

MARKET RESEARCH

European Listed Real Estate Special Report

Listed Real Estate valuation: A closer look at ratios, cash flows and portfolio allocation

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Executive summary

The investment community is a very diverse universe, comprising both individual and institutional investors from different sectors, geographies and cultural backgrounds. They may all look at listed property investments in a different way, and possibly have other perceptions of risk as well. Generalists may be different from specialised real estate investors, and therefore adopt different valuation metrics to listed real estate (LRE). However, once the necessary 'nuance' is brought to the major valuation ratios, a holistic approach is perfectly possible by adding LRE securities to multi-asset portfolios.

Numerous valuation metrics are available for LRE, whether investors are cash flow-driven or NAV-minded. However, certain valuation ratios for real estate securities are determined in a "special" way compared to the more commonly used valuation metrics. This is particularly true for property valuation where market value is usually assessed on a frequent basis (in contrast to the accounting-based book value). As a direct consequence, loan-to-value ratios (LTVs) for LRE securities also differ from total assets/debt multiples used in other sectors. And "earnings" are specific as well, which is illustrated by several definitions: EPRA earnings, net earnings, funds from operations (FFO), adjusted funds from operations (AFFO).

The least we can say is that the current economic and geopolitical environment is challenging. The actual context has a direct impact on the valuation metrics, for example with the European LRE sector trading at substantial discounts-to-net asset values (NAVs). Most Central Banks – with the exception of the Bank of Japan – have changed their monetary policy to combat inflation by gradually raising benchmark interest rates. Higher nominal interest rates have led to market volatility, irrespective of asset classes. For example, bonds and shares have been falling hand in hand in recent months.

For LRE, it is interesting to observe that after any bearish period of stock market performance since 1989, the FTSE EPRA Nareit Developed Europe index recovered strongly in the three-to-five-year period after such a downturn. For the continental index, the average annualised return for the 3 and 5 years following those bearish periods was 9.94% and 9.54% in GBP, respectively. For the Eurozone index, for the period 1999–2022 the average annualized total return in the post-bearish recovery was 13.28% for 3y and 11.75% for 5y in EUR.

The advantages of real estate securities for both Asset Liabilities Management (ALM) generalists as well as other generalists and specialised investors remain pretty clear. LRE can be used to boost the returns on the asset side in the ALM exercise. Moreover, debt ratios – LTVs for Real Estate Investment Trusts (REITs) – remain very reasonable which is of paramount importance in the near and mid-term. Also, the present turmoil in the capital markets can by no means be compared with the Global Financial Crisis (GFC) of 2008/2009. And given the current atmosphere, with cash gradually becoming King, it is important to highlight that REITs need to pay out the bulk of recurrent income from a regulatory perspective.

LRE is a highly liquid asset class, with low leverage, recurrent cash generation and current low valuations given the recent decline in share prices. The current bearish trend seems to be too extended and expected returns look attractive for the recovery period in the medium and long term.

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1. Impact of the current economic turbulences on listed real estate

We are experiencing very special times, both economically and geopolitically. Central bank monetary tightening to curb inflationary pressures is now the new mantra, and this is new to a lot of (younger) analysts and market players after a long period of very low or even negative interest rates. On 8 September, the European Central Bank (ECB) raised interest rates by three-quarters of a percentage point to 1.25 %, the largest increase in history, to curb inflation in the euro area. Central banks in Europe and elsewhere in the world are also widely expected to raise their benchmark interest rates further, although the ECB has adopted a less aggressive interest rate policy than the US so far.

Higher nominal interest rates - both short-term and long-term - obviously have an impact on global economic growth expectations. Headline inflation, initially due to soaring energy prices, needs to be tackled with a tightening monetary policy which immediately puts a damper on future growth prospects. Not to mention any recessionary scenarios. What is also concerning is that core inflation data are on the rise as well, which suggests that the overall inflation problem could be long-lasting.

More important than the "right" level of economic growth forecasts and the "exact" prediction of interest rate benchmarks is the fact that we are now living in a new economic (and geopolitical) world, which could be very different from the past 10 to 20 years. This leads to nervousness, uncertainty and thus volatility in financial markets, not only stock markets, but also bond markets, currencies, commodities, and other assets. LRE does not escape from the general uncertainty either.

This means that investors and analysts face valuation problems in LRE. The current uncertainty sometimes makes it difficult to value LRE correctly, whether the valuation metrics are driven by intrinsic values or inflation-adjusted cash flows. Which valuation metrics should now be used to best approximate the market value of LRE? Can most 'common' valuation multiples simply be applied to REITs and other LRE?

2. Heterogenous investors: specialists vs. generalists

Values for LRE companies can be either income-based or asset-based, and the valuation approach will depend on geographies. Where are the buildings located and more importantly, where do investors come from?

2.1. Are 'generalist' investors different from 'specialised' investors?

At the Iberian REIT conference of March 2022 held in Madrid, Alex Moss, Chairman of the EPRA Research Committee, explained there are three broad types of investors in the LRE industry:

- Active real estate specialists
- Active generalists
- Passive funds/investors

The definition of a specialist property investor is more than clear. He or she specialises in real estate, whether in space markets, private real estate vehicles or LRE. Among the active "generalist" investors and managers, we believe another distinction can be made between two major profiles: those who rather focus on the "asset management" only and those who try to "match" the liability side of the balance sheet with the asset side using multiple assets.

Only active real estate specialists are concerned with share pricing relative to the net market value of the underlying assets (price-to-NAV). Generalists might use the more common valuation metrics (such as price-to-earnings, price-to-book value) or be more cash flow driven and compare price-to-cash flow ratios for real estate companies with P/CF for companies active in other sectors. For many companies, active real estate specialists do not represent a sufficient percentage of the ownership to determine price. Therefore, *generalist valuations* and *fund flows/sentiment* normally drive short-term pricing rather than sector arbitrageurs (Moss, A., 2022). As such, the common valuation metrics – used for general equity – could be more familiar to generalists wanting to invest in real estate and so more relevant for pricing LRE.

