FTSE RUSSELL
An LSEG Business

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Investing in listed real estate

Practical considerations

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Agenda

1. Popular asset class
2. Reasons behind the popularity
3. Vehicle choices: listed or unlisted
4. Real estate dynamics

1. Popular asset class

Bricks and mortar

- Real estate is probably the most familiar and commonly understood asset class. The seeming simplicity of the asset class draws strong attraction from investors.
- According to Ibbotson and Siegel (1983), more than half of global wealth is in real estate.
- According to Preqin, 2019 was the record year for capital raising for real estate funds – USD151bn by 295 funds.
- There are different estimates of recommended portion of real estate in a diversified institutional investor portfolio, most of them are in the 5–15% range.

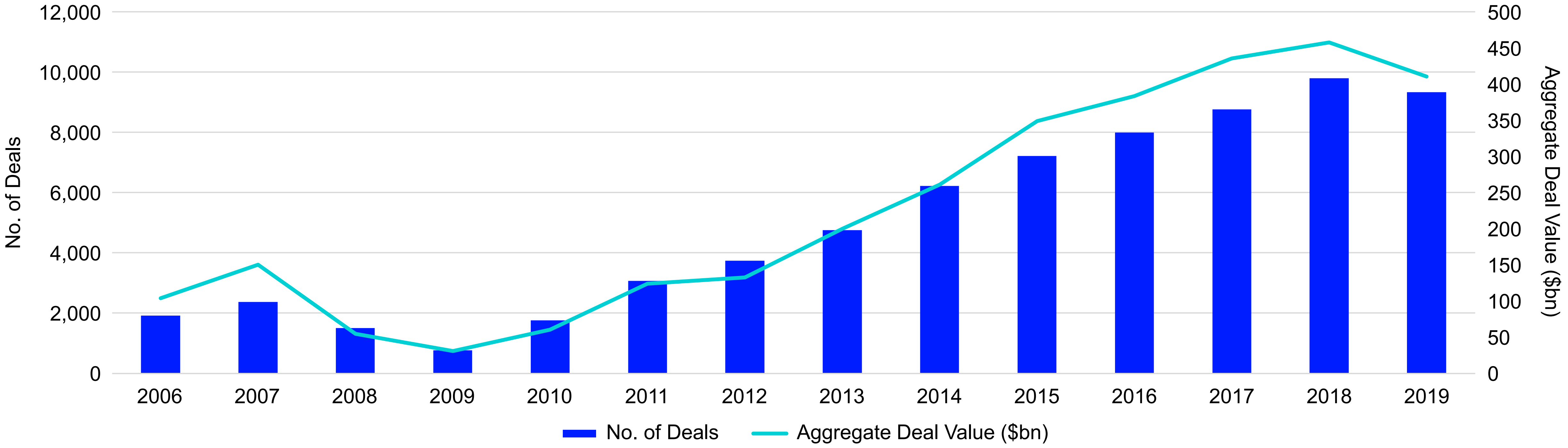
Use cases – Who is investing?

- 87% of public pension funds invest in real estate;
- Average allocation to real estate in pension fund portfolios is 9.3% for private sector (with targets of 10.2%) and 9.7% for public pension funds (with targets 10.3%);
- UK pension funds:10–15% AuM, down from 20% in 60–70s;
- 30% of pension funds invested in listed real estate;
- 76% of endowment plans are active in real estate;
- 68% – insurance companies;
- 60% – sovereign wealth funds (e.g., Norges – 2.6% of AuM);
- 48% – family offices.

Number and value of deals quintupled

The value and number of deals in real estate nearly quintupled over the last 10 years.

