

A joint EPRA / INREV Publication

One Real Estate Universe

Combining Listed and
Non-Listed Routes in
European Institutional
Real Estate Portfolios

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Executive summary



The total European real estate investment universe hits above the €2.0 trillion threshold



Structural reset to lower gearing, but leverage risk has become more granular



Germany has displaced the UK as the largest market exposure in both listed and non-listed universes.



With nearly 30% share, residential is now the largest sector for both, while retail has halved

One asset class, two institutional routes to real estate exposure

European listed and non-listed real estate are not two asset classes but two routes into one — institutional-grade European commercial property. Drawing on close to two decades of data from the index families maintained by EPRA and INREV, this report — the first report of this type the two organisations have produced jointly — traces how the two routes have evolved and where they differ. Its central finding is that they are best understood as complementary rather than competing: each has reached institutional scale, both have de-leveraged structurally since the global financial crisis, and each reaches parts of the market the other cannot fully replicate.

The non-listed and listed universes are measured differently by convention, so market-size comparisons require care. The Gross Asset Value of the global non-listed real estate universe that includes both equity and debt structures, such as funds, separate accounts, club vehicles and joint ventures, and direct holdings, stood at €1.03 trillion at the end of 2025, according to the ANREV/INREV/NCREIF Fund Manager Survey. Within that broader universe, non-listed equity funds reached approximately €519 billion at the end of 2025, accounting for just over half of the total non-listed market.

For the listed market, full market capitalisation is the commonly reported measure, but it captures only the equity value of real estate companies. The global listed real estate market stood at approximately €971 billion on a NAV-adjusted implied GAV basis at 2025 year-end. This is a more relevant measure to approximate property exposure than the full market capitalisation as a commonly reported measure. Combined, the European non-listed and listed real estate universe is now just above the €2.0 trillion threshold.

For the non-listed market, this report focuses on non-listed real estate equity funds to ensure most directly comparable to listed real estate equity and the consistency and depth of the analysis.

Both routes have reached institutional scale, and the 2022–24 correction was cyclical, not structural. European non-listed real estate has grown from roughly €219bn of gross asset value in 2005 to about €1.03tn in 2025, while the listed sector’s free-float market capitalisation has risen from around €121bn to €422bn, representing close to €1tn of underlying property. The sharp 2022–24 repricing tested both routes but left their structures intact — the listed market repriced immediately through share prices, the non-listed market adjusted gradually through appraisals, and capital continued to be committed to both throughout.

Leverage has been structurally lower since the GFC and has remained contained through the recent interest rate shock. Non-listed gearing, which peaked near 40% in 2009, has settled into a 22–26% range, and listed loan-to-value ratios sit around 36–39%, well below pre-crisis levels. Through the 2022–24 tightening, the average cost of debt rose by under 100 basis points even as policy rates climbed by some 400, and gearing rose only modestly — largely because falling valuations lifted ratios mechanically. The drivers of this shift — tighter bank capital rules, AIFMD and Solvency II, and the listed sector’s move to rated, unsecured bond funding — are structural rather than cyclical, so lower leverage ratios are likely to persist.

Both routes have rotated out of retail and offices into residential, industrial/logistics and alternatives, and shifted their centre of gravity from the UK to Germany. Retail’s share has more than halved since 2012, and retail and offices together now account for 43.8% of the listed portfolio against 30.8% of the non-listed. Residential is the largest single sector in both universes, yet it is reached predominantly through listed companies in Germany and predominantly through non-listed vehicles in the Netherlands, although the allocations in other markets are growing strongly. Germany is now the largest country exposure in both — delivered in the listed market through the market weight of large residential platforms, and in the non-listed market through the capital allocation of core funds.

The two routes deliver materially different country and country-sector exposure. The listed route offers deeper access to Sweden, Switzerland, France and Belgium, and to specialist operators in alternative sectors; the non-listed route is the principal way into markets such as the Netherlands, Portugal and Poland. For many country-sector combinations — German residential, Dutch residential, French retail, Portuguese retail — only one route offers meaningful exposure, so combining the two materially widens the opportunity set.

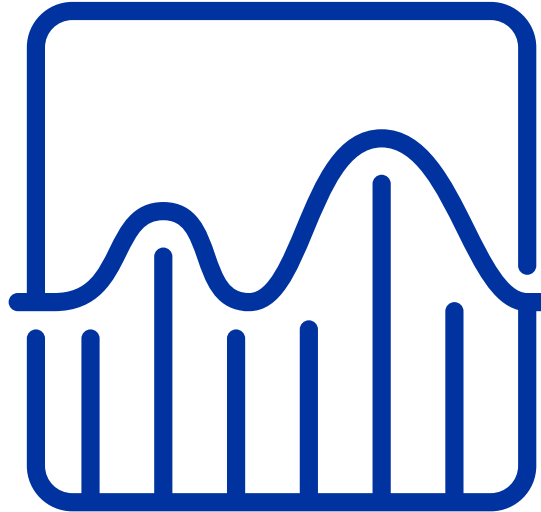
Each route also delivers that exposure differently. The listed route provides liquid, daily-priced access to specialist, predominantly single-country operators and supports faster sector rotation; the non-listed route is weighted towards diversified, multi-country core strategies — multi-country funds account for around half of the INREV Annual Index by value — with portfolio change that is slower and driven by capital allocation. These are complementary implementation characteristics, not competing ones.

Taken together, these findings reframe the long-standing ‘listed versus non-listed’ question. For an investor that has set target allocations by country and sector, the practical question is not which route is superior, but which route provides access to that exposure — and, increasingly, the most complete answer uses both.

Chapter 1: Introduction

European commercial real estate is a cornerstone of institutional asset allocation, accessed through two sizeable and mature routes: the public, listed market of property companies and REITs, and the private, non-listed market of funds and vehicles. Over the past two decades, the European property landscape has been transformed — by the maturing of the listed sector, the rapid expansion of the non-listed universe, and a succession of defining regulatory and macroeconomic events – from the global financial crisis to the most recent monetary-tightening cycle.

Historically, the two routes were managed in separate institutional silos, divided by differences in liquidity, governance and reporting, and the choice between them was framed as a simple trade-off between the liquidity of public markets and the appraisal stability of private ones. That framing no longer holds. As both markets have matured, their boundaries have blurred, and the decision has become a more deliberate one — about the sector and country exposure an investor is seeking, the implementation characteristics of each route, and the diversification the two can offer in combination.



This report — the first of this type produced jointly by EPRA and INREV — examines the listed and non-listed routes within a single analytical frame, drawing on close to two decades of European data. It establishes how the two markets compare in scale, balance-sheet structure and the exposure they deliver.

To examine the characteristics, evolution and potential benefits for institutional investors provided by listed and non-listed real estate, the report is organised in three analytical sections (Chapters 2 to 4):

- **Scale and maturity** — a historical overview tracking the two-decade trajectory of the European non-listed universe and listed property companies. It maps the expansion of both markets and the defining events and structural shifts that have shaped today's institutional real estate investment landscape.
- **Leverage** — an assessment of how gearing has evolved over time and across distinct market cycles, covering debt levels and how they are measured, the structural and cyclical drivers behind them, and how leverage differs by sector, by country and by vehicle type.
- **Sector and country exposure** — a detailed breakdown of how the two universes are invested by sector and by country, how their allocations have shifted, the main drivers of that change, and how their portfolio structures compare at end-2025. It closes by examining how the two routes differ in the access they offer and how, as complementary routes, they can be combined to build country and sector exposures that neither can deliver alone.

This paper has been written by Dr Alexandra Krystalogianni, with the support and guidance of the INREV and EPRA teams. INREV and EPRA thank Alexandra for her contributions to this study.

Chapter 2: Listed and non-listed real estate: scale and maturity

Key findings

- > **European non-listed equity funds and listed real estate markets have both reached institutional scale.** Their representative indices - the INREV Annual Index and the FTSE EPRA Nareit Developed Europe Index - show substantial growth in market depth, transparency and underlying property exposure over the past two decades.
- > **The 2022-24 correction was cyclical rather than structural.** Higher rates drove valuation resets, wider discounts and weaker sentiment, reducing market size from its 2021-22 peaks. Yet both markets retained their institutional depth, with non-listed values adjusting gradually and listed markets repricing immediately.

2.1 One asset class, two institutional routes to real estate exposure

European listed and non-listed real estate both provide access to the same underlying asset class — European commercial property — but through fundamentally different ownership structures, liquidity profiles and governance frameworks. Each market has carved its own distinct path to institutional maturity over the past two decades.

The non-listed market has grown through the expansion of commingled institutional funds, separate accounts, club vehicles and joint ventures. Pension funds, insurers and sovereign investors have driven demand, seeking income, diversification and inflation sensitivity. The professionalisation of fund management and the rise of cross-border strategies have been central to that development.

The listed market has evolved through the spread of Real Estate Investment Trust (REIT) and Real Estate Operating Company (REOC) regimes, public-market consolidation and improved disclosure standards. It offers daily liquidity, transparent pricing and scalable access to specialised operating platforms — making it an increasingly accepted route into European real estate for institutional investors.

The growth of European real estate has not only been a story of capital flows. It has also been a story of market infrastructure. EPRA, founded in 1999, introduced standardised reporting and, together with FTSE Russell and Nareit, developed the FTSE EPRA Nareit index series - now a global reference benchmark for listed real estate. INREV, founded in 2003, developed the INREV indices, reporting standards and governance frameworks that made the private fund universe measurable and comparable for

institutional investors. Together, these two organisations converted both channels from fragmented, local markets into transparent asset classes. Without this infrastructure, neither market would carry the institutional depth it does today.

Reflecting that shared exposure, listed and non-listed returns have moved together through successive property cycles (Figure 1).¹



¹ The greater volatility and the lead of the listed series reflect how each market is priced and measured rather than differences in the underlying assets.

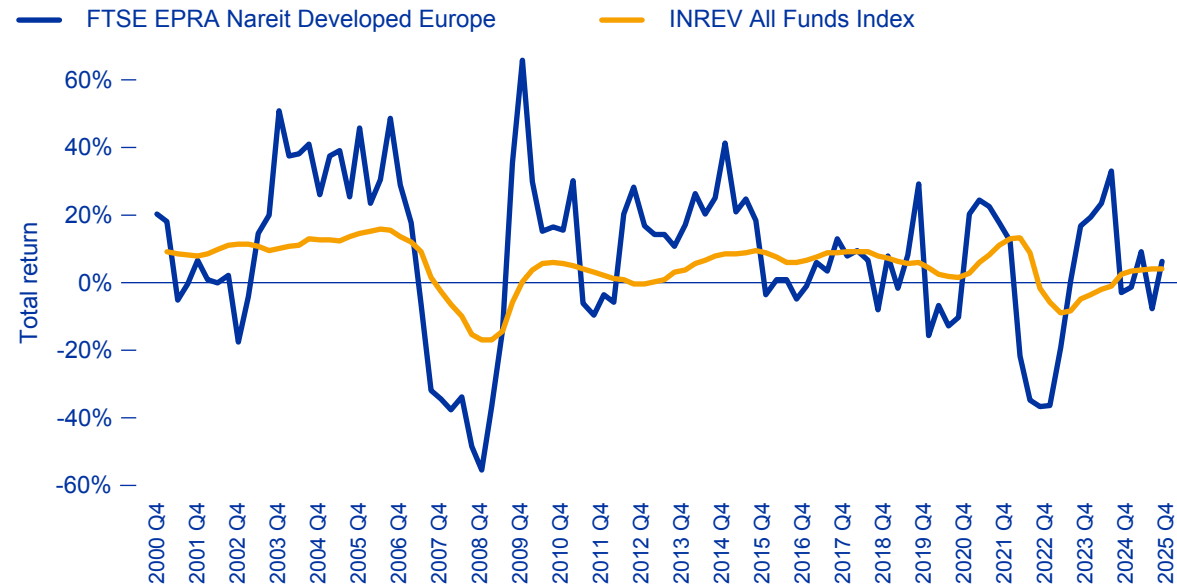
BOX 1. A note on measurement and comparability of market size

The non-listed and listed universes are measured differently by convention, so market-size comparisons require care.

