liquidity profiles increase the risk of further pressures on asset valuations in times of stress, if managers sell fewer liquid assets over a short period to meet redemptions.¹²

Market size and structure

Size: The size of the market has now crossed EUR 1tn in NAV, standing at EUR 1.1tn at the end of 2022. The EU RE funds market remains concentrated in a few jurisdictions, with the top 5 countries (DE, LU, NL, FR and IT) accounting for 89% of the NAV, down by 3pp from 2020 (SR-AIF.21).

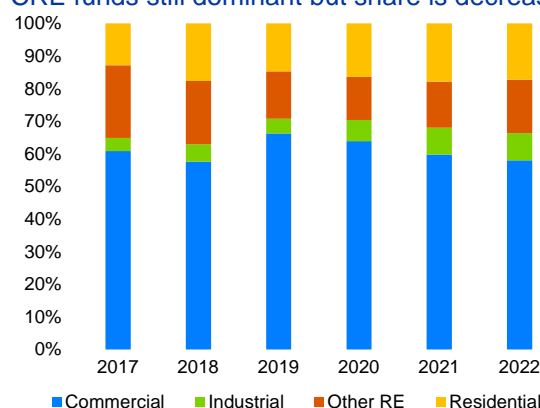
SR-AIF.S.21
Size of RE funds
NAV increased in all major countries



Note: NAV of REs managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

Strategies: RE investment strategies are still largely dominated by CRE, though to a lower extent (58% of the NAV in 2022, decreasing from the 64% in 2020, SR-AIF.22). Exposures to residential real estate (RRE) sector follow at 17%, whereas the share of 'other RE' strategies has increased to 16% of the NAV in 2022 from 13% in 2020.

SR-AIF.S.22
RE fund strategies
CRE funds still dominant but share is decreasing



Note: Share of NAV of real estate funds by strategy, in %. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30. RE= Real estate.
Sources: AIFMD database, National Competent Authorities, ESMA.

Investors: RE funds are mostly sold to professional investors (80% at end 2022), a proportion that has increased by 4pp from 2020. Within funds strategies, the share of retail investors is higher for CRE (29% in 2022, down 5pp from 2020), whereas it is lower for RRE (16% in 2022). Among professional investors, pension funds and insurance companies are still the main owners of RE fund shares accounting for 23% and 18% of the NAV, respectively (SR-AIF.23). Households play an important role for CRE funds as they own 22% of their NAV. This high share is mostly driven by their strong presence in DE, where households account for 33% of the NAV. Banks maintain a limited exposure, with 5% of the NAV overall.

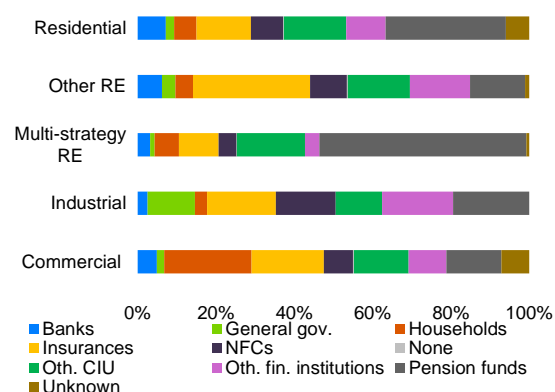
¹¹ For further details on RE valuation see ESMA, [Final report on the 2022 CSA on valuation](#).

¹² [ESRB recommendations on liquidity risks in investment funds](#), May 2020.

SR-AIF.S.23

RE investor base

Meaningful households share for CRE funds



Note: Ownership of units in real estate funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered FoF=Fund of funds. NFCs= Non-financial corporates. Data for the EEA30. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

Geographical investment focus: RE funds invest predominantly in the EEA (83%), though the share slightly decreased from 2020 levels (88%) in favour of 'Other Europe' area that has increased to 8% in 2022.

Leverage and market footprint

Leverage: In terms of adjusted gross leverage, RE funds are not substantially leveraged overall (133% of the NAV). However, the 75th percentile of the distribution is quite leveraged, as it amounts overall to 179% of the NAV, higher than hedge funds for the same percentile distribution (155% of the NAV). Leverage for 75th percentile of the distribution however has decreased by 7pp from 2020.

The share of direct borrowing accounts for around 9% of the NAV overall for RE funds (6% secured, 3% non-secured), marking a decrease from 10% of the NAV in 2020. Across strategies this share is above average only for residential and industrial RE (11% and 16% of the NAV respectively).

Market footprint: While RE funds on average present low level of leverage, their market footprint¹³ can make them more systemically relevant. At the aggregated level, EU RE funds manage EUR 952bn of RE assets, which

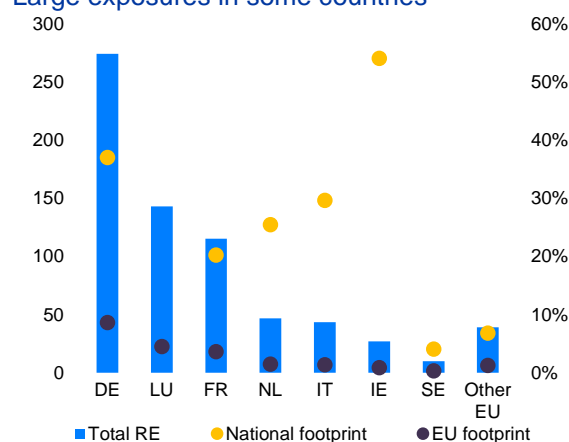
accounts for approximately 27% of the EU market.¹⁴ RE funds in DE, FR and LU¹⁵ have a large market footprint in the EU (15% of the market combined) (SR-AIF.24). In NL and IT the size of RE funds is relevant with respect to their national markets (25% and 30% respectively), whereas IE RE funds have a lower impact on the EU aggregated market but have a large impact on their domestic market, as they alone represent 54% of it.

Where a large market footprint is present, large outflows from RE funds could potentially create negative pressures on RE asset prices.

SR-AIF.S.24

Market footprint

Large exposures in some countries



Liquidity and redemption analysis

Exposure to illiquid assets: As RE funds invest primarily in physical assets (66% of exposures at end 2022) that take a long time to sell, there is a possibility that RE funds facing large redemptions might be unable to raise cash quickly enough to meet investors requests.

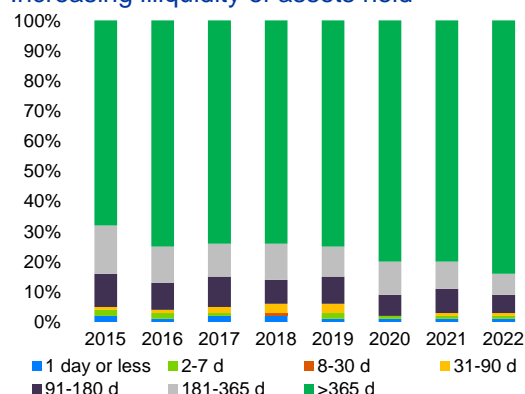
The evolution of the portfolio liquidity over time points to an increase in illiquidity in RE funds' portfolio, especially after 2020 (SR-AIF.25). In 2015 on average 32% of the portfolio could be liquidated within a year. This share halved to 16% in 2022. The most noteworthy change is witnessed in the 181-365 days bucket.

¹³ It should be noted that one of the difficulties of assessing accurately the market footprint lies in the lack of visibility in the AIFMD data on the size of the foreign RE funds investing on the EU market and, at the same time, by a lack of granularity of the geographical exposures of EU RE funds.

¹⁴ MSCI data, 2022

¹⁵ According to [Di Filippo \(2022\)](#) the assets held by LU captive financial institutions and money lenders (CFIs) affiliated to PE and RE investment funds are mostly versus Germany (16%), Spain (12%), Switzerland (11%), France (9%), the United Kingdom (8%), the United States (7%) and Denmark (6%). The remaining countries account for 31% combined.

SR-AIF.S.25

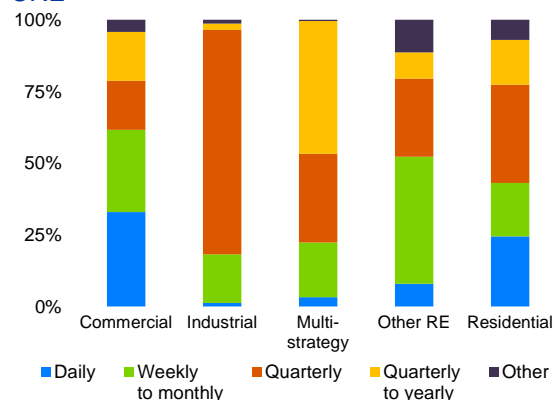
RE funds portfolio liquidity profile
Increasing illiquidity of assets held

Note: Portfolio liquidity profile of real estate funds managed and/or marketed by authorised AIFMs. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

Redemption terms: Liquidity risk is higher for open-ended funds that allow daily redemptions.¹⁶ Overall, 57% of RE funds in terms of the NAV are open-ended, 21% of which offered daily liquidity in 2022, down by 5% from 2020. Differences persist across RE strategies (SR-AIF.26). For CRE funds, 34% of their NAV can be redeemed daily (64% within a month), whereas for RRE funds this share is around 26% (50% within a month).

SR-AIF.S.26

RE funds redemption terms
2/3 of the NAV redeemable within a month for CRE

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

Sources: AIFMD database, National Competent Authorities, ESMA.

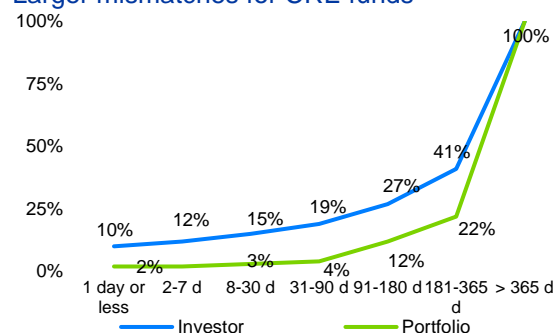
Valuations and liquidity mismatches:

Valuation discrepancies, i.e., funds reporting higher prices than the transaction prices observed in the market, can be a driver of

investor redemptions, especially during market downturns. If upcoming price corrections in RE funds can be anticipated, it would give investors an incentive to redeem shares beforehand, hence providing them with a first-mover advantage.¹⁷

Valuation discrepancies are even more relevant in presence of liquidity mismatches, which remain a key vulnerability for open-ended RE funds, especially for funds that offer redemptions at high frequency. At strategy level, liquidity mismatches are more pronounced for CRE funds (SR-AIF.27). 12% of the NAV can be redeemed within a week while only 2% of the portfolio can be liquidated over the same period.

SR-AIF.S.27

CRE funds liquidity mismatches
Larger mismatches for CRE funds

Note: Portfolio and investor liquidity profiles of commercial real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

Financing liquidity risk for most RE funds remains limited as borrowing lines overall remain open for relatively long periods, with the only exception represented by RRE which relies more on 30-90 days borrowings.

Liquidity risk mitigation: Against the backdrop of liquidity mismatches, high exposure to illiquid assets and relatively high daily redemption terms, the ESRB and ECB have recommended a greater availability of liquidity management tools (LMTs) to prevent liquidity mismatches in open-ended CRE funds, including longer notice periods for investor withdrawals, redemption gates, and an increase in the share of liquid assets held by CRE funds.¹⁸

Liquid assets can help mitigate liquidity mismatches, as funds in meeting redemption requests might follow a pecking order of

¹⁶ Liquidity risk can be mitigated by using liquidity management tools, including lock-ups and notice periods, as discussed in the "liquidity risk mitigation" section.

¹⁷ ESRB, "Vulnerabilities in the EEA commercial real estate sector", January 2023.

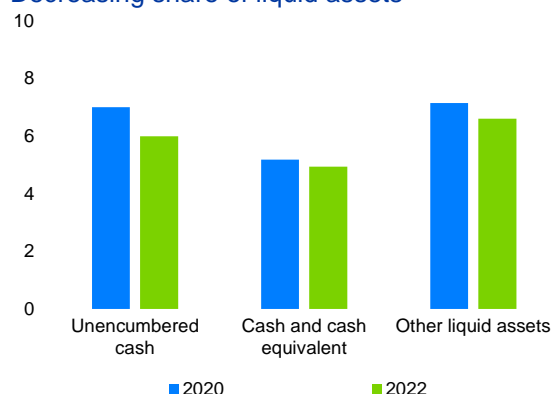
¹⁸ See [ESRB/2017/6](#) and Daly, Pierce & Dekker, Lennart & O'Sullivan, Sean & Ryan, Ellen & Wedow, Michael, 2023. "The growing role of investment funds in euro area real estate markets: risks and policy considerations," Macroeprudential Bulletin, European Central Bank, vol. 20.

liquidation by selling their most liquid assets before more illiquid ones.¹⁹ However, exposures to liquid assets²⁰ remain low overall for RE funds (SR-AIF.28), only amounting to 17% of the NAV in total. This share has also decreased by 2pp from 2020.

SR-AIF.S.28

RE funds liquidity metrics

Decreasing share of liquid assets



Note: Long positions in liquid assets as a % of NAV, by year. Cash and cash equivalent include certificates of deposits, commercial papers, other deposits and other cash equivalent excluding sov. bonds. Other liquid assets include sov. bonds, investment grade corporate bonds, listed equities.

Sources: AIFMD database, ESMA

Liquidity management tools²¹ can also help RE funds to cope with redemptions from investors. At the end of 2022 only 16% of RE funds envisaged a lock-up period for their investors. Conversely, around 64% of open-ended RE funds required investors to redeem shares after a notice period. This share was higher in 2020 (~70%) but decreased across all strategies except for 'Other RE' funds. For CRE it went down to 60% in 2022 from 64% in 2020, whereas for RRE it decreased to 62% from 68%.

¹⁹ This pecking order of liquidation was observed especially for bond funds during periods of market stress, see IMF, '[Asset price fragility in times of stress, Chapter 3 the role of open-end investment funds](#)' October 2022, and Ma, Xiao, Zenq, '[Mutual Fund Liquidity Transformation and Reverse Flight to Liquidity](#)' 2022.

²⁰ Liquid assets include unencumbered cash (i.e., liquidity buffers), cash and cash equivalent (certificates of deposits, commercial papers, deposits), and other liquid

assets (sovereign bonds, investment grade corporate bonds and listed equities). Only long positions were included in the calculation.

²¹ In this sub-section we only focus on lock-up and notice periods on account of data availability in the AIFMD database. It is worth noting that some real estate funds dispose of additional LMTs (such as deferral of redemptions power) to address liquidity mismatches.

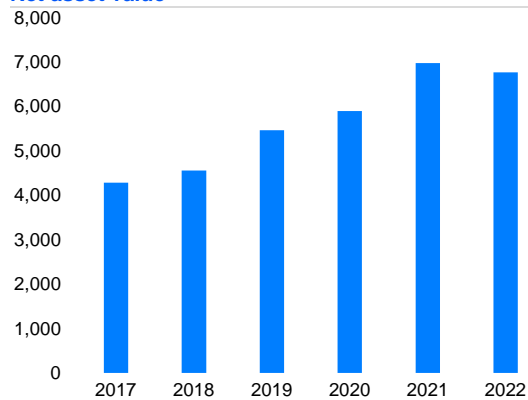
Statistics

EU AIF market overview

AIF characteristics

SR-AIF.S.1

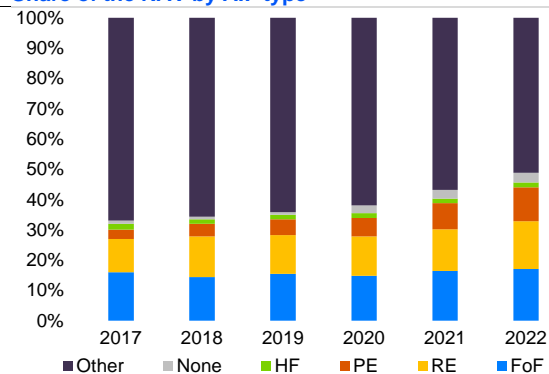
Net asset value



Note: NAV of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.2

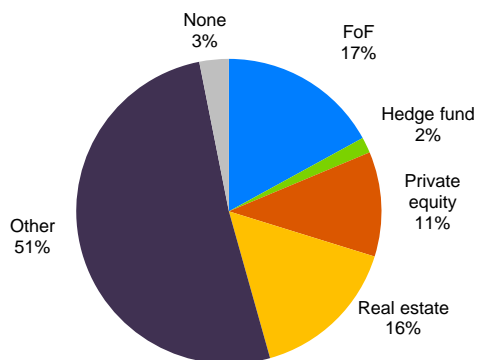
Share of the NAV by AIF type



Note: NAV by type of AIF managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in % of total. FoF= Fund of funds, HF=Hedge funds, PE=Private equity funds, RE=Real estate funds, None= No predominant type. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.3

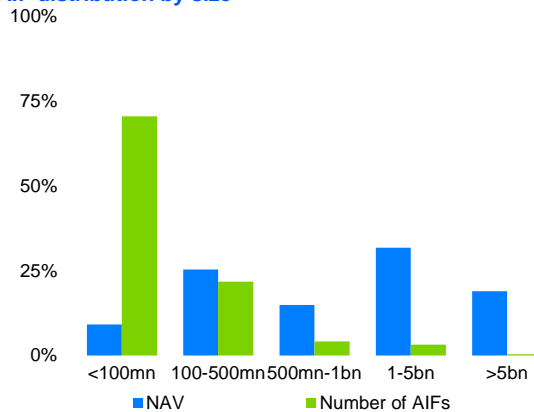
AIF types



Note: NAV by type of AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in %. FoF=Fund of funds, None=No predominant type. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.4

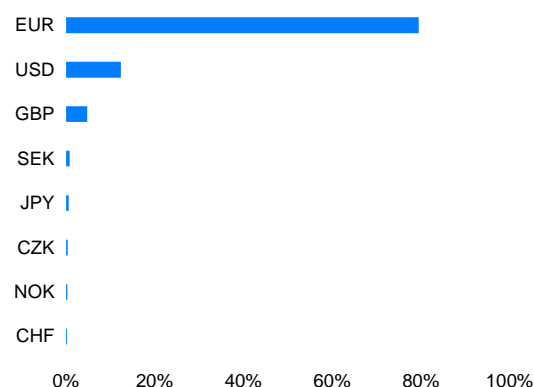
AIF distribution by size



Note: Share of AIFs by size, end of 2022, in %. AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.5

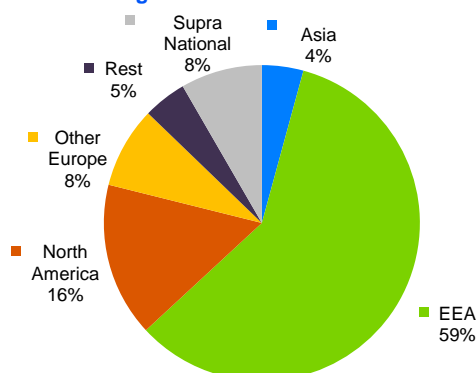
Base currencies



Note: Base currency managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.6

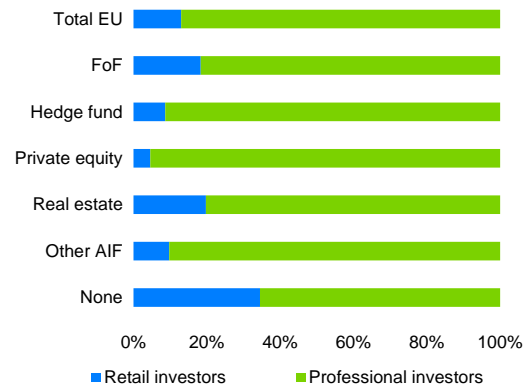
Investment regions



Note: Regional investment focus of AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Geo-focus determined according to the domicile of investments, supra national category including investments without predominant geo-focus. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.7

