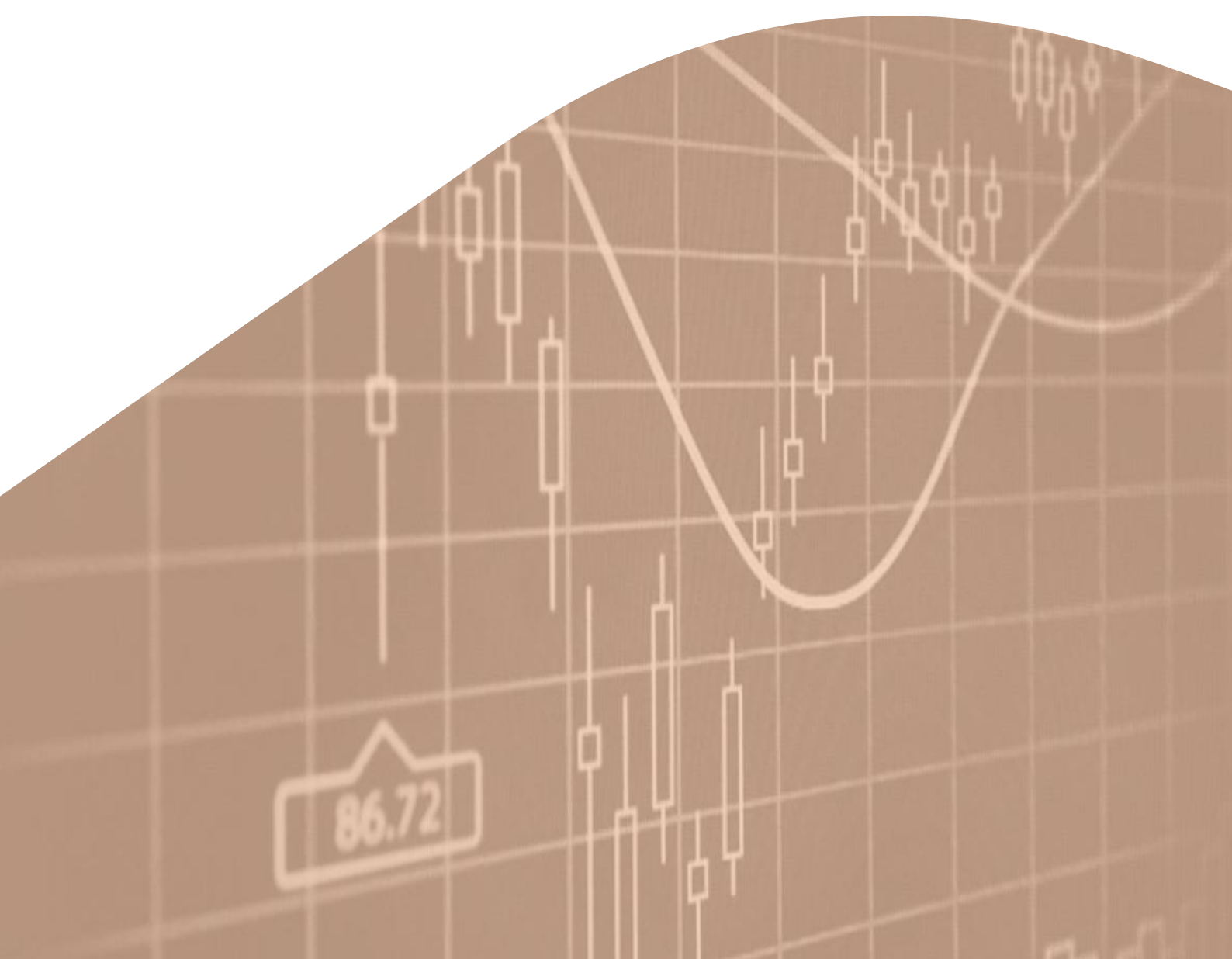


ESMA TRV Risk Analysis

Financial Stability

Real estate markets – Risk exposures in EU securities markets and investment funds



ESMA Report on Trends, Risks and Vulnerabilities Risk Analysis

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Financial Stability

Real estate markets – Risk exposures in EU securities markets and investment funds

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Summary

Recent macroeconomic shifts, such as elevated inflation and rapidly rising interest rates, coupled with global growth deceleration, have put real estate markets under particular stress. We explore the current exposures in EU securities markets and the asset management sector to the rising risks in real estate markets. First, there has been a broad-based decline of the main equity and bond real estate indices, as along with increased trading activity and securities lending activity for real estate corporations. Lower valuations were also observed for listed real estate firms and real estate investment trusts, this may also be in the context of an increase in leverage of real estate firms over the past five years. Second, next to credit institutions, particularly banks, investment funds are important investors in the sector. They also belong to the main counterparties of some real estate firms in derivatives and securities financing transactions. Real estate-related securities are also found to be used as collateral. Real estate alternative investment funds have seen significant growth in the past five years (+375% to EUR 1.5tn AuM). Finally, real estate firms have mainly domestic focus with few prominent players and low cross border-exposures (except for securities financing transactions). Going forward, interest rate risk can be expected to continue to shape real estate market exposures; credit risk indicators for real estate companies have started to show signs of deterioration; liquidity mismatches remain the key vulnerability for real estate funds².

¹ This article was written by Lorenzo Danieli, with significant contributions from: Yanis El Omari, Damien Fennell, Raoul Fruzza, Aira Dominique Gutierrez, Jean-Baptiste Haquin, Natacha Mosson, Roberto Proietti and Alessandro Spolaore. We are grateful for valuable comments from Christian Winkler, Steffen Kern, and the ESMA risk standing committee (RSC).

² The data cut-off for the analysis is 30 September 2023, except for securities markets charts whose data cut-off date is 30 October 2023. Any other cut-off date is adequately specified in the sources of the charts. Some charts are based on regulatory databases (EMIR, SFTR, AIFMD) and are intended to be interpreted as purely descriptive remaining aware of potential quality limitations.

Introduction

Market downturns in **real estate markets** can have significant effects on financial markets and the wider financial system, as witnessed in the Global Financial Crisis (GFC). While current RE market adjustments are of a different nature and scale compared to the events of 2007 to 2008, real-estate developments so far suggest that profound pressures on the prices, quantities and quality of real estate assets are presently at work. Understanding the channels through which real estate markets affect other financial markets and the wider economy has since been a key concern for policymakers and regulators.

Price falls in real estate markets can be transmitted into financial markets and the wider financial system through various channels, including:

- bank exposures (worsening credit quality of borrowers);
- non-bank exposures (declining value of real estate investments, lower non-bank real estate funding, potential fire sales);
- the collateral channel (reduced value of real estate collateral can trigger lower real estate demand and further price falls).³

In recent years, a number of broad trends affecting real estate markets have emerged. Among these are structural shifts in demand for real estate induced by the Covid-19 pandemic, a macrofinancial environment characterised by uncertainty, slower growth and increased inflation, and fast-rising interest rates.

These broader and longer-term trends are being reflected in real estate market conditions that have become challenging since mid-2022 – though varying across real estate market segments (e.g. commercial, residential and industrial real estate), demand on rental and buy markets and EU Member States, depending on national market characteristics.