For the non-listed market, this report focuses on non-listed real estate equity funds, the commingled institutional vehicles most directly comparable to listed real estate equity. The broader non-listed universe, including debt funds and separate accounts, is shown for context in Figure 2.

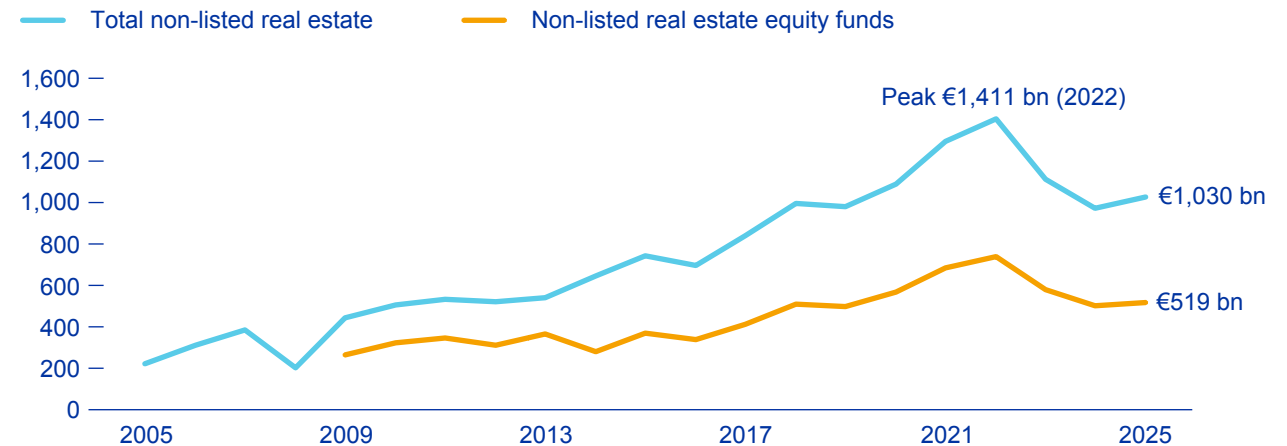
For the listed market, full market capitalisation is the commonly reported measure, but it captures only the equity value of real estate companies. To approximate gross property exposure, this report also uses market-derived implied gross asset value (GAV) and net asset value (NAV)-adjusted implied GAV, which account, respectively, for leverage and share-price discounts or premiums. These measures provide a more meaningful basis for market-size comparisons.

Figure 1: Listed vs non-listed real estate: total return y-o-y (%)



Source: EPRA, INREV

Figure 2: European non-listed real estate market size, GAV (€ billion)



Source: ANREV/INREV/NCREIF Fund Manager Survey

2.2 The expansion of the European non-listed market

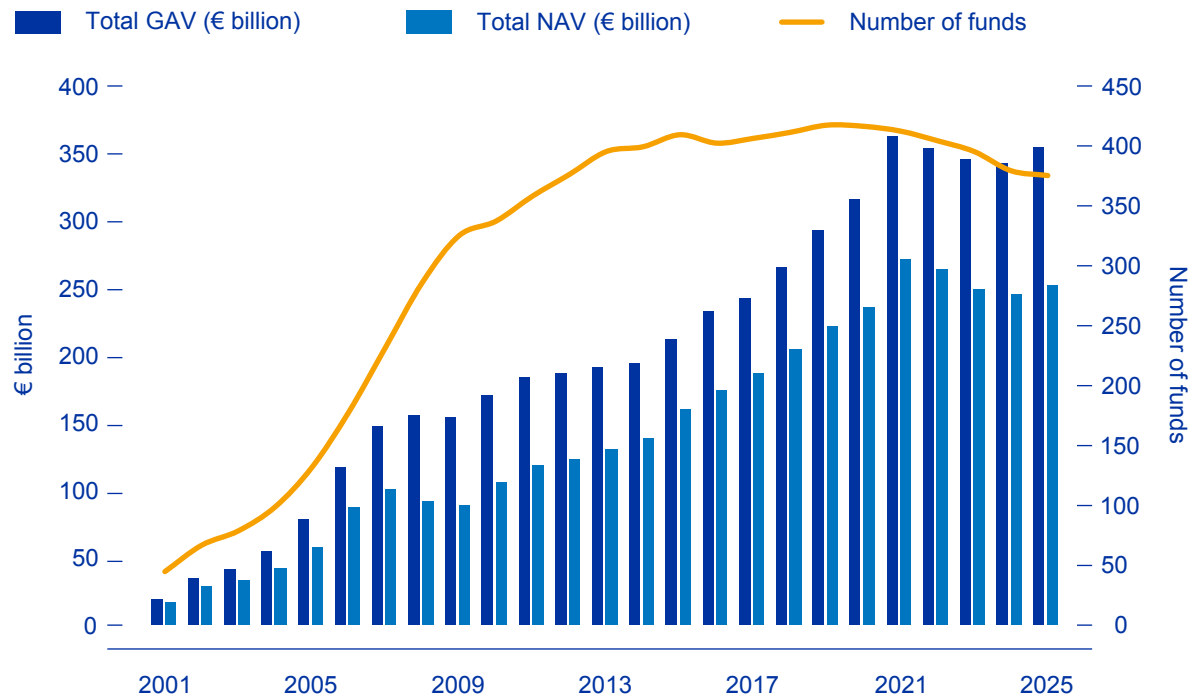
The European non-listed real estate universe has expanded nearly fivefold over the past two decades, from approximately €219 billion of total GAV in 2005 to around €1.03 trillion in 2025. Within that broader universe, non-listed equity funds reached approximately €519 billion at the end of 2025, accounting for just over half of the total non-listed market.²

Four structural forces drove this expansion: rising long-horizon institutional allocations to real assets; the growth of pan-European fund management; the post-GFC low-rate environment; and a broadening investable universe extending beyond the traditional office and retail sectors.

The INREV Annual Index, measures the annual net asset value–based performance of European non-listed real estate funds, with a history extending back to 2001. It covers core and value added funds that invest at least 90% of gross asset value in European real estate, excluding opportunity funds. Constituting approximately 68% of the European non-listed real estate equity-fund market at end-2025, it provides the most consistent reference series for tracking its evolution.

Reported total Index NAV rose from approximately €17 billion in 2001 to approximately €252 billion at the end of 2025,

Figure 3: Evolution of the INREV Annual Index



Source: INREV Annual Index

while gross asset value advanced from about €19 billion to €355 billion over the same period.³ The number of contributing funds grew from 45 to 375, itself a measure of how far the market’s depth and transparency have come.

The index peaked in NAV terms at roughly €272 billion in 2021, before declining through 2022-24 as valuation adjustments worked

through a sharp monetary tightening cycle. Contributing fund numbers fell from a peak of 417 in 2019 to 375 in 2025, reflecting liquidations, mergers, strategy repositioning and a challenging fundraising environment. This consolidation is a mark of institutional maturity: the market absorbed that repricing shock in an orderly manner, emerging tested but structurally intact.

² Figures for non-listed equity funds and the total non-listed universe are survey-based aggregates. Year-to-year changes may partly reflect changes in manager participation, reporting coverage and classification. The series are therefore best read as long-run trends rather than precise annual marks.

³ Index figures reflect the contributing fund universe at each annual index rebuild and are not adjusted for survivorship.

2.3 The expansion of the European listed market

The European listed real estate market has expanded materially over the past two decades, though on a more cyclical path due to daily public-market pricing. Figures 4a and 4b show why market capitalisation alone understates listed real estate exposure: Figure 4a tracks the evolution of the market across three size measures, while Figure 4b decomposes the bridge from equity market value to NAV-adjusted implied GAV.

Measured by full market capitalisation, the European listed real estate market grew from approximately €121 billion in 2005 to about €422 billion in 2025.⁴ On a market-derived implied GAV basis, the market expanded from around €204 billion to approximately €688 billion over the same period; on a NAV-adjusted implied GAV basis, it grew from roughly €199 billion to approximately €971 billion.

These measures are estimates and should be read as indicative of scale.⁵ The gap between them is most consequential in stressed markets. Between 2021 and 2022, full market capitalisation fell from about €532 billion to €369 billion, while NAV-adjusted implied GAV rose modestly, from about €951 billion to €988 billion. The divergence reflects

Figure 4a: European listed real estate market size (€ billion)

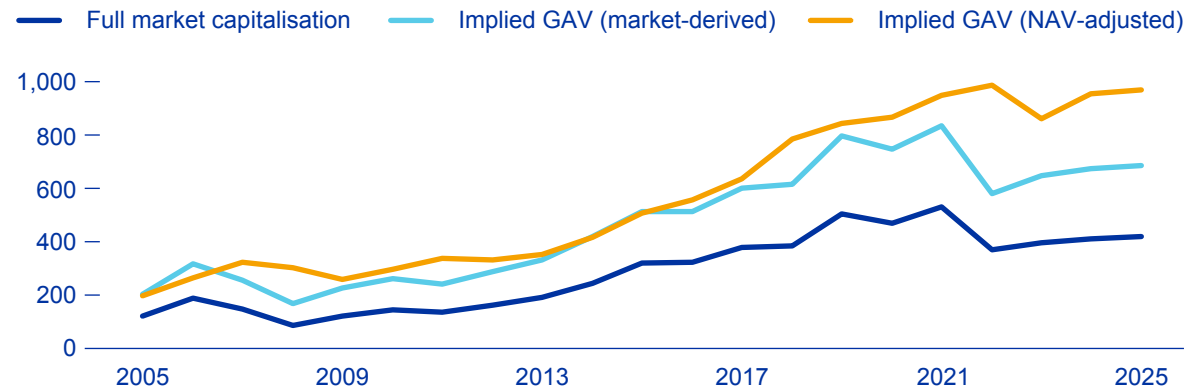
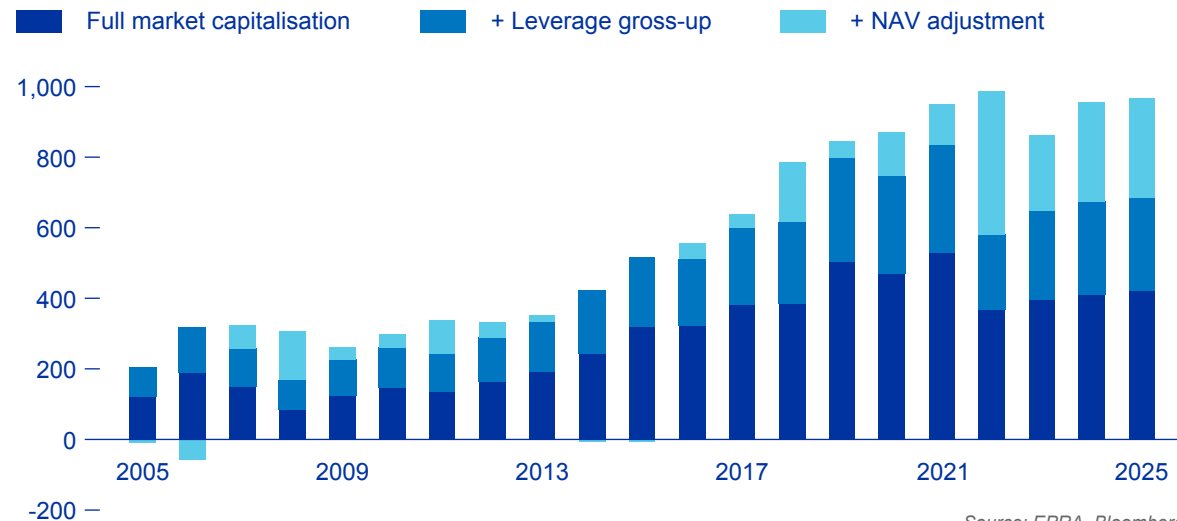