2.2. What are the available valuation multiples?

As a matter of fact, there are various valuation multiples commonly used for the public property companies depending on whether you belong to the net asset value (NAV) side following the asset-based approach or the cash flow camp (income-based approach): price/EPRA earnings (P/EPRA Earnings), price/net earnings (P/E), price/funds from operations (P/FFO), price/adjusted funds from operations (P/AFFO) and finally assets side price/net asset value (P/NAV) or enterprise value/gross assets value (EV/GAV)¹

And what about price/book value, enterprise value/earnings before interest, taxes, depreciation and amortization (EV/EBITDA) used for other industry sectors? Is it possible to use the latter (more standardised) valuation multiples to value REITs anyway? And what to make of loan-to-value ratios and interest rate coverage ratios for REITs?

As a reminder, the income-based approach for Real Estate Investment Trusts (REITs) and other property companies uses a measure for both cash flows and capitalization rates and is regularly used for commercial buildings. NAVs are impacted by income streams and property capitalization rates.

- **The DCF (Discounted Cash Flow) Analysis:** Property values are estimated by calculating the present value of future cash flows. The discount rate incorporates a nominal interest rate (being the sum of the real interest rate and expected inflation) and a risk premium;
- **Capitalization Rates:** Property values are assessed by dividing the 'operating income' for a property by a capitalization rate. So leased commercial property is valued in the property market using gross or net yields based on market conditions and transactions. A basic definition of a gross yield is the gross market rent divided by the market value. For a net yield, the net market rent (after operating costs)/market value.

It is important to underline that the capitalisation rate used in the space market to value real estate is not the same as the "earnings yield" used to value more property companies. In the case of REITs that have recently seen much lower share prices in the stock market, the earnings yield (net current earnings/share price) may now be much higher than the cap rates used to value the underlying properties. Just because earning yields increase with falling stock prices does not mean this will automatically lead to rising cap rates in the space markets (or not to the same extent). Moreover, cap rates also depend on the type of property to be valued.

The **asset-based approach** for REITs and other listed property companies consists of assessing – on a regular basis – the net asset value per outstanding share. The net market value of the REIT is calculated on a periodic basis by subtracting the market value of liabilities from the gross market value of the property portfolio. This approach is often criticized in particular by (Anglo-Saxon) investors eager to reveal cash flows (and profit) on a short-term basis.

¹ EPRA has issued guidelines to better reflect the current operational performance of a REIT. In concrete terms, this means that non-cash elements as well as changes in market value of elements of the portfolio (whether realised or non-realised, investment or development properties) are added to the net earnings. In effect, what is left as EPRA Earnings is the income return generated by the investment, rather than the change in value or capital return on investments (EPRA Best Practices Recommendations, February 2022).

Funds from operations (FFO) is widely used in the U.S. In 1991, the National Association of Real Estate (Nareit) adopted a definition of FFO in order to promote an industry-wide standard measure of financial performance that would not have certain drawbacks associated with net income under Generally Accepted Accounting Principles – GAAP (Nareit website). Indeed, the main drawback associated with GAAP net income is historical cost depreciation accounting for real estate assets. Current GAAP depreciation practice implicitly assumes that the value of real estate assets diminishes predictably over time, while in actuality these values rise or fall with market conditions (e.g., investment demand, the degree of correlation with other asset classes, liquidity, etc.). Therefore, FFO was created and intends to be a supplemental measure emphasizing REIT industry recurring performance.

FFO contains a major weakness: It does not deduct for capital expenditures required to maintain the existing portfolio of properties. Shareholders' real estate holdings must be maintained, so FFO is not quite the true residual cash flow remaining after all expenses and expenditures (Farley, A., 2022). Analysts, therefore, use a measure called adjusted funds from operations (AFFO) to estimate the REIT's value. It is a more precise and second measure of residual cash flow available to shareholders, and of the capacity of a REIT to pay out dividends.

Another measure for cash flows could be Net Operating Income (NOI), even though NOI neither exclude interest income nor subtracts capital expenditures.

The different metrics are used in practice, however it is important to remember that FFO and EPRA earnings are not exactly the same, as EPRA Earnings has its basis in IFRS and FFO is based on US-GAAP. The main distinction is the exclusion of depreciation/amortization in FFO which is not the case in EPRA earnings.

2.3. Complementary valuation approaches

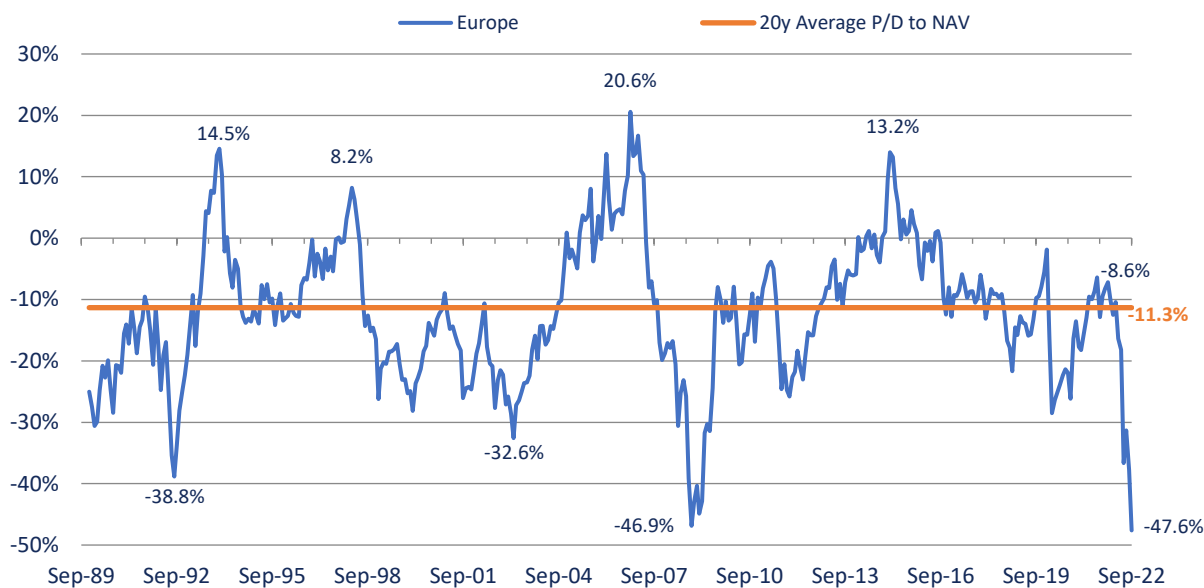
Whether the valuation method should be asset-based or income-based is not a foregone conclusion, and it is not a matter of who is right and who is wrong.