This article analyses risks arising from real estate markets from a securities markets and investment fund perspective. It first provides an overview of real estate market developments. It

then provides an analysis of primary and secondary equity and bond market developments for real estate companies as along with the role of these companies in derivatives, repurchase agreements and securities lending markets. Finally, we analyse impacts on real estate investment funds.

In assessing the main effects of real estate market dynamics in securities markets and investment funds segments, we contribute pieces to what clearly is a much larger picture. Real estate markets are connected to the financial system in numerous and complex ways, including most importantly banks, but also other non-banks such as insurance and pension funds and other intermediaries. Our stock-take reflects the importance of securities market-related transmission channels for this wider systemic picture.

Real estate markets: Tighter credit standards, falling prices

In recent years and months, the economic framework conditions for real estate have changed in a number of important ways.

First, real estate has been gravely affected by structural and cyclical adjustments. After more than a decade of by-and-large favourable growth conditions and historically low interest rates, economic fundamentals have deteriorated, in particular as a result of the Covid-19 pandemic and more recently the Russian war and other adverse geopolitical developments. In parallel, the interest rate environment changed drastically, turning within less than 18 months from a low-for-long scenario until mid-2022 to what is now widely considered a high-for long outlook. And as economic and geopolitical parameters remain erratic, uncertainty over medium-term financing conditions continues to prevail.

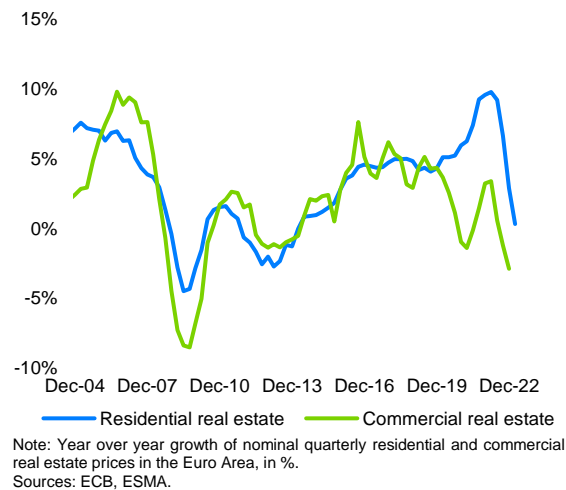
Second, important changes are underway that influence business models and profitability in the real estate sector. Rising commodity and energy costs have hit real estate and construction prices across the EU. At the same time, demand for

³ For a detailed explanation of transmission channels, with a specific focus on commercial real estate, see IMF (2021), *Global Financial Stability* report, [Chapter 3](#):

[Commercial Real Estate: Financial Stability Risks During the COVID-19 Crisis and Beyond](#), April.

sustainable living has contributed to price rises. In addition, commercial real estate has been critically affected by changing demand patterns in the wake of the Covid-19 crisis, resulting in low occupancy ratios and rent returns in many regions around the world.

Chart 1
Commercial and residential real estate prices
Dropping real estate prices



Real estate markets have been affected by these and other cyclical and structural developments, translating into three material consequences for the industry, namely significant declines in:

- market prices
- the value of property as collateral
- the related credit quality

These and other effects weigh on real estate markets in varying ways, with differential effects between **commercial** and **residential** real estate and across countries and regions. Such differences notwithstanding, the impact of the industry adjustments on financial markets in the remit of ESMA has been profound.

Listed real estate firms: Valuations drop...

In securities markets, the impact of the real estate downturn has been particularly visible in the valuations across real estate asset classes.

In equity markets, the **STOXX 600 Europe Real Estate** index declined by 40% in 2022 and by a further 12% year-to-date (YTD) as of the end of October 2023. As of the end of October 2023 it was still trading 18% below the market low observed after the outbreak of the Covid-19 pandemic in March 2020 (Chart 6). This compares to the performance of the broader **STOXX 600 index** of -13% in 2022, +1% in 2023 YTD in October and +55% since the March 2020 market low.

In corporate bond markets, the Bank of America **Real Estate Euro corporate bond** index was down by -20% in 2022 and only recovered by 4% YTD as of October 2023. In contrast to equity valuations, real estate bonds have broadly mirrored the general corporate bond market performance since the end of 2021, with the benchmark Euro corporate bond down -14% during 2022 and up 5% YTD as of October 2023 (Chart 7).

The impact on share valuations has been similar between listed real estate companies (i.e. real estate developers, real estate brokers, or companies providing financing for real estate transactions) and **real estate investment trusts (REITs)** (i.e. exchange traded investment pools).⁴ Both types of real estate companies showed declining valuations since the beginning of 2022.⁵ From a regional perspective, in 2023, entities domiciled in LU (-28%), DE (-23%), and SE (-21%) particularly underperformed with respect to those domiciled elsewhere in the EEA (Chart 10).

For REITs, valuations declined by almost half since January 2020. From a sectoral perspective residential and retail REITs both declined by 47%, while industrial REIT valuations increased by 6% compared to January 2020 levels (Chart 11), highlighting diverse developments in different segments of real estate markets.

⁴ Listed companies are retrieved from Refinitiv Eikon according to the classification 'public firms'.

⁵ REITs are company that own, operate or finance income-producing real estate. REITs provide investment opportunities like mutual funds.

At the end of March 2023, the impact of the general cyclical downturn on real estate was further aggravated by the knock-on effects of the banking turmoil in the US. European real estate shares were particularly affected by investor fears of tighter access to credit and further falling property valuations.⁶ This was followed, in April and May 2023, by a surge in trading volumes (72% above the one-year moving average) (Chart 8) and an increase in share lending activity. Overall, share lending activity started to pick up in January 2023, reaching its peak in May (from 13% on 30 April 20% on 19 May), before receding to end-2022 levels of around 8% (Chart 9). On top of this, in 2023, there was a higher fraction of real estate shares with high utilisation rate between 20% and 40% (on average 15% of real estate shares displayed high utilisation rates compared to 4% in mid-2022).

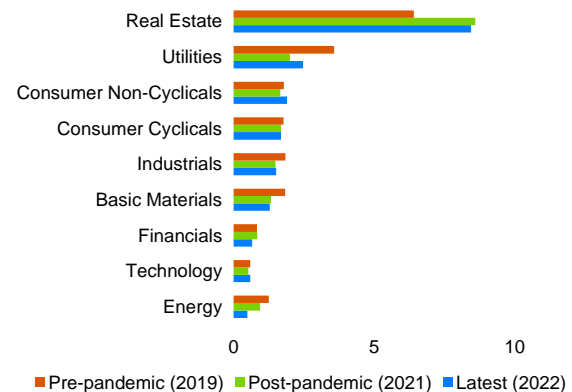
... while leverage rises

In terms of financial conditions of listed real estate firms, as of the end of 2022, the real estate sector was substantially more leveraged than other sectors. While other sectors somewhat deleveraged with respect to the pre-pandemic period, leverage for real estate companies continued to increase over time (Chart 2).

The lack of demand and the drop in valuations of physical assets substantially weighed on profits. Moreover, their main source of financing is through debt (mainly via banks), which became increasingly more expensive in the past two years. These two factors coupled together could result in debt sustainability issues, with potential needs to rapidly deleverage, and consequently lower investments or fire sales.

