



Invesco Real Estate

Real Estate, Infrastructure & MLPs

April 2019



Important Information



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This is being provided for educational purposes only, is not to be construed as an offer to buy or sell any financial instruments and should not be relied upon as the sole factor in any investment making decision. As with all investments, there are associated inherent risks.

Investments in real estate instruments may be affected by economic, legal, or environmental factors that affect property values, rents or occupancies of real estate. Real estate companies, including REITs or similar structures, tend to be small and mid-cap companies and their shares may be more volatile and less liquid.

All data provided by Invesco unless otherwise noted.

The opinions expressed are those of the presenter, are based on current market conditions and are subject to change without notice. These opinions may differ from those of other Invesco investment professionals.

Diversification does not guarantee a profit or eliminate the risk of loss.

This does not constitute a recommendation of any investment strategy or product for a particular investor. Investors should consult with a financial professional before making any investment decisions.

Invesco Advisers, Inc. is an investment adviser; it provides investment advisory services to individual and institutional clients and does not sell securities.

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Section 1

Invesco Real Estate Overview



\$65.6 Billion Under Management

496 Employees Worldwide; 21 Offices; 16 Countries



Global Securities Management

- \$13.8 BN Under Management
- Since 1988

Direct Real Estate Investments

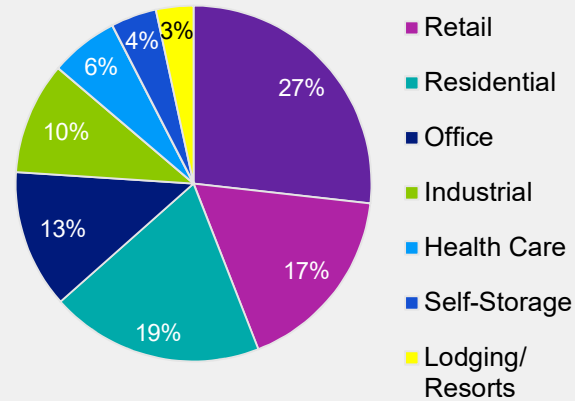
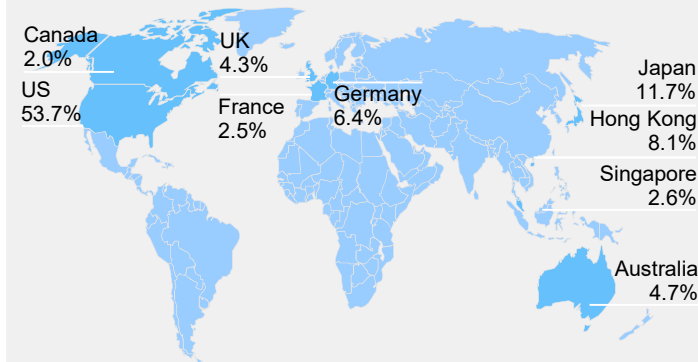
- \$51.8 BN Under Management
- Since 1983

\$=US

Our Regional and Sector Coverage

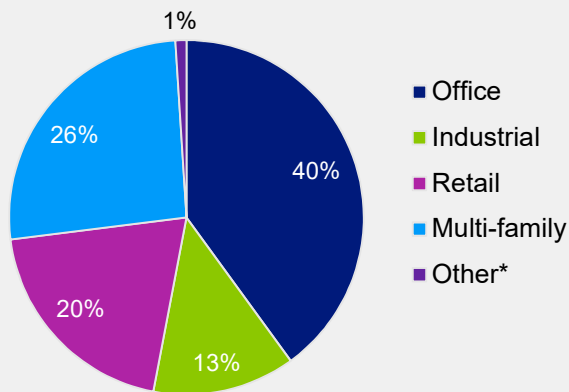
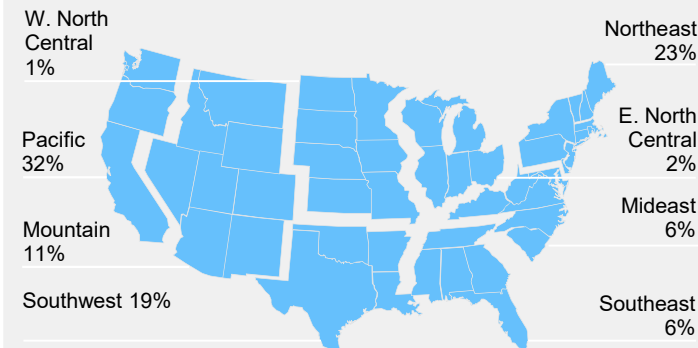