Global Private Equity Real Estate Deals, 2006–2019



Source: Preqin

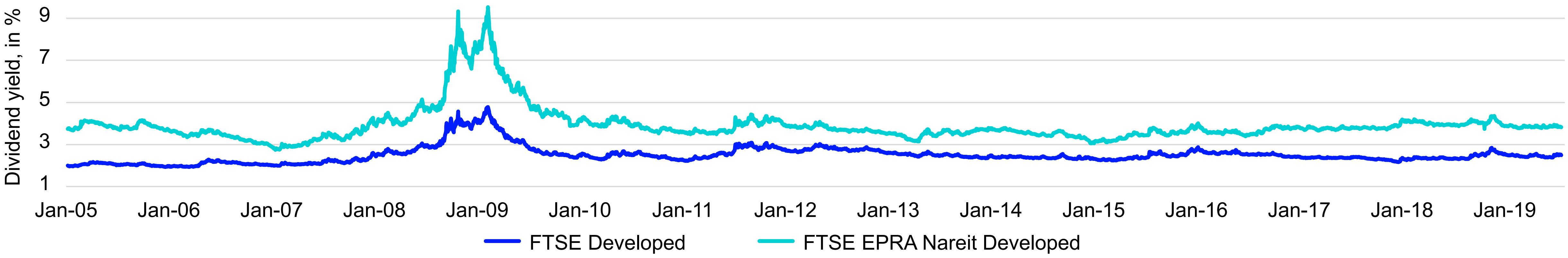
2. Reasons behind the popularity

Most frequently quoted reasons

Cash component	Inflation protection	Diversification	Diversity of outcomes
– Large proportion of return from real estate is derived from rent.	– Typically, real estate investment offers some inflation protection – Interest rate changes and availability of credit impact valuations	– Relatively low correlation with other assets – Attractive risk adjusted returns	– Geography of location of the real estate is strong determinant of its value – Purpose of use has significant impact on yield and price performance

Yield and returns characteristics

Dividend income component is higher for FTSE EPRA Nareit Developed Index than for FTSE Developed



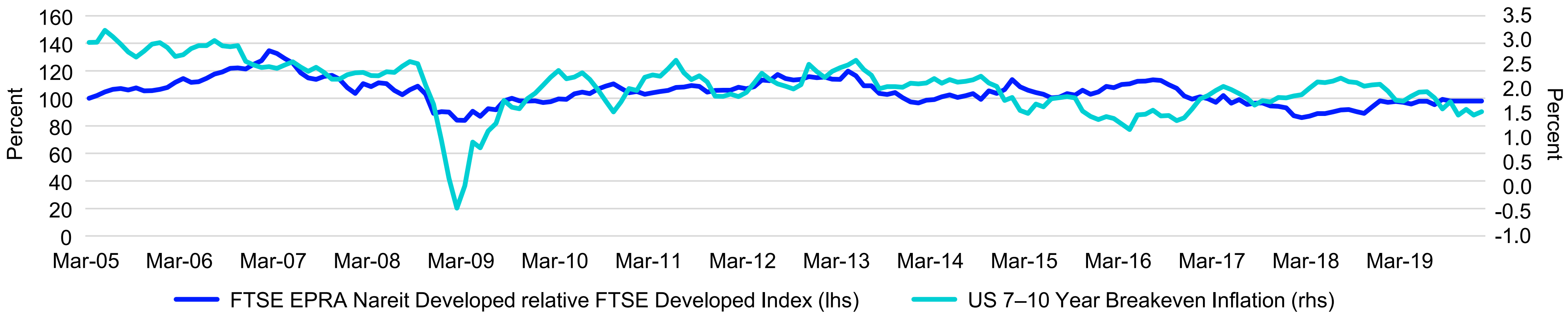
Source: FTSE Russell. Data from 29th December 2005 to 15th March 2018. Past performance is no guarantee of future results. See end of presentation for legal disclosures.

Index	Total return, % p.a.	Price return, % p.a.	Dividend income, % p.a.
FTSE Developed	7.00	4.32	2.68
FTSE EPRA Nareit Developed	6.77	2.70	4.07

Source: FTSE Russell. Annualized returns are calculated for the period from 18 February 2005 to 30 August 2019. Past performance is no guarantee of future results.
Please see the end for important legal disclosures.