Chart 2

Leverage indicator Real estate listed companies more leveraged



Note: Leverage of EEA30 listed companies by sector. Leverage measured as total debt / EBITDA, in %.
Sources: Refinitiv Eikon, ESMA.

Real estate debt: Rising credit risks

Risk-taking and search for yield strategies were the main drivers of elevated debt issuance over the past years. For both **public** and **private** companies this mainly took the form of loans and corporate bonds.

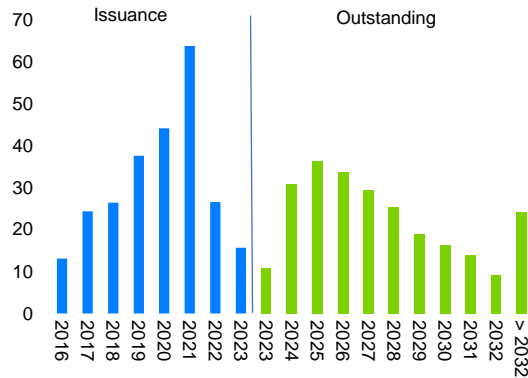
Bank loans represent the major credit line for public and private real estate corporations, which borrowed a total of EUR 208bn since 2018. Out of these, the total loans granted to real estate firms in 2021 amounted to the annual record of EUR 84bn (121% above the five-year moving average). **Bond primary markets** represent another source of funding. Over the same period, a total of EUR 214bn real estate corporate bonds were issued in the EEA. Similar to loans, 2021 saw a surge in corporate bond issuance (EUR 64 bn, Chart 3).

⁶ See [European real estate stocks hammered by banking turmoil](#), Financial Times, March 2023.

⁷ See also Allianz Research (2023), [Eurozone commercial real estate – selectivity matters!](#) for the methodology on

the calculation of the leverage. We acknowledge alternative measures of leverage that can be used for further analysis such as enterprise value or book asset value.

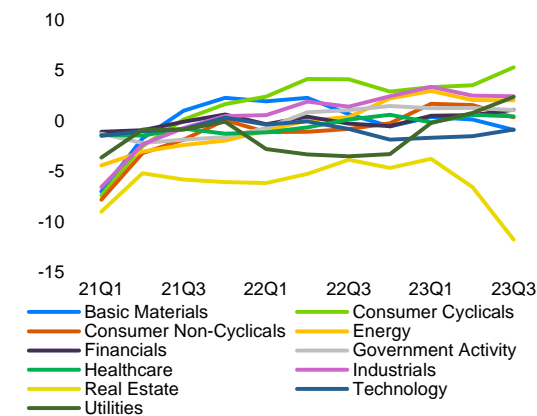
Chart 3
Corporate bond issuance
Maturity wall from 2024



Note: Yearly gross corporate bond issuance of real estate firms by issue date (in blue) and outstanding amounts by maturity date (in green), in EUR bn. Data until October 2023. Sources: Refinitiv Eikon, ESMA.

The consistent exploitation of primary fixed income markets led to a significant amount of outstanding real estate bonds which are due to be repaid in the next three years with a peak in 2025. In this context, the debt capacity of real estate companies will be tested against a **maturity wall** of more than EUR 110bn to be repaid until 2026. Real estate corporate resilience will critically depend on the ability of such firms to withstand rising refinancing costs in an environment of elevated interest rates.

Chart 4
EEA corporate ratings drift by sector
Negative for the real estate sector



Note: 4 quarterly moving average of quarterly ratings drift for EEA corporates by sector. Sources: Eikon Refinitiv, RADAR, ESMA.

Amid increased refinancing needs, **credit risk** indicators for EEA real estate corporations worsened through 2023. For public and private

firms, the ratings drift, a ratings-based measure of the net change in credit quality, was strongly negative in 2023 (Chart 4). This contrasts with other sectors where it remained slightly positive overall. The number of downgrades grew gradually over the year (Chart 15), particularly in SE and DE, with a peak in May-June 2023 (Chart 14). Nevertheless, the number of defaults remained limited to a few corporations in DE.

Derivatives use: Mainly IRS

Financial and non-financial entities could be linked to real estate firms through directly engaging in **derivative transactions**. The total notional of derivatives used by listed real estate firms amounted to EUR 166bn as of October 2023, of which EUR 160bn are interest rate swaps. Though this number is limited with respect to total derivatives markets, it accounts for almost half of the total market capitalisation of real estate listed firms. The real estate companies making the largest use of derivatives mainly hold positions against counterparties from the same or neighbouring jurisdictions. In the EEA, French real estate firms make the largest use of derivatives for a total notional amount of EUR 93bn, and are mainly involved in transactions against other EEA entities. Overall, the counterparties to real estate French firms were mainly domestic (EUR 58bn) (Chart 25). Most of the trading occurs off-exchange, either over the counter (78%) or through off-venue listed products (20%).

Another way in which entities can be linked to the real estate sector is through derivatives is the **use of financial instruments issued by real estate companies as underlying or reference entities to derivatives**. Across asset classes, a total notional amount of EUR 58bn had real estate securities used as an underlying by EEA counterparties involved in derivative transactions. Of these, EUR 47bn were equity derivatives on publicly listed real estate companies reference entities (Chart 26). In terms of types of market participants, more than 50% of positions are held by credit institutions and 35% by non-financial ones. Less than 1% is held by real-estate counterparties, which makes them less exposed to risks stemming directly from real estate markets. Also in this case, the trades mainly

occur off-venue with only 18% on regulated markets.

Securities financing transactions: Links with non-EEA counterparties

EEA real estate companies are, in contrast to derivatives, less exposed through **securities financing transactions** (SFTs). Around 120 real estate firms (mostly private) engaged in SFTs as of October 2023, for an outstanding exposure of EUR 585mn – mainly via repurchase agreements (74% of the total). The counterparties involved are almost exclusively banks (97% of total real estate SFT activity), with 78% of the activity domiciled in DK and FI.

While direct securities financing activity by real estate companies is limited, there is a non-negligible amount of **real estate-issued securities used as collateral in SFTs**. About 1,000 EEA entities accept or pledge real estate collateral, mostly in exchange for cash through repurchase agreements or margin lending (Chart 29). Overall, EEA entities show significant links with US, UK and other non-EEA counterparties via SFTs (EUR 7.5bn in lending and EUR 3.5bn in borrowing, Chart 28).

In terms of instruments employed, real estate collateral pledged amounts to EUR 22bn and is composed largely of equity (61%) and corporate bonds (37%). Among the instruments used as collateral, the majority are non-EEA assets (57% of the overall market value, Chart 27) and a dominant role is played by US real estate equity (31% overall).

It is important to highlight that, apart from repurchase agreements, real estate securities are usually **pledged to a pool of various collateral assets** (while in repurchase agreements transactions, 66% of the collateral market value employed is through a single asset). The main actors employing real estate collateral in SFT markets are EEA credit institutions (EUR 6.5bn, 87% of overall lending), which mainly lend

to other EEA credit institutions, non-EEA funds and non-EEA investment firms. Notably, among the non-EEA borrowers, there is a very small share of foreign funds pledging significant collateral amounts to obtain funding via margin lending (in margin loans the market value of collateral pledged is generally larger than the loan amounts depending on the type and quality of collateral).