Investors who are focused on creating short-term profit are likely to be attracted to the income-based method. It comes down to showing that a property company is capable of generating cash. The method is particularly popular in the United States and Asia. Investors urge property managers to create as much cash as possible that can be paid out as dividends. The emphasis is on the 'operational' aspect (buying, selling, renting or renovating).

Obviously, the asset method does not exclude efficient operational management either, but the starting point is rather what the existing portfolio could be worth at the current net market value. This approach usually works well, although REITs can trade at substantial discounts-to-NAV or very high premiums indeed in times of market uncertainty coupled with structural changes in the sector (due to e-commerce, Working from home policies, etc.).

This story has never been so actual as today, leading to fierce discussions among investors. Is the market not exaggerating when it comes to large discounts? Is the stock market not too volatile relative to the net market value of the underlying properties? Does the equity market not overestimate the operational quality of the manager when REITs trade at very high premiums?

Graph 1: Discounts-to-NAV for European property companies



Source: EPRA Market Research, Data as of 30 September, 2022.

It is possible that cash flows become more important in times of very large market value fluctuations, which is currently the case. For instance, investors may feel that an unfavourable economic outlook could put strong pressure on the share price while therefore net rental income streams should not be affected to the same extent. However, the assets angle cannot be put aside and the wider picture looking at both angles can generate an interesting view that enable investors to identify new opportunities.

2.4. Homework for investors

It would be arrogant to claim that ‘traditional’ valuation methods no longer work (such as the NAV approach). They do still work but ‘the market’ gets impulses from all angles and can cause share prices to fluctuate sharply. This is usually a temporary phenomenon, and it comes to investors to make their own assessment of the current property market. In a sense, they should assess the intrinsic qualities of the underlying property markets as accurately as possible so that possible ‘corrections’ can be made to projected cash flows. Consequently, the determined value per share may differ from the share price. And this can lead to investment opportunities.

Are the inflation hedge qualities of real estate adequately reflected in today’s share prices? Or is the market solely focussing on possibly higher borrowing costs? The current geopolitical turmoil is adding further impetus to the already high inflationary pressures. Yet, across Europe, most rental contracts are indexed to inflation indices. While the indexation may not be perfect, it is at least partial (EPRA, June 2022).

The challenge could be that rental adjustments are based on a backward-looking basis (on inflation rates reported over the reference period (Moss, A., 2020)). But real estate can nevertheless be a better inflation-protected than many other asset classes if rental contracts are indexed to inflation while LTV ratios for REITs look very reasonably ².

2.5. Preliminary conclusion

To summarize, we believe that the discussion on valuation metrics is not a black-and-white story, and that the aim is not to play off one approach against the other. It does seem plausible to us to argue that it is mainly “generalist” who tend to value LRE based on metrics such as net earnings and cash flows because this is also done in various segments of the market other than real estate. Whereas real estate specialists tend to value LRE using NAV (or a combination of NAV and cash flows).

In any case, we believe that both generalist and real estate specialist investors can find value in LRE investments, regardless of the valuation method used, as the combination of different angles helps to identify new opportunities. When it comes to property valuation and the various real estate valuation metrics, the last word has not yet been said. Neither by the real estate players themselves nor by the investors, or just real estate specialists and “generalists”. Indeed, the real estate world with its various players and investors is a very heterogenous universe.

3. LRE in a Multi-Asset Portfolio

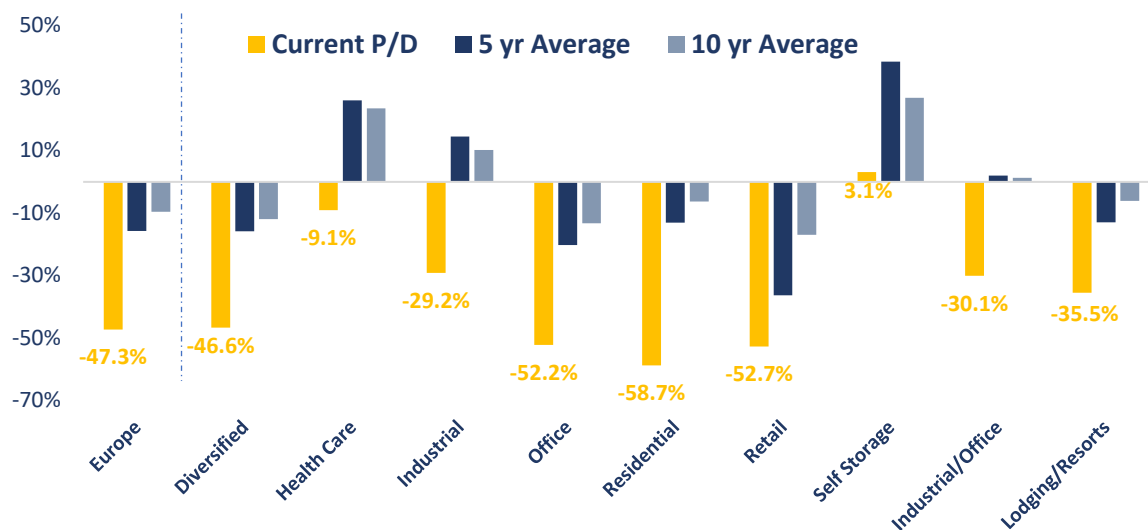
3.1. What about discounts or premiums compared to the average NAV?