Clients

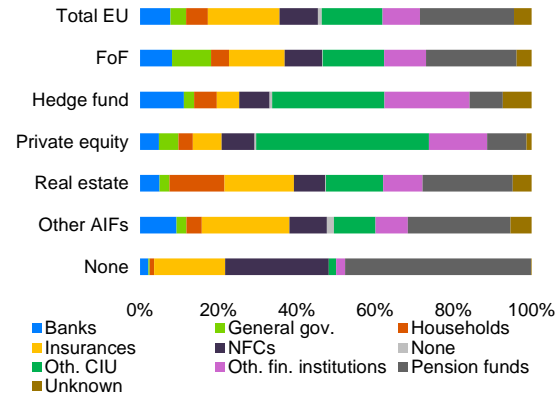


Note: Clients of AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. FoF=Fund of funds. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.8

AIF investor base



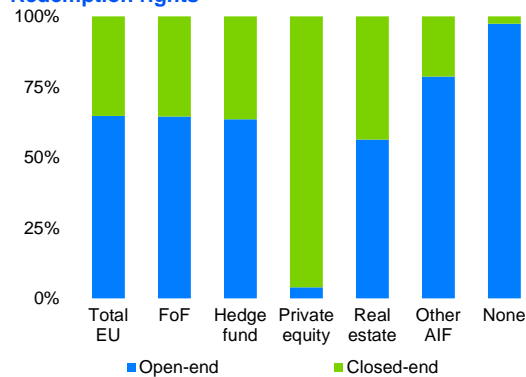
Note: Ownership of units in AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. FoF=Fund of funds. NFCs= Non-financial corporates. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF liquidity profile

SR-AIF.S.9

Redemption rights

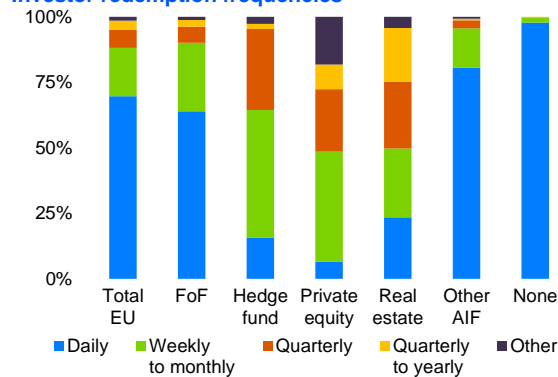


Note: Redemption rights provided in the ordinary course to investors in AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. FoF=Fund of funds, None=No predominant type. Data for 25 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.10

Investor redemption frequencies

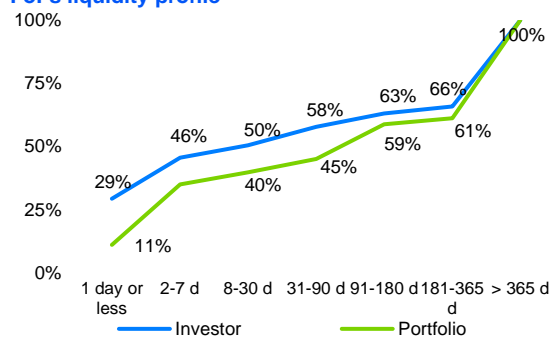


Note: Investor redemption frequencies allowed by open-end AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of Funds, None=No Predominant Type. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.11

FoFs liquidity profile

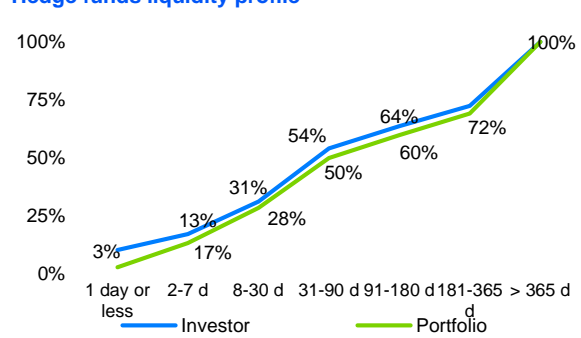


Note: Portfolio and investor liquidity profiles of funds of funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.12

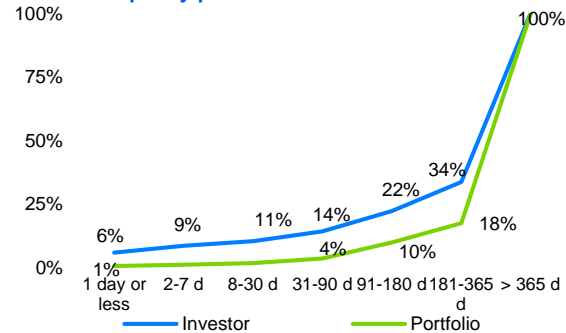
Hedge funds liquidity profile



Note: Portfolio and investor liquidity profiles of hedge funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

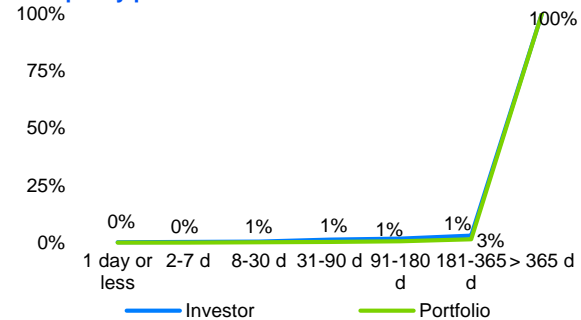
SR-AIF.S.13 RE funds liquidity profile



Note: Portfolio and investor liquidity profiles of real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

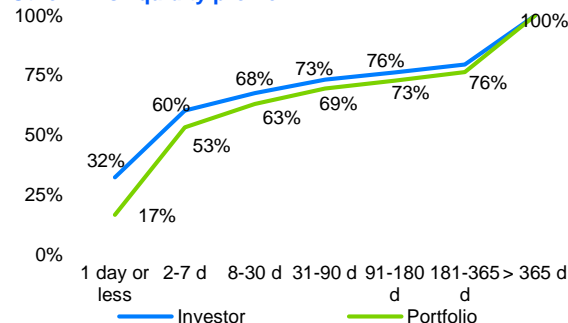
SR-AIF.S.14 PE liquidity profile



Note: Portfolio and investor liquidity profiles of private equity funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

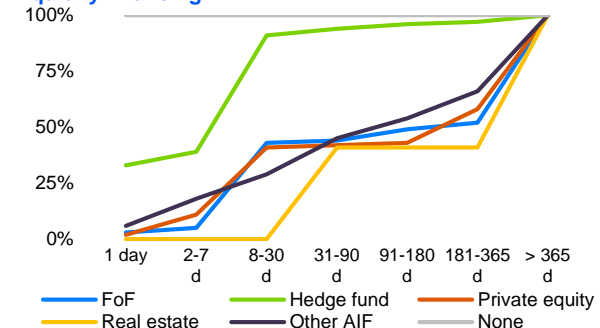
SR-AIF.S.15 Other AIFs liquidity profile



Note: Portfolio and investor liquidity profiles of AIFs classified as Other managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.16 Liquidity financing

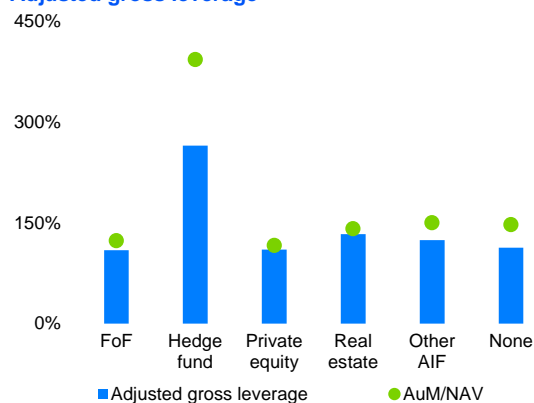


Note: Liquidity financing of AIFs managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. FoF=Fund of funds, None=No Predominant type. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

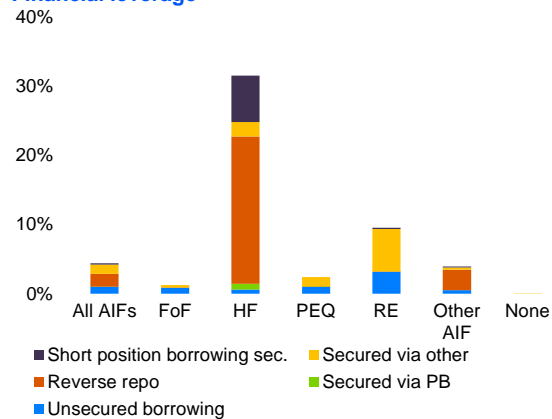
SR-AIF.S.17 Adjusted gross leverage



Note: Adjusted gross leverage of AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. FoF= Fund of funds, None=No predominant type. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.18 Financial leverage

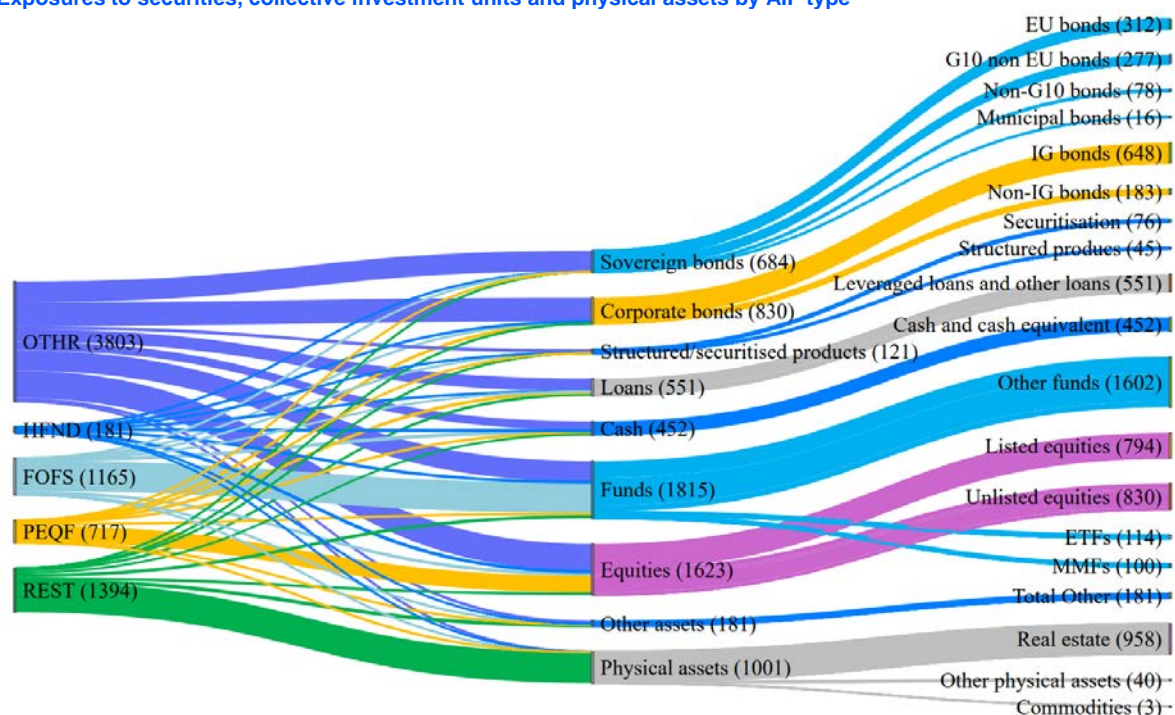


Note: Cash and securities borrowed, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds, None=No predominant type.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.19

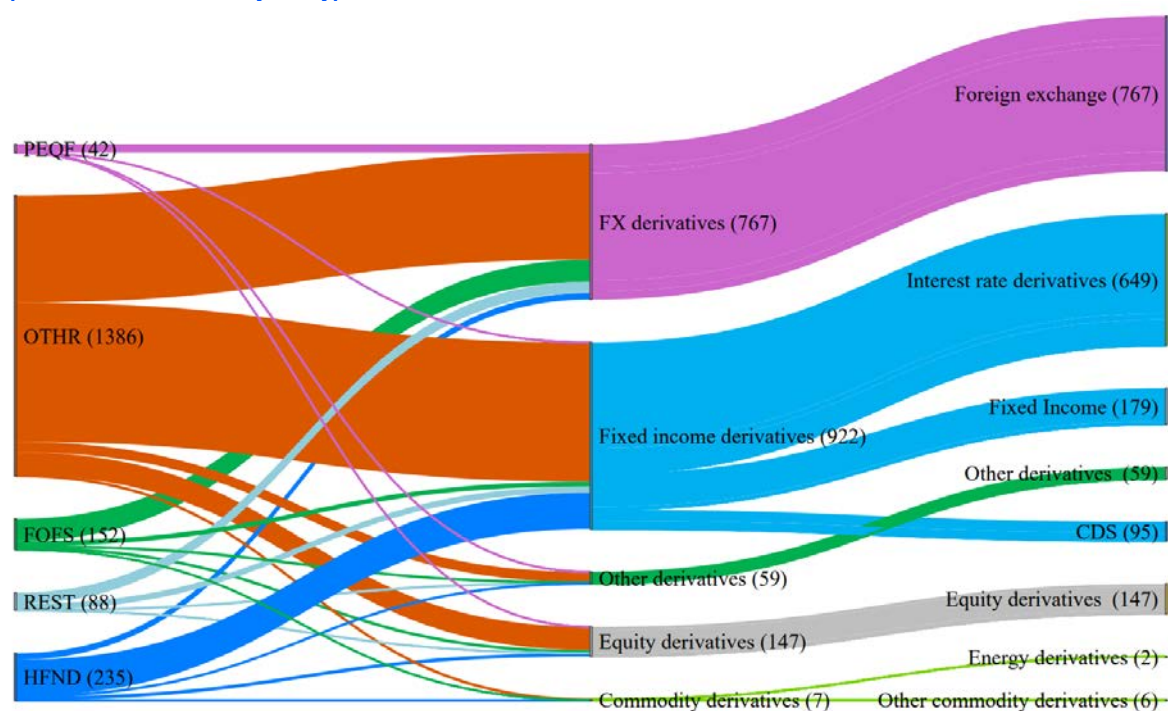
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.20

Exposures to derivatives by AIF type



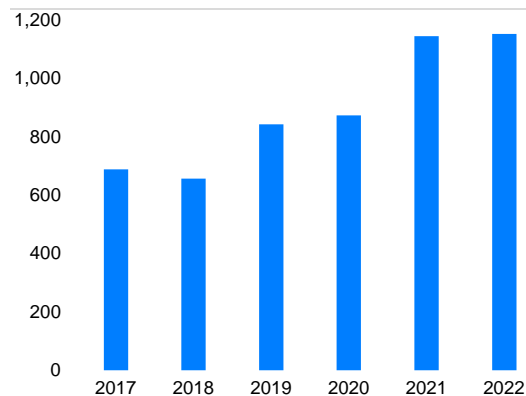
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Fund of Funds

AIF characteristics

SR-AIF.S.21

Net asset value

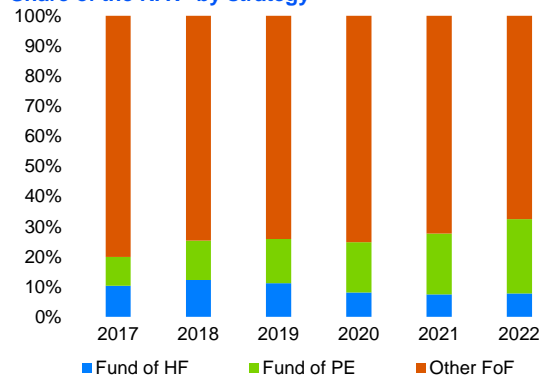


Note: NAV of fund of funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.23

Share of the NAV by strategy

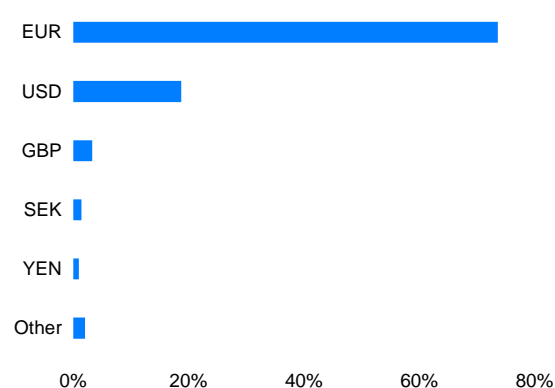


Note: Share of NAV of FoFs by strategy, in % of NAV, AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30. FoF= Fund of funds, HF Hedge fund, PE= Private equity.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.25

Base currencies

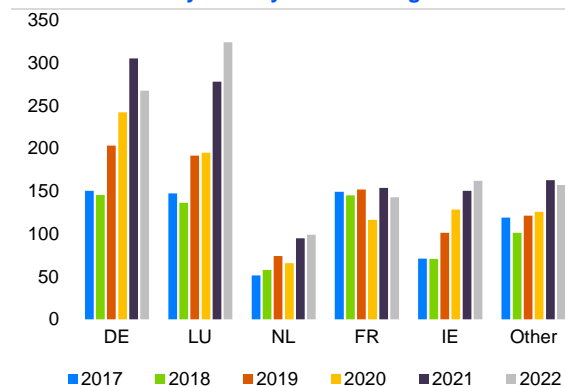


Note: Base currency for funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 28 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.22

Net asset value by country of the manager

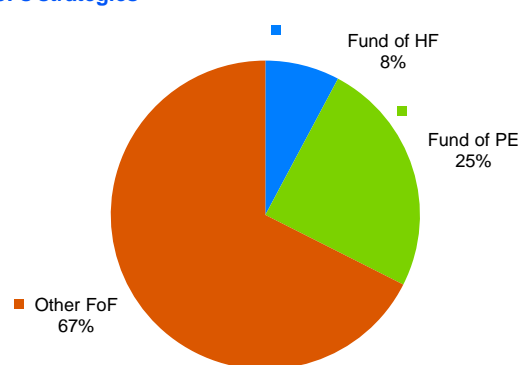


Note: NAV of fund of funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.24

FoFs strategies

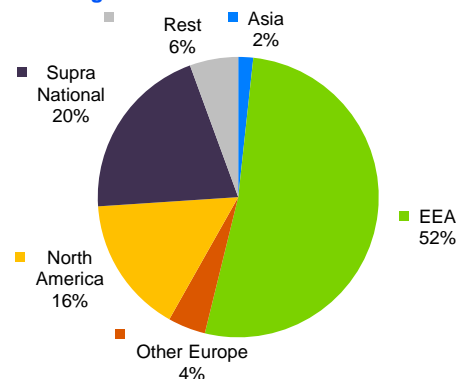


Note: Investment strategies of funds of funds, end of 2022, in % of NAV. Funds of funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. FoF=Fund of funds, PE=Private equity fund, HF=Hedge fund. Data for 28 EEA countries.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.26

Investment regions

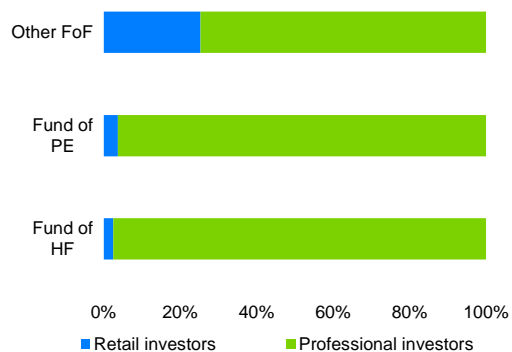


Note: Regional investment focus of funds of funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2020, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.27

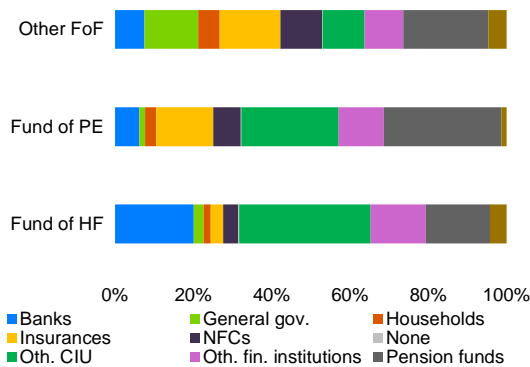
Clients



Note: Clients of funds of funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. FoF=Fund of funds, PE= Private equity fund, HF=Hedge fund. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.28