Global Securities



Total Value = \$13.8 Billion

North America Direct Real Estate



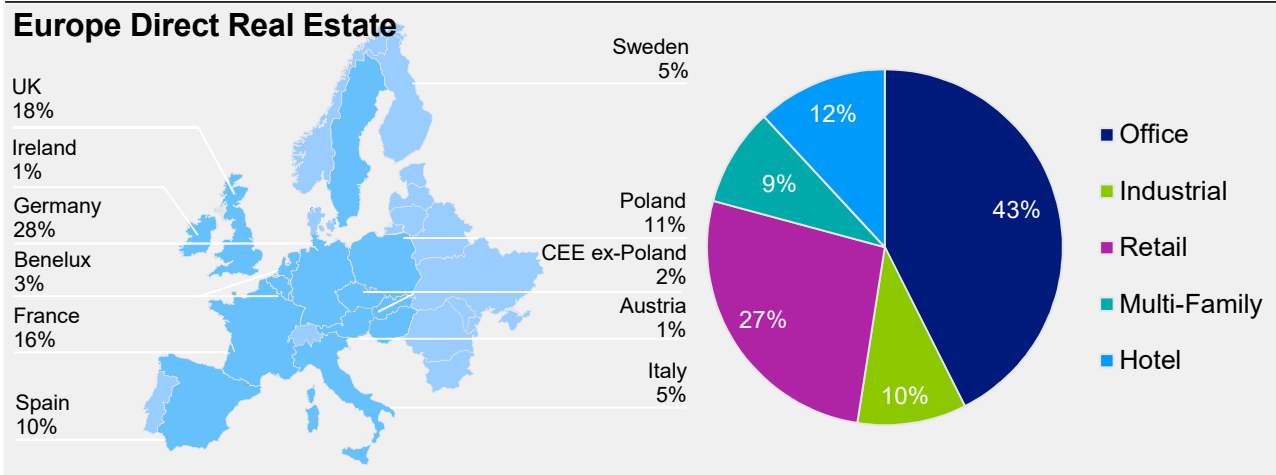
Total Value = \$31.0 Billion

452 Properties

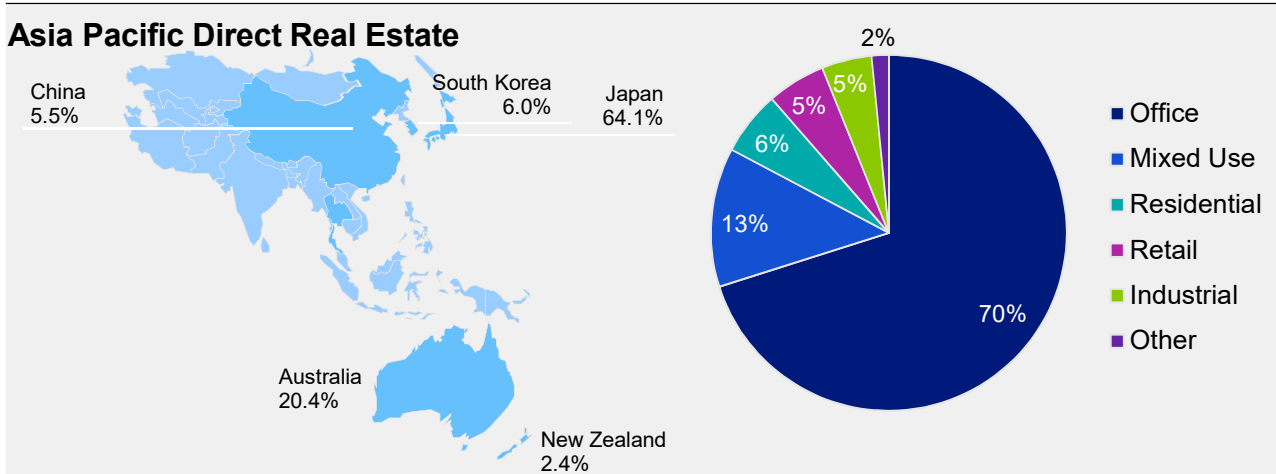
*Other US includes: hotels and land

Source: Invesco Real Estate. Securities AUM represents Invesco's global real estate securities sample portfolio as of 31 December 2018. Direct North America AUM as of 30 September 2018 using gross property value. Portfolio holding and index weights are shown for illustrative purposes. The totals as shown may sum to more or less than 100% due to rounding differences in the underlying data.

