



Overview

The FTSE EPRA Nareit (FEN) Global Developed Real Estate Index lost 3.6% and now YTD return stands at -3.3% as of September. Both global equities (-94 bps) and bonds (-70 bps) returned negative. In terms of regional performance, all regions posted negative returns for the month: Europe (-3.5%), Asia (-1.3%), North America (-4.4%), while emerging markets (38 bps) posted lower but positive returns during September.

Focusing on sector performance, lodging/resorts (3.4%) was top performer and the remaining sectors returned negative of which industrial (-5.6%) and office (-5.3%) were the bottom performers.

At the end of September, the FEN Developed Index totalled 368 constituents, representing a free float market capitalisation of around EUR 1.3 trillion and the FEN Emerging Index totalled 127constituents, representing a free float market capitalisation of around EUR 120 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. As of 29/09/2023, the benchmark gained 21.1% (m-o-m) and brought the YTD return to 13.9%. The benchmark now has 29 constituents from 12 different countries in Developed Europe (18 out of the UK) representing an aggregated full market cap of EUR 39,764 million (29/09/2023). A high-level computation can be found in the relevant section (page 5).

2023-Q3 Quarterly Review

During the Q3-2023 review, there were four additions and two deletions in the Developed index, whereas four companies were added in, and six companies were deleted from the Emerging index. The changes were effective on September 18 and represented a net value of EUR 1.027 million in free float market cap to the global index. The details are given in the related sections. The next index review will take place at the end of November, and the results will be published on December 1.

Highlights of the Month

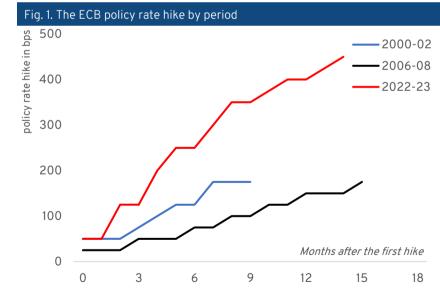
The ECB raised the policy rate at the latest meeting in September and now the main refinancing operations stands at 4.50%. As given in Fig.1, the ECB launched the most aggressive series of policy rate hike in decades, which is a total of 450 bps increase compared to 175 bps increase around the GFC (2006-2008) within the same period (12 to 15 months). Even though the Eurozone inflation is in a decreasing trend (came down from its peak of 10.6% in October 2022 to 5.2% in August and it is expected to be 4.3% in September), the outcome of this monetary tightening strategy remains uncertain.

Tighter financing conditions put pressures on the markets and real estate companies which made effort to keep their leverage at reasonable levels. Indeed, the European average LTV stands at 38.9% now, with the lowest in the UK and quite above the EU average in Germany, Italy and the Nordics. However, the companies are still being cautious on the impact of the changing macro-economic conditions.

You can read the latest blog on 'European Debt markets reveal renewed trust on listed property companies'.

FTSE EPRA Nareit Global Ind	ex Total F	Returi	n			
			1	3	5	10
% Total Returns (EUR)	Sep-23	YTD	yr	yrs*	yrs*	yrs*
Global Real Estate	-3.6	-3.3	-5.0	5.0	1.6	5.5
Global Equities (FTSE)	-0.9	13.1	11.1	12.9	6.7	8.8
Global Bonds (JP Morgan)	-0.7	-2.6	-7.3	-5.4	1.2	1.9
Europe Real Estate	-3.5	-3.4	1.1	-6.7	-5.0	2.8
Europe Equities (FTSE)	-1.2	9.3	21.2	10.2	5.8	6.8
Europe Bonds (JP Morgan)	0.1	0.4	-9.5	-4.8	-0.6	3.2
Asia Real Estate	-1.3	-7.8	-7.7	1.5	-0.3	2.4
Asia Equities (FTSE)	1.4	11.8	8.9	10.4	6.9	9.6
Asia Bonds (JP Morgan)	1.6	1.0	-8.8	0.8	1.2	3.3
North America Real Estate	-4.4	-1.6	-5.0	9.5	3.9	7.8
North America Equities (FTSE)	-2.2	14.5	12.2	13.4	11.8	14.4
North America Bonds (JP Morgan)	0.3	0.0	-8.1	-2.4	2.0	3.4
Emerging Real Estate	0.4	-6.8	-4.0	-5.9	-3.8	2.0
Emerging Equities (FTSE)	0.5	3.6	2.8	3.5	4.1	5.7
Emerging Bonds (JP Morga 🔻	-0.4	2.4	0.5	-0.9	1.8	4.8
(*) Annualised						