Though SFT activity remains relatively low with respect to the whole market, there is tangible evidence of potential vulnerabilities stemming from cross-border risks, in the form of links between EEA and non-EEA entities and exposure to non-EEA collateral.

Investment funds: Growing role of real estate alternative investment funds

Besides banks, which represent the main provider of credit to the sector, **real estate alternative investment funds** (AIFs) have become a relevant source of financing for real estate activities in recent years.⁸ The assets under management (AuM) of real estate AIFs quadrupled from EUR 400bn in 2015 to EUR 1.5tn in 2022 (Chart 16). The industry remains concentrated mainly in DE, FR, IT, LU and NL, which accounts for 89% of the net asset value (NAV). Real estate investment strategies are still largely dominated by commercial real estate, though to a lesser extent (58% of the NAV in 2022, decreased from 64% in 2020) followed by residential real estate at 17%.⁹

⁸ The management of real estate funds in the EU is covered by the AIF Directive 2011/61/EU (Directive on the Management of Alternative Investment Funds). Thus, RE funds in EU have to be registered as AIFs and are thus not subject to regulation by the UCITS directive.

⁹ For further details on the AIF industry, please refer to the [2021 ESMA market report on EU alternative investment funds](#). The 2023 version will be published in parallel in January 2024.

TEXTBOX 1

Valuation concerns in real estate funds

The collapse of three US regional banks that started on 10 March 2023 was caused by a combination of unrealised losses on banks bond portfolios and very large withdrawals from a concentrated depositor base. The unrealised losses were the direct effects of higher policy rates, combined with a valuation of assets not adjusting to market prices, as if they were "held-to-maturity" (HTM). Investment funds are in principle not exposed to this risk, as they value their asset at fair value. In particular concerning bonds, the interest rates hikes over the past 18 months have been successfully accounted for in fund valuation.

Real estate funds assets are valued at fair value too. However, valuation issues could potentially occur as real estate assets are valued less frequently than equities or bonds. If investors anticipate a price correction, but this price is not yet reflected in the NAV due to delays in updating the valuation, they could benefit from a "first mover advantage" and be incentivised to "run" from the fund at the expense of other investors.

Against this background, the 2022 CSA between ESMA and the NCA focused on valuation. The NCAs considered that there was an overall satisfactory level of compliance of supervised entities with the applicable regulatory requirements. However, the CSA also highlighted an heavy reliance on long-term models for the valuation of underlying real estate assets, which may result in stable valuations that are not always sufficiently reactive to changing market scenarios, particularly under the current economic conditions characterised by a heightened inflation and the deterioration in the growth outlook.

Funds investing in commercial real estate have been under particular supervisory scrutiny, as reflected in the 2023 risk assessments of the national competent authorities (NCAs) reported to ESMA under Article 25 of AIFMD¹⁰ and the 2022 common supervisory action (CSA) on valuation¹¹ (Textbox 1).

Investors are predominantly professional (80% as of the end of 2022, up 4pp since 2020), which represents an important channel of interconnectedness and the associated spillover risks. Within professional investors, **pension funds** and **insurance companies** were the main owners of real estate fund shares accounting for 23% and 18% of NAV, respectively. Banks maintain a limited exposure, with 5% of NAV overall (Chart 17).

The changing economic landscape poses risks that could test the resilience of real estate funds. Fund flows were muted overall in 2023 with notable outflows observed in May and July (Chart 19). Moreover, returns significantly declined

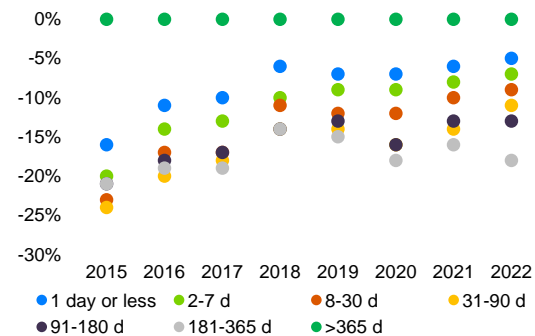
though with heterogeneity across strategies. There are several risks that real estate funds face, related to leverage, market footprint, valuations discrepancies and liquidity mismatches.

Out of the total AuM in 2022, 66% (EUR 1tn) is in **physical assets** that are, by nature, very illiquid.

Chart 5

Liquidity shortfall

Increase in illiquid assets



Note: Liquidity shortfall of real estate funds managed and/or marketed by authorised AIFMs, end of 2022. Liquidity shortfall measured as portfolio liquidity minus investor liquidity. Portfolio liquidity defined as the percentage of the funds' asset 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.

The evolution of the fund liquidity shortfall over time points towards a deterioration in the ability to meet redemptions in periods between 91–180 days and 181–365 days (Chart 5).¹² This is mostly linked to a deterioration in the portfolio liquidity of real estate AIFs (Chart 21).

Liquidity mismatches are the key vulnerability for open-ended real estate funds, especially those that allow daily redemptions by investors (21% in terms of NAV in 2022). As of end 2022, 70% were closed-ended with the remaining 30% open-ended. In terms of NAV, open-ended funds were largest (57% of total NAV of RE funds). Mismatches in liquidity profiles increase the risk of further pressures on asset valuations in times of stress, if investment funds seek to sell less liquid assets over a short period to meet redemptions.

¹⁰ The main results of the 2023 risk assessments under the [ESMA Guidelines on Article 25 of AIFMD](#) will be published in an upcoming TRV Risk Analysis article.

¹¹ [ESMA Final Report on the 2022 Common Supervisory Action \(CSA\) on valuation](#)

¹² Liquidity management tools, like notice periods, could reduce the liquidity mismatches.

TEXTBOX 2

Enhancing the real estate funds framework

The ESRB published an issues note describing how the EU regulatory framework for investment funds could be enhanced¹³. The ESRB identified structural vulnerabilities among investment funds with large exposures to corporate debt and real estate, including liquidity mismatch between fund investments and redemption rules, excessive use of leverage and interconnectedness. Regarding real estate funds especially, the illiquid nature of their investment and the difficulty in valuing their asset accurately during stress periods such as the COVID-19 pandemic, make them vulnerable, depending on the liquidity terms offered to their investors.

As policy options, the ESRB suggested adapting policy tools already present in the regulatory framework. For real estate funds this includes in particular a closer alignment between fund redemption terms and investment strategy. The ESRB also proposed the use of anti-dilution liquidity management tools (LMTs) for less liquid assets and better preparedness for cash needs stemming from margin and/or collateral calls in derivative and repurchase agreements transactions. In the medium term, the ESRB suggested considering new tools, such as a liquidity bucketing approach and the development of an ex-ante policy instrument aimed at mitigating the build-up of liquidity risk.

Such proposals coincide with the upcoming review of the AIFMD and UCITS Directives. In accordance with the provisional agreement, the revised directives would include the development of an EU framework for the design and use of LMTs. In that context, the ESRB proposals will inform the development of the relevant Level 2 and Level 3 EU acts.

