



Overview

The FTSE EPRA Nareit (FEN) Global Developed Real Estate Index gained 2.5% in November and brought the YTD return to -14.3%. Global equities gained 1.9% compared to 20 bps from global bonds. In terms of regional performance, all regions returned positive: Europe (2.5%), North America (1.7%) and Asia (5.1%). In addition, emerging markets also gained 19.7%.

Focusing on sector performance, data centres (13.9%) was outperformer followed by healthcare (5.5%), diversified (5.3%), industrial/office (4.0%), while self-storage (-8.3%), lodging/resorts (-3.3%) and residential (-35 bps) were bottom performers. The remaining sectors posted positive but relatively limited returns in November.

At the end of November, the FEN Developed Index totalled 380 constituents, representing a free float market capitalisation of around EUR 1.53 trillion and the FEN Emerging Index totalled 126 constituents, representing a free float market capitalisation of around EUR 128 billion

EPRA Developers Research Benchmark

The EPRA Developers Research Benchmark is a non-commercial benchmark designed to allow its constituents to assess themselves against each other. The benchmark now has a total of 28 constituents from 11 different countries in Developed Europe (17 out of the UK) and an aggregated full market cap of EUR 39,325million (30/11/2022). A high-level computation can be found in the relevant section (page 5).

2022-Q4 Quarterly Review

During the Q4-2022 quarterly review, one company was added in, and one company was deleted from the Developed index, whereby there were seven additions and three deletions in the Emerging index. The changes will be effective on December 19, 2022. The details are given in the related sections. The next index review will take place at the end of February 2023, and the results will be published on March 3. All changes are effective as of Monday March 20, 2023.

Highlights of the Month

The FEN Developed Europe Index continued to gain momentum and posted a return of 2.5% during November. Now YTD return stands at -35.6%. Focusing on sector performances, retail (5.5%), office (4.3%), diversified (4.2%) outperformed and residential (1.2%) also posted still positive but relatively lower return. Meanwhile. the remaining sectors returned negative that lodging/resorts (-4.0%), and healthcare (-3.2%) were bottom performers. Even though all sectors performed well this month, they lost momentum since the beginning of the year and are still trading below their pre-Covid19 (Table 1).

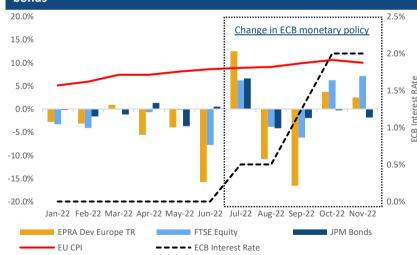
The rising economic and political headwinds caused increase in uncertainty, so volatility in the markets. Annual inflation in the Euro area is expected to be 10.0% in November 2022, a slight down from 10.6% in October according to Eurostat's estimate. Following ECB's consecutive interest rate hikes, the refinancing rate has shot up by +200 bps since July which is the fastest increase since the introduction of Euro and reached 2.0% at the end of October (Fig.1).

Indeed, monetary tightening by central banks to curb inflationary pressures is challenging to analysts and market players after a long period of very low or even negative interest rates. The current uncertainty sometimes makes it difficult to value LRE correctly, whether the valuation metrics are cash flow-driven or NAV-minded, and also depends on investors' perceptions, generalists or specialists who adopt different valuation metrics to LRE. You can read the latest report discussing 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?

To read and download the report: LRE valuation: A close look at ratios, cash flows and portfolio allocation.