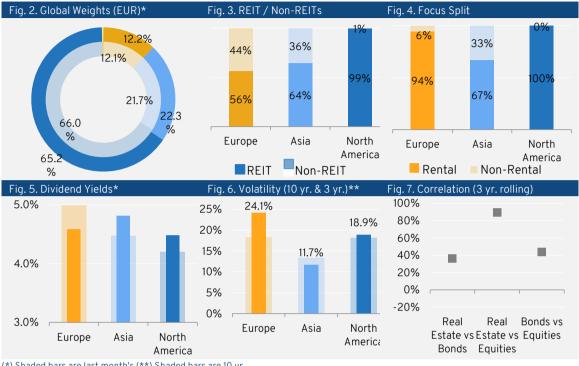
(*) Annualised.



Source: EPRA Research. Data is compiled from ECB.

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(*)) Shaded	bars are I	ast month's ((**) Shaded bars are 10 yr	ſ.
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FTSE EPRA Nareit Dev	eloped Euro	pe - Cou	ntry Indice	S		
% Total Returns	Sept-23	YTD	1 yr	3 yrs*	5 yrs*	10 yrs*
UK (GBP)	-2.9	-6.9	-2.7	-2.4	-4.0	1.6
France (EUR)	-4.84	2.6	18.2	7.1	-3.6	2.2
Netherlands (EUR)	-4.9	1.7	12.8	16.8	-16.3	-6.9
Germany (EUR)	2.0	7.1	4.4	-19.4	-9.7	4.9
Sweden (SEK)	-6.9	-10.6	4.2	-9.0	0.9	11.1
FTSE EPRA Nareit As	ia - Country	Indices				
Hong Kong (HKD)	-1.3	-7.8	-7.7	1.5	-0.3	2.4
Japan (JPY)	-3.6	-21.6	-11.3	-3.3	-5.9	-0.4
Australia (AUD)	0.7	10.8	5.8	9.7	4.6	2.4
Singapore (SGD)	-8.4	-6.6	5.0	4.5	-0.7	5.7
South Korea (KRW)	-5.4	-13.2	-35.1	na	na	na
FTSE EPRA Nareit Dev	eloped Nort	h Americ	a - Country	y Indices		
United States (USD)	-6.8	-2.3	2.7	5.8	2.1	5.4
Canada (CAD)	-5.8	-5.2	1.7	5.4	0.9	4.9

FTSE EPRA Nareit Developed Index – Top 10 Constituents								
Company	Sector	Country	То	tal Return				
ProLogis USA	Industrial	USA	▼	-9.0%				
Equinix Inc	Data Centers	USA	▼	-7.1%				
Public Storage, Inc.	Self-Storage	USA	▼	-3.6%				
Welltower	Healthcare	USA	▼	-1.2%				
Digital Realty Trust	Data Centers	USA	▼	-7.2%				
Simon Property Group, Inc.	Retail	USA	▼	-3.1%				
Realty Income Corp.	Retail	USA	▼	-10.4%				
Vici Properties Inc	Specialty	USA	▼	-4.3%				
Extra Space Storage	Self-Storage	USA	▼	-5.1%				
AvalonBay Communities, Inc.	Residential	USA	▼	-5.7%				

FTSE EPRA Nareit Developed Index	c – Top 10 Performers			
Company	Sector	Country	Tot	al Return
Aroundtown SA	Diversified	GER	A	18.3%
SBB i Norden AB	Diversified	SWED		13.7%
Sabra Health Care REIT	Healthcare	USA		11.3%
Grand City Properties S.A.	Residential	GER		8.5%
Tokyo Tatemono Co., Ltd.	Diversified	JA		8.0%
Mitsubishi Estate Co. Ltd.	Diversified	JA		6.1%
Champion REIT	Diversified	HK		5.9%
Japan Hotel REIT Investment	Lod./Resorts	JA		5.8%
HIAG Immobilien Holding AG	Diversified	SWIT		5.6%
Derwent London Plc	Office	UK	A	5.0%