In terms of adjusted gross **leverage**, real estate funds are not substantially leveraged overall¹⁴. At 133% of NAV, their leverage is just slightly above the average across all AIF types (123% of NAV), and it is half the level incurred by hedge funds (265% of NAV) (Chart 18). In most countries, borrowing is provided by locally domiciled intermediaries (Chart 20). This implies that in the event of a market downturn, spillover effects could arise among entities within the same jurisdiction, but should be limited from a cross-border perspective.¹⁵ Importantly, even moderate levels of leverage can add substantially to stress in individual funds depending on the source of the leverage itself. By design, the use of leverage magnifies gains and losses and may amplify redemption requests during downturns. But above all, borrowing may create liquidity needs that can add to and amplify existing fund liquidity

mismatches. While financing liquidity risk for most real estate funds remains limited, as borrowing lines remain open for relatively long periods, 15% of borrowing in the “other” real estate funds category is overnight.

While real estate funds on average present low levels of leverage, their market footprint can make them more systemically relevant: where a large **market footprint** is present, large outflows from real estate funds could potentially create negative pressures on real estate asset prices.¹⁶ At the aggregated level, EU real estate funds manage EUR 952bn of real estate assets, which accounts for approximately 27% of the EU market (Chart 16).¹⁷ Real estate funds in DE, FR and LU have a large market footprint in the EU (15% of the market combined). Real estate funds in IE have a low impact on the EU aggregated market though they have a large impact on their domestic market, as they represent 54% of it.¹⁸

Households: Decrease in loans for house purchase

Households play an important role in residential real estate markets as shown by the significant share of housing in their net holdings (with DE and FR as the largest markets) (Chart 24).

From a funds perspective, households are important for commercial real estate 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 NAV. Within funds strategies, the share of retail investors is higher for commercial real estate (29% in 2022, down 5pp from 2020), whereas it is lower for residential real estate (16% in 2022). The size of AIFs focusing on retail investors is EUR 208bn (out of which 75% held by commercial real estate) and they are mainly concentrated in DE (EUR 118bn) and FR (EUR 50bn). The retail UCITS industry investing in real

¹³ [Issues note](#) on policy options to address risks in corporate debt and real estate investment funds from a financial stability perspective.

¹⁴ The adjusted gross leverage is calculated as gross exposures to NAV excluding interest rate derivatives and foreign exchange derivatives used for hedging purposes.

¹⁵ Also see [Vulnerabilities in the EEA commercial Real Estate Sector](#), January 2023, ESRB.

¹⁶ It should be noted that one of the difficulties of accurately assessing the market footprint lies in the lack of visibility

in the AIFMD data on the size of the foreign real estate funds investing in the EU market and, at the same time, a lack of granularity of the geographical exposures of EU real estate funds.

¹⁷ See: MSCI data, 2022.

¹⁸ For more detailed overview of risks and vulnerabilities for EU real estate investment funds, please refer to the upcoming publications on the AIFMD market report and the TRV risk analysis article on Article 25 of the AIFMD.

estate equity is, on the contrary, limited to EUR 13bn. Overall, the performance of retail real estate funds reflected the general muted trend of the market.

Outlook: Interest rate path decisive for future course

Recent macroeconomic shifts, such as elevated inflation and rapidly rising interest rates, coupled with global growth deceleration, have put real estate markets under particular stress. Our analysis of current RE exposures in EU securities and asset management segments suggests that sizeable vulnerabilities exist, and that through entity exposures and activities important interlinkages with the banking system arise through which sector shocks may get transmitted across the EU financial system.

Importantly, debt levels in the real estate sector are elevated with wider risk implications from non-bank financial market players. Banks can be affected through the asset side of their balance sheet with higher shares of non-performing loans and deterioration of security holding quality. Households are vulnerable through higher mortgage rates and tighter credit standards. Securities markets are affected by weaker investor sentiment that impacts valuations across asset classes and in turn may affect the use of underlying instruments in derivatives and securities financing transactions.

First, these dynamics have started to crystallise in securities markets, which have lately witnessed a broad-based decline in real estate equity and bond indices. Challenging conditions in real estate markets, in the context of increased real estate firm leverage, are likely linked to this decline in market indicators. Investor uncertainty was also reflected through higher trading volumes in real estate shares in mid-2023 which coincided with a surge in securities lending.

Second, real estate markets have mainly domestic focus with few prominent players and low cross-border exposures, except for securities financing transactions.

Third, next to credit institutions, which are the entities most exposed to the real estate sector via loans, investment funds represent another important source of funding for real estate companies. They have grown in importance to real estate markets as liquidity providers for investors and real estate developers, and have accumulated a significant amount of illiquid assets. Liquidity mismatches remain the key vulnerability for open-ended real estate funds.

Going forward, real estate market conditions are likely to remain challenging against the higher-for-longer interest rate environment, subdued growth expectations and ongoing structural real estate market changes. This will also translate into challenges for non-bank real estate financial market players.

Related reading

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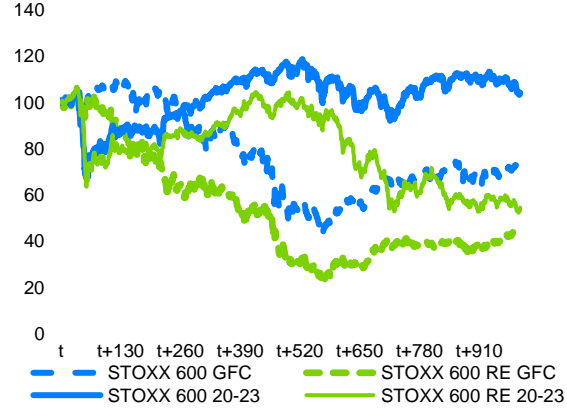
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Chart Annex

Securities markets

Chart 6

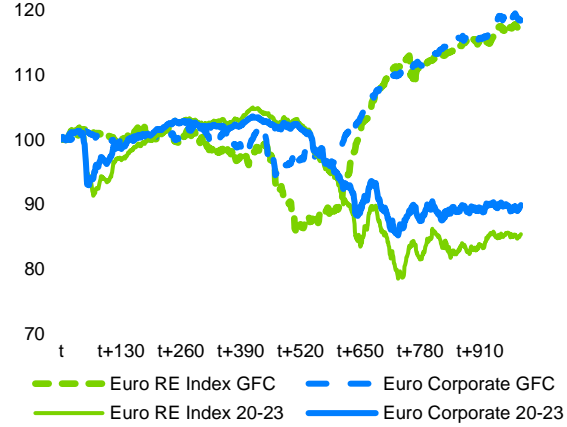
Equity market performance



Note: Market performance of STOXX 600 and STOXX 600 Europe Real Estate Equity Indices, in bps. Start dates: GFC (01/01/2007), 20-22 (01/01/2020).
Sources: Refinitiv Datastream, ESMA.

Chart 7

Corporate bond market performance

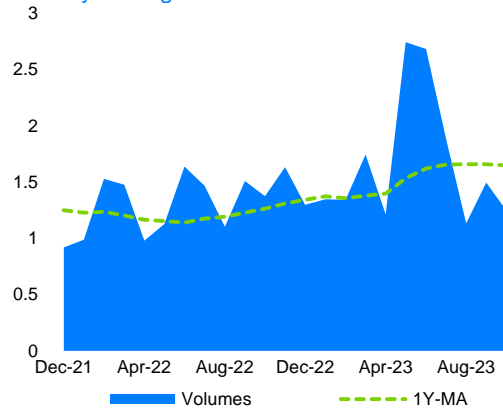


Note: Market performance of BoML Euro Corporate and Real Estate Indices, in bps. Start dates: GFC (01/01/2007), 20-22 (01/01/2020).
Sources: Refinitiv Datastream, ESMA.