AIF investor base

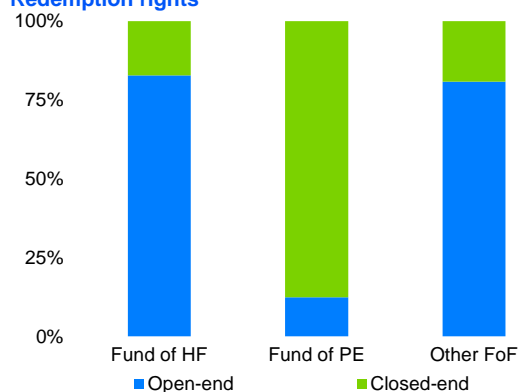


Note: Ownership of units in fund of funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. FoF=Fund of funds. NFCs= Non-financial corporates. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

AIF liquidity profile

SR-AIF.S.29

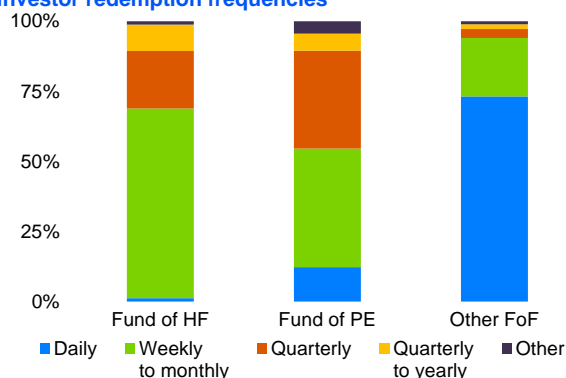
Redemption rights



Note: Redemption rights provided in the ordinary course to investors in funds of funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. HF=Hedge fund; PE=Private equity; FoF=Fund of funds, PE=Private equity fund. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.30

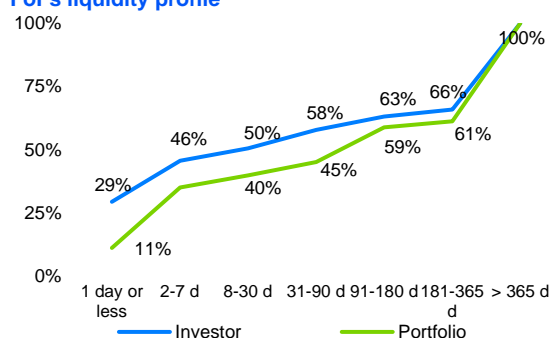
Investor redemption frequencies



Note: Investor redemption frequencies allowed by open-end funds of funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Fund of funds, PE=Private equity fund, HF=Hedge Fund. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.31

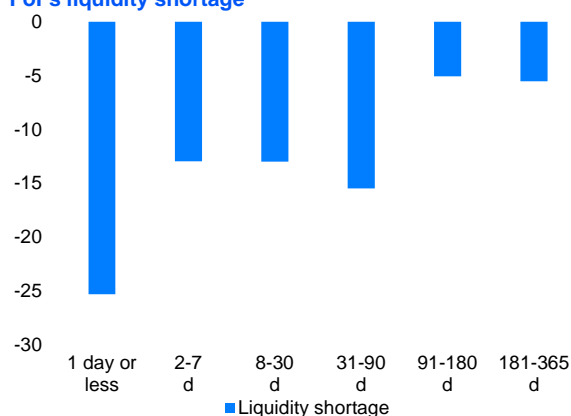
FoFs liquidity profile



Note: Portfolio and investor liquidity profiles of funds of funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

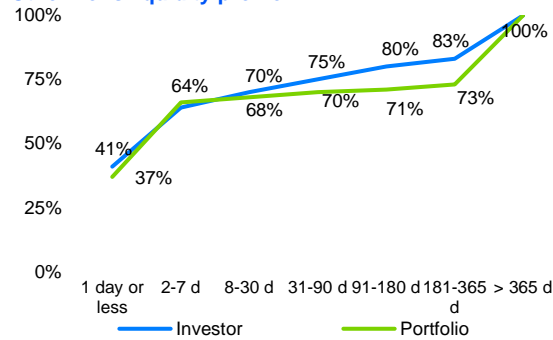
SR-AIF.S.32

FoFs liquidity shortage



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. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

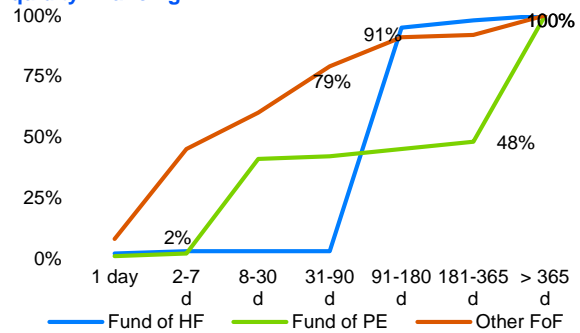
SR-AIF.S.33 Other FoFs liquidity profile



Note: Portfolio and investor liquidity profiles of other funds of funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.34 Liquidity financing

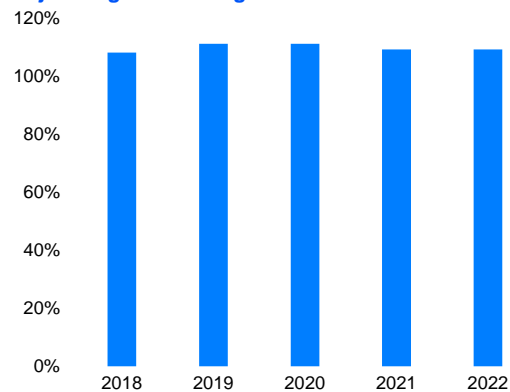


Note: Liquidity financing of funds of funds managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. Data for the EEA30. FoF=Funds of funds, PE=Private equity fund, HF=Hedge fund.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

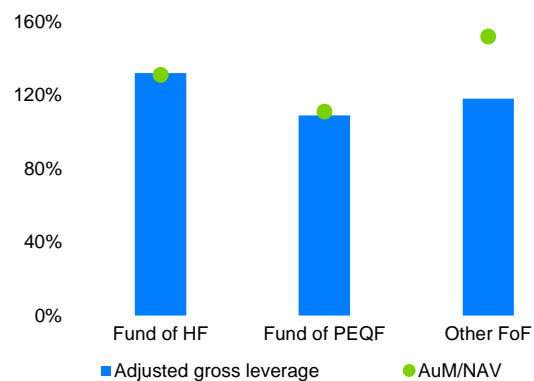
SR-AIF.S.35 Adjusted gross leverage



Note: Adjusted gross leverage of fund of funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

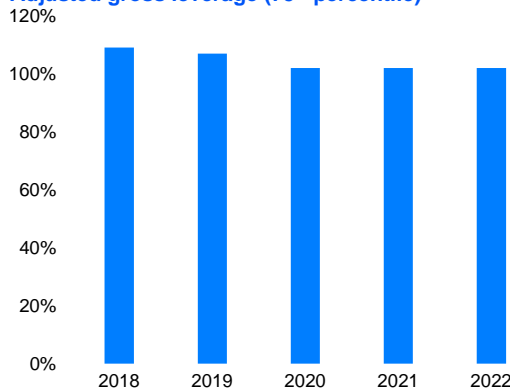
SR-AIF.S.36 Adjusted gross leverage by strategy



Note: Adjusted gross leverage of funds of funds managed and/or marketed by authorised AIFMs, end of 2022, 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 the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

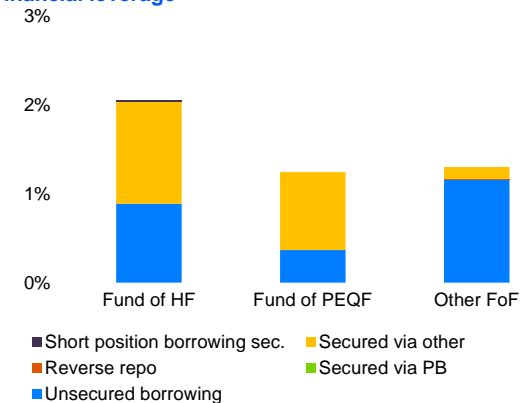
SR-AIF.S.37 Adjusted gross leverage (75th percentile)



Note: Adjusted gross leverage of fund of funds (75th percentile) managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.38 Financial leverage

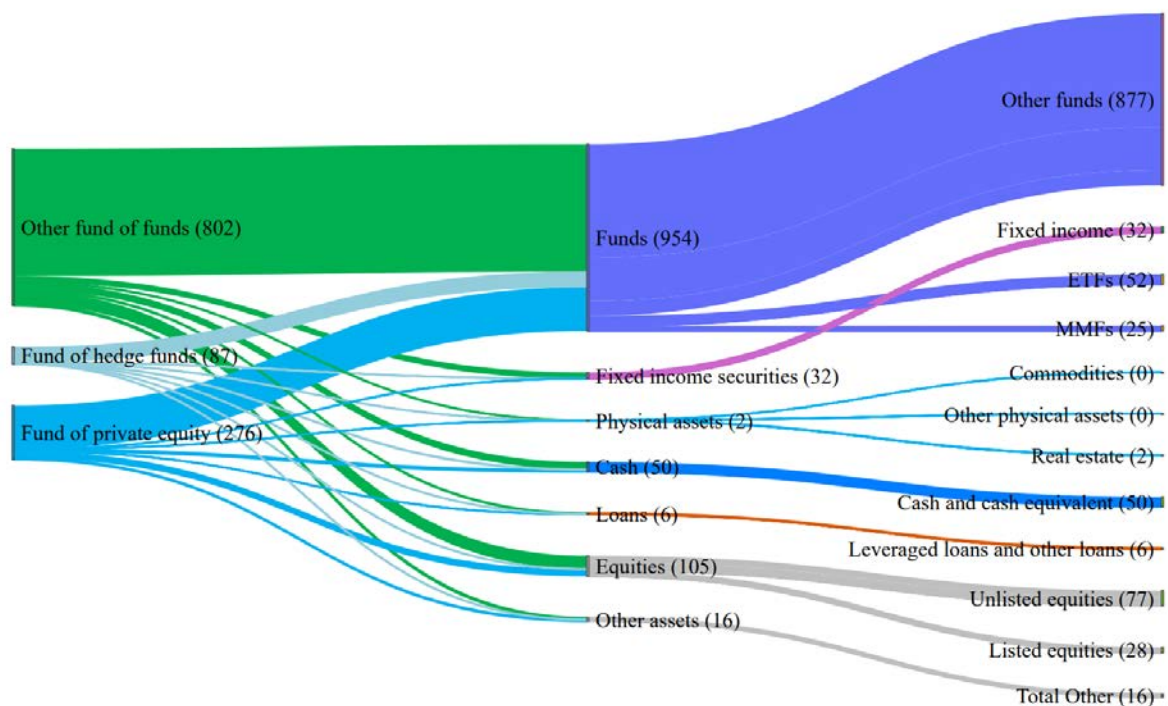


Note: Cash and securities borrowed by FoFs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. FoF=Funds of Funds. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.39

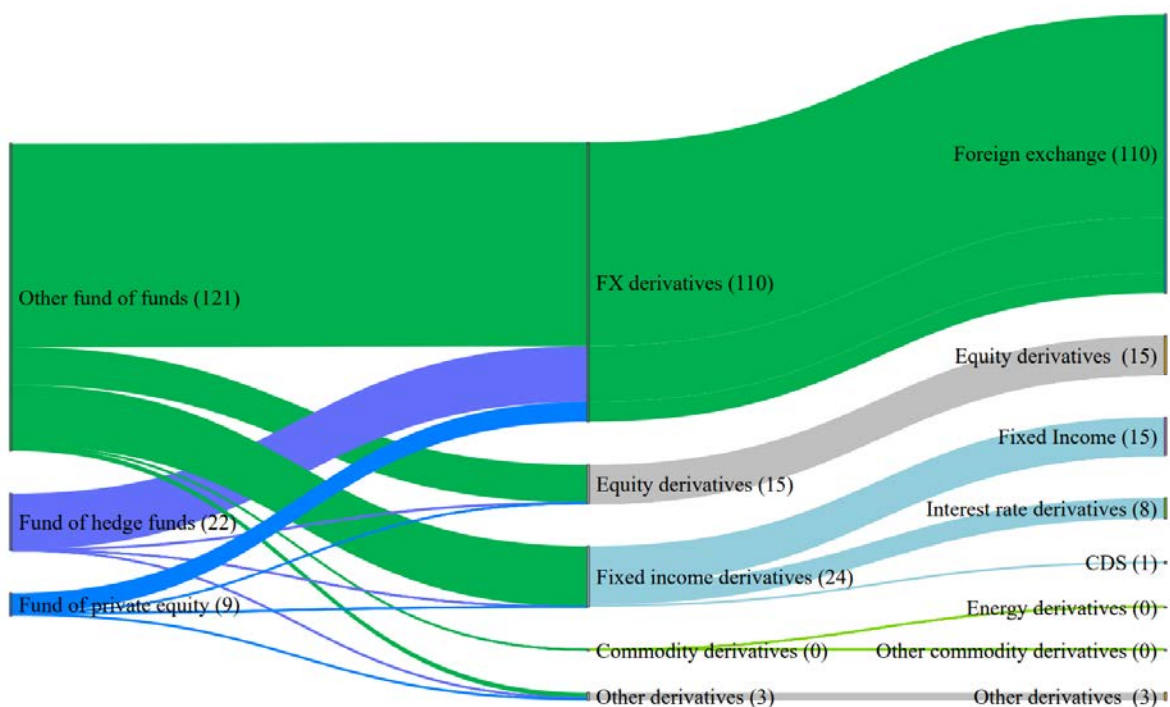
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.40

Exposures to derivatives by AIF type



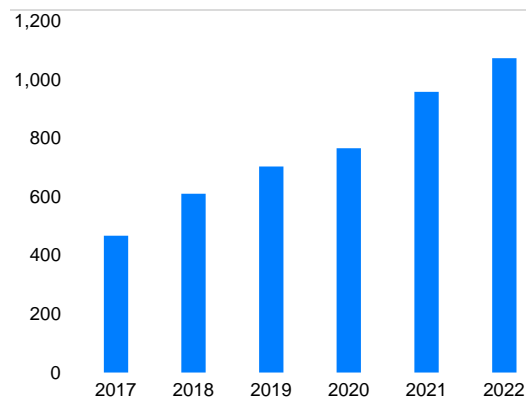
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Real Estate Funds

AIF characteristics

SR-AIF.S.41

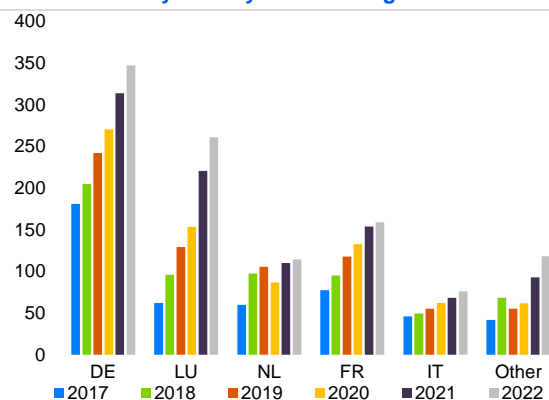
Net asset value



Note: NAV of real estate funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.42

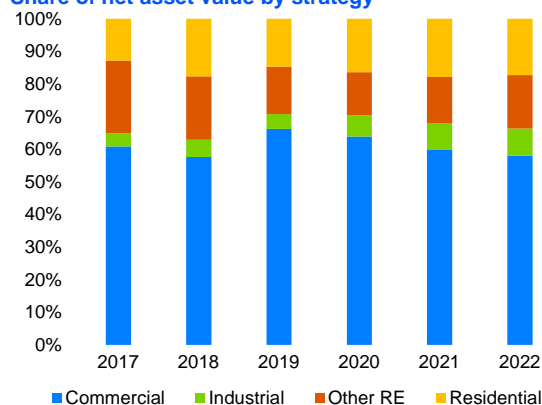
Net asset value by country of the manager



Note: NAV of real estate funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.43

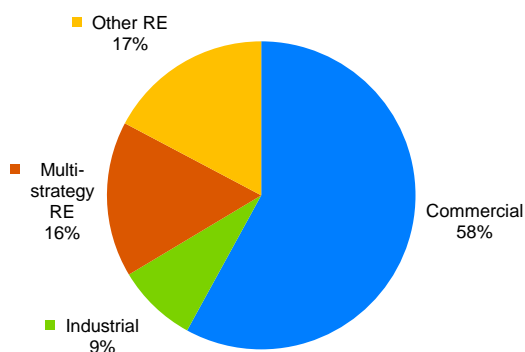
Share of net asset value by strategy



Note: Share of NAV of real estate funds by strategy, in %. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30. RE= Real estate.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.44

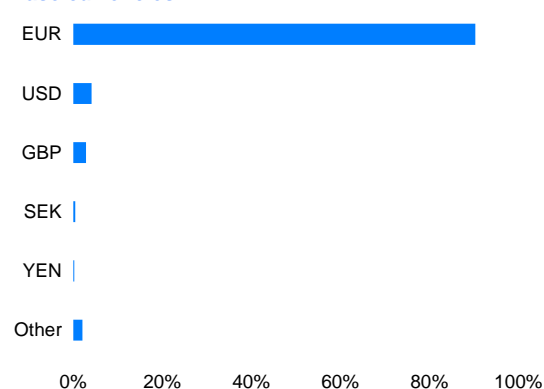
RE funds strategies



Note: Investment strategies of real estate funds, end of 2022, 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 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.45

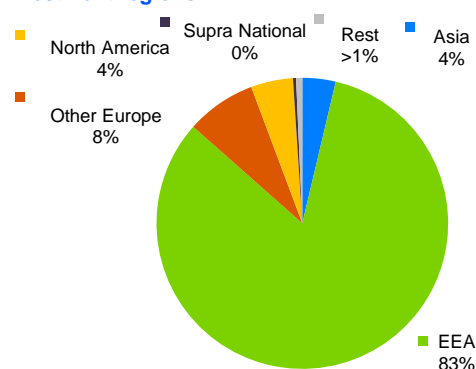
Base currencies



Note: Base currency for real estate funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.46

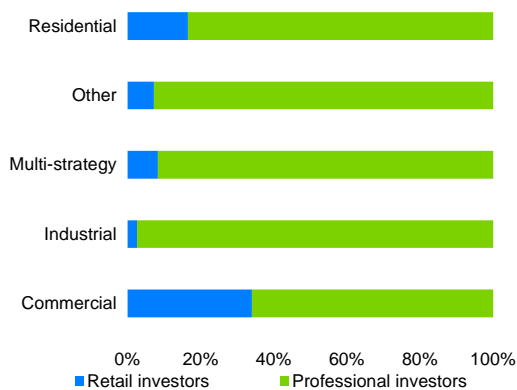
Investment regions



Note: Regional investment focus of real estate funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2020, 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 the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.47

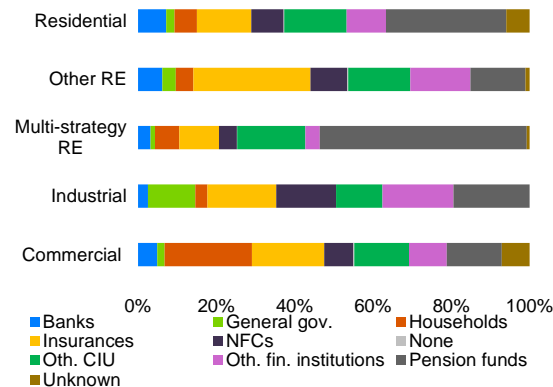
Clients



Note: Clients of real estate funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. RE = Real estate. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.48