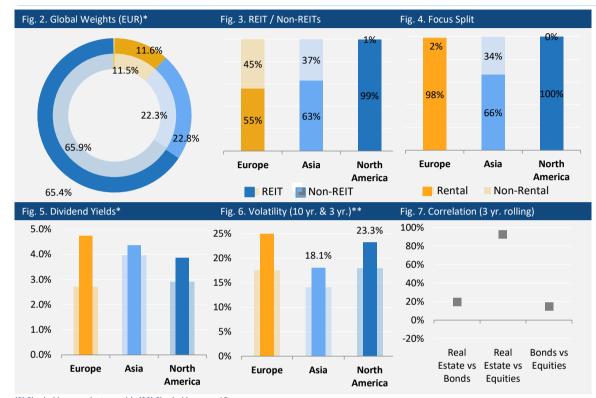
				1	3	5	10
% Total Returns (EUR)		Nov-22	YTD	yr	yrs*	yrs*	yrs*
Global Real Estate		2.5	-14.3	-9.7	-0.8	4.5	7.0
Global Equities (FTSE)		1.9	-2.0	1.1	7.1	7.3	10.4
Global Bonds (JP Morgan)		0.2	-8.6	-10.2	1.2	2.3	2.5
Europe Real Estate		2.5	-35.6	-34.4	-10.9	-3.1	4.1
Europe Equities (FTSE)		7.1	-7.8	-3.3	4.5	5.0	7.8
Europe Bonds (JP Morgan)	\blacksquare	-1.8	-6.8	-9.1	-3.2	1.2	3.7
Asia Real Estate		5.1	-3.4	-2.0	-3.4	2.4	4.2
Asia Equities (FTSE)		5.1	2.6	4.2	7.7	6.7	11.0
Asia Bonds (JP Morgan)	\blacksquare	-4.1	4.6	3.7	-0.1	2.5	3.4
North America Real Estate		1.7	-12.6	-6.0	2.6	7.2	9.1
NA Equities (FTSE)		1.1	-4.8	-1.6	13.0	13.9	15.6
NA Bonds (JP Morgan)	\blacksquare	-1.6	-2.2	-3.4	-0.3	3.3	3.1
Emerging Real Estate		19.7	-2.8	-2.8	-9.1	-2.7	2.3
Emerging Equities (FTSE)		9.3	-7.5	-6.6	3.4	4.0	5.3
Emerging Bonds (JP Morgan)		2.5	-8.1	-7.4	-1.9	1.9	3.8
(*) Annualised.			0.1		210	210	

Fig. 1. Europe: Interest rate, CPI, Total return for Real Estate, Equity and bonds



Source: EPRA Research, the FEN Index series, ECB, Eurostat, Bloomberg (as of November 30, 2022). Note: Interest rate is given in the right axis.





(*)	Shaded	bars are	last mont	h's (**) Shaded	bars are 10 yr	
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Dev. Europe:Total F	Return	Weekly T	Weekly Total Return by Sector			YTD	Ukraine war	Covid-19
	Nov-22	4-Nov	11-Nov	18-Nov	25-Nov	Dec-21	23-Feb-22	19-Feb-20
Developed Europe	2.5%	0.8%	8.4%	-2.7%	0.7%	-35.6%	-30.0%	-35.9%
Self-Storage	-2.8%	-3.5%	6.0%	-1.2%	-2.0%	-34.5%	-22.6%	-0.6%
Industrial	-0.5%	-2.0%	7.6%	-1.4%	0.0%	-44.4%	-35.8%	-11.3%
Healthcare	-3.2%	-0.9%	4.5%	-2.4%	-0.4%	-27.4%	-17.4%	-30.1%
Diversified	4.2%	1.6%	8.1%	-2.3%	1.6%	-30.6%	-25.0%	-35.4%
Office	4.3%	1.4%	10.1%	-3.5%	1.0%	-26.0%	-19.5%	-37.5%
Retail	5.5%	1.2%	9.0%	-2.7%	1.5%	-7.3%	-16.6%	-41.3%
Lodging/Resorts	-4.0%	3.2%	4.5%	-5.3%	2.9%	-16.2%	-10.4%	-42.5%
Residential	1.2%	2.3%	8.3%	-3.2%	-0.8%	-46.3%	-42.7%	-43.6%

Source: EPRA Research. Data is compiled from the FEN Index series (as of November 30, 2022).

FTSE EPRA Nareit Devel	oped Europ	e - Counti	ry Indices			
% Total Returns	Nov-22	YTD	1 yr	3 yrs*	5 yrs*	10 yrs*
Europe (EUR)	2.5	-35.6	-34.4	-10.9	-3.1	4.1
Europe ex UK (EUR)	3.2	-36.4	-36.1	-11.9	-3.8	4.2
UK (GBP)	1.9	-31.6	-29.0	-8.1	-1.8	4.1
France (EUR)	4.2	-11.6	-8.2	-10.8	-4.0	2.4
Netherlands (EUR)	4.8	-11.2	-6.0	-22.4	-18.5	-6.3
Germany (EUR)	2.4	-50.1	-50.3	-17.7	-7.7	4.4