When comparing the current NAV of European property companies to their share prices, a discount or premium to NAV arises. This suggests a differential valuation of the same properties in the private and the public market. Whether the valuation disparity is short-lived or permanent, real or perceived is a very difficult question to answer.

But it is clear that listed property companies in Europe – on average – are trading at sizeable discounts-to-NAV. For all markets but Europe, discounts are wider than their historical 5-year average. The overall average discount stood at -47.6% as of September 2022 with significant differences across the continent, suggesting a substantial mismatch that can be exploited by investors with long and medium-term horizons.

Across Europe, Residential, Retail and Offices in particular have extended losses in recent months, with discounts exceeding 50%. Nevertheless, the healthcare sector has held up relatively well, while Self Storage could still book a small premium at 30 September 2022. In any case, current sector discounts are very wide compared to 5-year and 10-year sector averages. The European discount stood at a mere 9.5% on average in the 10 years to end-September 2022, close to the 20-year sector average of 11.3% as depicted in graph 1. We believe most companies are well positioned to weather a modest economic slowdown.

² More information on inflation and interest rates can be found in our EPRA Research paper of June 2022.

Graph 2: Premium/Discounts-to-NAV for European property companies by sector


Source: EPRA Market Research, Data as of 30 September, 2022

3.2. A comparison against other industries is favourable for Real Estate, though not always an easy sell

Equity ratios might be closely aligned with real estate metrics, but sometimes they can also differ. Therefore, it is always useful to review some of the technical details that generalist investors should have in mind when using equity ratios to compare listed property companies against some other sectors, this is directly addressed in this following section.

Table 1: Weighted Average: European Small Caps ratios by sector*

Industry	# of companies	Total Market Cap (EUR M)	Average Market Cap (EUR M)	PE	Price to Book Ratio	DPS Growth 5 Years	Dividend Yield	Debt / Assets	Return On Equity	Return On Total Assets
Industrials	639	1,348,625	2,237	34.35	6.96	6.36	2.85	0.69	18.22	5.71
Financials	375	1,079,183	3,066	15.07	1.64	4.84	5.60	0.82	14.95	4.97
Communication Services	167	455,689	2,921	24.29	3.91	-1.75	4.76	0.74	19.31	9.99
Materials	204	545,489	2,812	15.26	2.37	8.27	4.85	0.52	17.96	9.18
Information Technology	330	451,867	1,462	47.82	5.19	8.35	1.52	0.58	13.86	7.62
Health Care	277	591,020	2,264	38.34	5.61	6.57	1.28	0.45	10.73	5.51
Consumer Staples	167	472,701	2,918	20.99	4.17	4.19	3.18	0.64	15.49	7.32
Utilities	82	430,169	5,377	21.19	2.64	6.04	4.50	0.81	14.22	3.47
Energy	93	169,229	2,015	13.95	4.33	6.00	4.55	0.80	11.22	6.89
Consumer Discretionary	363	570,532	1,739	36.90	3.38	6.47	2.86	0.67	11.96	5.05
Real Estate Services	29	14,913	574	9.91	1.06	0.53	2.47	0.58	12.16	4.85
Real Estate	236	297,957	1,330	8.13	0.89	1.10	4.39	0.42	13.02	7.83
Total / W.Average	2962	6,427,375	2,313	23.12	3.48	4.76	3.17	0.58	13.28	5.51

*Defined as companies under EUR 30 billion and above EUR 100 million in Market Cap.

Source: EPRA Research and Refinitiv, data as of 5 October 2022.

3.2.1. Market values without depreciation

LRE shows low leverage, resilient corporate profits and low valuation ratios. The overall debt/assets ratio for European real estate stands at 41.9% (EPRA, as at October 2022), and this is well below the global sector average (which is 57.8% as shown in table 1).

However, care must be taken with the debt/total assets ratio for LRE. Total debt is measured against the market value of assets. As a consequence, the debt/total assets ratio is often referred to as loan-to-value ratio (LTV) for REITs and other public property companies. Indeed, REIT's property portfolios need to be revalued on a regular basis. This is not necessarily the case for other sectors where book value may be converted into market value only when assets are sold or revalued (though not periodically). As a result,

LTVs for REITs and other property companies may be rather low (but not necessarily for listed property developers). Yet it is normal that debt/total assets ratios are higher for other sectors as they use the accounting-based book value for those assets. As a consequence, the debt-to-assets ratio can be calculated differently for the various asset classes of a multi-asset portfolio.

This also applies to other valuation ratios such as the commonly used price-to-book value. In fact, the P/Book ratio can never be used for portfolios with REIT status. Indeed, book values which take into account annual depreciation cannot be applied to REIT assets as they are valued at market value without taking depreciation into account. This is why specialists prefer P/NAV.

3.2.2. Price-to-earnings (P/E)

The price-to-earnings ratio or earnings multiple is the ratio for valuing a company that measures its current share price relative to its earnings per share (EPS). We could argue that P/E could also be a valuation multiple for real estate companies including REITs, but the key question is how exactly the earnings per share are calculated (not only for real estate companies but for companies in general). We think EPRA earnings could be a good indicator of the P/E multiple. EPRA earnings do not take into account capital gains or losses that can be booked on a real estate portfolio. Consequently, EPRA earnings can be considered as 'current' earnings, reflecting the operational performance of the REIT, and can be valuable in any comparison with other sectors that report current earnings (apples-to-apples comparison).

P/E may be estimated on a trailing (backward-looking) or forward (projected) basis. Table 1 shows that a P/E for LRE (not the same as P/EPRA Earnings) of a mere 8.13, which is very low compared to the sector average of above 23.12.

A partial explanation could be that REITs have to pay out the bulk of current net profits as dividends. This could hamper strong growth in NAVs per share (and subsequently share prices). While listed non-real estate companies can reserve a larger share of profits by reducing dividends at their discretion. Of course, shareholders of LRE are entitled to (often nice) dividends that are also part of the total return but usually these dividends are subject to taxes.