Figure 4b. From market capitalisation to NAV-adjusted implied GAV (€ billion)



Source: EPRA, Bloomberg

⁴ Total European listed real estate is sized as the full market capitalisation of the FTSE EPRA Nareit Global Index constituents (ICB Supersector 8600 Real Estate and selected related subsectors), excluding non-relevant activities.

⁵ LTVs and discounts or premiums to NAV are used as proxies for the broader listed market and are based on FTSE EPRA Nareit index constituents, which represent a sizeable share of European listed real estate. The resulting implied GAV measures should be read as implied estimates rather than reported asset values for the entire listed universe.

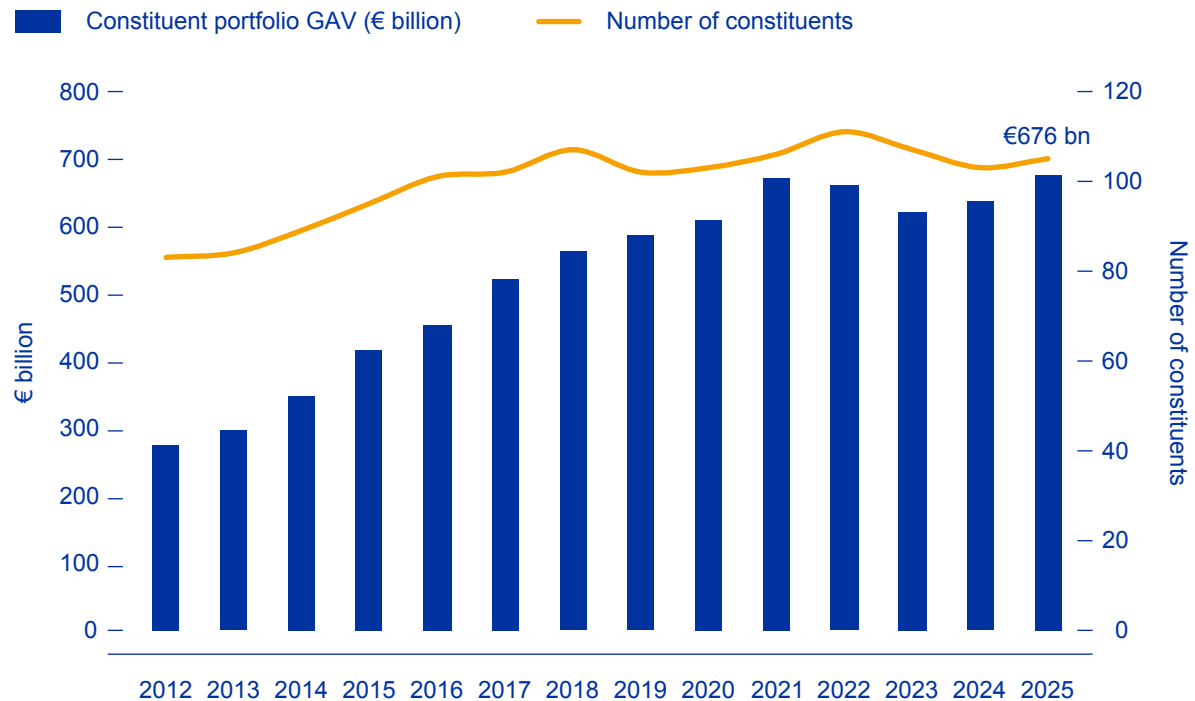
a sharp widening of discounts to NAV, rather than an equivalent immediate fall in reported underlying asset values.

The FTSE EPRA Nareit Developed Europe Index, provided by FTSE with EPRA and Nareit, tracks the stock performance – weighted by free-float adjusted market capitalisation – of listed real estate companies and REITs across developed Europe. Its constituents must derive a minimum share of EBITDA from relevant income-producing real estate and pass free-float, size and liquidity screens. Representing approximately 63% of the European listed real estate market by full market capitalisation at end-2025, it provides the benchmark for tracking its evolution.

The aggregate portfolio GAV of the index constituents rose from approximately €275 billion in 2012 to approximately €676 billion in 2025. Notably, underlying portfolio GAV proved far more resilient through 2022 than listed equity market capitalisation; reported asset values adjusted gradually, while public prices repriced immediately.

Four structural forces underpinned this long-term portfolio growth: the introduction and adoption of REIT regimes – notably in France, the UK and Spain – alongside the growth of large listed property companies in Germany, Sweden and Switzerland;⁶ greater sector specialisation into residential, logistics, healthcare and other sectors; more

Figure 5: Evolution of the FTSE EPRA Nareit Developed Europe Index



Source: EPRA

standardised disclosure, supported by EPRA’s Best Practices Recommendations; and the prolonged low-rate environment, which supported rising asset values and capital raising.

The number of index constituents rose from 83 in 2012 to around 105-110 by the late 2010s and has been broadly stable since.

The initial phase of REIT-regime adoption and new listings gave way to consolidation, take-privates and organic growth among established platforms. A stable constituent count alongside materially larger portfolio GAV points to a sector that has consolidated into larger, more focused and more institutional companies.

⁶ Germany’s 2007 G-REIT regime saw limited adoption, reflecting in part the regime’s initial exclusion of residential property and limited tax incentives for conversion; the largest German listed real estate companies continue to operate as standard corporations. Sweden and Switzerland have no REIT regime; their listed property companies are structured as ordinary corporations.

Box 2. Sizing the listed and non-listed equity markets

Listed and non-listed real estate both represent sizeable pools of European property exposure, but they include different components and are conventionally reported on different bases (see Chapter 2.2). The figures below should therefore be read as indicative orders of magnitude, not precise rankings.

| Basis | 2025** |
|---|--------|
| Non-listed real estate universe GAV* | 1,030 |
| Non-listed real estate equity funds GAV | 519 |
| Listed real estate market-derived implied GAV | 688 |
| Listed real estate NAV-adjusted implied GAV | 971 |
| INREV Annual Index GAV | 355 |
| FTSE EPRA Nareit Developed Europe Index constituents' portfolio GAV | 676 |

* Includes both equity and debt structures, such as funds, separate accounts, club vehicles and joint ventures, and direct holdings

** market size in € billion

Combined, the European non-listed and listed real estate universe is now just above the €2.0 trillion threshold. For the non-listed market, this report focuses on non-listed real estate equity funds to ensure most directly comparable to listed real estate equity and the consistency and depth of the analysis.

Both listed and non-listed real estate have reached sufficient scale and maturity to form meaningful components of institutional real estate allocations. The sections that follow examine how their structural differences - in leverage, country and sector composition, valuation methodology, liquidity and risk-return behaviour - determine the complementary roles they can play within a broader portfolio.

Chapter 3: Leverage: a post-GFC structural reset

Key findings

- > **European real estate balance sheets are less leveraged than at the peak of the previous cycle.** INREV gearing peaked at 39.8% in 2009 and stood at 24.6% at end-2025. EPRA loan-to-value ratio (LTV) has declined from 44.0% in 2010 to 38.7%.
- > **The reset is structural, not merely cyclical.** Despite exceptionally loose monetary policy, leverage stabilised well below before the Global Financial Crisis (GFC) levels, reflecting tighter regulation, lender discipline, stronger disclosure and more active investor governance.
- > **The 2022-24 rate shock was a severe macro test, but its impact on reported leverage was moderate.** Higher rates reduced asset values and lifted LTVs mainly through denominator effects but did not trigger a widespread leverage unwind. The same pattern is visible not only in the aggregate, but also across sectors and countries, though not uniformly.
- > **Leverage risk has become more granular.** Sector and country averages are shaped as much by index composition, constituent mix and funding model as by property risk itself. In a higher-rate environment, what now matters is less the level of leverage than its profile: where it sits, when it matures, what income supports it and how liquid the assets are in a downturn.

3.1 A structural reset tested by the 2022-24 rate shock

European real estate leverage increased steadily before the global financial crisis. In the INREV universe, average gearing rose from 8.4% of GAV in 2000 to around 30% by end-2007, then increased further as falling values reduced the denominator, peaking at 39.8% in Q3 2009. The build-up reflected abundant bank liquidity, aggressive lender competition, the expansion of CMBS markets and the growth of value added and opportunistic fund strategies.