Listed real estate (RE) firms

Chart 8

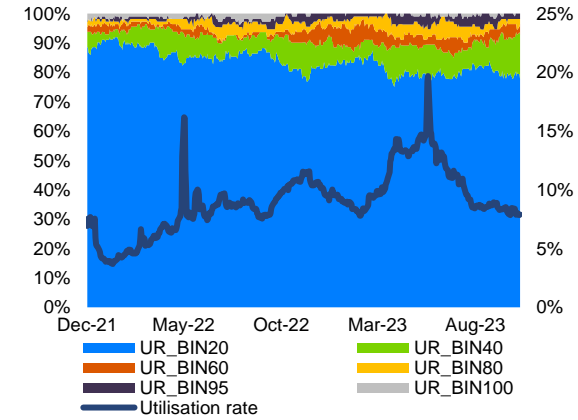
Monthly trading volumes in RE shares



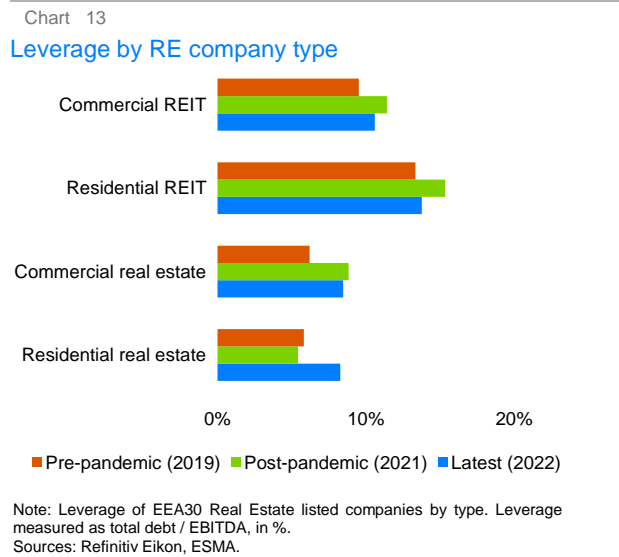
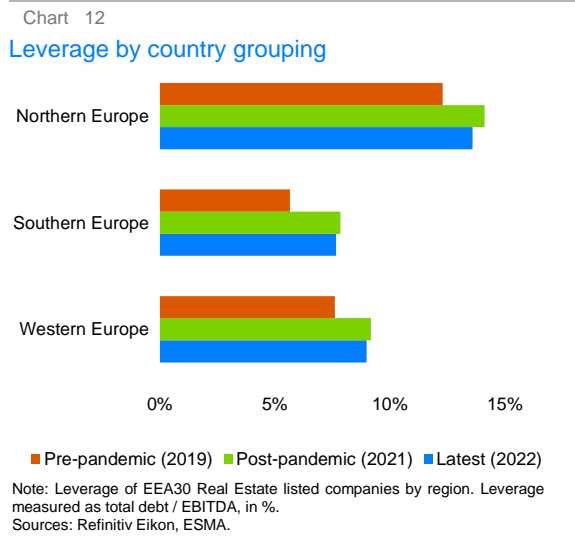
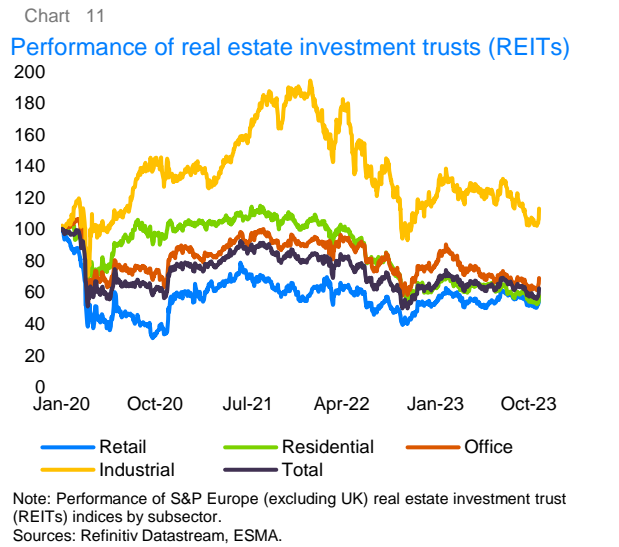
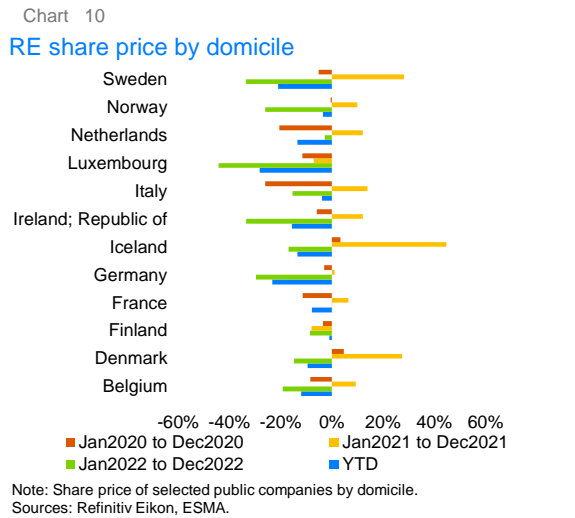
Note: Total monthly trading volumes in real estate shares and one-year moving average (1Y-MA), in million units.
Sources: Refinitiv Datastream, ESMA.

Chart 9

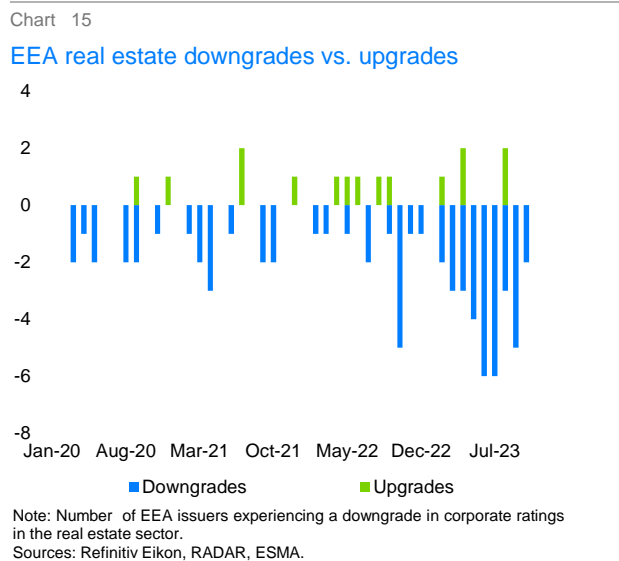
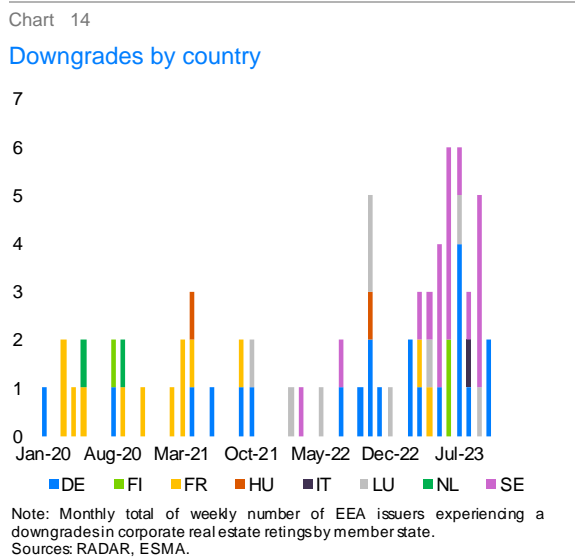
Utilisation rate of RE shares