AIF investor base

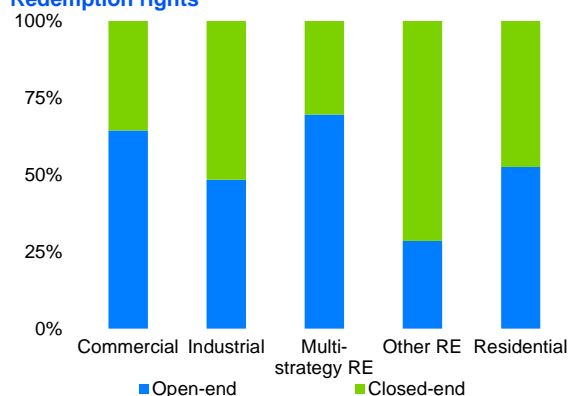


Note: Ownership of units in real estate funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered FoF=Fund of funds. NFCs= Non-financial corporates. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

AIF liquidity profile

SR-AIF.S.49

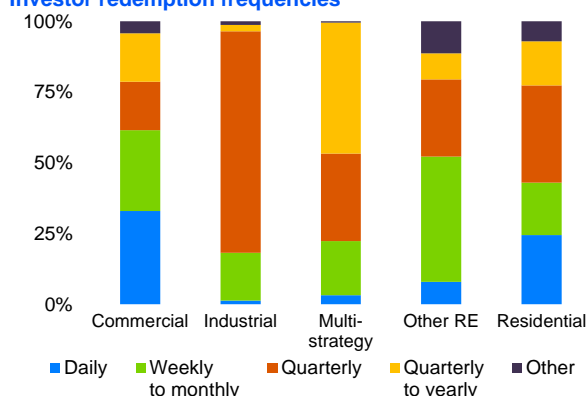
Redemption rights



Note: Redemption rights provided in the ordinary course to investors in real estate funds managed and/or marketed by authorised EU AIFMs, end of 2022, in % of NAV. RE=Real estate. Data for EEA30 countries. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.50

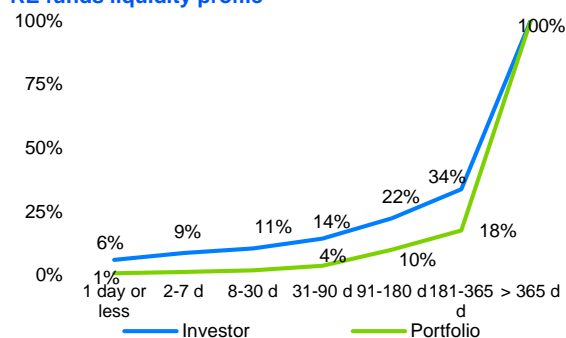
Investor redemption frequencies



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

SR-AIF.S.51

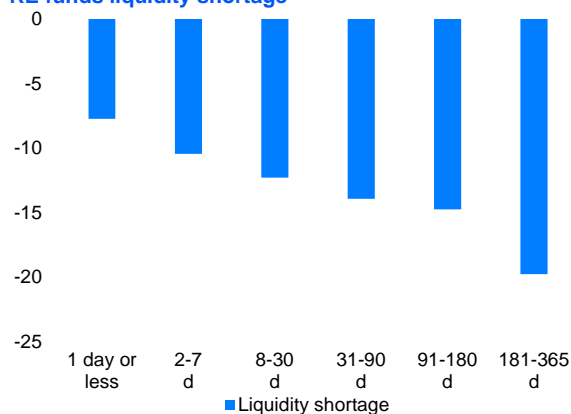
RE funds liquidity profile



Note: Portfolio and investor liquidity profiles of real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.52

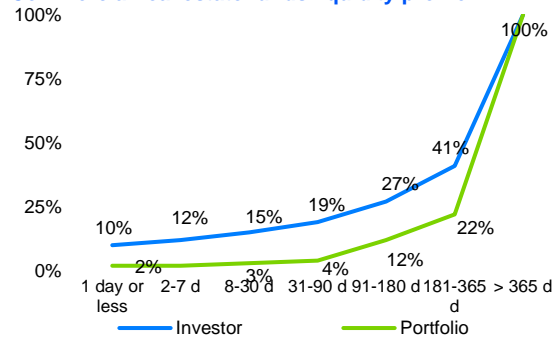
RE funds liquidity shortage



Note: Liquidity shortage of real estate funds, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as not compensated by liquidity surplus. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.53

Commercial real estate funds liquidity profile

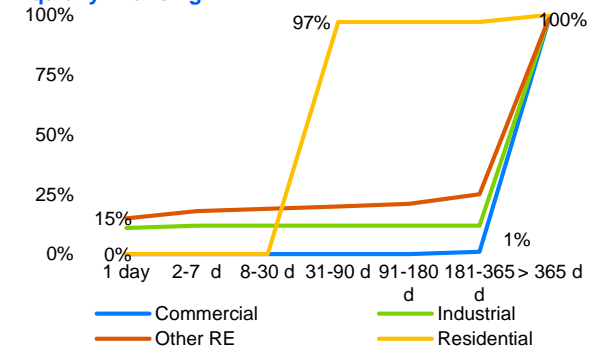


Note: Portfolio and investor liquidity profiles of commercial real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.54

Liquidity financing



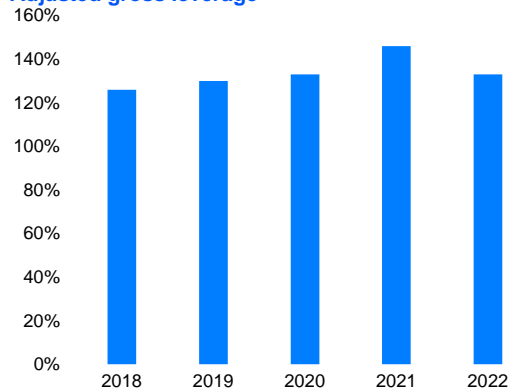
Note: Liquidity financing of real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. RE=Real estate. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

SR-AIF.S.55

Adjusted gross leverage

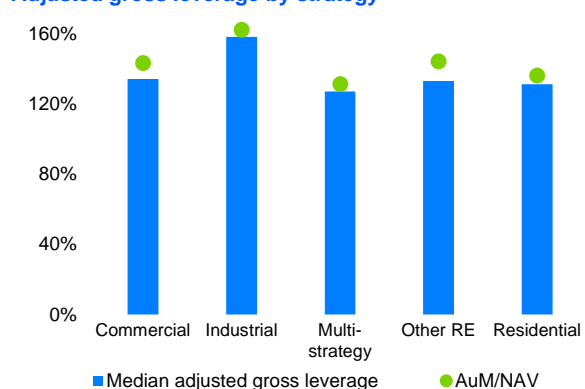


Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.56

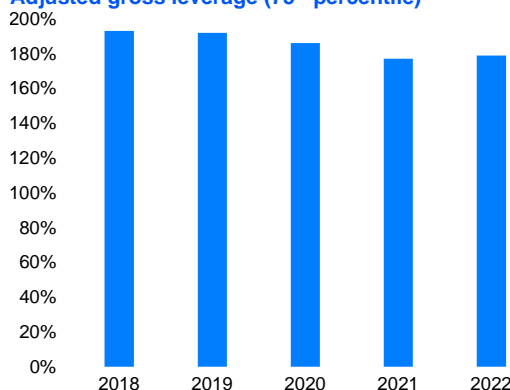
Adjusted gross leverage by strategy



Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. RE=Real estate. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.57

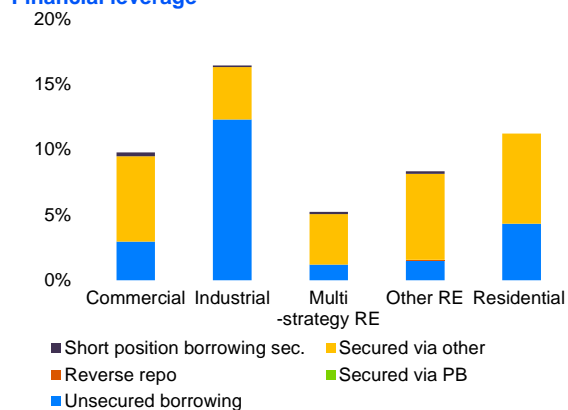
Adjusted gross leverage (75th percentile)

Note: Adjusted gross leverage of real estate funds (75th percentile) managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.58

Financial leverage

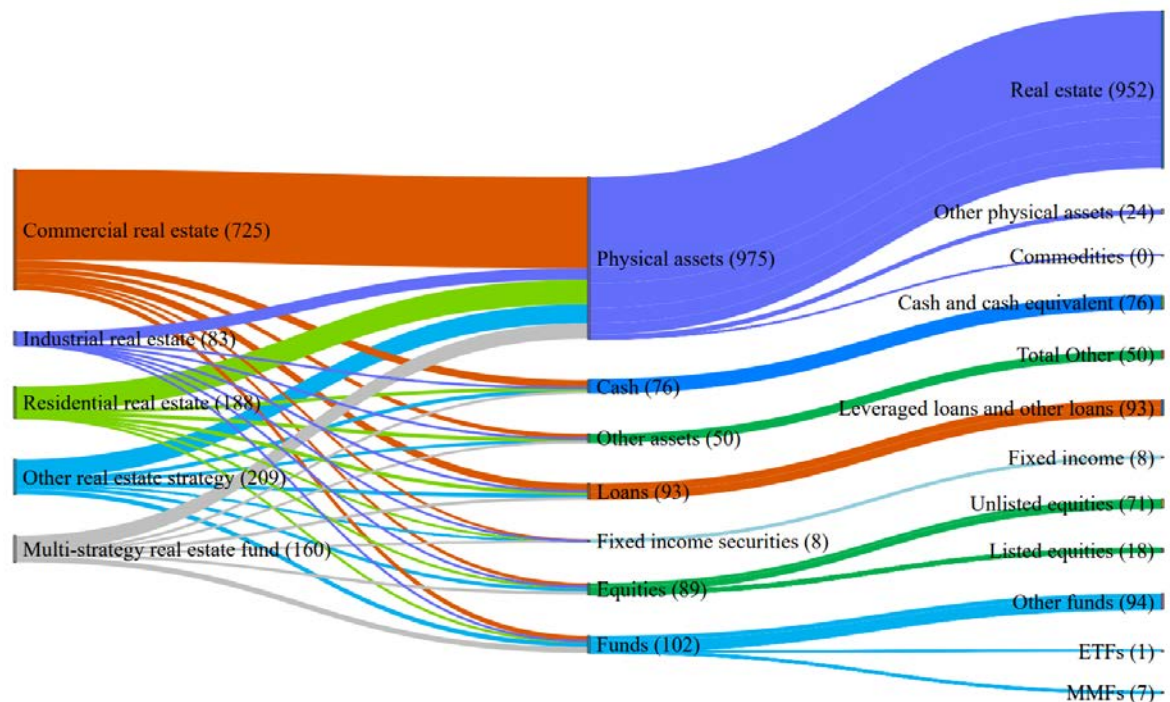


Note: Cash and securities borrowed by real estate funds, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. RE=Real Estate. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.59

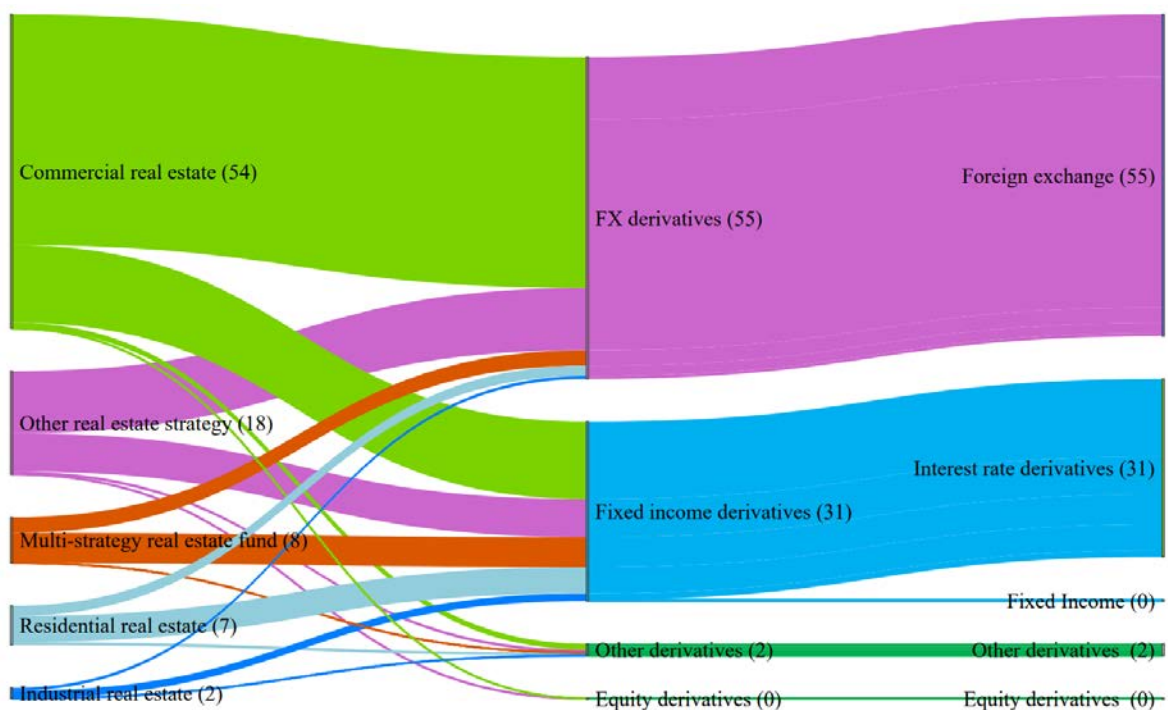
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.60

Exposures to derivatives by AIF type



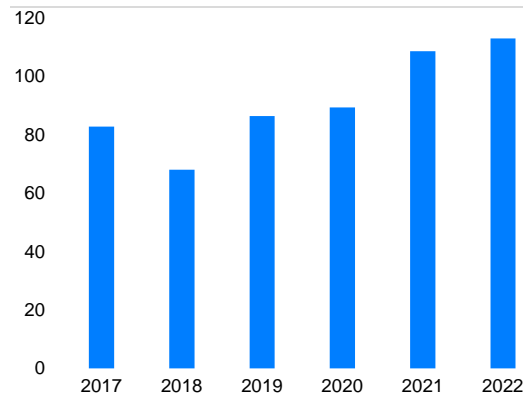
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Hedge Funds

AIF characteristics

SR-AIF.S.61

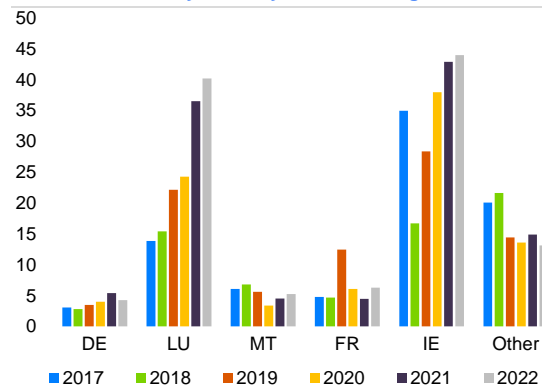
Net asset value



Note: NAV of hedge funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.62

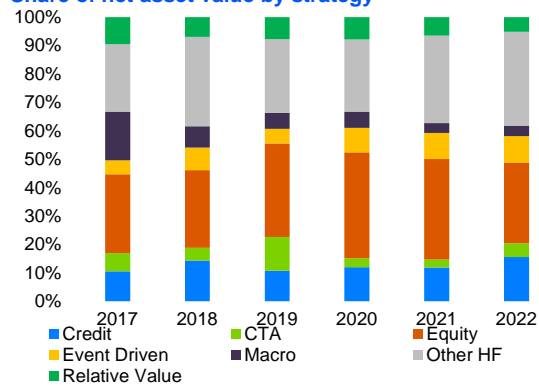
Net asset value by country of the manager



Note: NAV of hedge funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.63

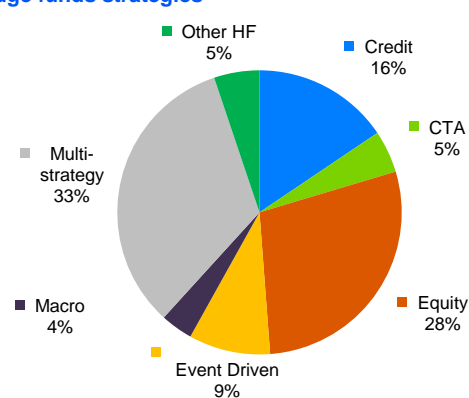
Share of net asset value by strategy



Note: Share of NAV of hedge funds by strategy, in %. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30. CTA= Commodity Trading Advisor strategy, HF= Hedge fund.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.64

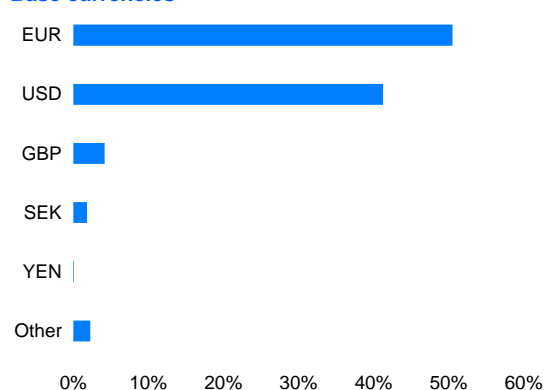
Hedge funds strategies



Note: Investment strategies of hedge funds, end of 2022, in % of NAV. Hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions. CTA= Commodity Trading Advisor strategies, HF=Hedge fund. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.65

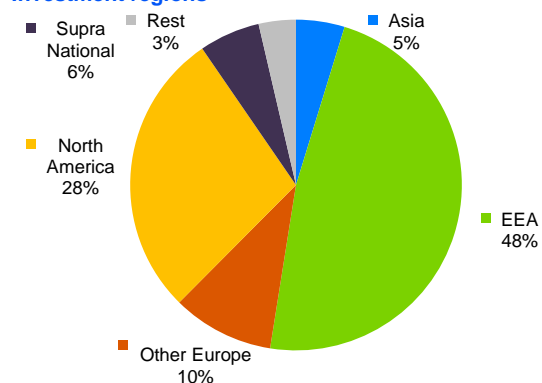
Base currencies



Note: Base currency for hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.66

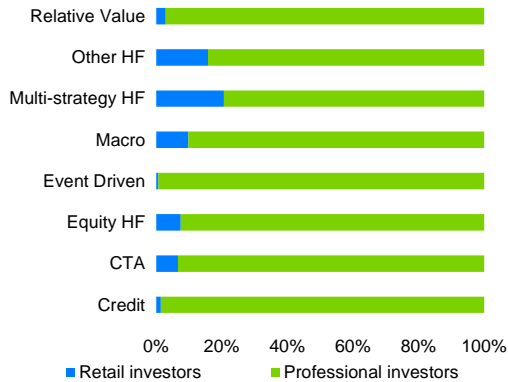
Investment regions



Note: Regional investment focus of hedge funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2020, 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 the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.67

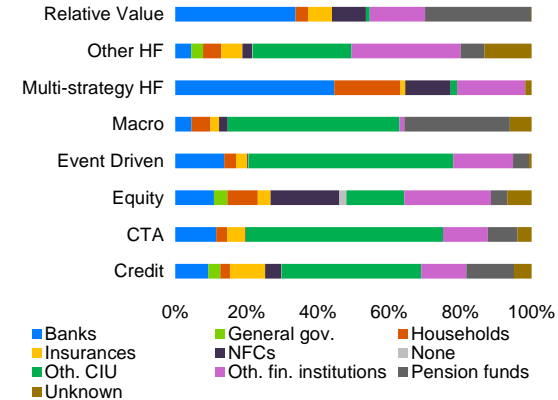
Clients



Note: Clients of hedge funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. CTA= Commodity Trading Advisor strategy, HF=Hedge fund. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.68

AIF investor base

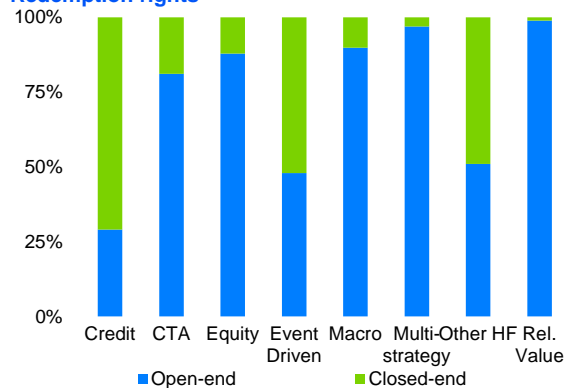


Note: Ownership of units in hedge funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. NFCs= Non-financial corporates. Data for the EEA30. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