The crisis exposed the vulnerabilities of that model. Falling asset values pushed reported

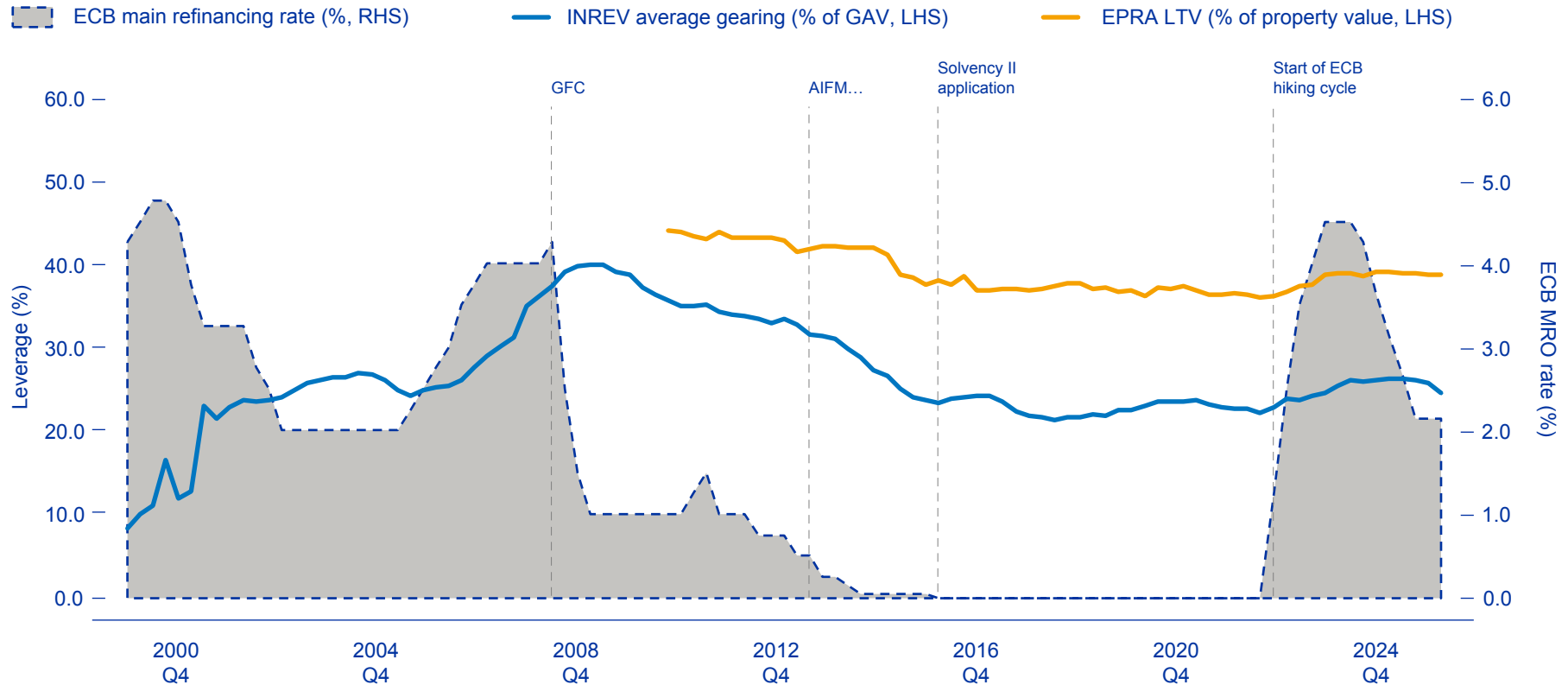
Box 3. Reading the leverage data

The listed and non-listed leverage series are directionally comparable, but not directly comparable in level. INREV gearing is calculated at the index level as aggregate debt across contributing funds divided by aggregate gross asset value. EPRA LTV measures leverage from the perspective of listed equity holders and applies a more shareholder-focused, look-through treatment of debt, cash, hybrid instruments and joint ventures.⁷

Differences between the two series should therefore not be read as evidence that listed real estate is inherently more or less levered than non-listed real estate. The important message is directional: both series show that European real estate balance sheets are less leveraged than they were at the peak of the previous cycle.

⁷ INREV gearing is reported as consolidated total external leverage at the vehicle level as a percentage of gross asset value. EPRA LTV is a shareholder-focused measure based on net debt, with adjustments for cash, hybrid instruments, shareholder loans, joint ventures and associated companies. These differences mean the two measures should be compared directionally rather than numerically.

Figure 6: Leverage and the ECB policy rate, 2000 Q2 – 2025 Q4



Source: INREV Quarterly Fund Index; EPRA Monthly LTV Monitor; European Central Bank. Vertical dashed lines mark the GFC (Q3 2008), AIFMD implementation (Q3 2013), Solvency II application (Q1 2016) and the start of the ECB hiking cycle (Q3 2022).

gearing higher, refinancing conditions tightened, and covenant headroom came under pressure. Non-listed funds were forced to manage liquidity and debt maturities more actively, while listed companies raised equity, sold assets and reduced debt to repair balance sheets.

What followed was not simply a cyclical deleveraging phase. Leverage continued to decline even as interest rates fell sharply. The ECB main refinancing rate moved from 1.5% in 2011 to 0% by 2016, and the deposit facility rate later turned negative. If monetary

conditions had been the dominant driver, the zero-rate period might have encouraged a return to pre-GFC leverage. It did not. INREV gearing stabilised at 22-24% from 2016 to mid-2022, while EPRA LTV remained at 36-38%.⁸

⁸ EPRA LTV in this case refers to the leverage (or gearing) metric reported by each constituent of the FTSE EPRA Nareit Developed Europe Index and aggregated by EPRA for research purposes. These figures do not necessarily correspond to the EPRA LTV ratio defined under the BPR Guidelines launched in 2024.

That persistence points to a structural reset. Bank capital reform raised the cost of higher-LTV commercial real estate lending. AIFMD strengthened reporting, risk-management and governance requirements for alternative funds. Solvency II reinforced insurers' preference for transparent, lower-risk real estate exposure. In the listed market, the shift towards unsecured bond funding, the importance of investment-grade ratings and greater EPRA disclosure all increased the market cost of running with high leverage.⁹

The 2022-24 monetary tightening cycle tested that lower-leverage regime. The ECB raised the main refinancing rate from 0% to 4.5% in roughly 18 months. The rise in reported leverage was nonetheless moderate and largely denominator-driven: INREV gearing increased from 22.1% in mid-2022 to 26.2% by end-2024 and EPRA LTV from 35.9% to 39.0%, as repricing pushed values down while absolute debt changed little. By Q4 2025, INREV gearing had fallen back to 24.6%, and EPRA LTV was broadly stable at 38.7%.

The debt-service impact was similarly muted, especially in the listed sector. EPRA notes that while European central banks raised rates by more than 400 bps in 2022–23, the average overall debt cost for FTSE EPRA Nareit Developed Europe constituents increased by only 91 bps, reflecting long maturities, fixed-rate debt and hedging.¹⁰

The main lesson from the 2022-24 episode is not that leverage risk disappeared. It is that the sector entered the shock with materially stronger balance sheets than in the previous cycle. Pressure concentrated in valuation declines, refinancing windows, interest coverage, and sectors with weaker income or higher capex, rather than a system-wide leverage unwind. Lower leverage is no longer simply a post-crisis hangover. It is now structural, making a broad return to pre-GFC levels less likely even if financing costs fall. That same pattern holds below the aggregate, across individual sectors and countries, to differing degrees.

⁹ Basel II and Basel III increased capital and risk-management requirements for bank lending, including commercial real estate exposure. AIFMD introduced leverage reporting, risk management, liquidity monitoring and regulatory disclosure for alternative investment funds. Solvency II affected insurers' capital treatment of real estate exposures, with outcomes depending on the form of exposure and look-through treatment. EPRA's Best Practices Recommendations and the formal EPRA LTV measure increased transparency and comparability in the listed sector.

¹⁰ EPRA (2025), *A Decade of Change: European Listed Real Estate Review 2015–2025*

3.2 Sector leverage remains highly differentiated

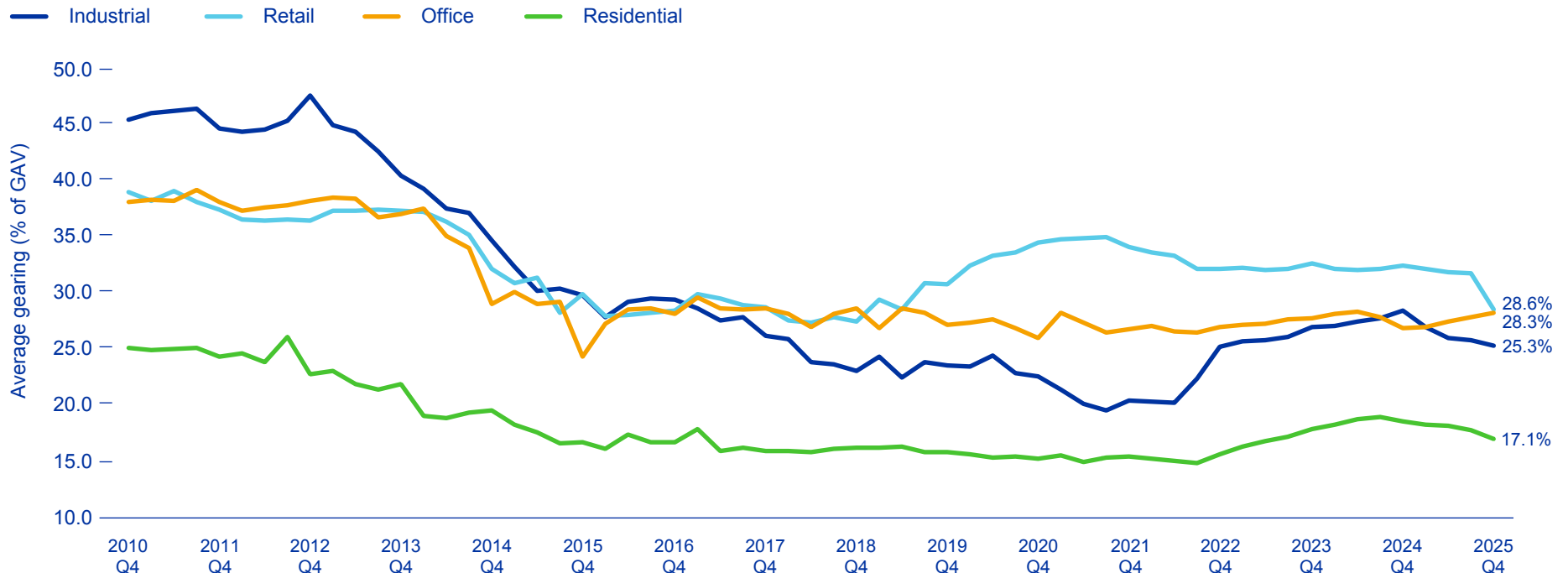
The post-GFC shift to lower leverage extends across most sectors, but headline averages conceal wide differences between them. Across listed and non-listed real estate, sector gearing ranges from the high teens to almost 50%. These differences matter for refinancing risk, interest coverage and downside resilience, but they should not be read mechanically.

Figures 7 and 8 show the evolution of leverage across the non-listed and listed sectors since 2010 Q4. Table 1 summarises the 2012 and 2025 endpoint positions.

The sectors that deleveraged most over 2012–2025 were those that entered the period with the highest leverage, notably industrial/logistics in the non-listed market and industrial/logistics and residential in the listed one. Across all listed sectors, the largest reduction was in self-storage, though this

remains a small segment whose index LTV reflects only a handful of companies. The main exception is listed retail, where LTV is slightly higher than in 2012: weak sentiment towards shopping centres and the listed market's faster repricing have weighed more heavily on valuations than balance-sheet repair has offset.