Note: Utilisation rate of EEA Real Estate equities, in % (rhs), and distribution of ISINs by utilisation rate bucket (UR_BIN), in % (lhs). Last date: 10/10/2023.
Sources: Refinitiv Eikon, Quandl, ESMA.

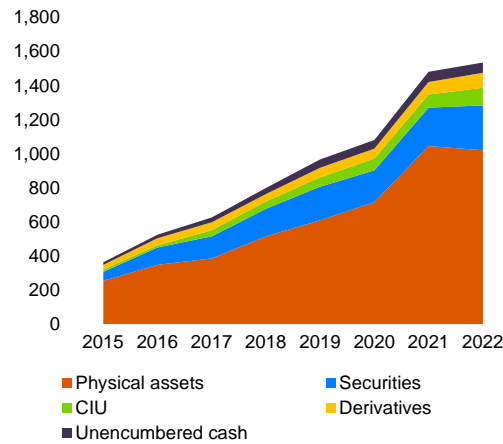


Credit risk indicators



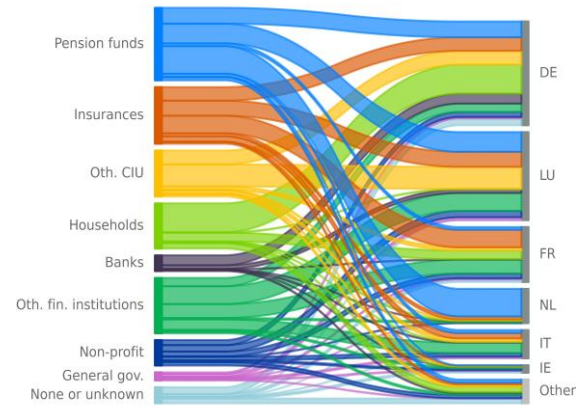
RE funds

Chart 16
RE AIF size



Note: AuM by type of RE 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.

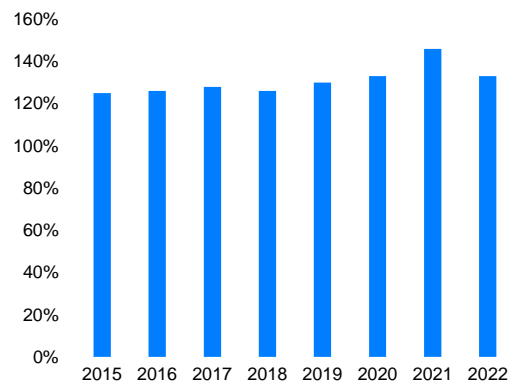
Chart 17
Owners investing in RE AIFs



Note: NAV of real estate funds managed and/or marketed by authorised AIFMs by investor type and fund domicile, end of 2022.
Sources: FIRDS, FITRS, ESMA.

Chart 18

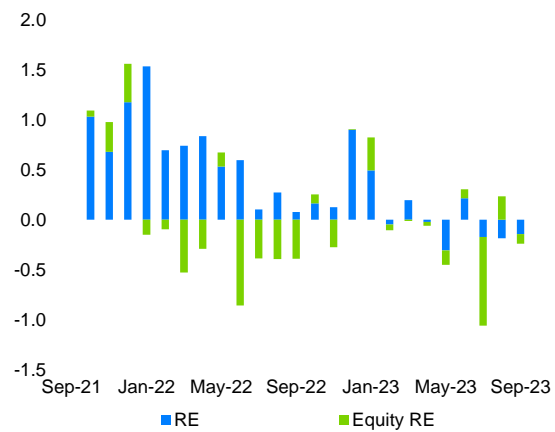
Adjusted leverage of RE funds



Note: Adjusted gross leverage of real estate AIFs managed and/or marketed by authorised AIFMs, in % of NAV. Adjusted gross leverage does not include IRDs. Data for the EEA30
Sources: AIFMD database, National competent authorities, ESMA.

Chart 19

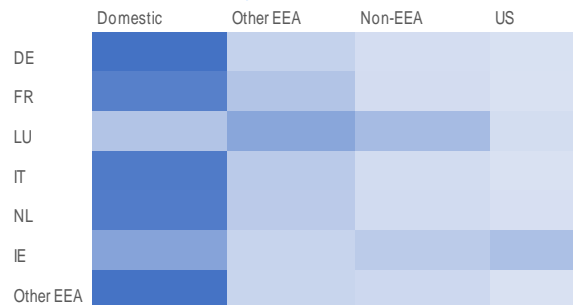
RE fund flows



Note: Monthly net flows of EU domiciled Real Estate funds by strategy, in EUR bn.
Sources: Refinitiv Lipper, ESMA.

Chart 20

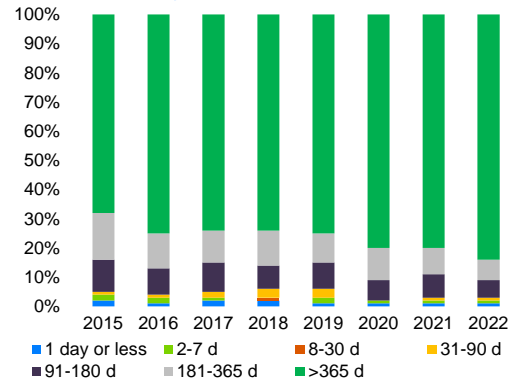
RE funds exposures by lender domicile



Note: Credit provision to real estate funds by investor and fund domicile. Investor domicile covers jurisdictions of the three main funding sources. Each box represent the share of domestic or foreign exposure of the RE funds. Coverage is 50% of the sample
Source: AIFMD database, National competent authorities, ESMA.

Chart 21

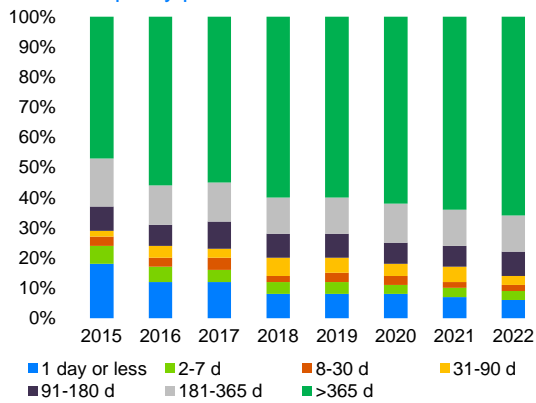
Portfolio liquidity profile



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.