Dev. Europe:Total Return		Weekly Total Return by Sector			YTD	Ukraine war	Covid-19		
	Sep-23	1-Sep	8-Sep	15-Sep	22-Sep	29-Sep	Sep-23	23-Feb-22	19-Feb-20
Developed Europe	-3.5%	2.7%	-0.4%	1.5%	-1.2%	-2.2%	-3.4%	-33.4%	-39.0%
Self-Storage	-14.2%	2.3%	-4.4%	-1.6%	-2.9%	-4.8%	-14.5%	-32.4%	-13.2%
Industrial	-5.8%	0.9%	-1.0%	0.8%	-1.5%	-2.6%	-2.0%	-38.8%	-15.5%
Diversified	-3.1%	1.7%	-0.4%	1.1%	-1.4%	-0.7%	-5.6%	-29.0%	-38.8%
Office	-2.1%	2.9%	0.1%	1.1%	-0.6%	-1.6%	-3.1%	-22.4%	-39.8%
Retail	-4.0%	2.2%	-0.5%	-0.3%	-1.1%	-1.6%	2.5%	-16.5%	-41.3%
Healthcare	-8.0%	3.6%	-1.6%	0.2%	-2.6%	-3.4%	-16.5%	-31.1%	-41.7%
Residential	-0.2%	5.6%	0.8%	4.7%	0.1%	-4.6%	2.1%	-43.8%	-44.7%
Lodging/Resorts	-1.3%	4.3%	-3.8%	2.5%	-2.4%	1.6%	-1.6%	-22.3%	-50.2%

Source: EPRA Research. Data is compiled from the FEN Index series (as of September 29, 2023)



European equities lost 1.2% compared to a gain of 14 bps from of 1.6 from Asian bonds and 1.4% from Asian equities. European bonds.

Netherlands (-4.9%), Sweden (-6.9%) and France (-4.8) indexes 8.4%) indexes posted negative returns in Asia (in local During quarterly review, there was no additions and deletions in returned negative for the moth (in local currencies).

Company plc (UK, REIT, Retail) and Life Science REIT (UK, REIT, was deleted from the index, in Developed Europe region.

Sector Performance: All sectors returned negative which was limited for Residential (-18 bps) as top performer, self-storage (-14.2%) and healthcare (-8.0%) were the bottom performers.

Performance of top 3 constituents: Aroundtown SA (18.3%, Performance of top 3 constituents: Tokyo Tatemono Co. Ltd. 13.2%) and diversified (-9.7%) were the bottom performers. Diversified). Grand City Properties SA (8.5%, Germany, Residential).

Developed Europe representing a free float MCap of around EUR 164 hillion with 108 constituents

Japan index (72 bps) returned positive while South Korea (-Germany index (2.0%) returned positive while the UK (-2.9%), 5.4%), Hong Kong (-3.6%), Singapore (-3.2%) and Australia (currencies).

region.

Sector Performance: Lodging/resorts (3.8%) outperformed, and the remaining sectors returned negative that retail (-5.3%) Sector Performance: All sectors returned negative except and industrial/office (-3.2%) were the bottom performers.

Germany, Diversified), SBB i Norden AB (13.7%, Sweden, (8.0%, Japan, Diversified), Mitsubishi Estate Co. Ltd. (6.1%, Performance of top 3 constituents: Sabra Healthcare REIT (11.3%, Diversified).

> Developed Asia representing a free float MCap of around EUR 301 hillion with 136 constituents

FTSE EPRA Nareit North America Index

The FEN Developed Europe Index lost 3.5% during September. The FEN Developed Asia Index slipped 1.3% compared to a gain. The FEN North America Index lost 4.4% for the month. North American bonds gained 25 bps compared to a loss of 2.2% from equities. Both the US index (-6.8%) and Canada (-5.8%) indexes returned negative for the month (in local currencies).

Developed North America regions.