Figure 7: INREV gearing by sector, 2010 Q4 – 2025 Q4

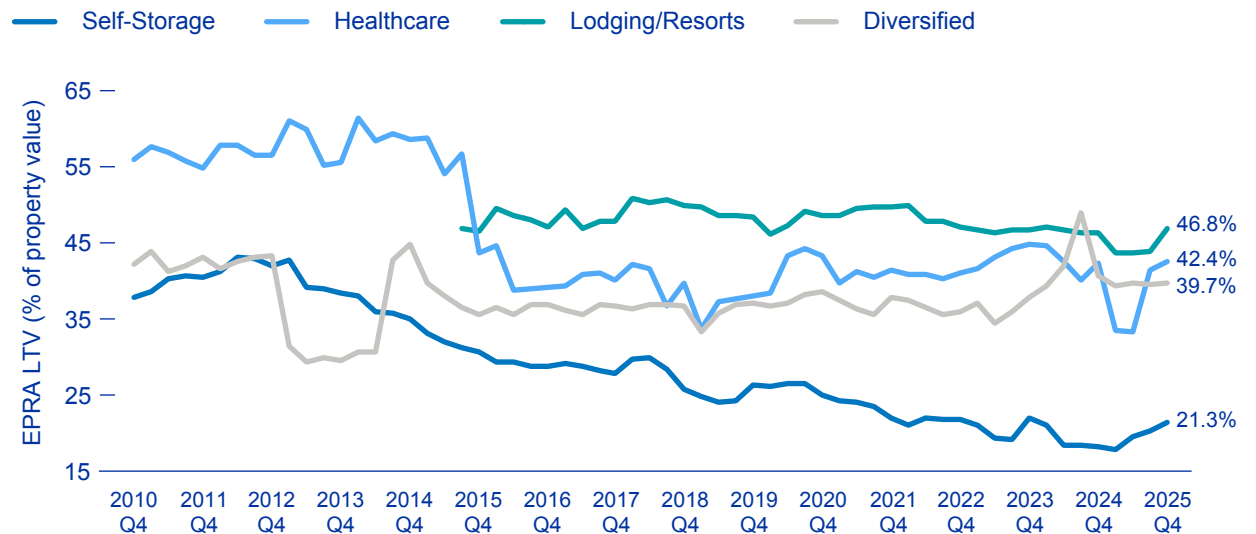
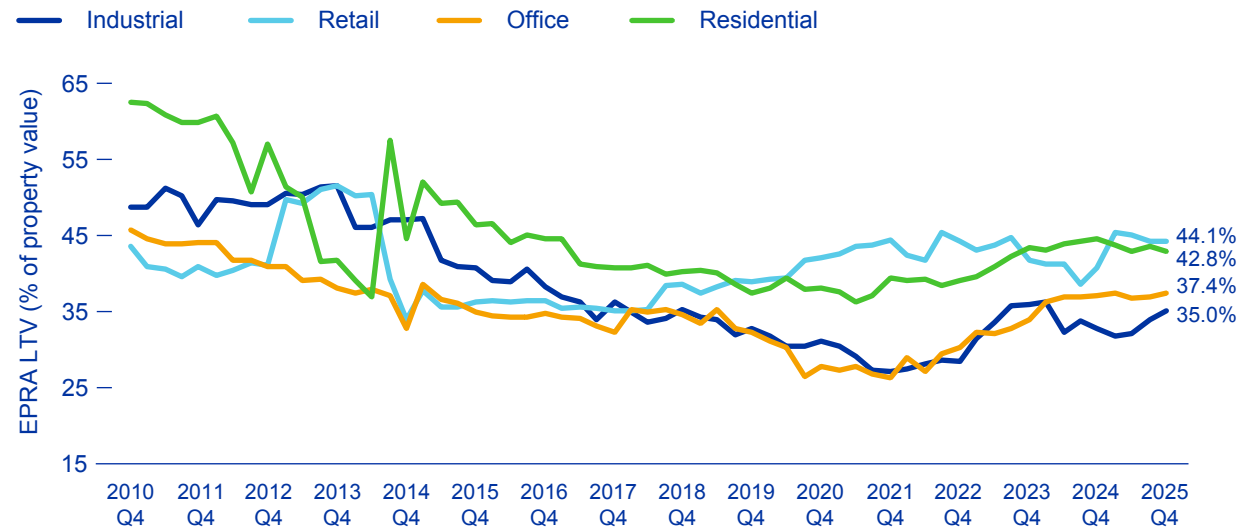


Source: INREV Quarterly Fund Index

At end-2025, retail carried the highest leverage among the main sectors in both universes. The lowest-leveraged sector differs by index: residential in the non-listed market and industrial/logistics in the listed one. Dispersion is widest among the listed alternatives, where lodging/resorts shows the highest LTV of any listed segment and self-storage the lowest.

The 2022–24 rate shock temporarily narrowed the gap between the most- and least-leveraged main sectors in both universes, largely because previously low-yielding sectors such as industrial/logistics experienced sharper valuation corrections. That compression now appears cyclical rather than structural and is already beginning to unwind as values stabilise.

Figure 8: EPRA LTV by sector — main and diversified/alternative sectors, 2010 Q4 – 2025 Q4



Source: FTSE EPRA Nareit Developed Europe Index

The broader lesson is that sector leverage remains informative, but insufficient on its own. It reflects property-sector fundamentals such as income stability, asset liquidity, capex intensity and obsolescence, as well as lender behaviour, vehicle structures and the speed of repricing. Sectors with deep and competitive lender bases can refinance more smoothly through cycles, while structurally challenged sectors tend to carry elevated LTVs partly because legacy debt is harder to refinance or work out. The same sector can rank differently across the two indices because of differences in constituent quality, capital structure and valuation dynamics. For the next cycle, where leverage sits within a portfolio — at asset, vehicle and refinancing level — is likely to matter at least as much as the sector average itself.

Table 1: Sector leverage, 2012 vs 2025 (INREV gearing; EPRA LTV)

| Sector | 2012 (%) | 2025 (%) | Change (pp) |
|--|----------|----------|-------------|
| <i>INREV — non-listed (main sectors)</i> | | | |
| Office | 38.3 | 28.3 | -9.9 |
| Retail | 36.5 | 28.6 | -7.9 |
| Industrial/logistics | 47.6 | 25.3 | -22.3 |
| Residential | 22.8 | 17.1 | -5.8 |
| <i>EPRA — listed (main sectors)</i> | | | |
| Office | 40.9 | 37.4 | -3.4 |
| Retail | 41.1 | 44.1 | +3.1 |
| Industrial/logistics | 49.0 | 35.0 | -14.1 |
| Residential | 57.0 | 42.8 | -14.2 |
| <i>EPRA — listed (alternative sectors)</i> | | | |
| Self-Storage | 42.0 | 21.3 | -20.7 |
| Healthcare | 56.4 | 42.4 | -14.0 |
| Diversified | 43.1 | 39.7 | -3.4 |
| Lodging/Resorts | n/a | 46.8 | n/a |

Source: INREV Quarterly Fund Index; EPRA Monthly LTV Monitor; n/a where the series began later. Change is in percentage points.

3.3 Country leverage reflects market structure and index composition

The post-GFC structural reset and the cyclical increase in leverage after 2022 are visible at the country as well as sector level, but the drivers differ across markets. Country leverage ratios, however, should not be read as measures of national real estate risk. Within each universe, country averages also reflect the specific listed companies or non-listed funds that make up each market's index. They are therefore informative, but only when read alongside sector composition, funding structure, constituent concentration and index events.¹¹

In the listed market, the UK has the lowest country LTV, falling from 44% in 2010 to 30% in 2025. This reflects genuine post-GFC deleveraging across UK REITs, but also a sector mix tilted towards lower-LTV diversified, industrial/logistics and self-storage platforms, together with a high concentration of index weight in well-capitalised large caps. The UK's low LTV is therefore best read as a capital-markets and portfolio-composition outcome, not simply as a lower-risk property-market signal.

Germany and France tell a somewhat different story, with sector mix and major constituents playing a more visible role. Germany's LTV fell from 60% in 2010 Q4 to a low of 35.4% in 2021 Q2, before rising back to around 45% by end-2025. That partial

Figure 9: EPRA leverage by country

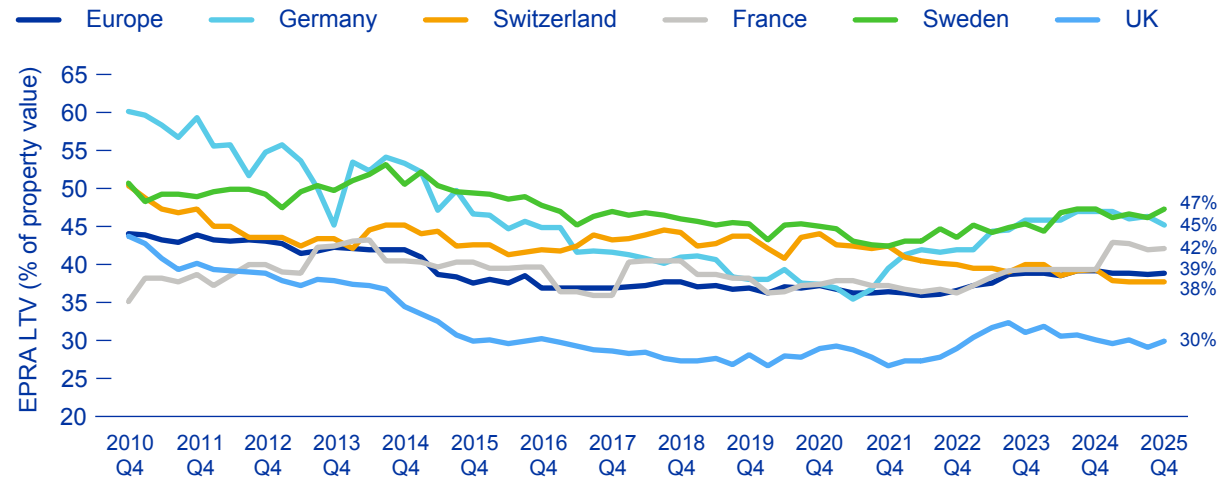
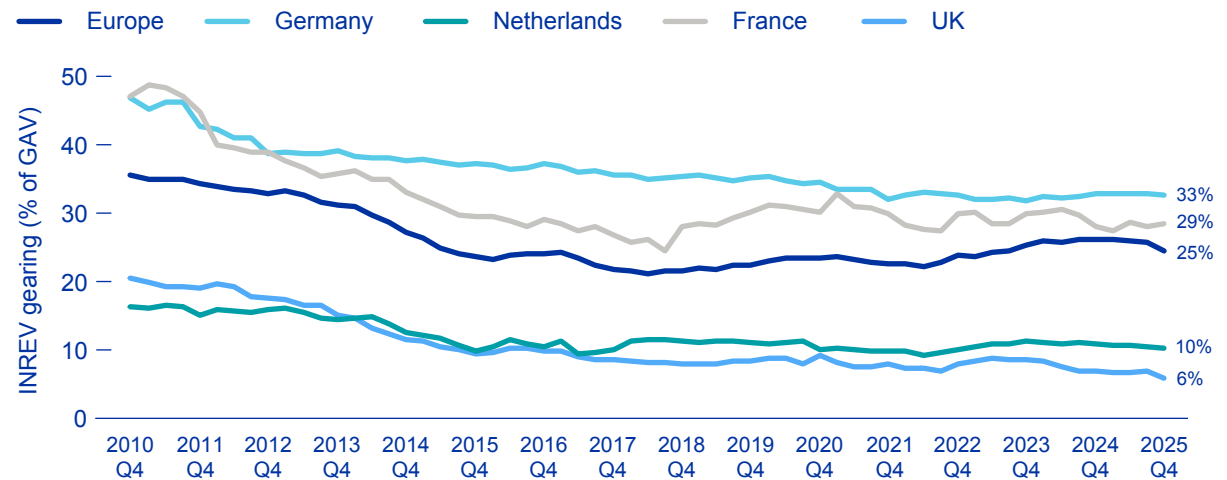


Figure 10: INREV leverage by country



Source: FTSE EPRA Nareit Developed Europe Index; INREV Quarterly Fund Index

¹¹ A nationality reclassification, a large-cap inclusion, a forced disposal programme or a credit-driven change in index weight can move a country series even when the underlying national property market has not changed materially.

reversal reflects developments in the large listed residential cohort, chiefly the Vonovia–Deutsche Wohnen merger and the post-2022 valuation reset.¹² France’s LTV has also risen recently, reflecting retail-valuation pressure and index mechanics, notably the 2023 reclassification of Unibail-Rodamco-Westfield from the Netherlands into France.¹³

Sweden and Switzerland illustrate two different market structures. Swedish listed companies are generally characterised by structurally higher leverage, shorter debt maturities and greater sensitivity to refinancing when rates rise. Swiss listed companies, by contrast, tend to operate with more conservative balance sheets, lower funding costs and more stable valuations. The leverage data reflect this difference: Sweden has not materially deleveraged between 2010 and 2025, with average LTV declining only from 50.6% to 47.3%, and rising by around 400 bps since mid-2022. Switzerland, meanwhile, has deleveraged steadily from 50.3% in 2010 to 37.6% by end-2025.