Another reason for the low P/E ratio for LRE is that the market simply overreacts in volatile times and believes that the current crisis is similar to the 2008 GFC (in which a number of public real estate companies were then overleveraged). That is not the case now, the cause of the volatility lies mainly in the rise in nominal interest rates.

An additional difficulty for real estate - and therefore LRE - is that valuation ratios differ within this asset class. Offices, retail, logistics and residential property, for example, do not command the same capitalisation rates in the space market and therefore, the price-to-earnings ratios also diverge for the listed property companies active in these property submarkets.

3.2.3. Debt/EBITDA ratio

Debt/EBITDA -Earnings before Interest, Taxes, Depreciation and Amortization—is a ratio measuring the amount of income generated and available to pay down debt before covering interest, taxes, depreciation and amortization expenses. In other words, what's the ability of a company to pay off its debt obligations?

This is a very important ratio, yet REITs are at a certain disadvantage because there is no depreciation expense compared to other sectors as the properties are not subject to depreciation. In this sense, EBITDA for REITs may be lower than for companies in other sectors.

3.2.4. Dividend yield

The dividend yield is an important feature for REITs as it is mandatory to pay out at least 80% of current earnings (regulations differ slightly according to geography). However, only REITs are required to pay out a dividend. This is not the case for project developers or LRE companies without REIT status. Consequently, the gross dividend yield is higher for REITs than for non-REITs. Thus, when investors analyse the 'real estate' sector, the different sub-sectors should be differentiated. As a consequence, it is hazardous to work with

an ‘average’ dividend yield.’ Growth in dividends is rather meagre for the real estate sector given the mandatory pay-out ratio. Other sectors cut their dividends during the pandemic (or even abolished them like banks) and, consequently, now have more room to increase dividends.

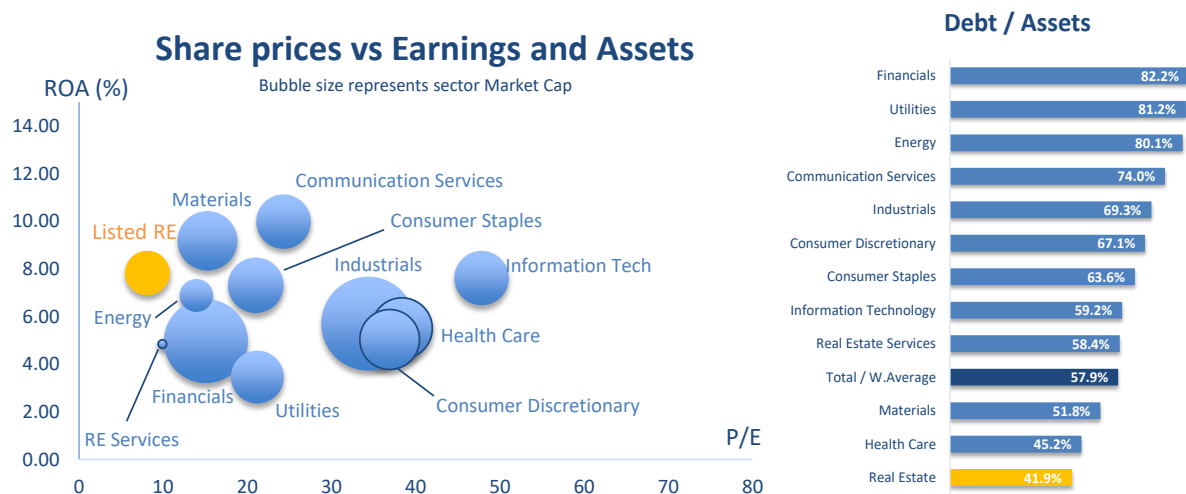
3.2.5. Return on total assets (ROA) and return on equity (ROE)

Return on total assets (ROA) is a ratio that measures a company's earnings before interest and taxes (EBIT) relative to its total net assets. So, ROA reflects the ratio of operating (and financial) income to the value of total assets (including debt financing). ROE instead determines the ratio of net earnings (after paying interest charges and taxes) to equity.

3.2.6. Putting all the pieces together

Listed property companies show positive fundamentals, with low valuations compared to other sectors. In terms of operating profits, LRE posted a ROA of 7.83% compared to 5.51% for all sectors, with communication services showing the highest multiple (9.99%) and utilities the lowest (3.47%). The same goes for ROE, which at 13.02% is very close to the sector average of 13.28%. Simultaneously, LRE companies have the lowest debt-to-asset ratio (41.90%), as real estate assets are usually valued at market value. However, all these positive figures are not well reflected in market valuations, as evidenced by a modest P/E ratio of 8.13x for LRE compared to 23.12x for all sectors. The real estate multiple is even lower than that for sectors such as financial institutions 15.07x, materials 15.26x and real estate services 9.91x.

Graph 3: Share prices, earnings, debt and assets



Source : EPRA and Refinitiv, data as of 5 October 2022.