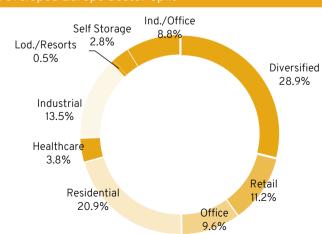
During the Q3-2023 review, Ediston Property Investment Digital Core REIT Management (Singapore, REIT, Data Centres) Subject to the completion of the merger, The Necessity Retail was added in and Manulife US REIT (Singapore), was deleted REIT Inc (USA, constituent) which was deleted from the index and Specialty) were added in and Stendorren Fastigheter (Sweden) from the index during quarterly review in Developed Asia Global Net Lease (USA, constituent) remained in the index with an increased shares in issue total of 193,421,979 and a decreased investability weighting from 99.66 to 99.57%.

lodging/resorts (3.4%) as top performer. Industrial/office (-

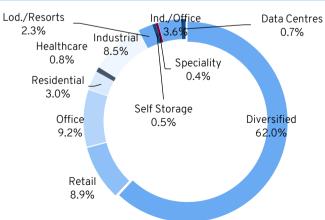
Japan, Diversified). Champion REIT (5.9%, Hong Kong, USA, Healthcare). Sunstone Hotel Investors (4.9%, USA, Lodging/Resorts). Omega Healthcare Investors Inc. (4.2%, USA, Healthcare).

> Developed North America representing a free float MCap of around EUR 879 billion with 124 constituents

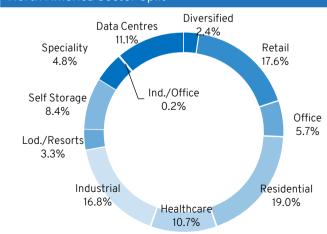
Developed Europe Sector Split



Developed Asia Sector Split



North America Sector Split



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EPRA Developers Research Benchmark

Friday, 29 September 2023



Historical Performance	Last Month	1 Year	3 Years	5 Years
Total Return	2.1%	31.7%	4.3%	-7.0%
Total Return (Annualized)		31.7%	1 4%	-1 4%

Return	3 Months	6 Months	Year to Date	5 Years
Total Return	9.4%	2.5%	13.9%	-7.0%
Maximum Return	4.5%	4.5%	4.7%	11.6%
Minimum Return	-3.2%	-4.2%	-5.4%	-13.1%
Mean Return (Annualized)	70.3%	10.7%	32.5%	5.2%
Maximum Drawdown	-11.1%	-16.7%	-16.7%	-55.2%
Maximum Drawdown Length	18	35	35	690

Risk	3 Months	6 Months	Year to Date	5 Years
Standard Deviation (Annualized)	23.3%	21.9%	23.6%	31.8%
Downside Risk (Annualized)	15.1%	14.9%	16.2%	22.4%
Kurtosis	0.88	1.10	1.65	6.20
Skewness	0.47	0.17	0.12	0.10
Semivariance (Annualized)	20.3%	20.1%	22.0%	31.4%
VaR (ex-post)	-1.87	-2.18	-2.30	-3.04

Risk-Adjusted Performance	3 Months	6 Months	Year to Date	5 Years
Sharpe Ratio	1.83	0.19	0.81	0.11