AIF liquidity profile

SR-AIF.S.69

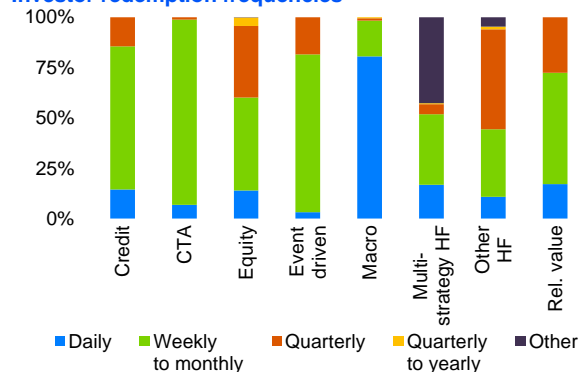
Redemption rights



Note: Redemption rights provided in the ordinary course to investors in hedge funds managed and/or marketed by authorised EU AIFMs, end of 2022, in % of NAV. CTA= Commodity Trading Advisor strategy, HF=Hedge fund. Data for EEA30 countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.70

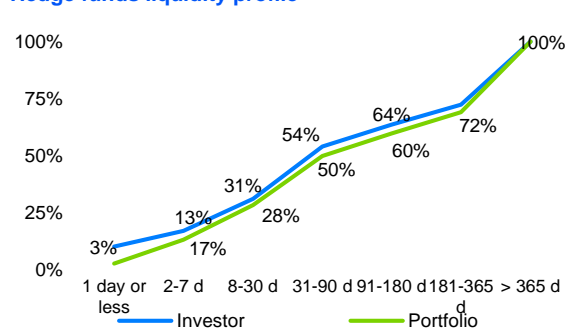
Investor redemption frequencies



Note: Investor redemption frequencies allowed by open-end hedge funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. CTA= Commodity Trading Advisor strategy, F=Hedge fund. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.71

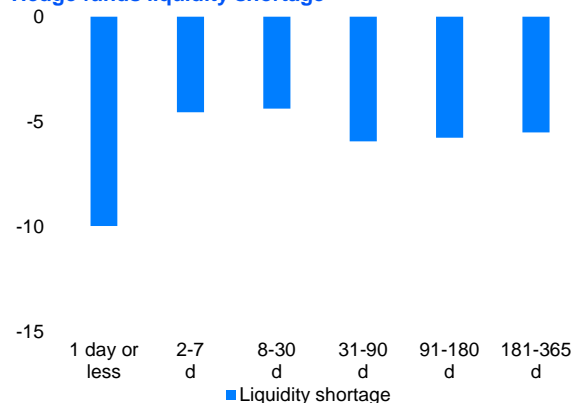
Hedge funds liquidity profile



Note: Portfolio and investor liquidity profiles of hedge funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.72

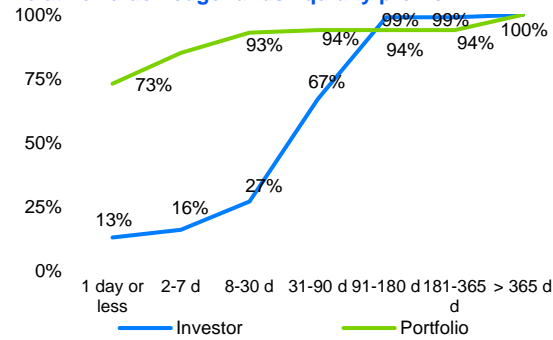
Hedge funds liquidity shortage



Note: Liquidity shortage of hedge funds, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as not compensated by liquidity surplus. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.73

Relative value hedge funds liquidity profile

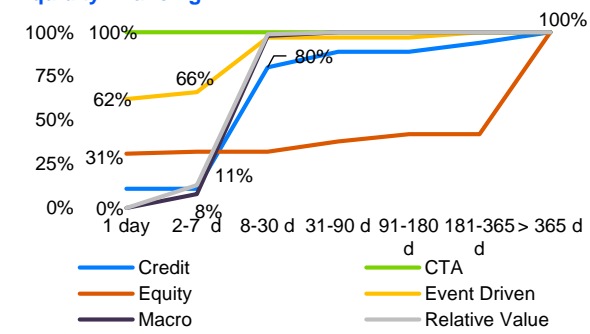


Note: Portfolio and investor liquidity profiles of relative value hedge funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.74

Liquidity financing



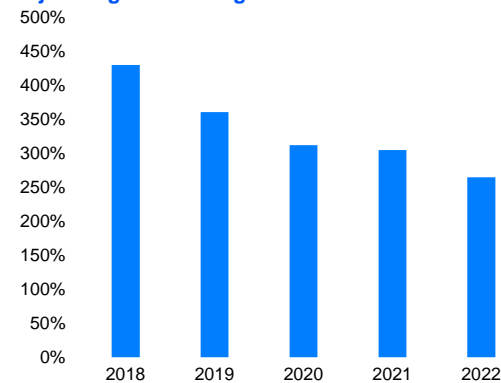
Note: Liquidity financing of hedge funds managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. CTA= Commodity Trading Advisor strategy, HF=Hedge fund. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

SR-AIF.S.75

Adjusted gross leverage

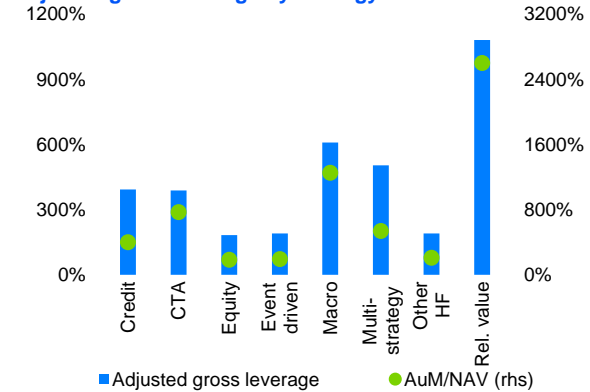


Note: Adjusted gross leverage of hedge funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.76

Adjusted gross leverage by strategy

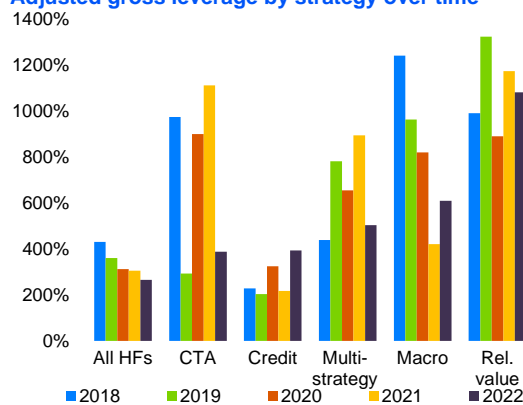


Note: Adjusted gross leverage of hedge funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. CTA= Commodity Trading Advisor strategy, HF=Hedge fund. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.77

Adjusted gross leverage by strategy over time

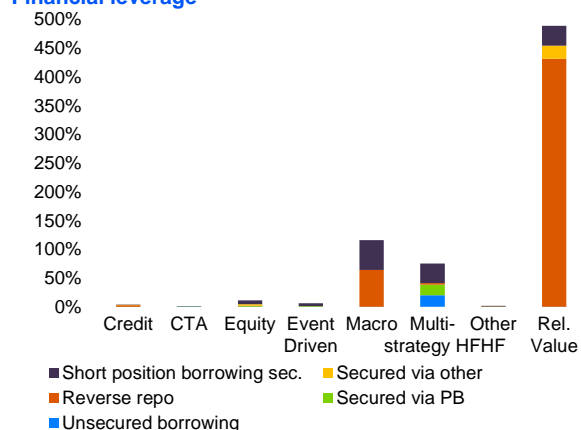


Note: Adjusted gross leverage of hedge funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. CTA= Commodity Trading Advisor strategy. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.78

Financial leverage

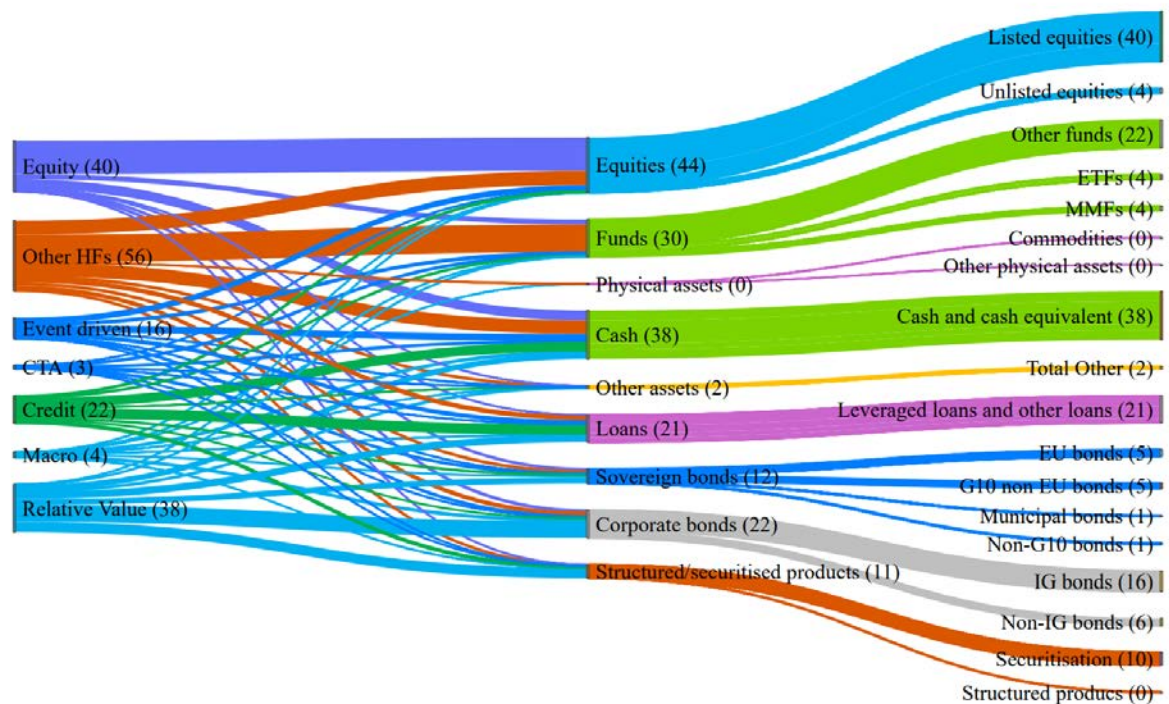


Note: Cash and securities borrowed by hedge funds, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. HF= Hedge funds, Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.79

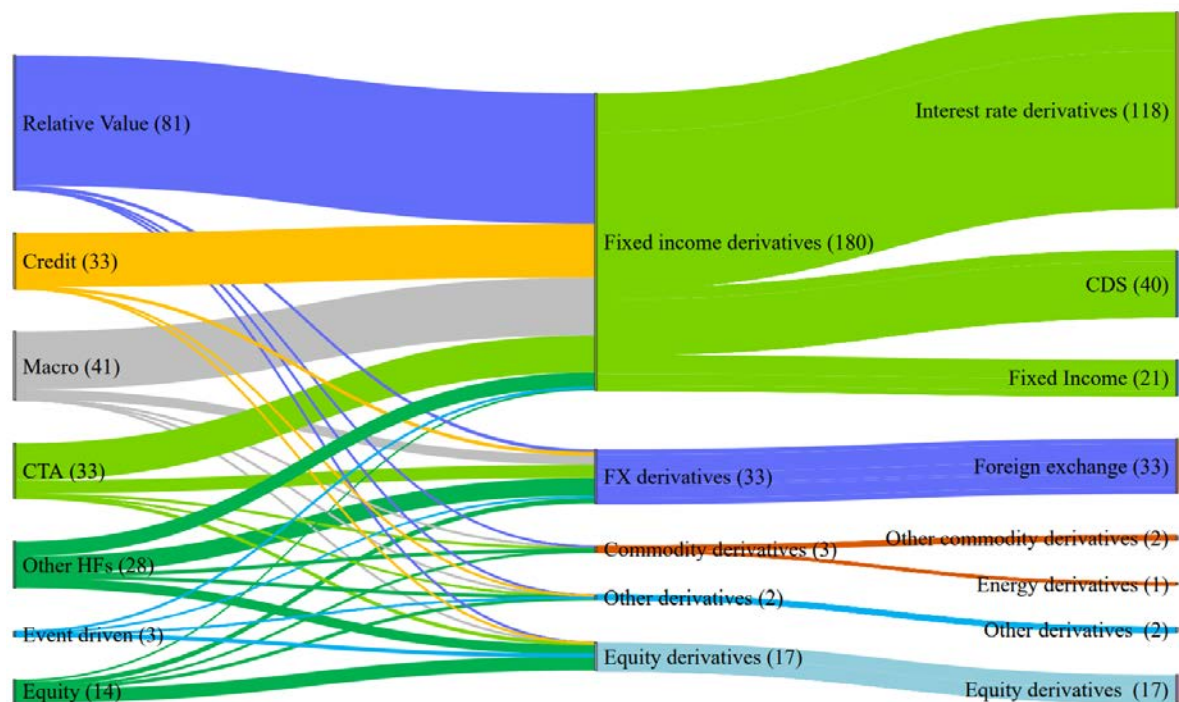
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.80

Exposures to derivatives by AIF type



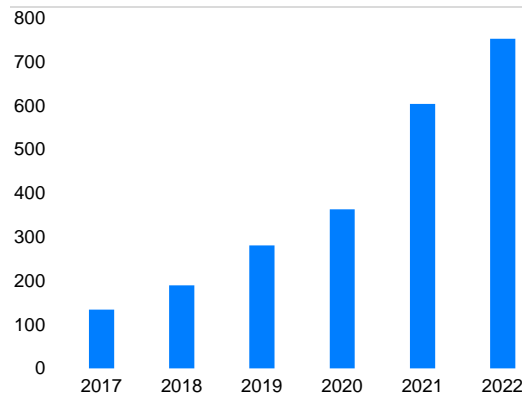
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Private Equity Funds

AIF characteristics

SR-AIF.S.81

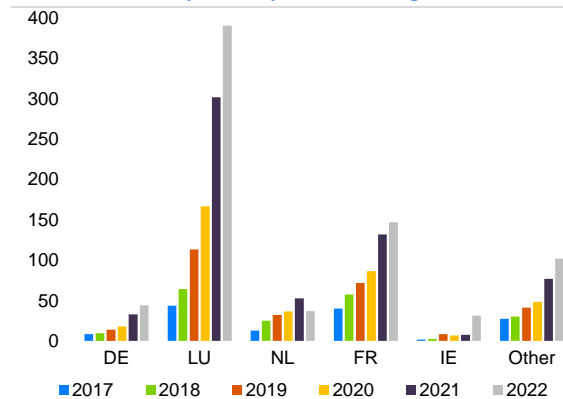
Net asset value



Note: NAV of private equity funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.82

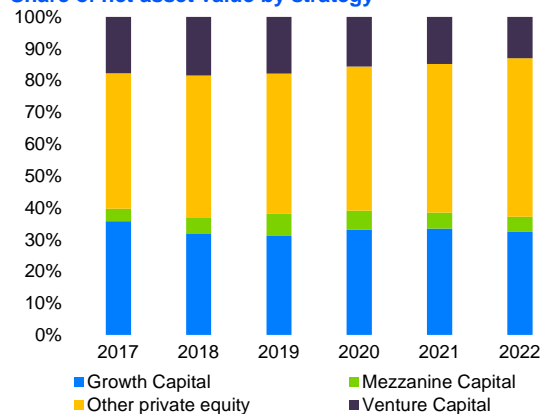
Net asset value by country of the manager



Note: NAV of private equity funds managed and/or marketed by authorized AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.83

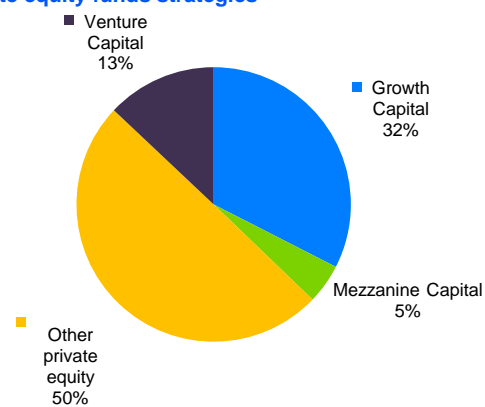
Share of net asset value by strategy



Note: Share of NAV of private equity funds by strategy, in %. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.84

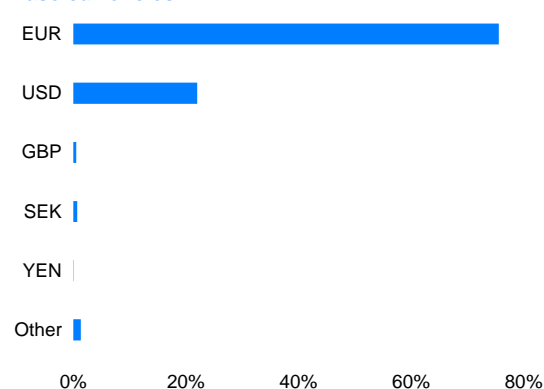
Private equity funds strategies



Note: Investment strategies of private equity funds, end of 2022, 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 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.85

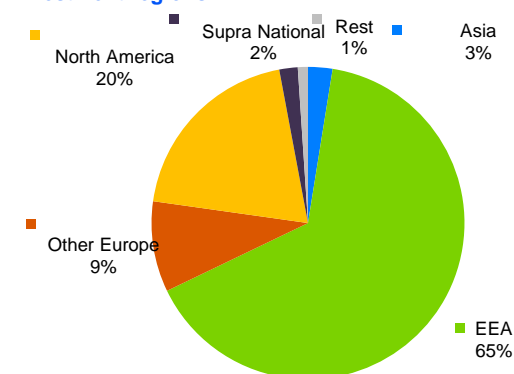
Base currencies



Note: Base currency for private equity funds managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA. Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

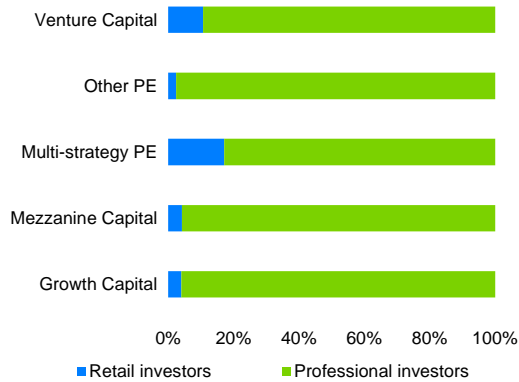
SR-AIF.S.86

Investment regions



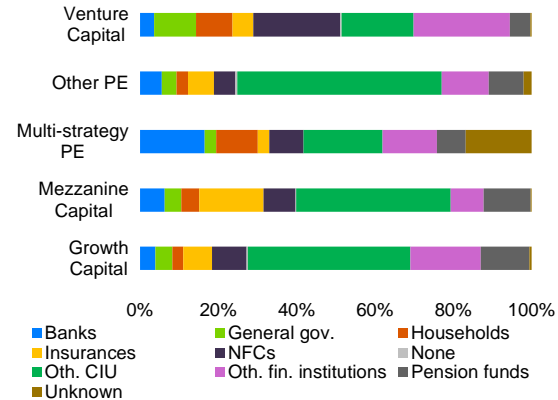
Note: Regional investment focus of private equity funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2020, in % of NAV. Geo-focus determined according to the domicile of investments, and the supranational category including investments without a predominant geo-focus. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.87 Clients



Note: Clients of private equity funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. PE = Private equity fund. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