Our Regional and Sector Coverage



Total Value = \$11.5 Billion
151 Properties



Total Value = \$6.0 Billion
39 Properties

Source: Invesco Real Estate.

Direct North America AUM as of 30 September 2018 using gross property value. Portfolio holding and index weights are shown for illustrative purposes. The totals as shown may sum to more or less than 100% due to rounding differences in the underlying data.

Invesco Real Estate Global Securities Team


















Average portfolio manager experience¹:
Average analyst experience:

22 years
11 years

Average investment team experience:

16 years

| | | | | | | | |
|---|---|---|---|---|---|---|--|
|  | <p>Joe V. Rodriguez, Jr. Portfolio Manager <i>Dallas</i> Years Experience: 35 Years with IRE: 28</p> |  | <p>Mark Blackburn, CFA® Portfolio Manager <i>Dallas</i> Years Experience: 31 Years with IRE: 20</p> |  | <p>James Cowen Portfolio Manager <i>London</i> Years Experience: 20 Years with IRE: 18</p> |  | <p>Paul Curbo, CFA® Portfolio Manager <i>Dallas</i> Years Experience: 25 Years with IRE: 20</p> |
|  | <p>Grant Jackson, CFA® Portfolio Manager <i>Dallas</i> Years Experience: 16 Years with IRE: 13</p> |  | <p>Darin Turner Portfolio Manager <i>Dallas</i> Years Experience: 15 Years with IRE: 13</p> |  | <p>Ping-Ying Wang, Ph.D., CFA® Portfolio Manager <i>Dallas</i> Years Experience: 21 Years with IRE: 20</p> | | |
|  | <p>Chris Faems, CFA® Associate Portfolio Manager <i>Dallas</i> Years Experience: 22 Years with IRE: 12</p> |  | <p>Alister Hough Associate Portfolio Manager <i>Hong Kong</i> Years Experience: 14 Years with IRE: 4</p> |  | <p>Jim Pfortner Associate Portfolio Manager <i>Dallas</i> Years Experience: 17 Years with IRE: 5</p> | | |
|  | <p>Lindsay Carson Senior Analyst <i>Dallas</i> Years Experience: 12 Years with IRE: 5</p> |  | <p>Xiaoying (Catherine) Li, CFA® Senior Analyst <i>Hong Kong</i> Years Experience: 16 Years with IRE: 12</p> |  | <p>Dan Moran, CFA® Senior Analyst <i>Dallas</i> Years Experience: 13 Years with IRE: 4</p> |  | <p>Krishna Soma, CFA® Senior Analyst <i>Dallas</i> Years Experience: 17 Years with IRE: 6</p> |
|  | <p>Min Zhang, CFA® Senior Analyst <i>Dallas</i> Years Experience: 18 Years with IRE: 11</p> |  | <p>Yannis Kuo, CFA® Securities Analyst <i>Hong Kong</i> Years Experience: 11 Years with IRE: 6</p> |  | <p>Chris Rynn Securities Analyst <i>Dallas</i> Years Experience: 10 Years with IRE: 7</p> |  | <p>Ada Chen, CFA® Associate Analyst <i>Dallas</i> Years Experience: 11 Years with IRE: 4</p> |
|  | <p>David Kern Associate Analyst <i>Dallas</i> Years Experience: 5 Years with IRE: 2</p> |  | <p>Monish Patel, CFA® Associate Analyst <i>London</i> Years Experience: 8 Years with IRE: 1</p> |  | <p>Haney Shaheen Associate Analyst <i>Dallas</i> Years Experience: 4 Years with IRE: 3</p> | | |