FTSE EPRA Nareit Developed Index – Top 1	O Constituents			
Company	Sector	Country	To	otal Return
ProLogis USA	Industrial	USA		6.4%
Equinix	Data Centers	USA		22.5%
Public Storage, Inc.	Self-Storage	USA	▼	-3.8%
Realty Income Corp.	Retail	USA		1.7%
Simon Property Group, Inc.	Retail	USA		9.6%
Welltower	Healthcare	USA		17.4%
Vici Properties Inc	Specialty	USA		6.8%
Digital Realty Trust	Data Centers	USA		12.2%
Alexandria Real Estate Equities, Inc.	Office	USA		7.1%
AvalonBay Communities, Inc.	Residential	USA	▼	-0.1%
FTSE EPRA Nareit Developed Index – Top 10	0 Performers			
Company	Sector	Country	Tot	al Return
Summit Industrial Income REIT	Industrial	CAN		29.8%
Hammerson Plc	Retail	UK		25.9%
Samhällsbyggnadsbolaget i Norden AB	Diversified	SWED		25.0%
New World Development Company Ltd	Diversified	HK		24.1%
Americold Realty Trust	Industrial	USA		23.1%
Equinix	Data Centers	USA		22.5%
CapitaLand Investment	Diversified	SI		21.9%
Sino Land	Diversified	HK		20.6%
Adler Group SA	Residential	GER		20.4%



FTSE EPRA Nareit Developed Europe Index

The FEN Developed Europe Index posted a positive return of 2.5% in November. European equities gained 7.1% compared to a loss of 1.8% from European bonds.

The Netherlands (4.8%), France (4.2%), Germany (2.4%) and the UK (1.9%) indexes returned positive in Developed Europe for the month. During the Q4-2022 index review, there was no addition/deletion in Developed Europe region.

There was no major corporate action in Developed Europe region.

Sector Performance: Retail (5.5%), office (4.3%), diversified (4.2%), residential (1.2%) were top performers and the remaining sectors returned negative that lodging/resorts (-4.0%), and healthcare (-3.2%) were bottom performers.

Performance of top 3 constituents: Hammerson plc (25.9%, UK, Retail), Samhällsbyggnadsbolaget i Norden (25.0%, Sweden, Diversified), Adler Group SA (20.4%, Germany, Residential).

<u>Developed Europe</u> representing a free float MCap of around **EUR 177 billion**with **110** constituents

FTSE EPRA Nareit Developed Asia Index

The FEN Developed Asia Index gained 5.1%. Asian equities gained 5.1% compared to a loss of 4.1% from Asian bonds.

Hong Kong (14.0%), South Korea (14.0%), Singapore (7.7%), Australia (3.4%) and Japan (82 bps) indexes returned positive for the month in Asia (in local currencies).

During the Q4-2022 index review, *SK REIT* (South Korea, REIT, Rental, Diversified) was added in, while *Home Consortium* (Australia) was deleted from the index. In addition, there were two sector reclassifications: *Charter Hall Long Wale REIT* (Australia) from "Industrial/Office" sector to "Diversified" and *HomeCo Daily Needs REIT* (Australia) from the "Industrial/Office" sector to "Diversified"

Sector Performance: Diversified (6.7%), industrial (5.6%), industrial/office (3.7%), retail (3.3%) were top performers, the remaining sectors also returned positive but limited that office (73 bps) and lodging/resorts (74 bps) were bottom performers.

Performance of top 3 constituents: New World Development Company Ltd. (24.1%, Hong Kong, Diversified), CapitaLand Investment (21.9%, Singapore, Diversified), Sino Land (20.6%, Hong Kong, Diversified).

<u>Developed Asia</u> representing a free float MCap of around **EUR 350 billion** with **136** constituents

FTSE EPRA Nareit North America Index

The FEN North America Index gained 1.7% in November. North America equities gained 1.1% compared to a loss of -1.6% from bonds.

Both the US index (5.8%) and Canada (7.9%) indexes returned positive for the month (in local currencies).

No addition or deletion in North America region during the quarterly review.

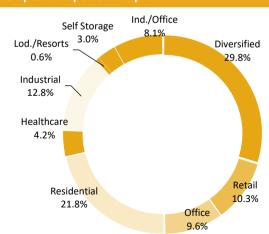
There was no major corporate action in Developed Asia region.

Sector Performance: Data centres (14.1%) was outperformer followed by healthcare (6.4%), retail (2.7%), industrial (2.7%) and industrial/office (2.4%) while self-storage (-8.7%) and lodging/resorts (-4.0%) were bottom performers.