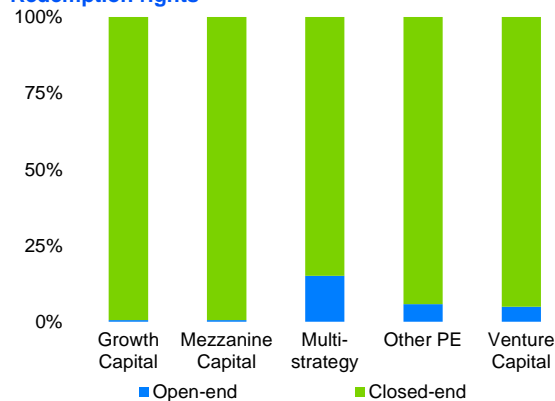
SR-AIF.S.88 AIF investor base



Note: Ownership of units in private equity funds managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. NFCs= Non-financial corporates. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

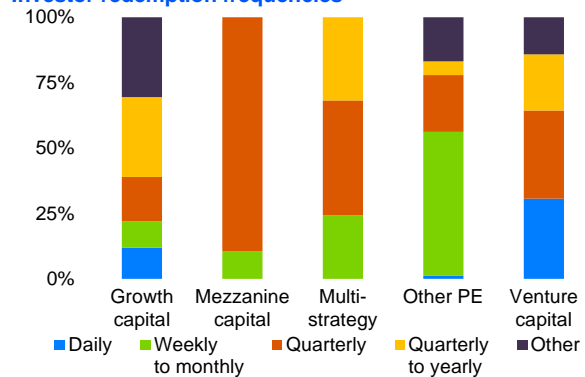
AIF liquidity profile

SR-AIF.S.89 Redemption rights



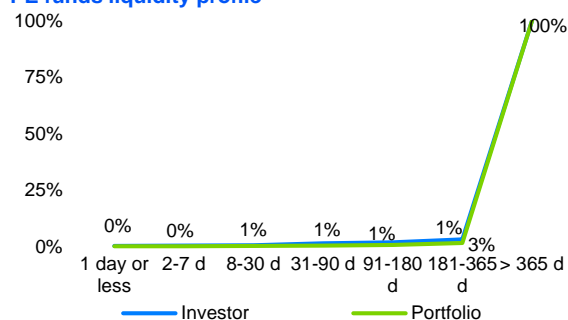
Note: Redemption rights provided in the ordinary course to investors in private equity funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. PE=Private equity fund. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.90 Investor redemption frequencies



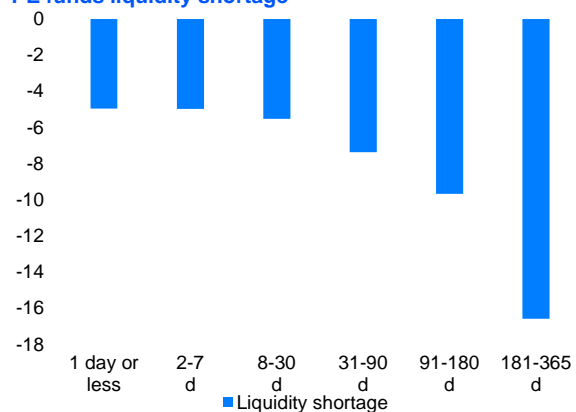
Note: Investor redemption frequencies allowed by open-end private equity funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Data for the EEA30. Sources: AIFMD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

SR-AIF.S.91 PE funds liquidity profile



Note: Portfolio and investor liquidity profiles of private equity funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

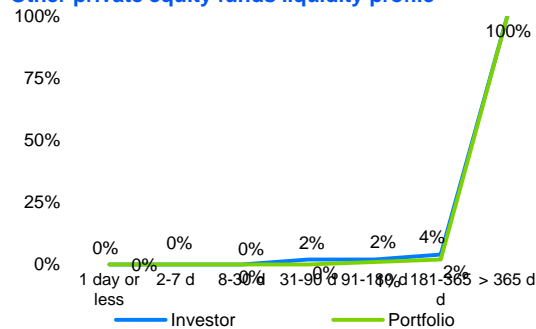
SR-AIF.S.92 PE funds liquidity shortage



Note: Liquidity shortage of private equity funds, % of NAV. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as not compensated by liquidity surplus. Data for the EEA30. Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.93

Other private equity funds liquidity profile

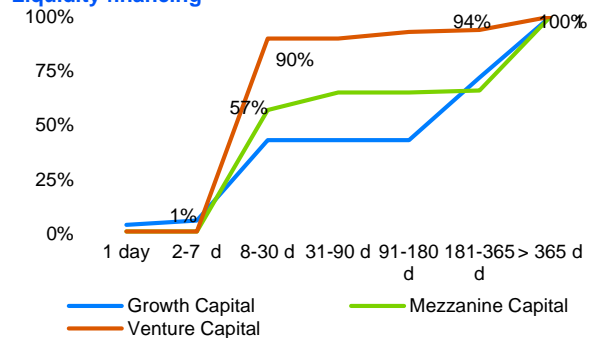


Note: Portfolio and investor liquidity profiles of other private equity funds managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.94

Liquidity financing



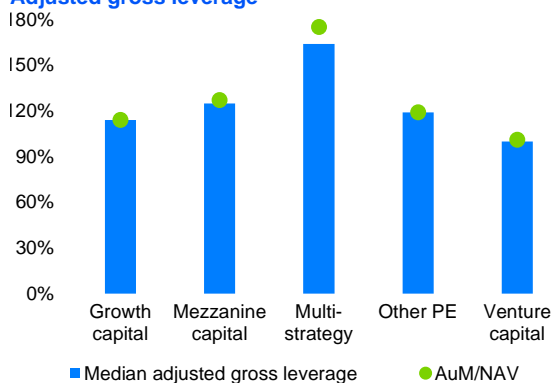
Note: Liquidity financing of private equity funds managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

SR-AIF.S.95

Adjusted gross leverage

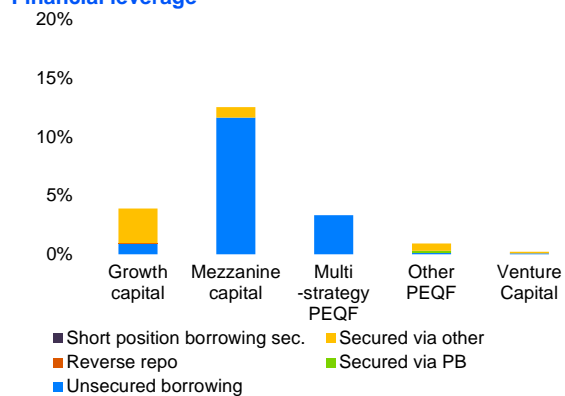


Note: Adjusted gross leverage of private equity funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. PE=Private equity fund. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.96

Financial leverage

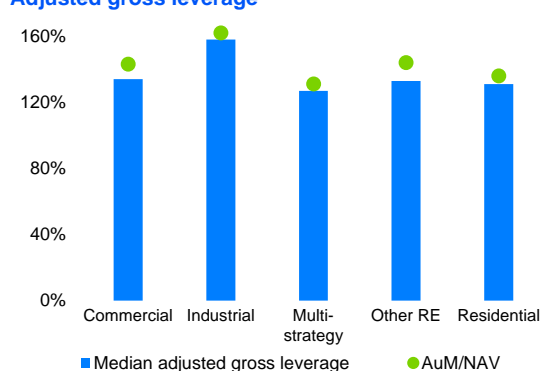


Note: Cash and securities borrowed by private equity funds, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.97

Adjusted gross leverage

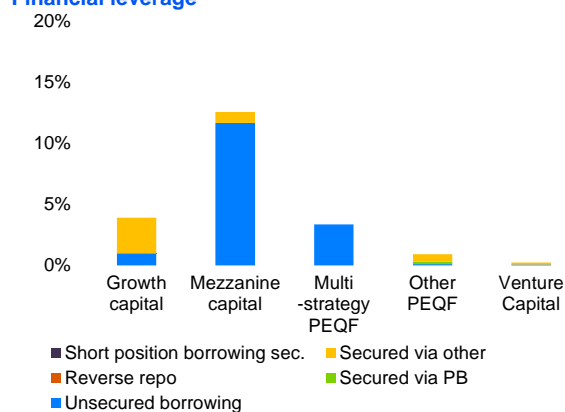


Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. RE=Real estate. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.98

Financial leverage

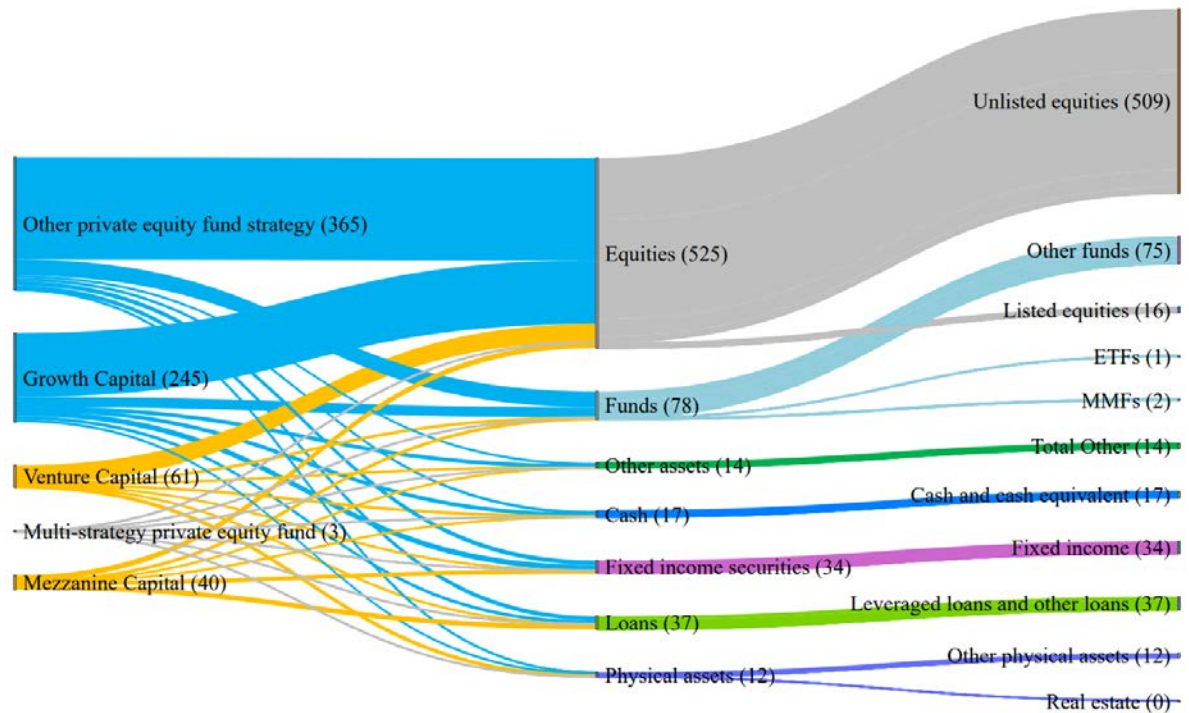


Note: Cash and securities borrowed by private equity funds, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. PEQF=Private Equity Fund. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.99

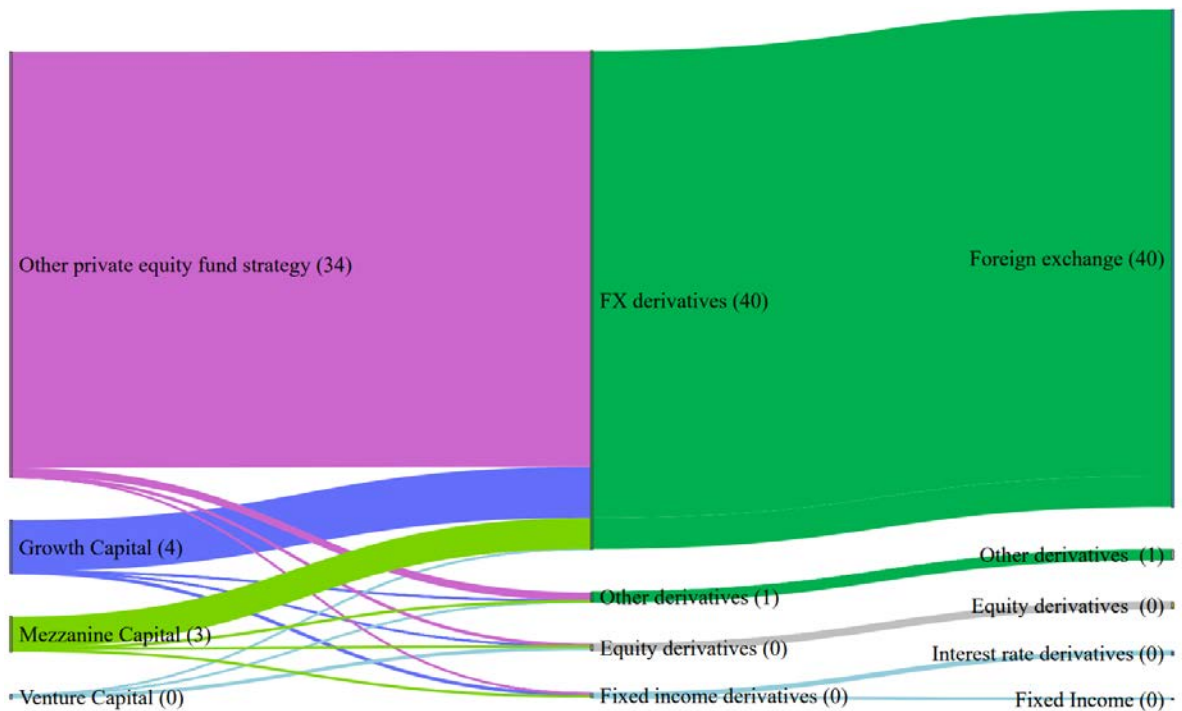
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.100

Exposures to derivatives by AIF type



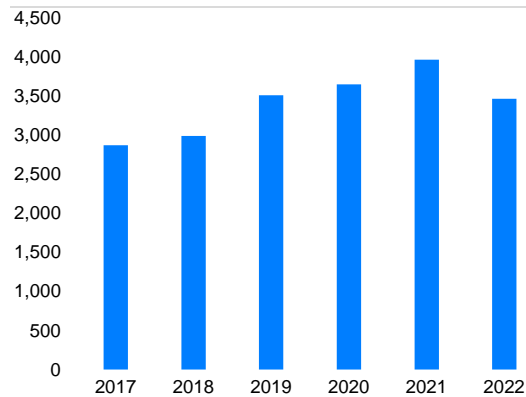
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Other AIFs

AIF characteristics

SR-AIF.S.101

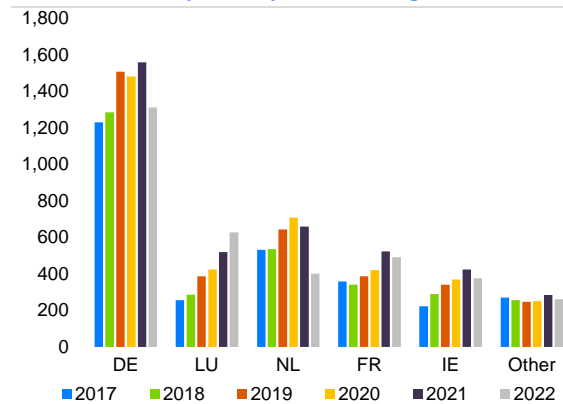
Net asset value



Note: NAV of other AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.102

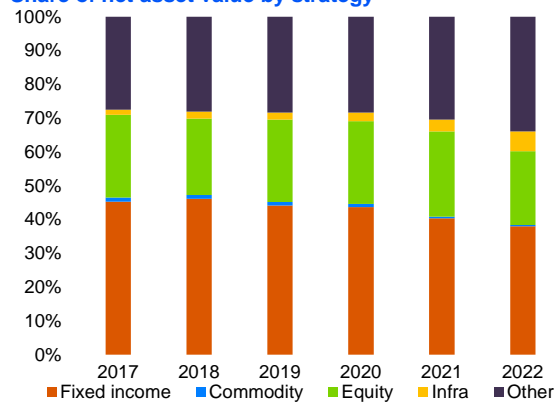
Net asset value by country of the manager



Note: NAV of other AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, in EUR bn. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.103

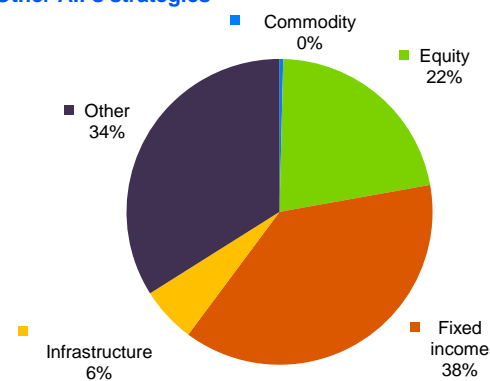
Share of net asset value by strategy



Note: Share of NAV of other AIFs by strategy, in %. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for the EEA30. Infra= Infrastructure.

SR-AIF.S.104

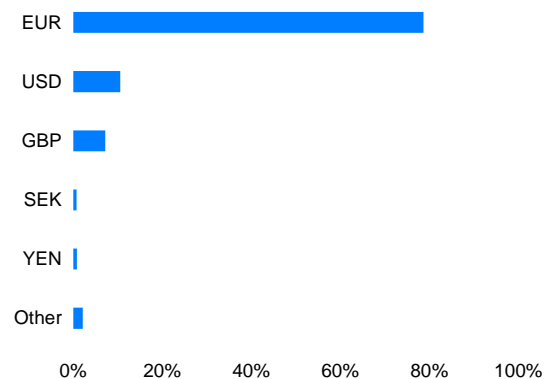
Other AIFs strategies



Note: Investment strategies of AIFs classified as Other, end of 2022, in % of NAV. AIFs managed and/or marketed by full scope EU AIFMs and sub-threshold managers registered only in national jurisdictions. Data for 28 EEA countries.
Sources: National Competent Authorities, ESMA.

SR-AIF.S.105

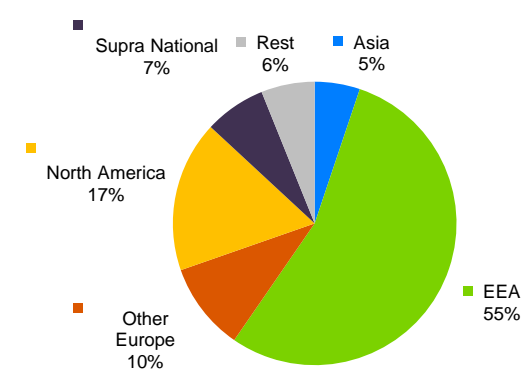
Base currencies



Note: Base currency for other AIFs managed and/or marketed by authorised EU AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Sources: AIFMD database, National Competent Authorities, ESMA, Data for 28 EEA countries.
Sources: AIFMD database, National Competent Authorities, ESMA.