Country gearing in the non-listed market varies far more widely than property composition alone can explain: at end-2025 the four largest markets ranged from 5.8% in the UK to 32.8% in Germany. Investment style offers little additional explanatory power: all four samples are overwhelmingly core, ranging from 87% of GAV in the UK to effectively 100% in France and the Netherlands.

The dispersion is better explained by national funding culture and the structure of the investor base. In the UK, open ended core and balanced funds dominate. Held mainly by liquidity-focused pension and insurance investors, and constrained by authorised-fund borrowing limits, these vehicles keep gearing at the investor’s portfolio level rather than inside the fund. That helps explain why UK gearing is the lowest in Europe, even though the sample carries the highest value added share of the four. The Netherlands sits low for related reasons: its heavy residential weight helps, but so does a domestic investor base that favours conservative, lightly geared core vehicles. At the other end, German Spezialfonds and French institutional core vehicles are supported by abundant low-cost bank financing - the Pfandbrief market in Germany and deep bank lending in France - within structures that permit meaningful fund level gearing.

A high or low national average is a signal to interpret, not a ranking of property market risk. Taken together, the evidence points in the same direction. European listed and non-listed real estate is structurally less leveraged than in the previous cycle — not only in the headline figures but across sectors and countries, though to markedly different degrees.

¹² Vonovia’s reported LTV was 39.4% at end 2020, the year before the merger, and increased to 45.3% by the end of 2021. Vonovia carries a 61% weight in the EPRA German constituents index and the residential sector a 92% weight as at the end of 2025.

¹³ URW now carries a 37% French index weight and retail constituents account for 70% of the French index, as of end 2025

Chapter 4: Different routes to sector and country exposure

Key findings

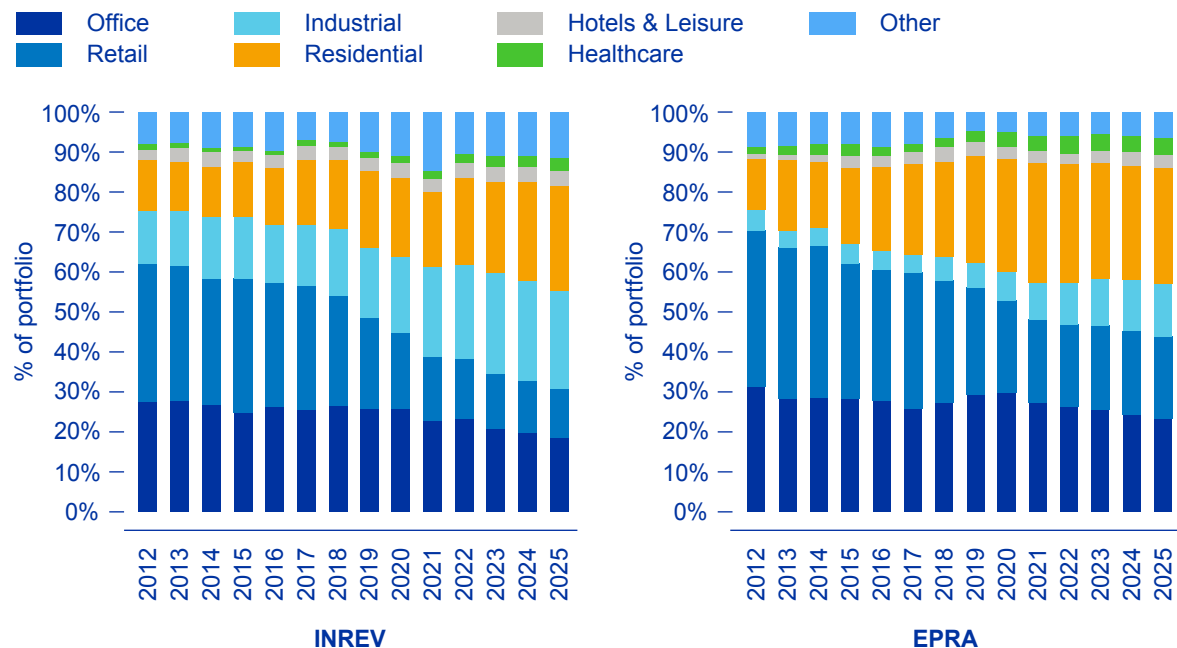
- > **Both universes have rotated out of retail and offices into residential, industrial/logistics and alternatives — but following different paths.** Retail and office still account for 43.8% of the listed portfolio, against 30.8% of the non-listed. Multi-sector non-listed vehicles and listed specialist operators in alternatives can be used as different diversification tools.
- > **Both universes have shifted their centre of gravity from the UK to Germany, now the largest exposure in each — but built through distinct channels.** In the listed universe, through the market weight of large residential platforms, and in the non-listed, through the capital allocation of core funds.
- > **The two routes also offer materially different country and country-sector exposures.** Combining them lets investors broaden diversification, reach allocations that are not available through either route alone, and build a more representative pan-European portfolio.

4.1 Sector composition: rising allocations to residential, industrial/logistics and alternatives

The value of both the European listed and non-listed real estate portfolios has grown markedly since 2012. While all major sectors have expanded in absolute value terms, their portfolio shares have shifted substantially, reflecting structural changes in occupier demand, investor preferences and capital allocation.

Figure 11 shows the evolution of sector weights in both universes since 2012; Table 2 summarises the endpoint positions.

Figure 11: Evolution of sector allocation, 2012-2025



Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

Table 2: Sector weights, 2012 vs 2025 (% of portfolio)

| Sector weight (%) | INREV 2012 | INREV 2025 | EPRA 2012 | EPRA 2025 |
|------------------------|------------|------------|-----------|-----------|
| Office | 27.7 | 18.7 | 31.3 | 23.1 |
| Retail | 34.3 | 12.1 | 39.2 | 20.7 |
| Industrial / logistics | 13.5 | 24.6 | 5.3 | 13.3 |
| Residential | 12.4 | 26.4 | 12.6 | 28.8 |
| Hotels & Leisure | 2.9 | 3.4 | 1.1 | 3.6 |
| Healthcare | 1.1 | 3.4 | 1.8 | 4.1 |
| Self-storage | n/a | n/a | 0.7 | 2.1 |
| Other | 8.2 | 11.4 | 7.9 | 4.3 |

Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

Retail has recorded the sharpest contraction in both universes, with its share more than halving since 2012. E-commerce has structurally weakened demand for traditional retail floorspace, while major retail landlords have pursued sustained disposal programmes to reduce leverage.¹⁴ Together with broader retail repricing, this has materially lowered retail’s portfolio contribution to the listed index. In the non-listed universe, pan-European core and multi-sector funds have steadily rotated away from shopping centre and high-street retail towards industrial/logistics and residential assets.

Office allocations have also declined, albeit less sharply, with the pace of decline accelerating after 2020 as hybrid working weighed on office utilisation, leasing demand, and net rental income.

Industrial/logistics has been the principal beneficiary in the non-listed universe, nearly doubling its weight in a structural reorientation towards sectors with stronger demand drivers. In the listed universe, the increase has been more measured, partly reflecting a lower starting point and the concentration of European listed logistics in a relatively small group of specialists.¹⁵

Residential has grown substantially in both universes, supported by urbanisation, demographic change, shifting household formation patterns and persistent supply-demand imbalances in major cities. In the INREV portfolio, the residential weight more than doubled, driven by institutional demand for long-leased, inflation-sensitive income suited to pension fund and insurer liabilities. Growth has been concentrated in the Netherlands, Germany and the Nordics, where regulated residential offers deep investable stock and an established manager base. In the EPRA portfolio, residential has been the largest sector since 2021, overtaking offices, with growth concentrated in German multifamily landlords.¹⁶

Alternative sectors are gaining more traction. Demand for student housing, healthcare, self-storage and emerging sectors such as data centres and life sciences is underpinned by structural tailwinds – demographic change, urbanisation, social shifts and digitalisation. Alternative sectors have expanded meaningfully since 2012, albeit from relatively small initial allocations. Student housing has nearly doubled, and healthcare has more than doubled in both indices, while self-storage has tripled its weight in the EPRA portfolio. Hotels, by contrast, have followed a different path: broadly stable in INREV, and in EPRA rising mostly before 2018.

¹⁴ Unibail-Rodamco-Westfield — one of the largest FTSE EPRA Nareit Developed Europe Index constituents, with approximately 87% of its portfolio in shopping centres — executed a sustained deleveraging programme of approximately €8.6 billion in disposals over 2021–2025. Source: URW FY 2024 and FY 2025 Results.

¹⁵ Segro is the largest industrial/logistics constituent at approximately 5.6% of the FTSE EPRA Nareit Developed Europe Index, with Tritax Big Box REIT and Warehouses De Pauw among the next-largest.