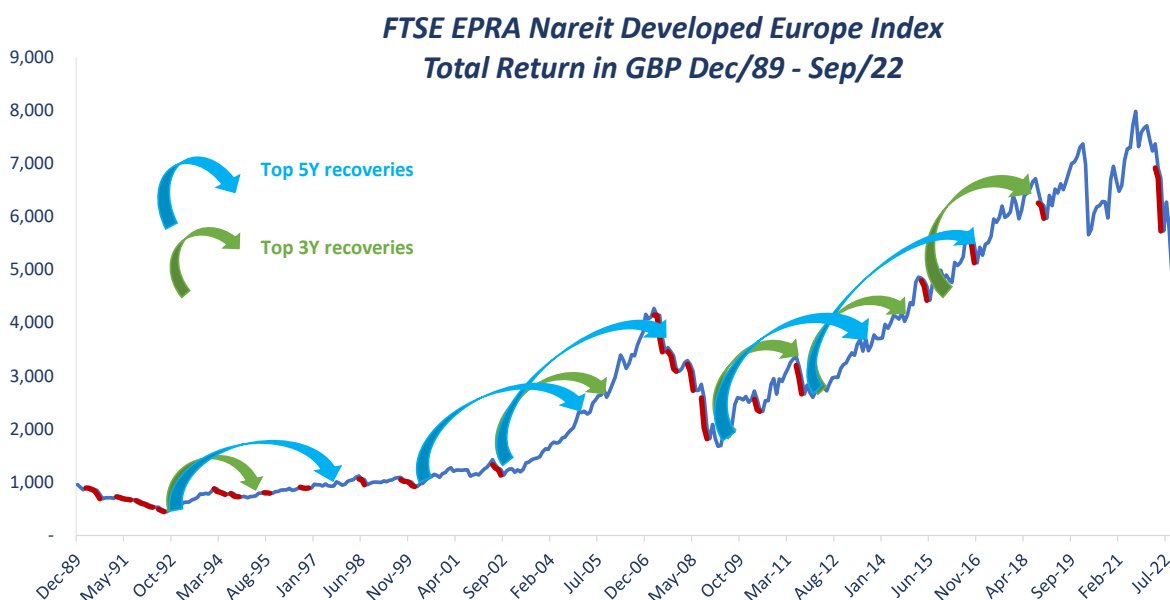
Perhaps, the only ratios where LRE does not stand on in a top position are those related to dividends, which is not surprising given the nature of the companies in the sector, most of them landlords aiming for a stable and resilient rental growth, with a long-term horizon and many of them obliged to distribute dividends under the REIT regulation. Therefore, it is just a matter of time for property companies to get their market valuations aligned with all the other sectors, representing a significant opportunity for investors with a long-term perspective aiming to get positive returns in a dynamic, resilient and stable industry.

3.3. Historical market trends, bearish periods and recoveries

In 2022, the FTSE EPRA Nareit Developed Europe Index showed negative returns in 7 of the 9 months until September, reaching a total return of -36.6% in GBP (-39.4% in EUR), this trend was the second worst annual drop in history just behind 2008 GFC (-44.8% in GBP). Of course, the rise in nominal interest rates is the main culprit but the pandemic has not really gone yet either.

When looking at the entire history of the index since Dec/89, it is possible to identify 21 bearish periods where the index showed negative returns in 3 or more consecutive months. This is an interesting result given the very long period covered here with at least 3 different economic cycles, with different characteristics of economic growth, inflation, interest rates and real estate trends. In terms of the country level indexes among the main European markets, the country with the highest number of bearish periods was Belgium and the lowest number was Switzerland.

Graph 4: Bearish periods and recoveries in European LRE



Source : EPRA Research.

However, what it is even more interesting to look at is the recovery observed after those periods. For the continental index, the average annualised total return for the 3 and 5 years following those bearish periods was 9.94% and 9.54% respectively. Again, differences across the countries are also relevant since those with a more diversified group of constituents by property sectors (UK, Belgium) are also the ones showing a more stable recovery, while those with more concentration of specific sectors (Germany, Netherlands) are the ones showing more volatile results. Finally, looking at the top 5 recoveries for the continental index, the average annual return in the 3-years following those periods was 19.75% and 18.60% in the following 5-years. Finally, looking at the Eurozone since 1999 when the Euro was introduced, the FTSE EPRA Nareit Eurozone Index showed 11 different bearish periods and the average annual total return in euros in the posterior recovery period was 13.23% for 3-years and 11.75% for 5-years, a bit higher than the figures for the continental index given the exclusion of the non-eurozone countries and a less significant currency effect.

Table 2: Bearish periods and recoveries in European LRE

FTSE EPRA Nareit Index TR in GBP: Dec/89 - Sep/22	# of Bearish periods	Average 3Y annualised TR Post-bearish period	Average 5Y annualised TR Post-bearish period
UK	21	9.80%	10.42%
France	20	12.22%	12.72%
Germany	22	13.22%	9.57%
Netherlands	22	4.61%	5.73%
Belgium	23	9.70%	7.96%
Sweden	20	16.01%	15.08%
Switzerland	18	14.44%	13.07%
Developed Europe	21	9.94%	9.54%

FTSE EPRA Nareit Index TR in EUR: Dec/99 - Sep/22	# of Bearish periods	Average 3Y annualised TR Post-bearish period	Average 5Y annualised TR Post-bearish period
Eurozone	11	13.28%	11.75%

Source : EPRA Research

Of course, it is possible to argue that the market conditions under each of these episodes were entirely different than the market conditions observed today, however, it is clear that the current bearish trend now looks far too extended and so the expectations for the recovery are very promising under a medium and long term perspective, perhaps not entirely aligned with the previous recoveries observed 3 and 5 years after those bearish periods, but definitely somehow close.

4. Cashflows management / LRE in the ALM process

4.1. Risk assessment

Risk and return are the two main focuses of modern portfolio theory, which has been studied for many years. Of course, "don't put all your eggs in one basket" is a well-known adage because investors intuitively feel that they cannot put all their resources in a single asset or in a single asset class.

However, the process of asset allocation is in reality much more complicated. Not only is the real estate investment universe heterogeneous in terms of assets and products, the diversity principle applies equally to the investors themselves. There are individual and institutional investors, a mix of retail investors, high net worth individuals, family offices, institutional investors such as pension funds, insurance companies or sovereign wealth funds, etc. Some investors are very well-informed, others less so.

Moreover, investors come from different cultural backgrounds and many of them view constraints and problems such as risk, liquidity, investment horizon, management burden and capital limitations differently. In particular, "risk" is difficult to assess or quantify and so is the premium that investors should require to compensate for perceived risk. For example, pension funds around the world have to match income from their assets with upcoming liabilities, while a wealthy person from Hong Kong may have a very different risk approach, holding property forever or just exchanging it for other (property) assets once conditions are optimal. And an investor from Kuwait might take a much higher risk than a defensive investor from Belgium. However, the Kuwaiti investor might command different risk premiums depending on whether he invests in Kuwait or elsewhere in the world. In other words, investors may or may not like risk depending on their background, the assets they invest in and the different geographies they target. This makes an asset and liability management (ALM) exercise far from simple to carry out.