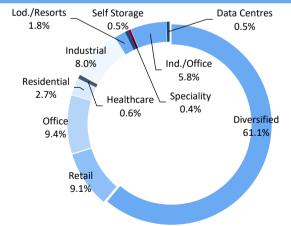
Performance of top 3 constituents: Summit Industrial Income REIT (29.8%, Canada, Industrial), Americold Realty Trust (23.1%, USA, Industrial), Equinix (22.5%, USA, Data Centres).

<u>Developed North America</u> representing a free float MCap of around **EUR 1,005 billion** with **132** constituents

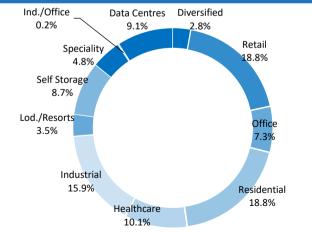
Developed Europe Sector Split



Developed Asia Sector Split



North America Sector Split



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EPRA Developers Research Benchmark

Wednesday, 30 November 2022



Historical Performance	Last Month	1 Year	3 Years	5 Years
Total Return	4.8%	-35.0%	-31.1%	-19.6%
Total Return (Annualized)		-35.0%	-10.4%	-3.9%

Return	3 Months	6 Months	Year to Date	5 Years
Total Return	-6.6%	-22.3%	-40.0%	-19.6%
Maximum Return	6.3%	6.3%	6.3%	11.6%
Minimum Return	-5.6%	-5.6%	-6.1%	-13.2%
Mean Return (Annualized)	-23.5%	-45.9%	-51.0%	0.7%
Maximum Drawdown	-22.3%	-35.3%	-51.1%	-55.3%
Maximum Drawdown Length	22	92	201	690

Risk	3 Months	6 Months	Year to Date	5 Years
Standard Deviation (Annualized)	40.5%	34.5%	31.7%	31.2%
Downside Risk (Annualized)	27.8%	24.2%	22.7%	22.0%
Kurtosis	-0.14	0.37	0.60	6.93
Skewness	0.20	0.11	-0.04	0.08
Semivariance (Annualized)	39.1%	35.2%	32.7%	31.3%
VaR (ex-post)	-4.20	-3.93	-3.58	-2.96

Risk-Adjusted Performance	3 Months	6 Months	Year to Date	5 Years
Sharpe Ratio	-0.44	-1.03	-1.25	0.03

The EPRA Developers Research
Benchmark is an equity index aiming to
represent the aggregated performance of
the most significant and liquid real estate
developers in Europe, including both
residential and commercial developers.

This is a benchmark developed for research purposes only, using free float market cap as the main input for computing index weights. The final list of constituents has been filtered applying a comprehensive methodology that combines both market and real estate criteria to determine the best companies to represent the sector. Two subindexes are also computed: 1) Liquid Developers (FFMC > EUR 500M) and 2) Residential Developers

Key Features

Benchmark Type: Equity Index

Industry: Real Estate Developers

Launch Date: 31/Dec/2021

Geography: Developed Europe

Weights Input: FF Market cap

Base Currency: EUR

Base Date: 30/Sep/2016

Base Value: 1,000

Review Dates: April, October

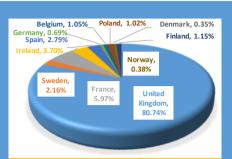


EPRA Developers Research Benchmark

Wednesday, 30 November 2022

Constituent	ISIN	Weight	Country	Currency
PERSIMMON	GB0006825383	15.25%	UK	GBp
BARRATT DEV	GB0000811801	13.95%	UK	GBp
BERKELEY GROUP	GB00BLJNXL82	13.66%	UK	GBp
TAYLOR WIMPEY PL	GB0008782301	11.94%	UK	GBp
VISTRY GROUP PLC	GB0001859296	8.51%	UK	GBp
BELLWAY PLC	GB0000904986	8.46%	UK	GBp
REDROW PLC	GB00BG11K365	4.87%	UK	GBp
CREST NICHOLS	GB00B8VZXT93	1.85%	UK	GBp
WATKIN JONES PLC	GB00BD6RF223	0.82%	UK	GBp
HARWORTH GROUP P	GB00BYZJ7G42	0.75%	UK	GBp
MJ GLEESON PLC	GB00BRKD9Z53	0.68%	UK	GBp
YIT OYJ	FI0009800643	1.15%	Finland	EUR
CAIRN HOMES	IE00BWY4ZF18	1.82%	Ireland	GBp
GLENVEAGH PROPER	IE00BD6JX574	1.88%	Ireland	EUR
NEXITY	FR0010112524	2.91%	France	EUR
KAUFMAN & BROAD	FR0004007813	1.22%	France	EUR
ALTAREA	FR0000033219	1.84%	France	EUR
NEINOR HOMES SA	ES0105251005	0.88%	Spain	EUR
AEDAS HOMES SA	ES0105287009	0.46%	Spain	EUR
METROVACESA SA	ES0105122024	1.45%	Spain	EUR
JM AB	SE0000806994	2.16%	Sweden	SEK
IMMOBEL	BE0003599108	0.53%	Belgium	EUR
ATENOR	BE0003837540	0.52%	Belgium	EUR
DEVELIA SA	PLLCCRP00017	0.58%	Poland	PLN
DOM DEVELOPMENT	PLDMDVL00012	0.44%	Poland	PLN
INSTONE REAL EST	DE000A2NBX80	0.69%	Germany	EUR
SELVAAG BOLIG AS	NO0010612450	0.38%	Norway	NOK
HUSCIET A/S	DK0061412855	0.35%	Denmark	DKK