¹⁶ The merger of Vonovia and Deutsche Wohnen, completed in October 2021, was the largest residential real estate merger in Europe to date, creating a combined entity with approximately €90 billion in real estate assets and around 568,000 apartments. Source: Vonovia Annual Report 2022

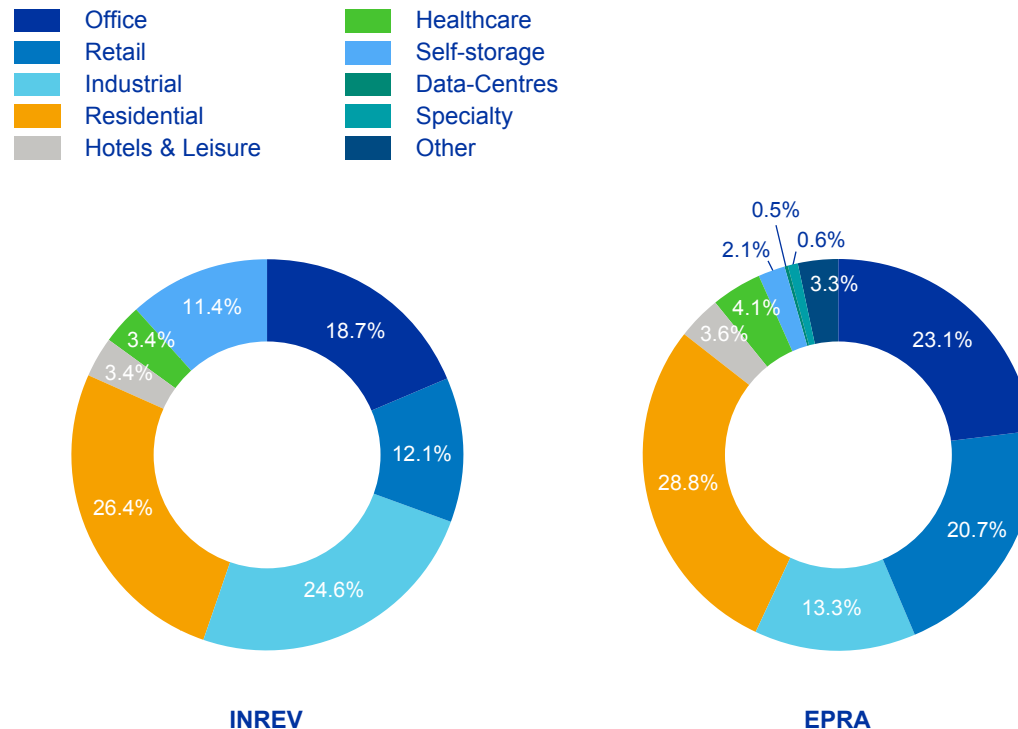
At end-2025, residential – including student housing – is the largest single sector in both universes, though the geographic composition differs materially: more than half of INREV’s residential allocation is in the Netherlands, while more than half of EPRA’s is in Germany.

In the INREV portfolio, residential and industrial/logistics together account for more than half of the total exposure, with offices and retail carrying less weight and alternatives smaller but increasingly relevant. In the EPRA portfolio, traditional sectors remain more prominent, with office the second-largest sector, followed by retail, reflecting the scale of the largest listed office and pan-European retail landlords. Retail and office together still account for 43.8% of the listed portfolio, against 30.8% of the non-listed.

Alternative sectors have a more visible specialist presence in the listed universe, where exposure to healthcare, self-storage and student housing is primarily delivered through dedicated single-sector specialists.¹⁷ Exposure to emerging sectors such as life sciences and data centres is currently achieved mainly through diversified, industrial/logistics and office listed platforms.

The difference in implementation route matters for investors. Listed real estate offers more direct access to specialist operators in sectors where scale, operational expertise and public-market capital access are competitively important. Non-listed real estate

Figure 12: Sector composition of EPRA constituents and INREV contributing funds, 2025



Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

remains more diversified by vehicle structure, providing a key route to large-scale private portfolios, particularly in residential, industrial/logistics and diversified core European strategies. Multi-sector non-listed funds account for 47% of the INREV Annual Index; diversified vehicles account for approximately 34% of the FTSE EPRA Nareit Developed Europe Index.

Sector diversification is achievable through both routes, but not in the same way. Listed markets provide liquid access to specialist operators and faster sector rotation, while non-listed multi-sector funds offer broader diversification across countries, asset types and managers, with portfolio change that is typically slower and more capital-allocation driven.

¹⁷ At end-December 2025, the FTSE EPRA Nareit Developed Europe Index included five healthcare constituents (combined index weight 5.1%), three self-storage constituents (combined index weight 2.5%) and three student housing constituents (combined index weight 2.2%).

4.2 Country composition: each route offers different portfolio exposure, with Germany the largest allocation

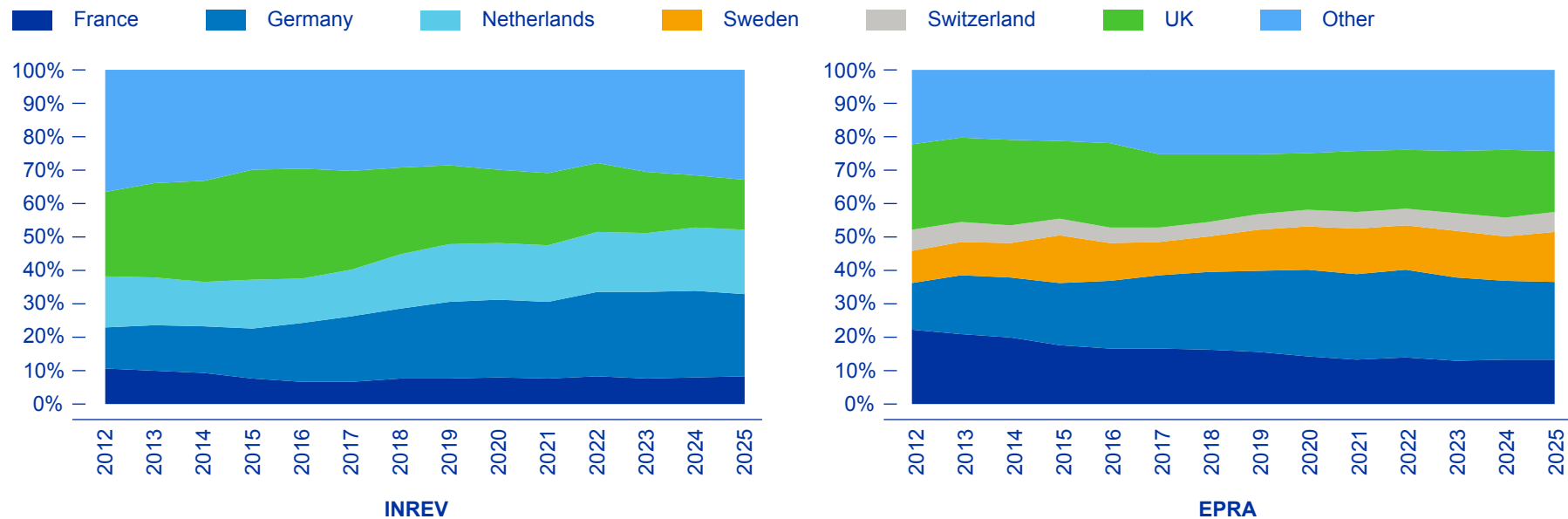
Figure 13 shows a clear geographic rebalancing in both universes since 2012. In the INREV portfolio, the most important shift has been a rotation away from the UK and towards Germany. In the EPRA portfolio, the country shift has been broader: France and the UK have lost share, Germany has gained materially, and Sweden has emerged with a more significant listed market presence.

The decline in the UK weight within the INREV index reflects not only relative pricing but also a sharp contraction in the UK property fund universe, which had historically been an important access route for institutional and wealth capital. Following suspension events in 2016 and 2020, several large UK -property funds announced closures or wind-downs from 2022 onwards,¹⁸ with assets falling from approximately £7.8 billion in October 2021 to £2.8 billion in October 2024.¹⁹

Germany's weight has moved in the opposite direction, underpinned by sustained institutional demand for core continental European exposure, particularly in residential. Pan-European core funds have increased their German exposure, while dedicated residential strategies have grown in scale.

In the listed universe, country weights have been reshaped by consolidation, repricing and capital market depth, and respond quickly to relative share price performance, corporate activity, equity issuance, index inclusion and sector repricing. This makes the listed country

Figure 13: Evolution of country allocation, 2012-2025



Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

¹⁸ Funds managed by M&G, Aegon, Aviva and St James's Place were among those announcing closures or wind-downs.

¹⁹ Source: Morningstar UK, 'UK Property Investors Have Another Painful Year' (December 2024).

composition more sensitive to capital-market dynamics than the non-listed universe.

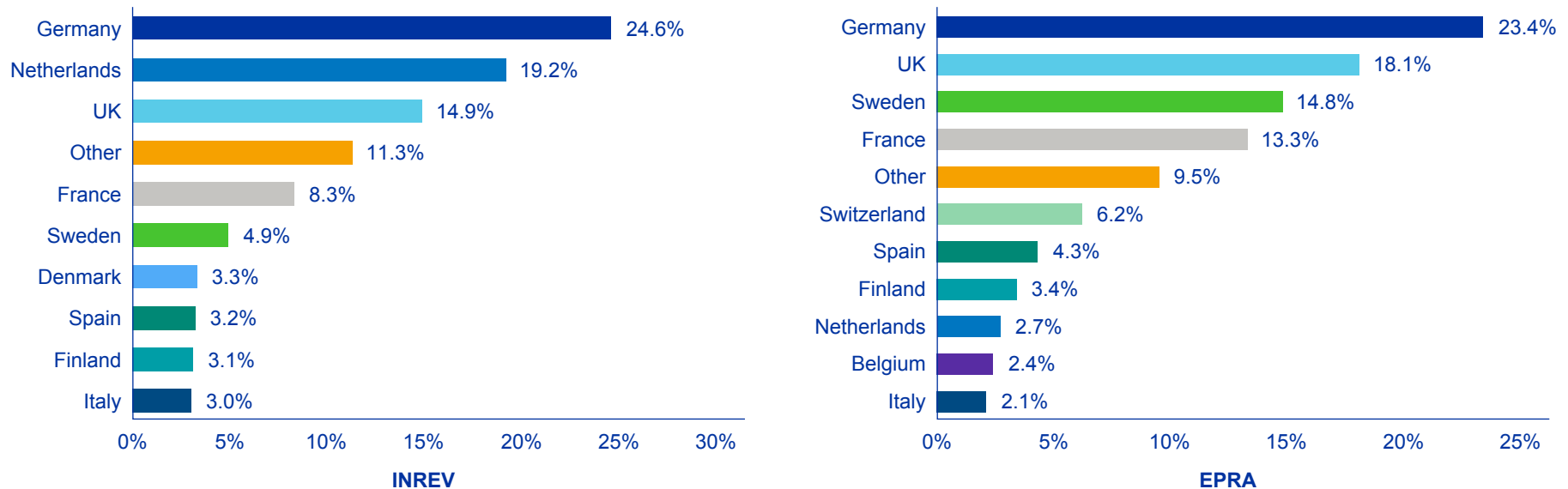
France is the clearest example, with its EPRA weight falling from 22.2% in 2012 to 13.3% in 2025. This decline is closely linked to the sector profile of the largest French listed real estate companies, historically concentrated in retail and offices – precisely the sectors facing the greatest repricing pressure since 2020.

Both Germany and Sweden have seen a marked rise in their portfolio weights.

Germany’s increase from 13.9% to 23.4% is more linked to residential consolidation and scale: the Vonovia–Deutsche Wohnen merger, together with the growth of other German residential-focused companies, created a listed residential cluster of a scale not present in 2012. In both the listed and non-listed universes, Germany has gained market share, but through different transmission channels: capital allocation in non-listed, market weight of large residential platforms in listed. Sweden’s share has grown from 9.8% to 14.8%, reflecting the breadth of its domestic listed property sector.