4.2. Assets and Liabilities Management (ALM)

ALM is a practice used by financial institutions to mitigate financial risks resulting from a mismatch of assets and liabilities. Some of the common risks that need to be addressed are the interest rate risk and liquidity risk. Both risks are related to cash flow management: in what way will higher interest rates alter future cash flows, and will liquidity be assured in the future?

When interest rates start to rise, attention quickly turns to the negative impact on the asset side of balance sheets. By what percentage will the market value of assets - especially assets with a stretched value - fall if nominal long-term interest rates rise, say, by 100 bps? There is a wide range of assets available: equity, government and corporate bonds, private equity, listed and unlisted real estate, ... It is difficult to determine how sensitive equity might be to higher interest rates. For bonds, on the other hand, it is a lot simpler. Sensitivity depends mainly on the maturity of debt securities. The longer the maturity or duration of a security, the greater the effect of rising interest rates. If the maturity of debt securities is very long (e.g., 20 years or more), the nominal price of the debt is more sensitive to changes in interest rates, which needs to be compensated by a higher yield, under normal market conditions (yield curves with positive slope).

But the liability side of the balance sheet is important as well. Liabilities could include anything, depending on the activity and business model of a company: pension pay-out obligations for pension funds, pay-outs by insurance companies if insurance claims are filed and approved (top categories for insurance may include medical, dental, vision, cars, life insurance, medical). So, how could the nominal value of future pay-outs fall when those pay-outs normally track inflation in one way or another? This is because the present value – the value today – of future obligations is impacted by discount rates. If the discount rate rises due to inflation hike, the present value will logically decline. As a consequence, the present value of future financial obligations commanding a very long duration – for instance 25 years – could drop more in percentage than the market value of assets that are due in less than 25 years, but the opposite could happen as well if the assets duration is too high aiming to reach higher returns. Therefore, a prudent strategy followed by many investors is to partially or entirely match the duration of its assets portfolio with the duration of its liabilities.

Table 3: Assets and Liabilities: Average for Dutch pension funds clients, December 2020

Average duration of liabilities	25 years
Interest Rate Risk Hedge Ratio	58%
Hedge via Fixed Income Assets	30%
Average duration of these Fixed Income Assets	8 years
Hedge via Interest Rate Derivatives	28%
Duration gap	17 years

Source: European Securities and Markets Authority (ESMA), Report to the European Commission. December-2020.

So, under episodes of high inflation and rising interest rates, it is very important that the duration of liabilities is similar or longer than that of assets. Consequently, the so-called net duration gap (assets duration minus liabilities duration) is negative (expressed in years). The larger negative duration gap, the safer for the institution managing those assets and liabilities. For example, by the end of 2020 Dutch pension funds had a net duration gap of 17 years and so were less concerned about the possibility of a future context of high inflation and raising interest rates (ESMA, December 2020). But institutions holding short-term liabilities could run into financial difficulties and face short-term cash pressure. When financial markets are volatile, income from assets may fall below the financial obligations to be met. Dividends, for instance, may be reduced while bond coupons remain too low to guarantee current and future pay-outs.

We think now could be a good time to add LRE as part of an ALM exercise, mainly with the purpose of increasing the expected returns of the assets portfolio with an asset class offering regular cashflow distributions that can be used for attending the short-term liabilities outflows. Actually, as outlined above, the ALM exercise shows positive results when the duration of the liabilities exceeds the duration of the assets in the event of higher nominal interest rates. But the assets may also lose value, which could lead to liquidity issues. And that is why LRE can offer a solution given its high liquidity, strong fundamentals and high expected returns, especially under the current market conditions.

In its December 2020 financial stability report, the European Insurance and Occupational Pensions Authority (EIOPA) formulates it as follows: “If the risk-free interest rate adjusts to inflation, inflation can be beneficial for life insurers, insofar they are characterized by negative duration gaps (i.e., liabilities with longer duration than assets)”. However, EIOPA also mentioned that inflation could be more challenging for the non-life insurance business due to potential coverage of claims in real terms (once adjusted for inflation). In addition, higher discount rates could lead to a depreciation of net asset values for non-life insurers which tend to have positive duration gaps (EIOPA, 2020).

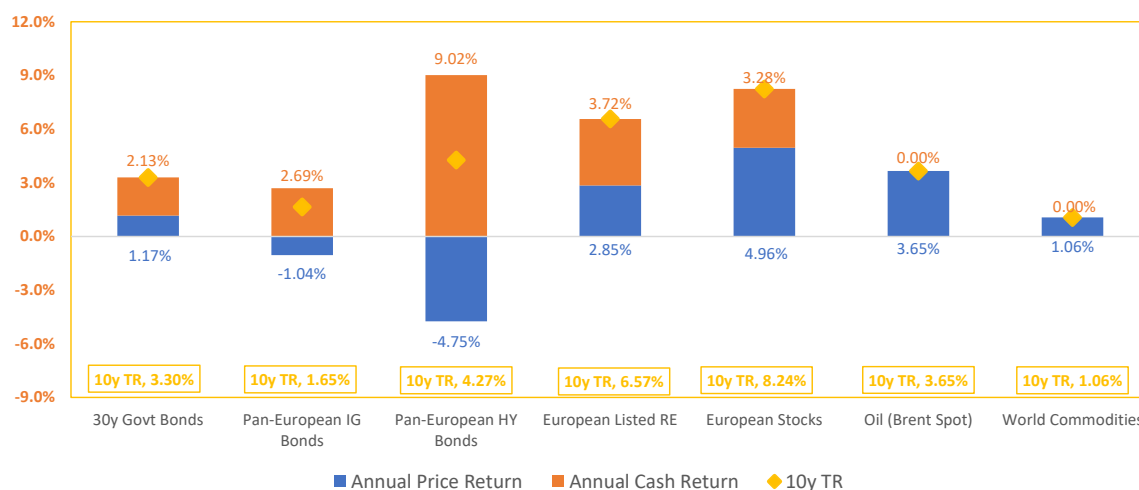
As seen before, the value of some property stocks - REITs and non-REITs - have fallen sharply in recent months (across Europe and elsewhere in the world), while fundamentals remain strong, and the average dividend yield is equivalent or higher than the coupons carried by investment-grade government and corporate bonds in Europe. In other words, it might be a good idea to add LRE to a multi-asset portfolio to increase expected returns without compromising liquidity, given the specific characteristics of the LRE industry. In other words, LRE could be convenient both for asset managers conducting a ALM exercise and investors – specialized or not – who intend to add public real estate to their portfolios in order to enhance risk-return characteristics.