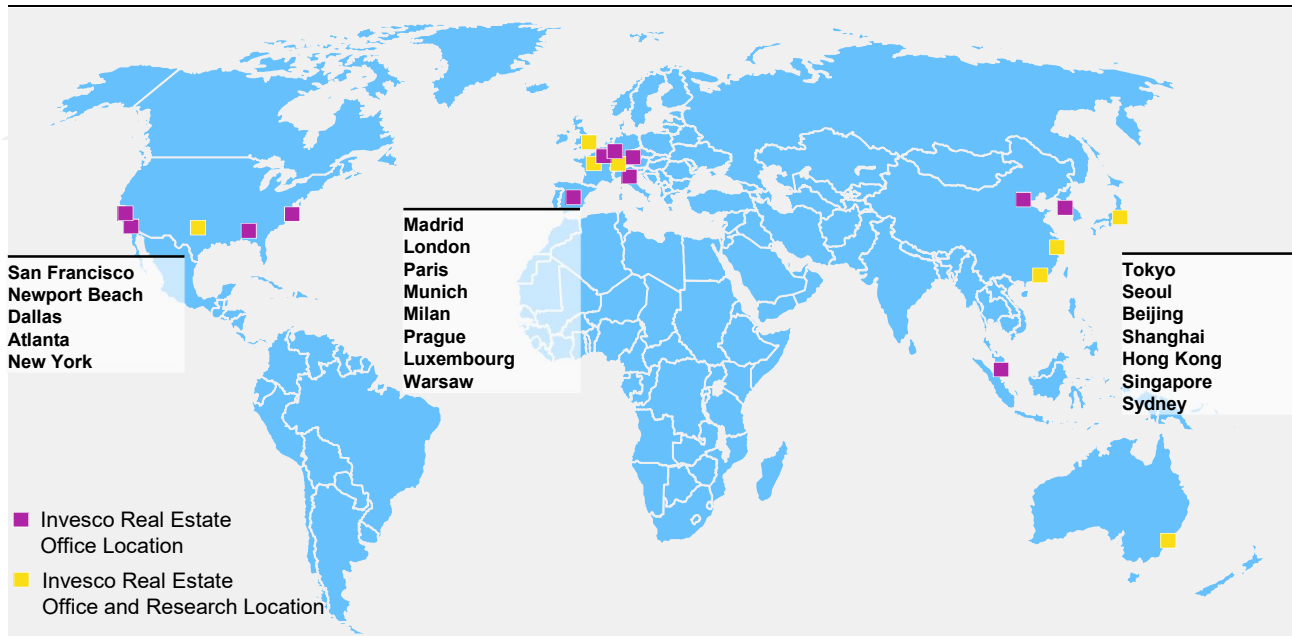
Source: Invesco Real Estate as of 31 December 2018. Subject to change with notice.

¹ Includes Associate Portfolio Managers

8 Not all portfolio managers on the team are named portfolio managers for each portfolio.

Global Property Market Research Platform

An Understanding of Market Fundamentals Drives Our Investment Strategies



- Dedicated team of 18 real estate market researchers with an average experience of 16 years.
- Property Market research is a separate global function providing a resource for the whole firm.
- Leads the Invesco Real Estate House View process.

Tim Bellman, Head of Global Research (2)*

| | | |
|---|--|--|
| <p>Mike Sobolik Head of North American Research</p> <p>US Property Market Research Team (6)*</p> | <p>Michael Bessell Head of European Research</p> <p>European Property Market Research Team (5)*</p> | <p>Thomas Au Head of Asia Pacific Research</p> <p>Asia Pacific Property Market Research Team (5)*</p> |
|---|--|--|

Property Market Research (Research Team)

Joe Rodriguez & Mark Blackburn, Co-Heads of Global Securities Research

| | | |
|--|---|---|
| <p>Americas</p> <p>Joe Rodriguez, Co-Manager Paul Curbo, Co-Manager Grant Jackson, Co-Manager Darin Turner, Co-Manager Americas Securities Team</p> | <p>EMEA & India</p> <p>James Cowen, Co-Manager Paul Curbo, Co-Manager EMEA & India Securities Team</p> | <p>Asia Pacific Team</p> <p>Ping-Ying Wang, Co-Manager Mark Blackburn, Co-Manager Asia Securities Team</p> |
|--|---|---|

Company Research (Securities Team)

9 Source: Invesco Real Estate. Data as of 31 December 2018. *(#) shows number of real estate market researchers within the applicable area.