The UK has moved in the opposite direction, its share of the listed portfolio falling from around 26% in 2012 to roughly 18% in 2025. This reflects relative growth rather than contraction: UK property exposure within the index has continued to expand in absolute terms, but far more slowly than the residential and industrial/logistics exposure built out predominantly in Germany and across pan-European logistics platforms. UK-held portfolios are concentrated in offices and retail — where values were broadly flat to lower after 2016, while sterling’s depreciation against the euro over the period has further reduced the euro-denominated value of UK assets.²⁰

Figure 14: Country composition of EPRA constituents and INREV contributing funds, 2025



Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

²⁰ UK-located property within the constituents’ portfolios is estimated at approximately €70 billion in 2012 (around 26% of €275 billion) and €120 billion in 2025 (around 18% of €676 billion); over the same period sterling depreciated from roughly €1.43 to €1.15 per pound. Source: EPRA; author calculations.

Allocations to Denmark and Spain have increased in both universes, while Italy's share has more than halved. Poland's share has also declined, reflecting a limited institutional base and geopolitical concerns

that have weighed on cross-border capital flows into the region.

At the end of 2025, Germany is the largest country exposure in both universes. The

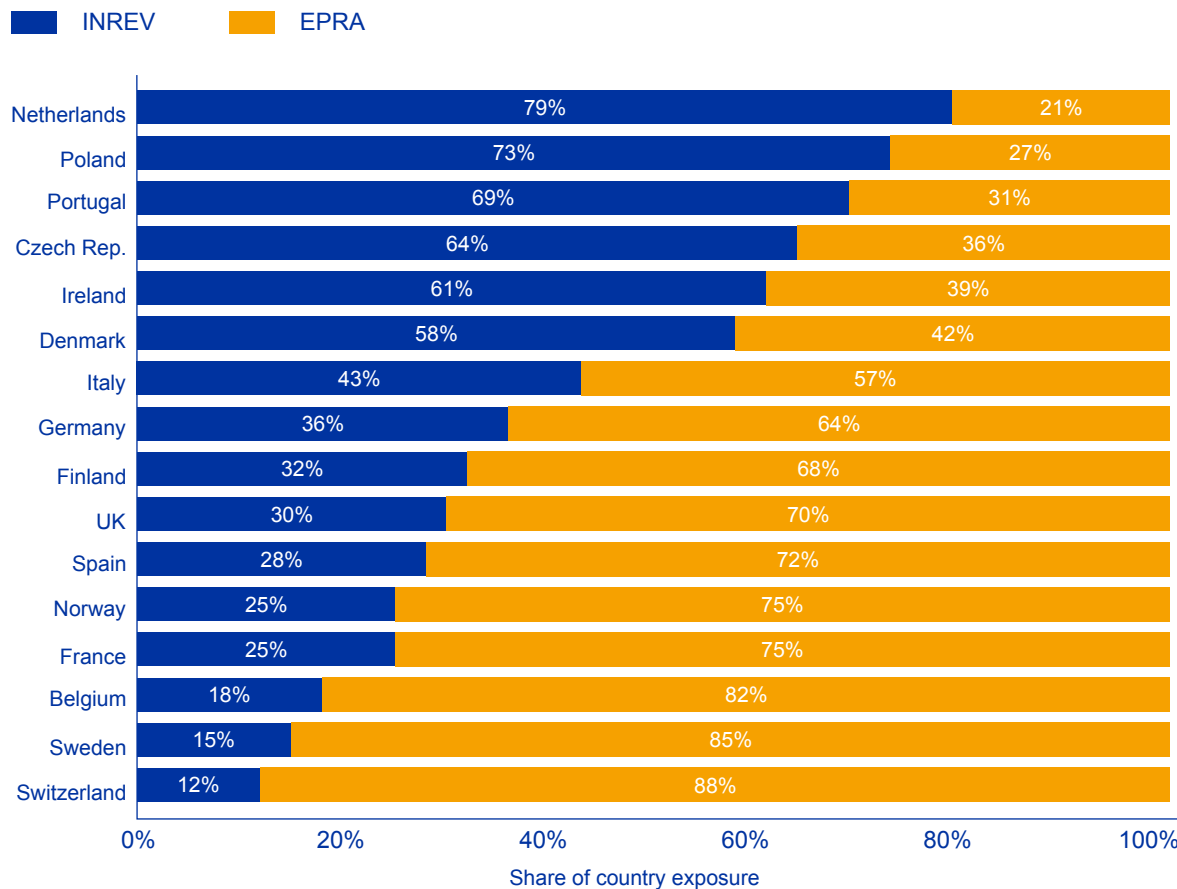
apparent similarity of the German weight masks important differences in how that exposure is delivered.

In the INREV portfolio, Germany sits alongside the Netherlands and the UK as part of a concentrated core European allocation — together accounting for nearly 60% of the index — reflecting the dominance of large multi-country funds and core strategies. Nearly 70% of the EPRA portfolio is accounted for by Germany, the UK, Sweden and France, shaped by the location and sector focus of large listed companies.

Multi-country equity funds represent 52.4% of the INREV Annual Index by NAV in 2025, giving investors diversified access across markets, sectors and managers. European listed vehicles tend to be more single-country focused, with multi-country platforms concentrated among retail, industrial/ logistics and alternative sector specialists.²¹

The two routes, however, also offer materially different country exposures. Combining them lets investors broaden geographical diversification, reach allocations that are not available through either route alone, and build a more representative pan-European portfolio. Figure 15 shows the listed and non-listed shares of property exposure in each market, ranked by the non-listed (INREV) share from highest (Netherlands) to lowest (Switzerland).

Figure 15: Listed and non-listed shares of real estate exposure by country (%), 2025



Source: INREV Annual Fund Index, FTSE EPRA Nareit Developed Europe Index.

²¹ Examples include: Unibail-Rodamco-Westfield and Klépierre in retail; Segro and Sagax in industrial/ logistics; Aedifica in healthcare, Safestore and Shurgard in self-storage, and Xior in student housing.

The listed universe has larger allocations to Switzerland, Sweden, Belgium and France than the non-listed universe. Switzerland's listed market comprises mainly domestically focused companies owning high-quality assets in prime urban locations.²² Sweden stands out for the depth of its listed property sector, with 25 EPRA index constituents and listed market penetration that is high relative to the domestic economy.²³ Belgium also has a well-developed listed market, underpinned by a long-established REIT regime. Its portfolio share of the European listed sector — at €16bn — is spread across industrial/logistics, healthcare and retail, and is owned by both domestic and other European listed companies, retail in particular. France also has a stronger presence in the listed universe, although the non-listed route still provides substantial exposure of €29.4bn. The non-listed route, by contrast, is the principal way into the Netherlands, where institutional real estate is held mainly through core open-ended vehicles: the Netherlands is close to a fifth of the non-listed portfolio but only a single-digit share of the listed one. Portugal and Poland are likewise mainly dominated by the non-listed vehicles.

4.3 Combining the two: complementary routes to a target exposure

The portfolio construction implication is that the two real estate universes offer distinct routes to sector and country allocation. The underlying patterns remain materially different, however: the German listed residential cluster, the depth of the Swedish listed sector and the availability of listed alternative-sector specialists are features of public capital markets, while the scale of multi-country non-listed core funds reflects the structure of institutional private real estate implementation. For some of these alternative sectors, listed markets offer, in practice, the only meaningful route to gaining exposure. Tax treatment and fiscal incentives add a further dimension to these implementation choices, influencing both the jurisdiction in which a vehicle is domiciled and whether similar underlying property exposures are held through listed companies, non-listed funds or direct structures.

Whether a given exposure is best obtained through listed or non-listed real estate ultimately depends on the specific country-sector combination: the same sector is predominantly listed in one country and predominantly non-listed in another.²⁴ Residential is the clearest illustration — in Germany, large-scale residential is held overwhelmingly through listed companies, whereas in the Netherlands this exposure is captured almost exclusively through non-listed vehicles. The same divergence appears in retail: French retail is heavily concentrated in the listed market, while Portuguese retail sits mostly within non-listed fund structures. The office sector is no different — Paris offices can be found predominantly in the listed market, whereas the larger share of German office allocations sits in non-listed vehicles. Listed and non-listed real estate are better understood as complementary routes rather than competing asset allocations: once an investor has set its target exposure by country and sector, the relevant question is which universe provides optimal access to that — and the answer differs from one market to the next.

²² Swiss listed real estate companies include Swiss Prime Site, PSP Swiss Property, Allreal and Mobimo, with portfolios concentrated in Zurich, Geneva and Basel.

²³ Large Swedish listed real estate companies include Castellum, Balder, Fabega and Sagax.

²⁴ Country-sector access is assessed from INREV look-through allocations for the non-listed universe and from FTSE EPRA Nareit constituent company accounts (FY2024–25), aggregated by the location of underlying assets, for the listed universe. The comparison is directional: the listed figures are compiled from public company disclosures rather than a standardised look-through, and are expressed as relative magnitudes, not index weights.

Chapter 5: Conclusions

Set Europe's listed and non-listed property markets side by side over twenty years, and the striking pattern is not what separates them, but how far they have converged. Both have reached institutional scale; both have de-leveraged structurally since the global financial crisis and held that discipline through the recent rate shock. Equally, both have rotated, in step, out of retail and offices and into residential, industrial/logistics and alternatives, moving their centre of gravity from the UK to Germany. They have grown to resemble one another in scale, in the discipline of their balance sheets and in the broad shape of their portfolios. What still sets them apart is not the asset class, but the route into it.

That residual difference is where their value to a portfolio now lies. Each route reaches

The striking pattern is how far Europe's listed and non-listed property markets have converged. Both have reached institutional scale; de-leveraged structurally, rotated out of retail and offices and into residential, industrial/logistics and alternatives, moving their centre of gravity from the UK to Germany. What still sets them apart is not the asset class, but the route into it.

Each route reaches parts of the European market the other does not — so the relevant decision is no longer the binary. It becomes a question of composition: having set a target exposure by country and sector, an investor asks which route, or which combination, delivers it.

parts of the European market the other does not — the same sector sits predominantly in the listed market in one country, and the non-listed market in another, and some specialist exposures are available through only one route — so the relevant decision is no longer the binary, liquidity-driven 'listed or non-listed?'. It becomes a question of composition: having set a target exposure by country and sector, an investor asks which route, or which combination, delivers it.

This recasts a debate that has run for much of those twenty years. The two routes were long compared on their attributes — the liquidity and transparency of public markets against the appraisal stability and control of private ones — with investors asked to weigh one set against the other. Those attributes still differ, and they still matter, but they are no longer what the decision turns on. Where the two routes hold the same kind of property at comparable scale, an investor is no longer

choosing between two kinds of real estate so much as deciding how to assemble a single exposure — with the liquidity and pricing profile of each becoming a characteristic to manage rather than the reason to prefer one.

On this view, they are complementary instruments tuned to the same market, and an investor who draws on both commands a fuller, more representative European real estate universe than either offers alone.

The second paper in this series will focus on further INREV and EPRA analysis on the issues that shape that combined role: the methodological drivers that partially explain their differences in performance, the lead-lag relationship between listed and non-listed markets, the relative risk-adjusted performance of the two routes once differences in pricing and valuation are accounted for, and the diversification benefit and optimal balance of holding both within an institutional multi-asset portfolio.

They are complementary instruments tuned to the same market, and an investor who draws on both commands a fuller, more representative European real estate universe than either offers alone.



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