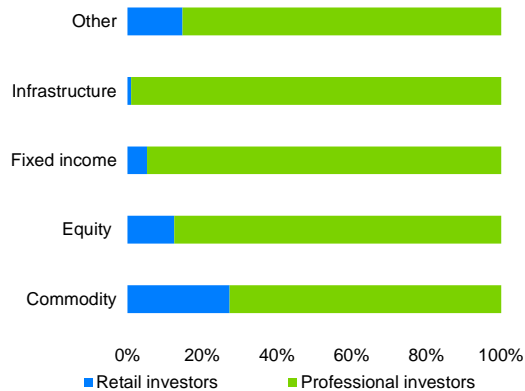
SR-AIF.S.106

Investment regions



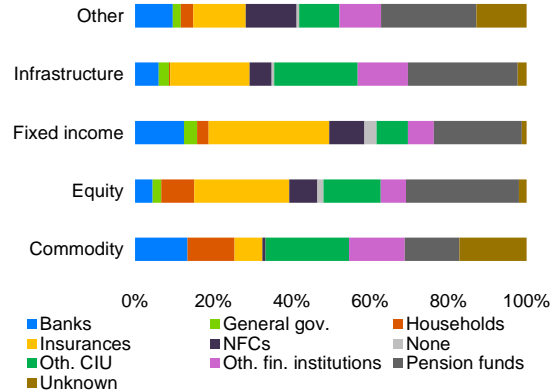
Note: Regional investment focus of EU AIFs classified as Other, managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2020, in % of NAV. Geo-focus determined according to the domicile of investments and the supranational category including investments without a predominant geo-focus. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.107 Clients



Note: Clients of AIFs classified as Other AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

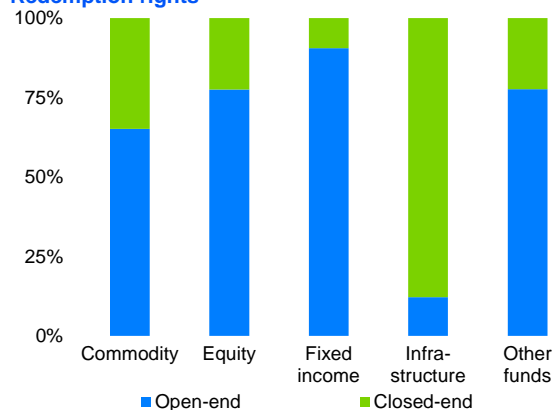
SR-AIF.S.108 AIF investor base



Note: Ownership of units in other AIFs managed and/or marketed by authorised AIFMs and sub-threshold managers registered only in national jurisdictions, end of 2022, in % of NAV. NFCs= Non-financial corporates. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

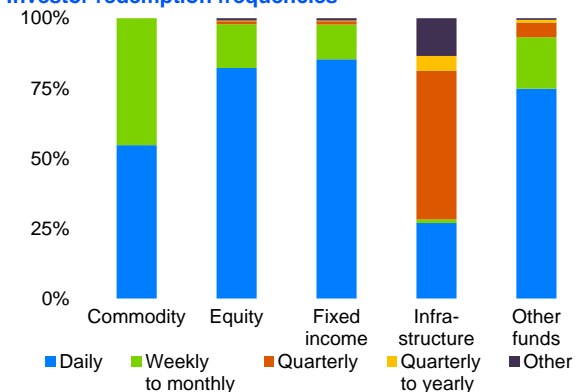
AIF liquidity profile

SR-AIF.S.109 Redemption rights



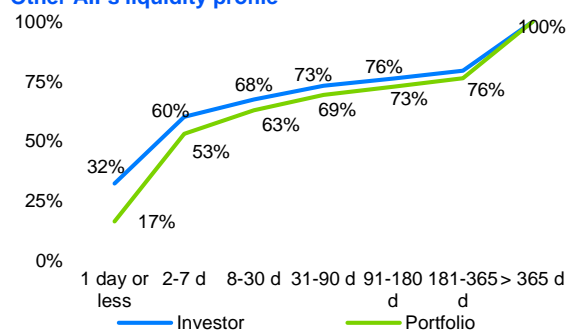
Note: Redemption rights provided in the ordinary course to investors in AIF: classified as Other managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.110 Investor redemption frequencies



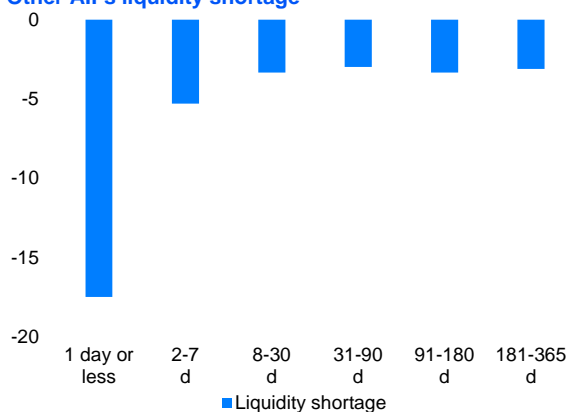
Note: Investor redemption frequencies allowed by open-end AIFs classified as Other managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised EU AIFMs marketed, respectively, w/ and w/o passport. Data for the EEA30.
Sources: AIFMD database, National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

SR-AIF.S.111 Other AIFs liquidity profile



Note: Portfolio and investor liquidity profiles of AIFs classified as Other managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

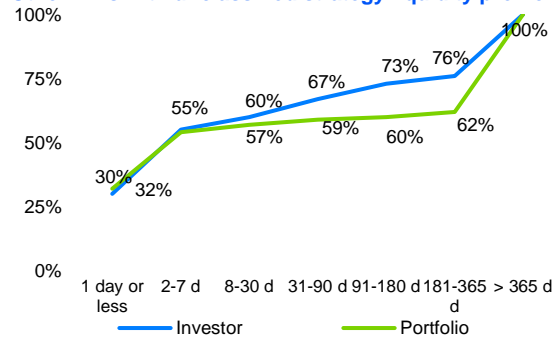
SR-AIF.S.112 Other AIFs liquidity shortage



Note: Liquidity shortage of AIFs classified as Other, % of NAV, end of 2020. Liquidity shortage is defined as the sum of liquidity deficits at the level of the funds, as non compensated by liquidity surplus. Data for the EEA30.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.113

Other AIFs with unclassified strategy liquidity profile

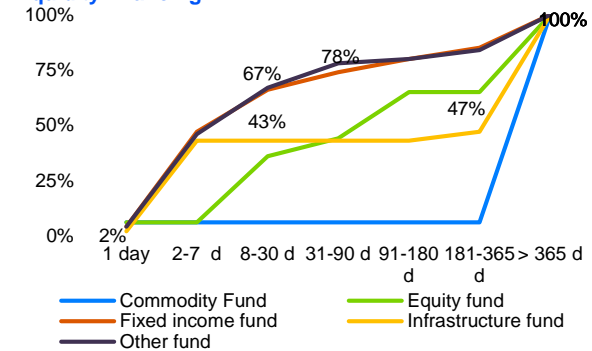


Note: Portfolio and investor liquidity profiles of other AIFs (unclassified strategy) managed and/or marketed by authorised AIFMs, end of 2022. Portfolio liquidity defined as the percentage of the funds' assets capable of being liquidated within each specified period, investor liquidity defined as the shortest period for which investors can redeem. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. d=Days. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.114

Liquidity financing



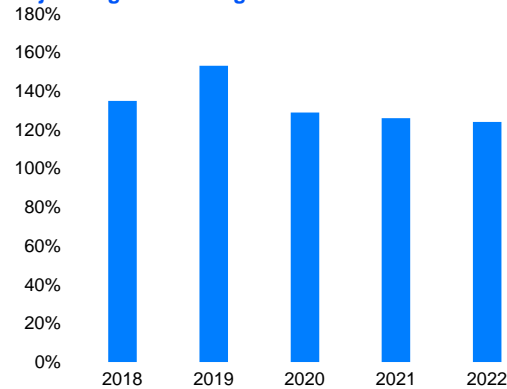
Note: Liquidity financing of AIFs classified as Other managed and/or marketed by authorised AIFMs, end of 2022. Aggregate amount of borrowing and cash financing divided depending on longest period for which creditors are contractually committed to provide such financing. Borrowing and cash financing include drawn and undrawn, committed and uncommitted lines of credit as well as any term financing. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

AIF leverage and exposures

SR-AIF.S.115

Adjusted gross leverage

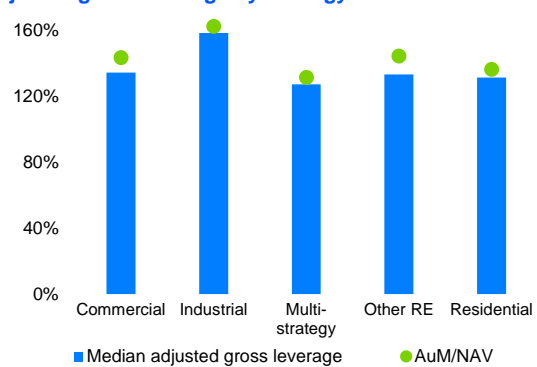


Note: Adjusted gross leverage of other AIFs managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.116

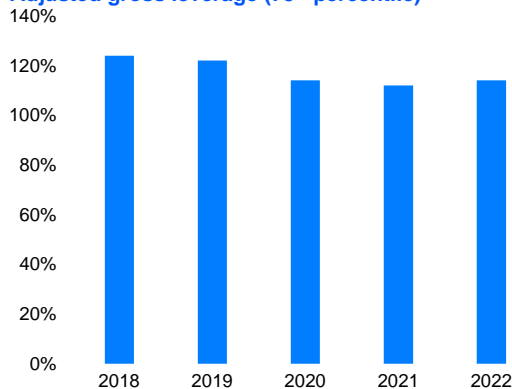
Adjusted gross leverage by strategy



Note: Adjusted gross leverage of real estate funds managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage computed as total exposure less IRDs with respect to NAV. RE=Real estate. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.117

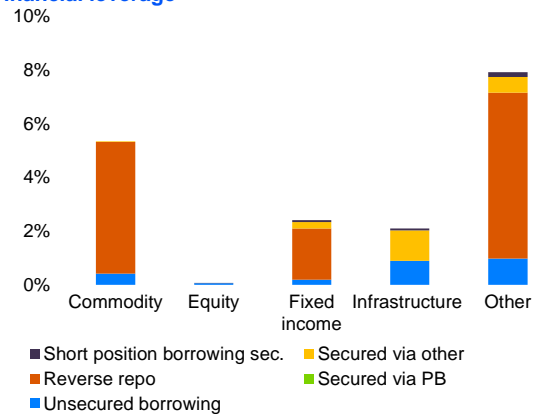
Adjusted gross leverage (75th percentile)

Note: Adjusted gross leverage of other AIFs (75th percentile) managed and/or marketed by authorised AIFMs, end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30.

Sources: AIFMD database, National competent authorities, ESMA.

SR-AIF.S.118

Financial leverage

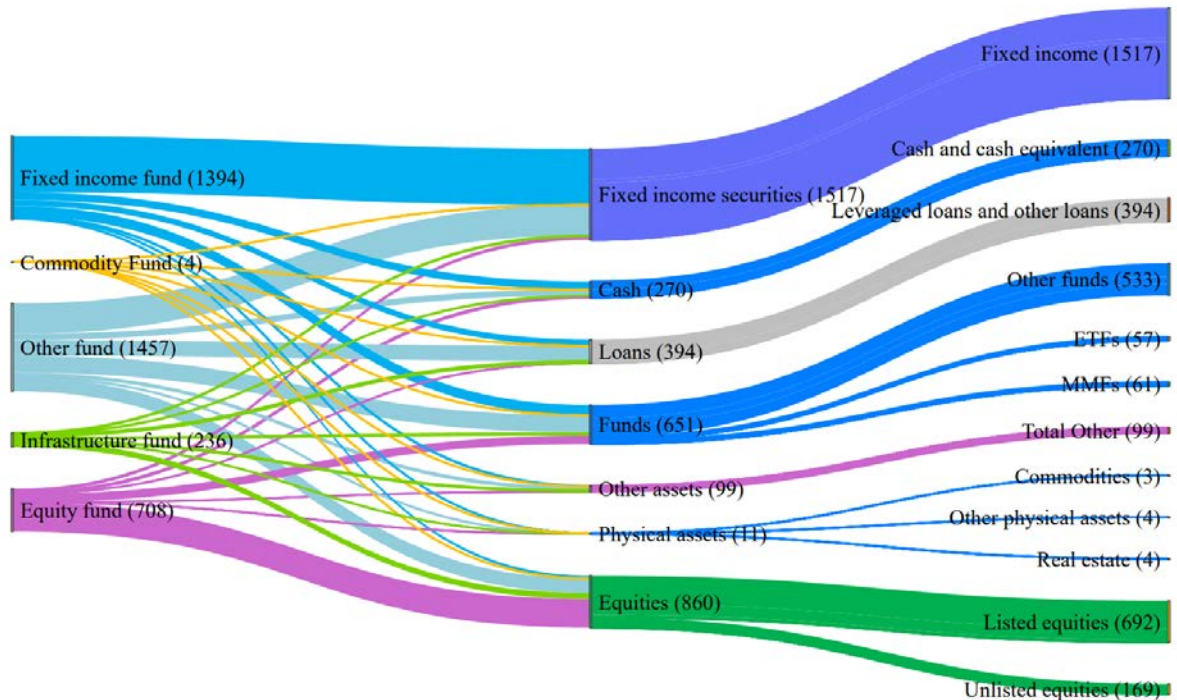


Note: Cash and securities borrowed by AIFs classified as Other, end of 2022, in % of NAV. EEA30 and non-EEA30 AIFs by authorised AIFMs marketed, respectively, w/ and w/o passport. Data for the EEA30.

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.119

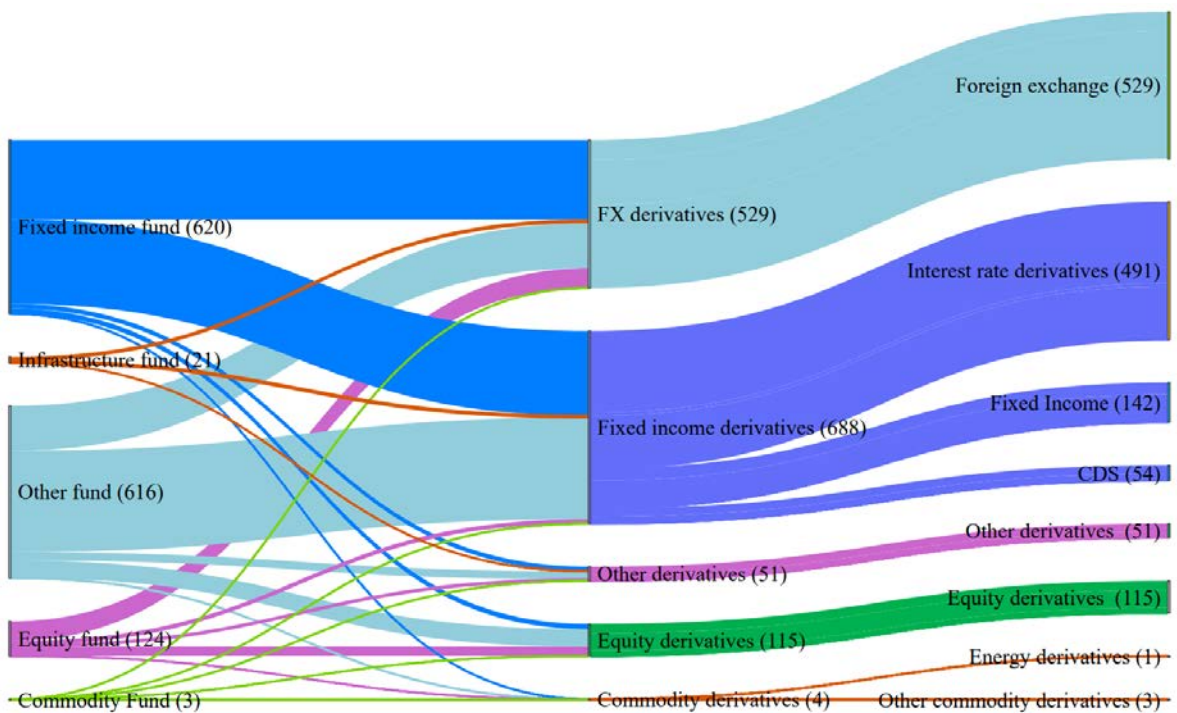
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.120

Exposures to derivatives by AIF type



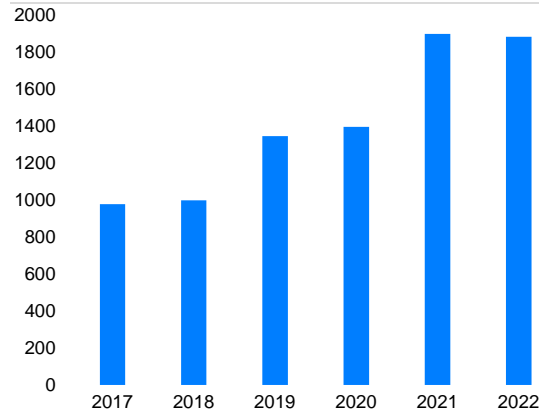
Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

Non-EU AIFs (NPPR)

AIF characteristics

SR-AIF.S.121

Net asset value

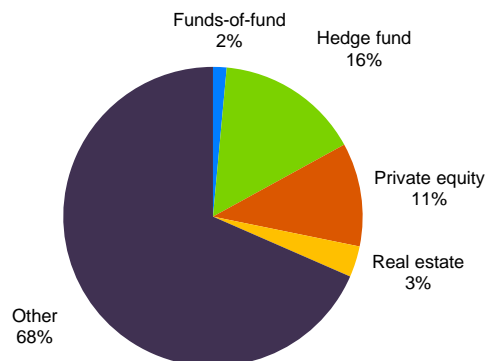


Note: NAV of AIFs marketed non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.123

AIF types

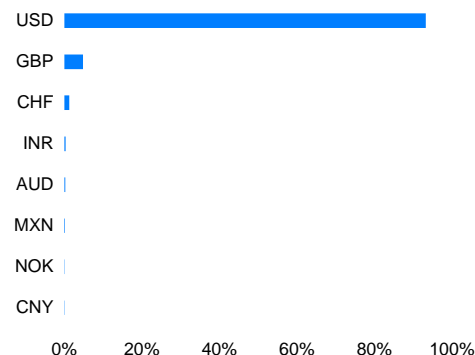


Note: NAV by type of AIFs marketed non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in %. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.125

Base currencies

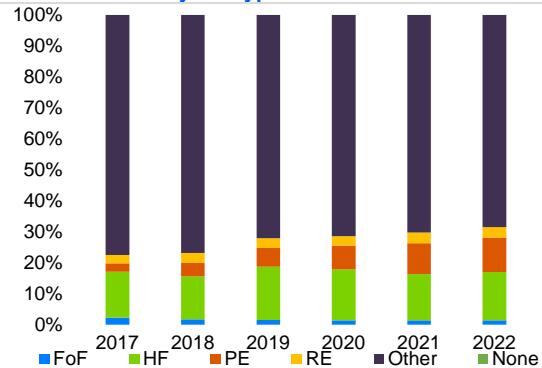


Note: Base currency of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD) by size, end of 2022. In % of NAV. AIFs identified via international standard identifiers (LEI, ISIN, Cusip).

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.122

Share of the NAV by AIF type

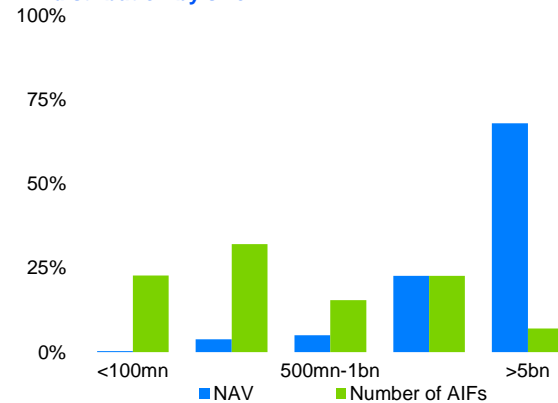


Note: NAV by type of AIFs marketed by non-EU AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of total. FoF=Fund of funds, HF=Hedge funds, PE=Private equity funds, RE=real estate, None=No predominant type.. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip).

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.124

AIF distribution by size

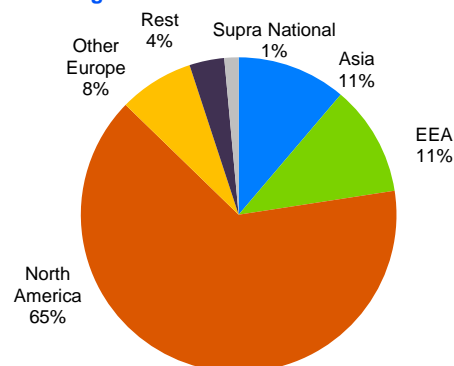


Note: Share of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD) by size, end of 2022. In %. AIFs identified via international standard identifiers (LEI, ISIN, Cusip).

Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.126

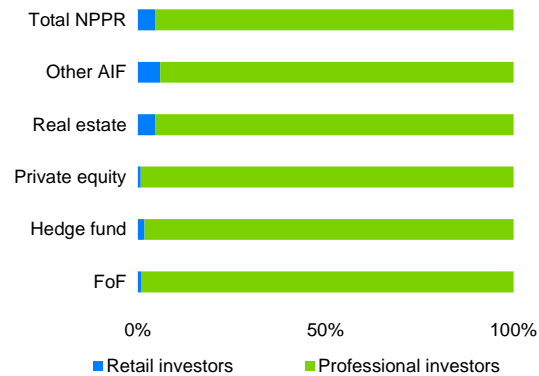
Investment regions



Note: Regional investment focus of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, 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.

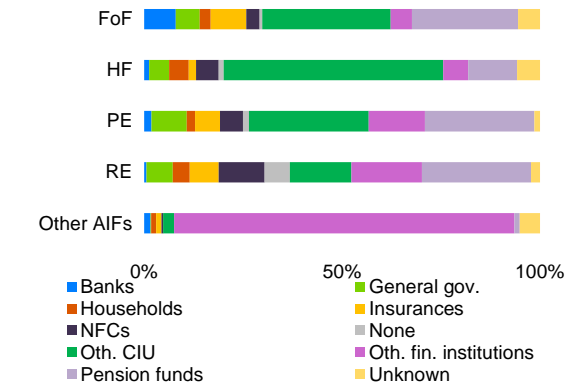
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.127 Clients



Note: Clients of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds
Sources: AIFMD database, National Competent Authorities, ESMA.

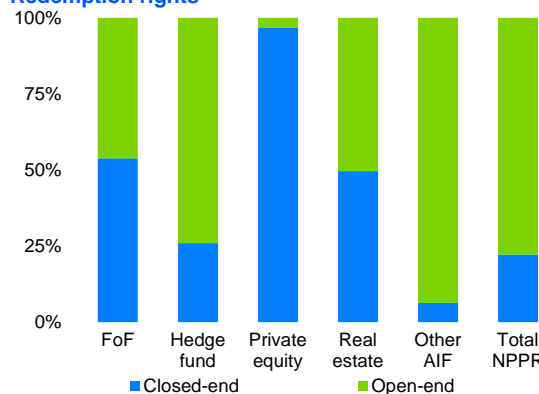
SR-AIF.S.128 AIF investor base



Note: Ownership of units in AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds. NFCs= Non-financial corporates.
Sources: AIFMD database, National Competent Authorities, ESMA.

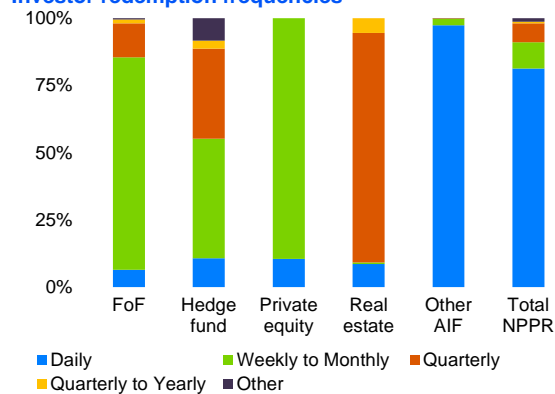
AIF liquidity profile

SR-AIF.S.129 Redemption rights



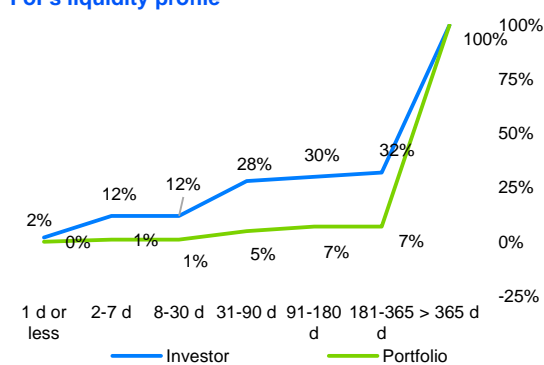
Note: Redemption rights provided in the ordinary course to investors in AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds, None=No predominant type.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.130 Investor redemption frequencies



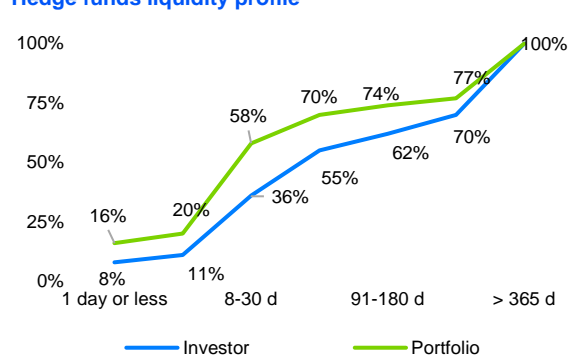
Note: Investor redemption frequencies allowed by open-end AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of NAV. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Fund of Funds, None=No Predominant Type.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.131 FoFs liquidity profile



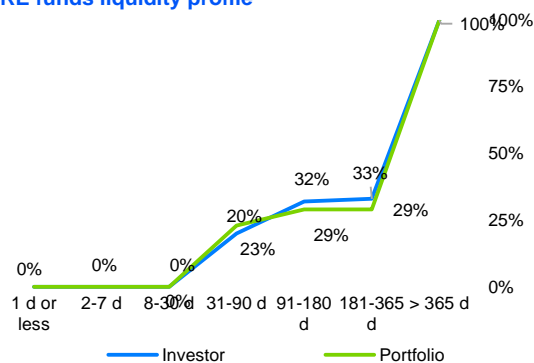
Note: Portfolio and investors liquidity profiles of funds of funds marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022. AIFs iAIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable 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.

SR-AIF.S.132 Hedge funds liquidity profile



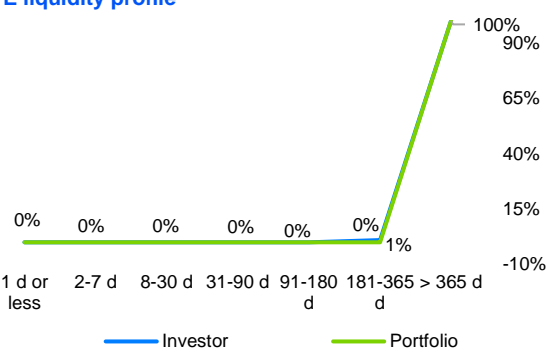
Note: Portfolio and investors liquidity profiles of hedge funds marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable of 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.

SR-AIF.S.133 RE funds liquidity profile



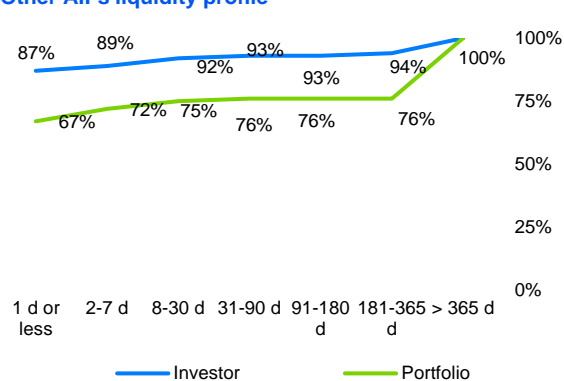
Note: Portfolio and investors liquidity profiles of real estate funds marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable 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.

SR-AIF.S.134 PE liquidity profile



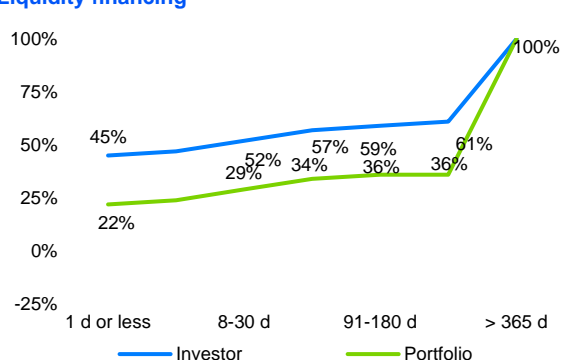
Note: Portfolio and investors liquidity profiles of private equity funds marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). Portfolio liquidity defined as the percentage of the funds' assets capable 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.

SR-AIF.S.135 Other AIFs liquidity profile



Note: Portfolio and investors liquidity profiles of AIFs classified as Other marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022. 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.

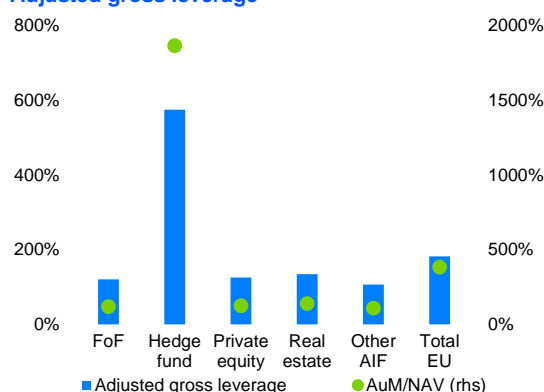
SR-AIF.S.136 Liquidity financing



Note: Portfolio and investors liquidity profiles of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2020. 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.

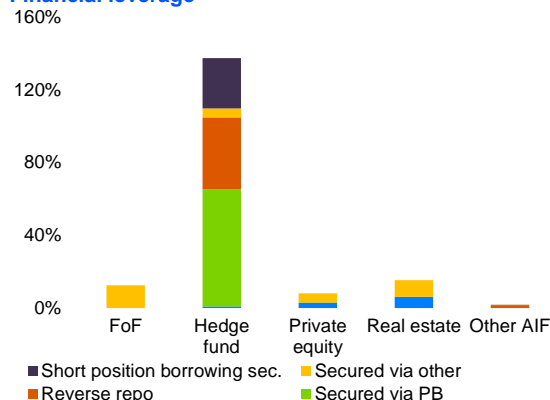
AIF leverage and exposures

SR-AIF.S.137 Adjusted gross leverage



Note: Adjusted gross leverage of AIFs marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD), end of 2022, in % of NAV. Adjusted gross leverage does not include IRDs. FoF= Fund of funds.
Sources: AIFMD database, National competent authorities, ESMA.

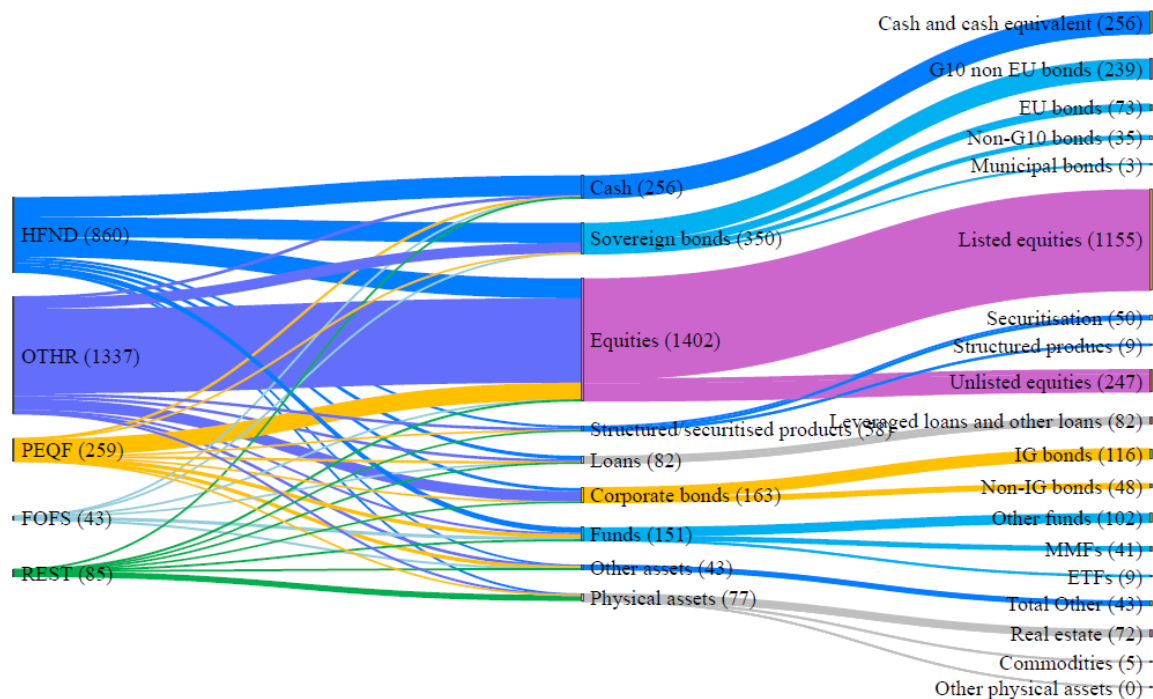
SR-AIF.S.138 Financial leverage



Note: Cash and securities borrowed, end of 2022, in % of NAV. marketed by non-EEA30 AIFMs w/o passporting rights (art. 42 of AIFMD) in EUR bn. AIFs identified via international standard identifiers (LEIs, ISIN, Cusip). FoF=Funds of Funds.
Sources: AIFMD database, National Competent Authorities, ESMA.

SR-AIF.S.139

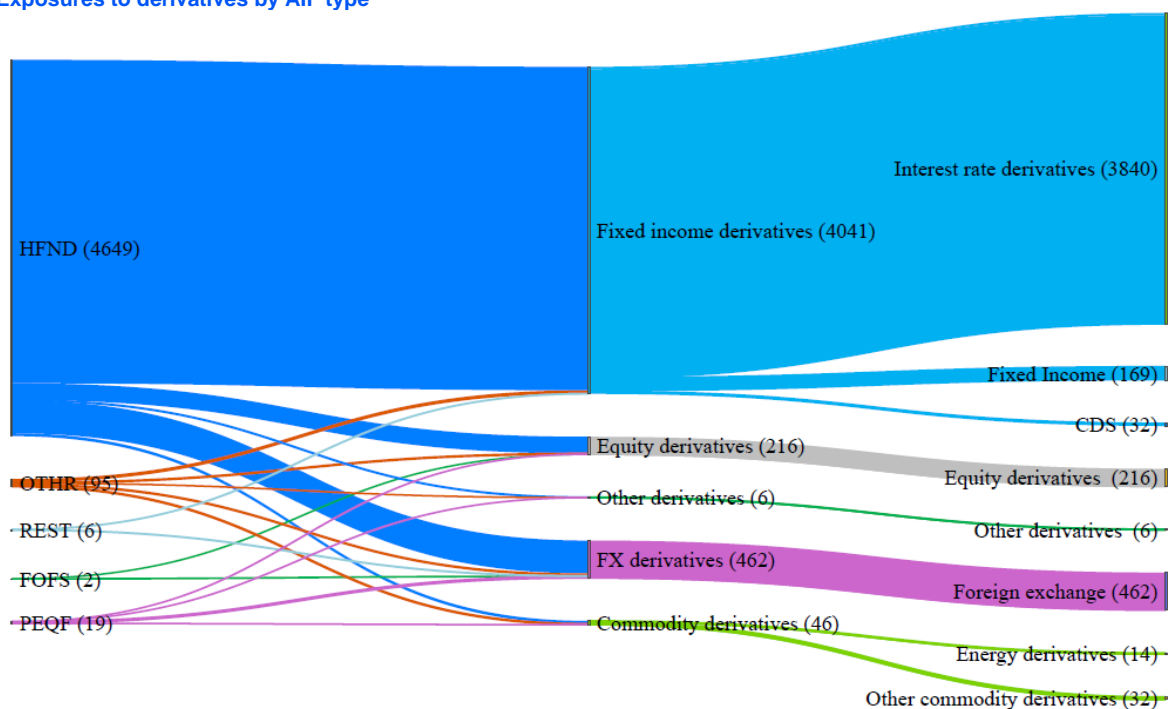
Exposures to securities, collective investment units and physical assets by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

SR-AIF.S.140

Exposures to derivatives by AIF type



Note: OTH=Other AIFs; HFND=Hedge funds; FOFS=Funds of Funds; PEQF=Private equity funds; REST=Real estate funds.

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 Article 42 of the AIFMD (NPPR) are described in the specific section 'Non-EU AIFs'.

The data are based on reports transmitted to ESMA by 29 NCAs. Around 41,219 reports of EU AIFs were transmitted to ESMA. Of those reports, we excluded around 3,465 nil reports (empty reports sent by new AIFs) and 2,393 feeder funds (representing a NAV of EUR 437 bn) to avoid double counting. The final sample is composed of around 35,361 AIFs.

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. 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, even if data quality improved. 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.

Definition of terms

Under the AIFMD, the definitions of some concepts differ from those commonly used in the industry. 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 definition of AuM is different from the typical definition 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 which is 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 interest rate derivatives (IRDs) and FX derivatives from the computation of leverage, following the approach used in the previous reports (ESMA, 2019 and 2020). Indeed, the use of IRDs tends to inflate leverage measures, since IRDs (and FX derivatives) 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. ESMA Guidelines specify that AIFMs and AIFs that have commenced have to start reporting from the first day of the calendar quarter following authorisation or registration²².

²² [Guidelines on reporting obligations under Articles 3\(3\)\(d\) and 24\(1\), \(2\) and \(4\) of the AIFMD.](#)

AIFMs and AIFs that have not started any activity must still report a nil return to the home competent authority. In addition to this, 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 a double counting of entities, as their AIFs cannot be passported.

As of 14 August 2023, NCAs have gathered and made available to ESMA 41,219 reports for the end of 2022 of AIFs managed and/or marketed by authorised EU and sub-threshold AIFMs. Of the initial data intake, around 3,465 AIFs reported a nil return. The definition of the AIFs' reference sample for the analysis requires further data cleaning operations and consistency checks.

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Data cleaning and 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.

The final reference sample is constituted by 35,361 AIFs. Overall, 80% of them are managed by full-scope AIFMs benefiting from the EU passport. The final sample includes 433 AIFs without a predominant type (i.e. reported as 'None'). Feeder funds are excluded from analysis to avoid any double counting of assets.

Non-EU AIFs

EU Member States can allow non-EU asset managers to market alternative funds at national level under the National Private Placement Regime (NPPR). The NPPR is a mechanism that allows 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. 900 non-EU AIFs can be uniquely identified while around 1,500 AIFs marketed under NPPR in different jurisdictions cannot be uniquely identified because of the lack of international identifiers.

According to the data reported by National Competent Authorities the non-EU AIFs are marketed in 12 EU jurisdictions under the NPPR. The NAV of the NPPR market is as at least EUR 1.9tn which is equivalent to about 30% of the EU AIF market. Most of the AIFs are other AIFs exposed to equities, most of them being US equity ETFs, in line with previous AIF reports²³. The total regulatory AuM is estimated at a minimum of EUR 7,335 bn. The observed adjusted gross leverage for the non-EU AIFs identified is 182% mainly driven by HFs since they are highly exposed to IRDs. This market is highly concentrated with 7% of the AIFs accounting for almost 70% of the NAV.

²³ See the NPPR section in the [2022 ESMA Annual Statistical Report on EU Alternative Investment Funds](#) for further details.

List of abbreviations

ABS	Asset-Backed Security
AIF	Alternative Investment Fund
AIFM	Alternative Investment Fund Manager
AIFMD	Alternative Investment Fund Manager Directive
AuM	Assets under Management
bp	basis point
CDO	Collateralised Debt Obligation
CIU	Collective Investment Undertaking
CLO	Collateralised Loan Obligation
CRE	Commercial Real Estate
CUSIP (number)	Committee on Uniform Securities Identification Procedures number
EEA	European Economic Area
EEA30	30 countries that belong to the European Economic Area
EFAMA	European Fund and Asset Management Association
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETF	Exchange-Traded Fund
FoF	Fund of Fund
HF	Hedge Fund
IRD	Interest Rate Derivative
ISIN	International Securities Identification Number
LDI	Liability Driven Investment
LEI	Legal Entity Identifier
LMT	Liquidity management tools
MBS	Mortgage-backed Security
MMF	Money Market Fund
NAV	Net asset value
NCA	National Competent Authority
NFC	Non-financial corporate
NPPR	National Private Placement Regime
PE	Private Equity
pp	percentage point
RE	Real Estate
RRE	Residential Real Estate
UCITS	Undertakings for the Collective Investment in Transferable Securities



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