Chart 22

Investor liquidity profile

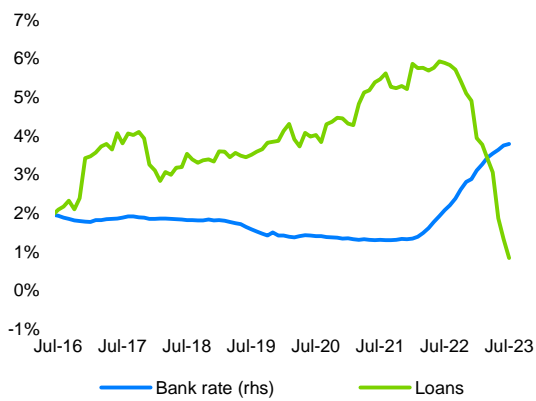


Note: Investor liquidity profile of real estate funds managed and/or marketed by authorised AIFMs. Investor liquidity defined as the shortest period for which investors can redeem. d=Days. Data for the EEA30
Sources: AIFMD database, National Competent authorities, ESMA.

Households

Chart 23

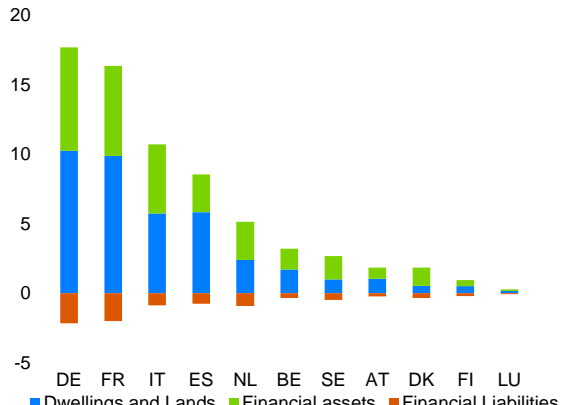
House purchases – loan rate and change in stock



Note: Rate on lending for house purchase and year over year change in lending for house purchase, in%.
Sources: ECB, ESMA.

Chart 24

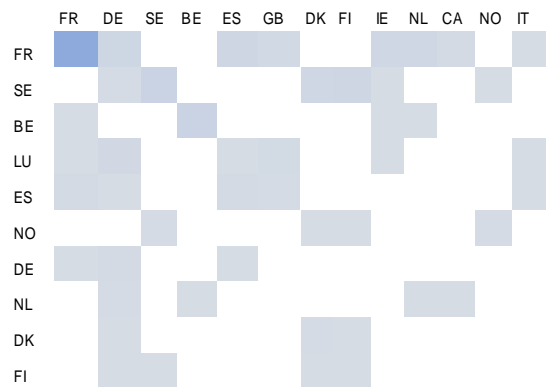
Households assets and liabilities



Note: Households and non-profit institutions serving households net holding of dwellings and lands, total financial assets and liabilities. Last data point available.
Sources: Eurostat, ESMA.

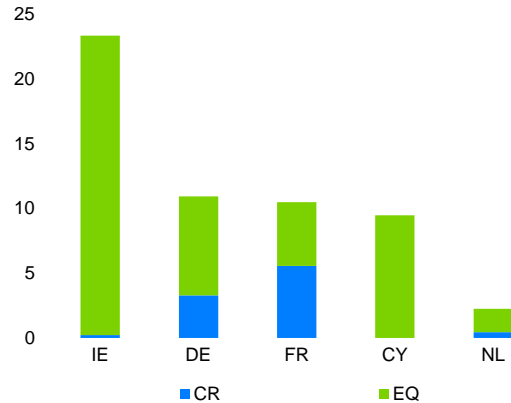
Derivatives

Chart 25
Counterparty notionals by country



Note: Amount of derivatives usage by real estate counterparties by domicile, in EUR bn (as of 04/10/2023). The darker blue the squares the higher the usage. Source: TRs, ESMA.

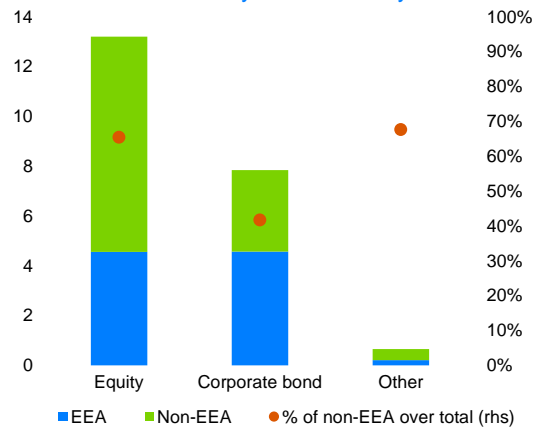
Chart 26
Exposures on RE company derivatives



Note: Exposures of EU counterparties on RE company credit or bond (CR) and equity (EQ) derivatives, as of 23 October 2023. MS with less than 1EUR bn of exposure not displayed. in EUR bn. Counterparty countries on the x-axis. Sources: TRs, ESMA.

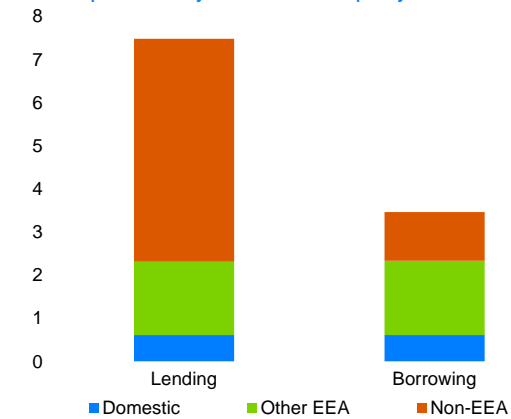
Securities financing transactions

Chart 27
RE issued collateral by issuer country



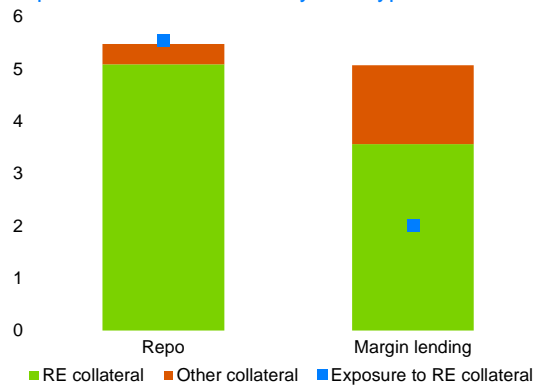
Note: Market value of RE issued collateral by instrument type and issuer domicile, in EUR bn. Date: 04/10/2023. Sources: SFTR, ESMA.

Chart 28
EEA exposures by other counterparty domicile



Note: SFT outstanding exposure of EEA entities against real estate collateral by entity side and counterparty domicile, in EUR bn. Date: 04/10/2023. Sources: SFTR, ESMA.

Chart 29
Exposure to RE collateral by SFT type



Note: Outstanding SFT exposures of EEA counterparties to RE issued collateral and market value of collateral employed, by RE vs other, in EUR bn, by SFT type. Date: 04/10/2023. Sources: SFTR, ESMA.