Section 2

Real Assets Overview



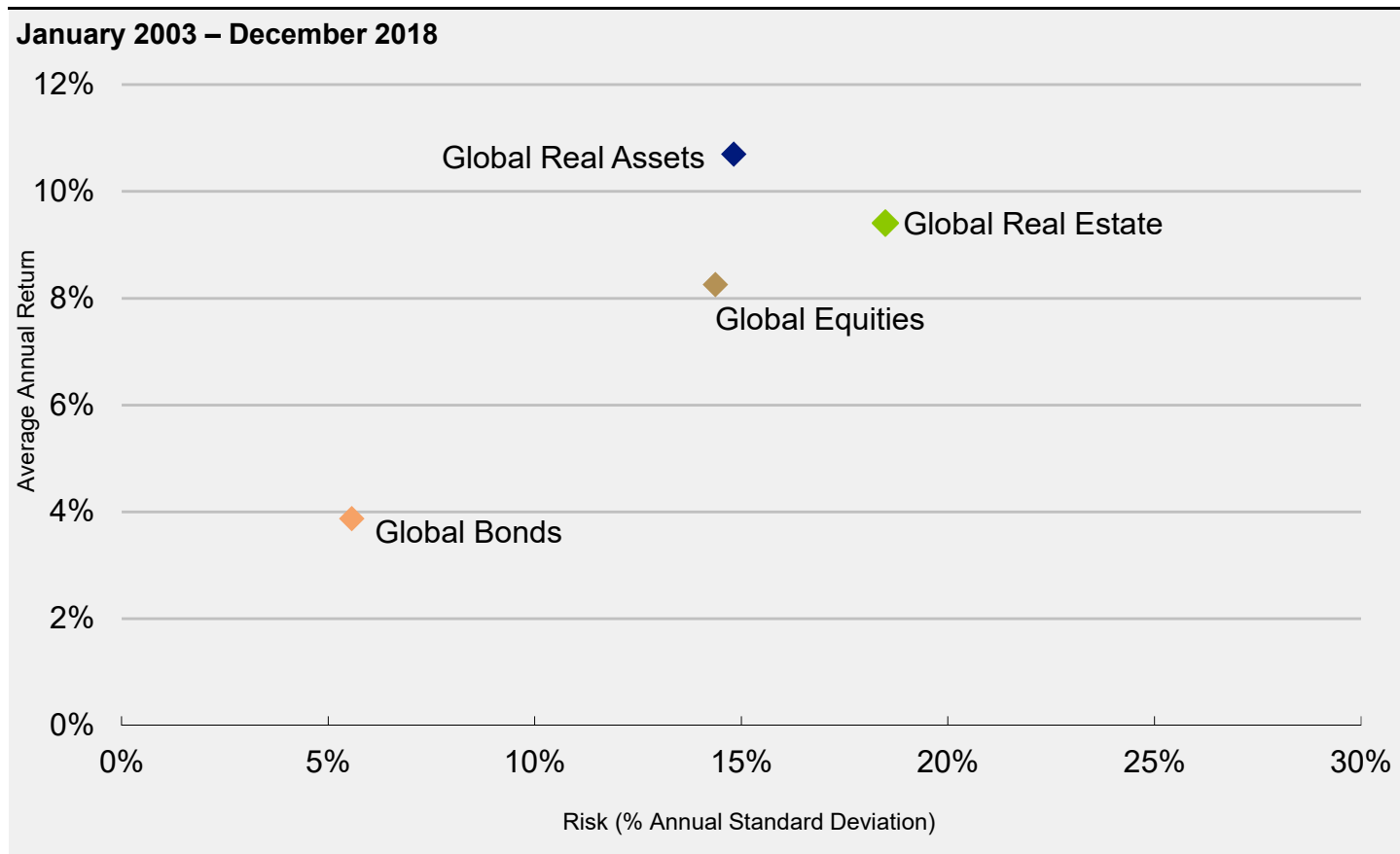
What are the Characteristics of Real Assets?



| | Long-Lived Assets | Heterogeneous Assets | Local Market Demand Drivers | Contracted Cash Flows | Income | Capital Appreciation | Linked to Inflation | Discounted Cash Flow Valuations |
|------------------------------------|-------------------|----------------------|-----------------------------|-----------------------|--------|----------------------|---------------------|---------------------------------|
| Global Real Estate | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Infrastructure | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Timber/ Agriculture | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| Natural Resources (Companies) | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| Natural Resources (Commodities) | ✓ | | | | | ✓ | ✓ | |
| TIPS | | | | ✓ | ✓ | | ✓ | |