Inflation protection

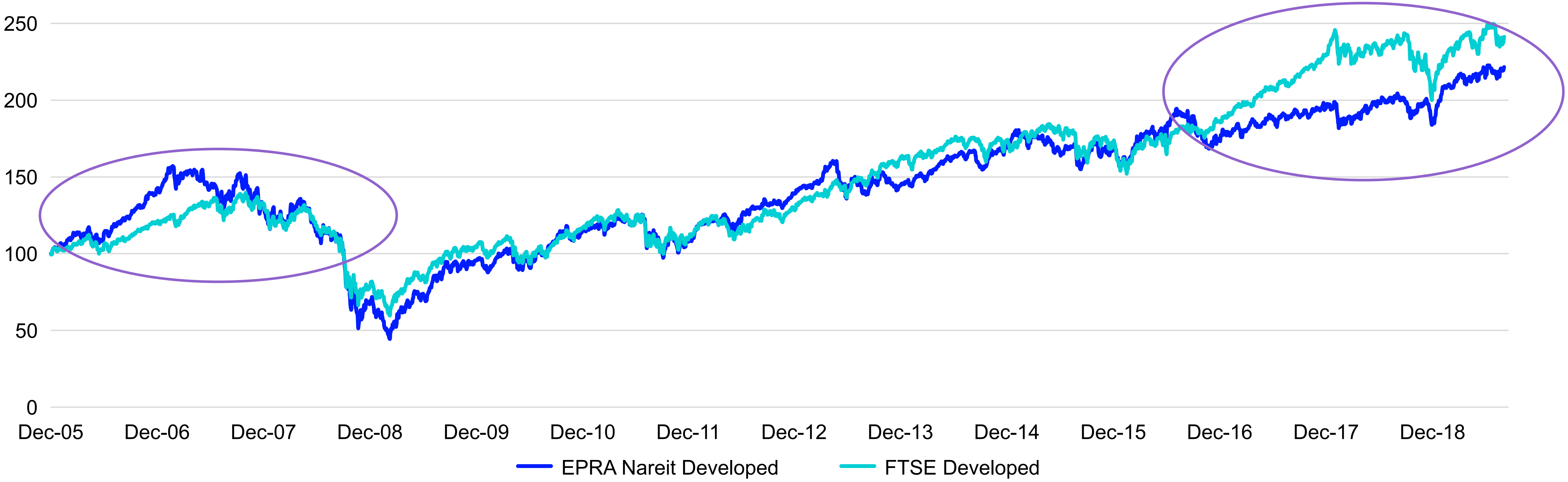
- Low inflation and inflation expectations
- Academic research suggests that:
  - There could be periods of diversion between real estate prices and inflation;
  - Residential real estate has generally been a good protector against inflation;
  - Office space and industrial generally have not been good in protecting against inflation;
  - Retail generally good protection but worse than residential.



References:

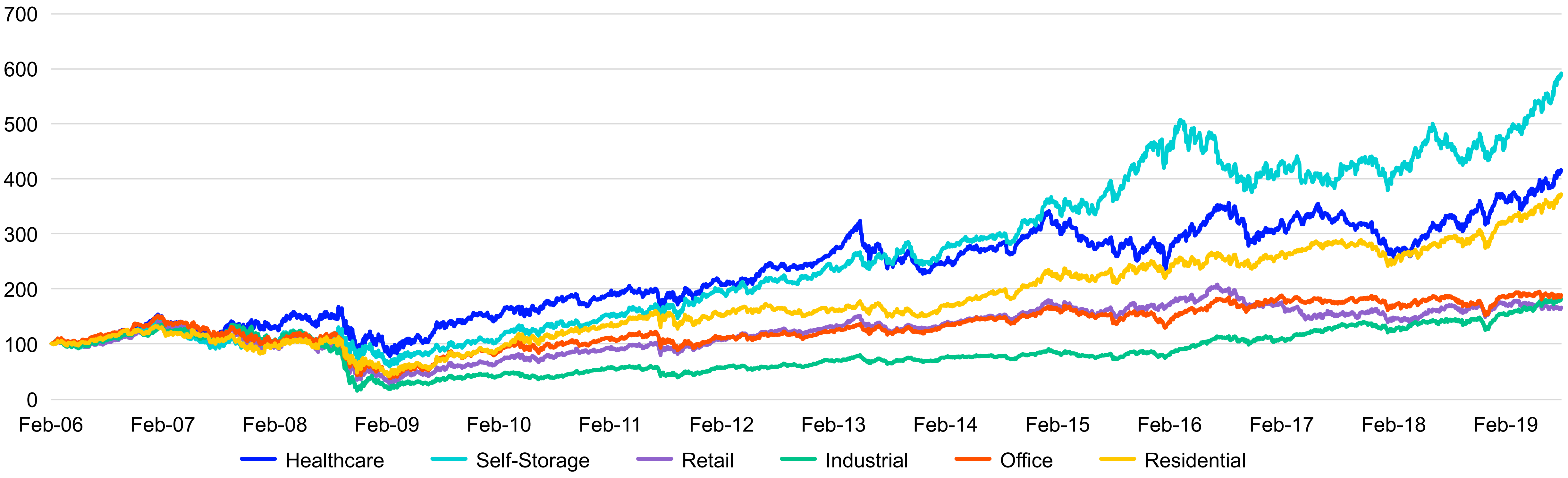
Fama E., Schwert, G. Asset returns and inflation. Journal of Financial Economics, 1977, 5, pp. 115–146.
Rubens, J., Bond, M., Webb, J. The inflation-hedging effectiveness of real estate. Journal of Real Estate Research. 1989. 4, pp45–46.
Bill Wheaton. Has Real Estate Been a Good Hedge Against Inflation. CBRE blog July 2017.

Real estate index performance – Comparison



Source: FTSE Russell. FTSE daily data from 29 December 2005 to 30 August 2019. Past performance is no guarantee of future results. Please see the end for important legal disclosures.

Diverse return outcomes in sector segments



Source: FTSE Russell. Data from 29 December 2005 to 30 August 2019. Drawdown is calculated as the largest drop. Bounce back is calculated from the lowest point at the time of the GFC to the highest point after that. Past performance is no guarantee of future results. Please see the end for import ant legal disclosures.

Variable performance of different segments

Drawdowns and performance since the GFC of selected FTSE EPRA Nareit indexes (%)

Index	Drawdown	Bounce back	
		Total	p.a.
Diversified	63.8	413	17.2
Healthcare	23.0	440	16.9
Self-storage	41.7	816	24.7
Retail	73.2	674	31.8
Industrial	85.8	1,178	26.8
Office	63.1	427	17.5
Residential	59.1	808	23.4
FTSE EPRA Nareit Global	71.2	388	16.6
FTSE Global All Cap	58.4	314	17.3

Source: FTSE Russell. Data from 29 December 2005 to 30 August 2019. Drawdown is calculated as the largest drop. Bounce back is calculated from the lowest point at the time of the GFC to the highest point after that. Past performance is no guarantee of future results. Please see the end for import ant legal disclosures.

3. Vehicle choices: Listed or unlisted

Valuation methods: Listed vs unlisted

- **Similar basis**. Theoretically, wrapping should not influence the valuation of the asset. Other things being equal listed or unlisted funds should provide the same valuation.
- **Valuation methods**. Different methodology of valuation of listed and unlisted funds. Market valuation versus expert valuation. Lagged valuation versus live valuation.
- **Financial leverage**. Leverage is used to enhance returns and it may distort the comparison if not taken into account appropriately.
- **Practical studies**. Review of actual of portfolios of pension funds in the US and Europe by Beath and Flynn.