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

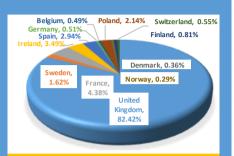


EPRA Developers Research Benchmark

Friday, 29 September 2023

Constituent	ISIN	Weight	Country	Currency
BARRATT DEV	GB0000811801	15.01%	UK	GBp
BERKELEY GROUP	GB00BLJNXL82	14.41%	UK	GBp
TAYLOR WIMPEY PL	GB0008782301	13.34%	UK	GBp
PERSIMMON	GB0006825383	11.43%	UK	GBp
VISTRY GROUP PLC	GB0001859296	10.49%	UK	GBp
BELLWAY PLC	GB0000904986	9.43%	UK	GBp
REDROW PLC	GB00BG11K365	5.26%	UK	GBp
CREST NICHOLS	GB00B8VZXT93	1.41%	UK	GBp
MJ GLEESON PLC	GB00BRKD9Z53	0.69%	UK	GBp
HARWORTH GROUP P	GB00BYZJ7G42	0.64%	UK	GBp
WATKIN JONES PLC	GB00BD6RF223	0.30%	UK	GBp
NEXITY	FR0010112524	1.89%	France	EUR
ALTAREA	FR0000033219	1.15%	France	EUR
KAUFMAN & BROAD	FR0004007813	1.34%	France	EUR
NEINOR HOMES SA	ES0105251005	0.93%	Spain	EUR
AEDAS HOMES SA	ES0105287009	0.55%	Spain	EUR
METROVACESA SA	ES0105122024	1.46%	Spain	EUR
IMMOBEL	BE0003599108	0.34%	Belgium	EUR
ATENOR	BE0003837540	0.15%	Belgium	EUR
GLENVEAGH PROPER	IE00BD6JX574	1.62%	Ireland	EUR
CAIRN HOMES	IE00BWY4ZF18	1.88%	Ireland	GBp
DEVELIA SA	PLLCCRP00017	1.33%	Poland	PLN
DOMDEV	PLDMDVL00012	0.81%	Poland	PLN
HUSCIET A/S	DK0061412855	0.36%	Denmark	DKK
YIT OYJ	FI0009800643	0.81%	Finland	EUR
CHAM GROUP AG	CH0001931853	0.55%	Switzerland	CHF
SELVAAG BOLIG AS	NO0010612450	0.29%	Norway	NOK
JM AB	SE0000806994	1.62%	Sweden	SEK
INSTONE REAL EST	DE000A2NBX80	0.51%	Germany	EUR

Developers Sub-Indexes: Risk and Return	3 Months	6 Months	Year to Date	5 Years
Liquid Developers: Total Return	10.96%	2.87%	13.75%	-8.76%
Liquid Developers: Standard Deviation (Annualized)	25.64%	23.69%	25.00%	32.96%
Residential Developers: Total Return	10.33%	3.17%	14.39%	-8.23%
Residential Developers: Standard Deviation (Annualized)	24.27%	22.51%	23.89%	32.39%



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)

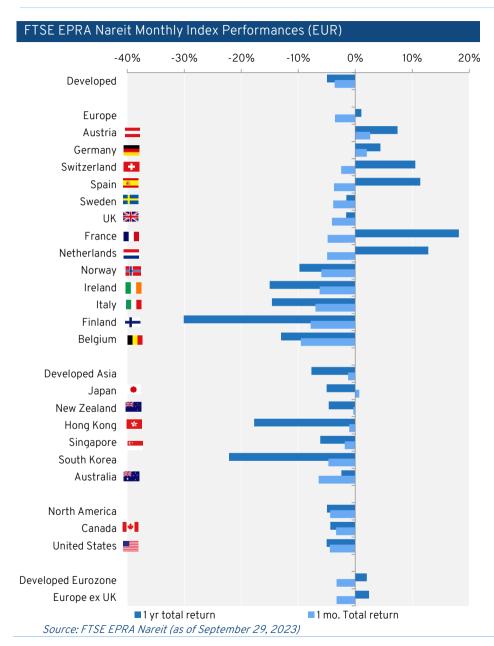
Geography: ≥ 75% EBITDA from Developed countries

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. Performance figures available on this report. Raw data accessible on demand at research@epra.com





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Index Ground Rules <u>Version 11.6</u>

<u>Property Portfolio Analysis (end of 2022)</u>

Emerging Markets 2023
Sector Analysis: Office (Aug-21)
Total Markets Table 2023-Q2
(quarterly)



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EPRA Invitation for Research Proposals 2024

Expressions of Interest including all supporting documents should be emailed as a single Word or PDF file to Dr. Dilek Pekdemir at research@epra.com. The deadline for receipt of submissions is 23:59 CET on Friday, November 3, 2023.

EPRA INSEAD Executive Education Programme

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. The fourth edition will be June 18-20, 2024 at INSEAD Fontainebleau campus.

EPRA Bayes Business School Online Programme, 2023 Edition: Understanding the REIT price (16 Oct-24 Nov)

An online programme dedicated to understanding the listed real estate market, the third edition will start in October 2023. You can download <u>brochure</u> and <u>register</u>.

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

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