Developers Sub-Indexes: Risk and Return	3 Months	6 Months	Year to Date	5 Years
Residential Developers: Total Return	-7.55%	-23.44%	-41.44%	-21.28%
Residential Developers: Standard Deviation (Annualized)	42.06%	35.97%	33.05%	32.19%
Liquid Developers: Total Return	-8.14%	-23.74%	-41.58%	-20.53%
Liquid Developers: Standard Deviation (Annualized)	41.05%	35.06%	32.25%	31.75%



Eligibility Criteria

EBITDA: ≥ 50% from Property Development **EBITDA:** ≥ 75% from Real Estate Activities

Size: > 0.30% of the Benchmark size and Minimum of EUR 150 Million in FFMC

Liquidity: ≥ 0.05% of their (FF) shares in issue based on their median daily trading volume per month

Reporting: public AR in English (Full set of audited FS, notes and Mgt Report)

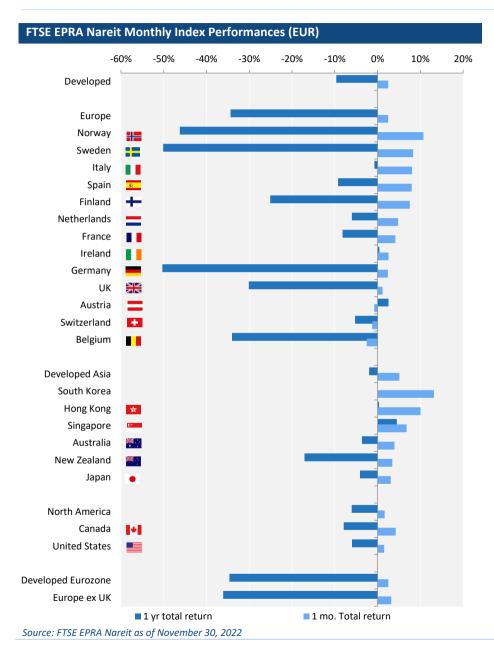
Geography: ≥ 75% EBITDA from Developed countries

Assets: ≥ 50% of Total Tangible Assets invested in RE. No Holding structures.

Eligible Markets: Premium and main trading segments of official stock exchanges.

Data Availabilty: Monthly computations. Perfomance figures available on this report. Raw data accessible on demand at research@epra.com





Link to Reports & Contacts

Monthly Statistical Bulletin

Monthly Published NAV Bulletin

Monthly LTV Report

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Index Ground Rules Version 11.3

Property Portfolio Analysis (end of 2021)

Emerging Markets 2022

Sector Analysis: Residential
Sector Analysis: Office (Aug-21)

Total Markets Table 2022-Q3 (quarterly)



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EPRA INSEAD Education Programme, 2023 Edition (20-22 June, Fontainebleau)

Held in partnership with INSEAD, the Executive Programme is a unique, intensive course that covers the latest trends shaping the listed real estate sector, such as e-commerce and logistics, digitalisation and data analytics.

EPRA Bayes Business School Online Programme, 2023 Edition: Understanding the REIT price

An online programme dedicated to understanding the listed real estate market, the third edition will be in Autumn 2023.

For more information about the Education programmes, contact: education@epra.com.

EPRA's latest research report

The latest report (November 2023): <u>LRE valuation</u>: A close look at ratios, cash flows and portfolio allocation.

Read the latest EPRA's special report (June 2022) Interest rates and inflation: What are the challenges for listed real estate?

Download EPRA's special report (February 2022) Inflation and short-term impact on listed property companies

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