Statistic	Netherlands		UK		Other European	
	Listed	Unlisted	Listed	Unlisted	Listed	Unlisted
Average gross return, % p.a.	11.17	3.80	11.71	6.47	10.17	7.66
Average cost, % p.a.	0.28	1.14	0.78	0.69	0.24	0.46

Listed real estate – Flexible and ease

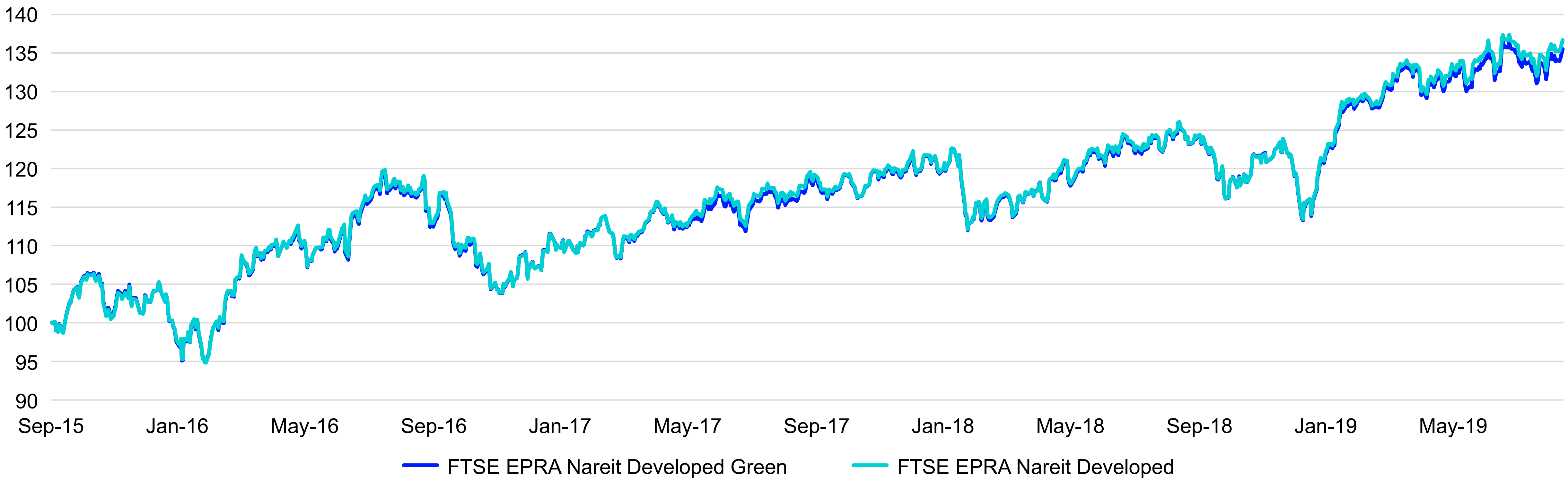
- **Ease of access**. Acquisition (and sale) of an entire piece of real estate is a lengthy process.
- **Liquidity**. Quick sale typically means a hefty discount in case of unlisted real estate. Some funds have to sell.
- **Tactical changes**. An investor in listed real estate can enter and exit desired segments of real estate.
- **Diversification**. Require smaller amounts money to achieve wide geographical and sector diversification.
- **Operational expertise**. Operating real estate assets is not as simple as it may seem. International diversification would add an extra level of complexity on top of this.
- **Cost of holding**. There are extra costs involved with holding an unlisted asset, for example valuation which is not as straightforward as it is with listed shares.

4. Real estate dynamics

Structural changes affecting real estate

- **E-commerce**. Shifting shopping patterns impact real estate use.
- **Employment patterns**. Employment practices change nature and demand for real estate.
- **Environmental concerns**. “Green” trends impact on real estate.

Going “Green” without sacrificing returns



Source: FTSE Russell. Data from 18 September 2015 to 30 August 2019. Past performance is no guarantee of future results. Pleas e see the end for important legal disclosures. Returns shown prior to index launch represent hypothetical, historical performance. Please see the end for important legal disclosures.

Conclusions

- Real estate provides investors with high yield and some inflation protection.
- Listed vs unlisted performance is similar in long term.
- Variability in geographical and sector segmental returns provides an opportunity.
- Real estate is not statics, watch the trends.

For more info, see: Investing in listed real estate. Practical considerations. November 2018. FTSE Russell.
https://www.ftserussell.com/research/investing-listed-real-estate

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