4.3. Returns decomposition: cash and capital appreciation

In the previous chapters, we have discussed the cash flow characteristics of LRE, with the various cash flow and valuation metrics being quite similar around the world. Our contacts with investors show that many of them have both a growth and a cash flow objective. Although they want to invest in the longer term to generate capital gains, they would like to collect regular cash income on an annual basis (especially investors with short-term cash needs).

Graph 5 shows total returns in the 10 years to end-June 2022 were primarily made of cash, clearly exceeding bond yields. What is very important is that the graph(s) above shows that REITs worldwide are capable of generating a total return and stable cashflow distributions that is very reasonable for most sectors, and this regardless of financial and economic crises.

Graph 5: Ten-year annual total return decomposition for different European assets classes



Source : EPRA and Bloomberg, Data as of June, 30, 2022.

It is fair to point out that nominal interest rates fell steadily in the 9-year period till early 2022. Since early this year, interest rates have started rising which has led to stock market losses. So, investors should bear in mind that (more liquid) public real estate is still a multi-year (5 or more) investment. And as said before, if part of an ALM exercise, this can be a valuable contribution to the net duration gap.

5. Main conclusions

- Three different types of institutional investors are discussed in our analysis: generalists focussing on assets, generalists concentrating on ALM matches and specialised real estate investors. They look in a different way at multi-asset portfolios.
- The diversity of investors leads to a differentiated approach to LRE, especially in terms of valuation parameters. Nevertheless, a holistic approach is obtained when real estate securities are added to multi-asset portfolios, despite tangible distinctions in valuation metrics between LRE and other industries.
- As a matter of fact, several valuation metrics are available for LRE, depending on whether you belong to the NAV or cash flow camp. This is illustrated by ratios such as P/NAV, P/EPRA earnings, P/E, P/FFO; P/AFFO,... Most multiples are complementary yet may diverge significantly from each other: there are differences in the way earnings are calculated, discrepancy between book and market values, the difference between the accounting-based debt/total asset ratios and the market-based loan-to-values (LTVs), to name just a few.
- Once investors properly understand the differences between the various metrics, most ratios can be effectively applied to LRE with a view to increasing the part of real estate securities in a multi-asset portfolio. In our view, global real estate securities are attractively valued relative in terms of discounts to net asset value (NAV). Despite a widening of valuations, balance sheets are relatively strong, and inflation could lead to higher rents, ultimately (and so higher dividends).
- Investors may increasingly focus on cash flow management given the current difficult economic and geopolitical environment. Cash is becoming King, again. The war in Ukraine is fuelling market disruptions, which originated from the Covid-19 pandemic. However, looking at current market valuations and fundamentals, many different metrics and ratios suggest a strong potential for future performance for LRE compared to other equity sectors.
- For LRE, it is interesting to observe that after any bearish period of stock market performance since 1989, the FTSE EPRA Nareit Developed Europe index recovered strongly in the three-to-five-year period after such a period (average annualised return of 9.9% and 9.5% in GBP). For the FTSE EPRA Nareit Eurozone index, the average annualised total return for the 3 and 5 years following those bearish periods was 13.28% and 11.75% respectively in euro (1999-2022).
- Advantages of LRE for both ALM generalists as well as other generalists and specialised investors:
 - ✓ LRE can be used to boost the returns on the asset side in the ALM exercise, overpassing the interest rate used for discounting the liabilities while attending part of the cashflows obligations thanks to its characteristics of high liquidity, recurrent cashflows generation and attractive expected returns.
 - ✓ Reasonably debt ratios (LTVs for REITs). The current economic turmoil is not the result of inappropriate real estate investments, and the Global Financial Crisis of 2008/2009 is not comparable to the current crises (energy crisis, geopolitical turmoil). The importance of acceptable LTVs (which are capped for REITs), with debt preferably contracted at fixed rates is of paramount importance. In addition, REITs need to pay out the bulk of recurrent income.
- **LRE is a highly liquid asset class, with low leverage, recurrent cash generation and current low valuations given the recent decline in share prices. The current bearish trend seems to be too extended and expected returns look attractive for the recovery period in the medium and long term.**

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7. Abbreviations

ALM:	Asset and Liability Management
DCF:	Discounted Cash Flow
EBIT:	Earnings Before Interest and Taxes
ECB:	The European Central Bank
EPS:	Earnings per Share
EV/EBITDA:	Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization
EV/GAV:	Enterprise Value/Gross Assets Value
GFC:	Global Financial Crisis
LRE:	Listed Real Estate
LTV:	Loan-to-Value ratio
NAV:	Net Asset Value
P/CF:	Price to Cash Flow ratio
P/E:	Price-to-Earnings
P/EPRA Earnings:	Price/EPRA Earnings
P/AFFO:	Price/Adjusted Funds from Operations
P/FFO:	Price/Funds from Operations
P/NAV:	Price/Net Asset Value
REITs:	Real Estate Investment Trusts
ROA:	Return on Total Assets
ROE:	Return on Equity