Global Real Assets Equities

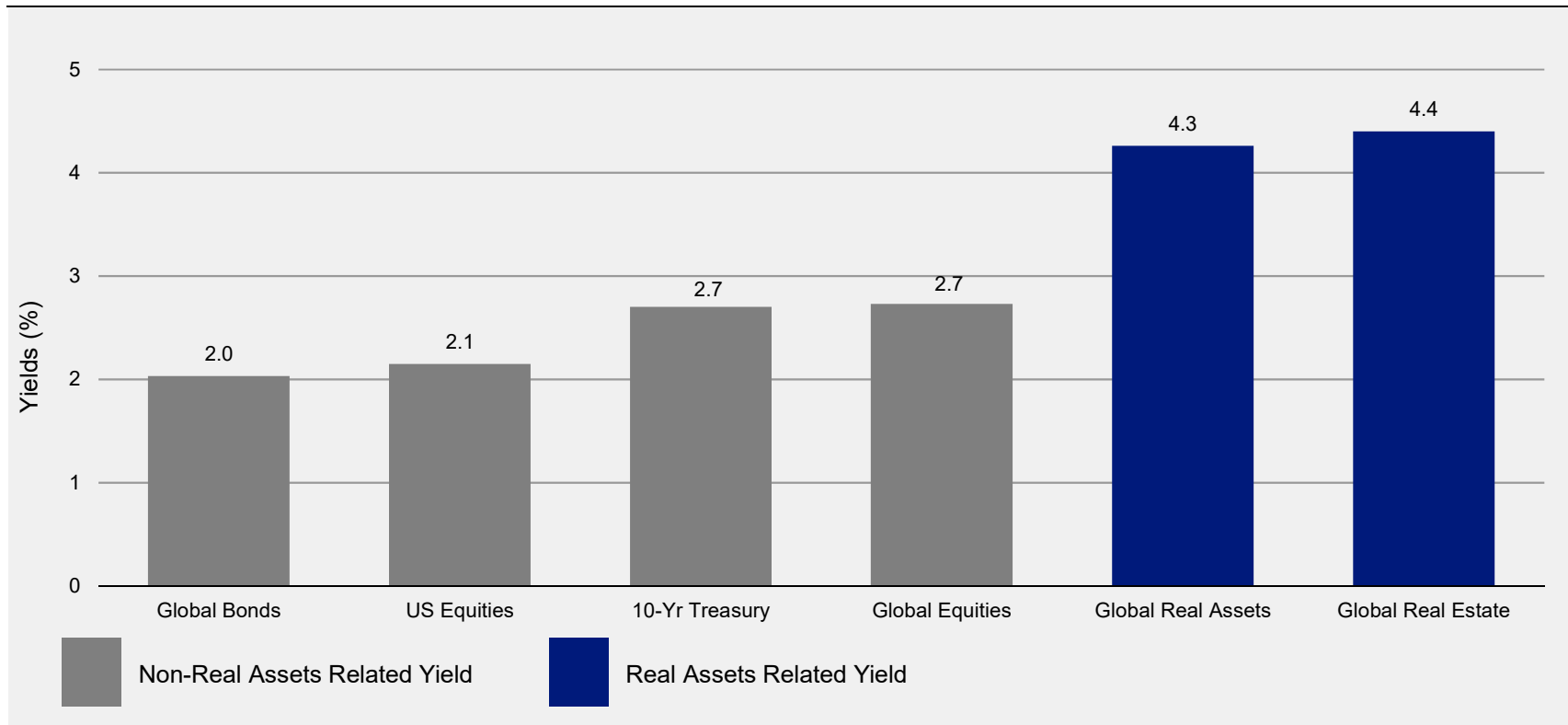
Total Return & Risk Comparison



Source: Invesco Real Estate, S&P and FTSE EPRA Nareit using data from Bloomberg and StyleADVISOR as of 31 December 2018. Past performance is not guarantee of future results. Global Bonds represented by Bloomberg Barclays Global Aggregate Index; Global Equities represented by MSCI World Index; Global Real Estate represented by FTSE EPRA Nareit Developed Index; Global Real Assets represented as S&P Real Assets Equity Total Return Index.

Current Income Comparison

As of 31 December 2018



*Represents the yield of the underlying securities as of 31 December 2018.

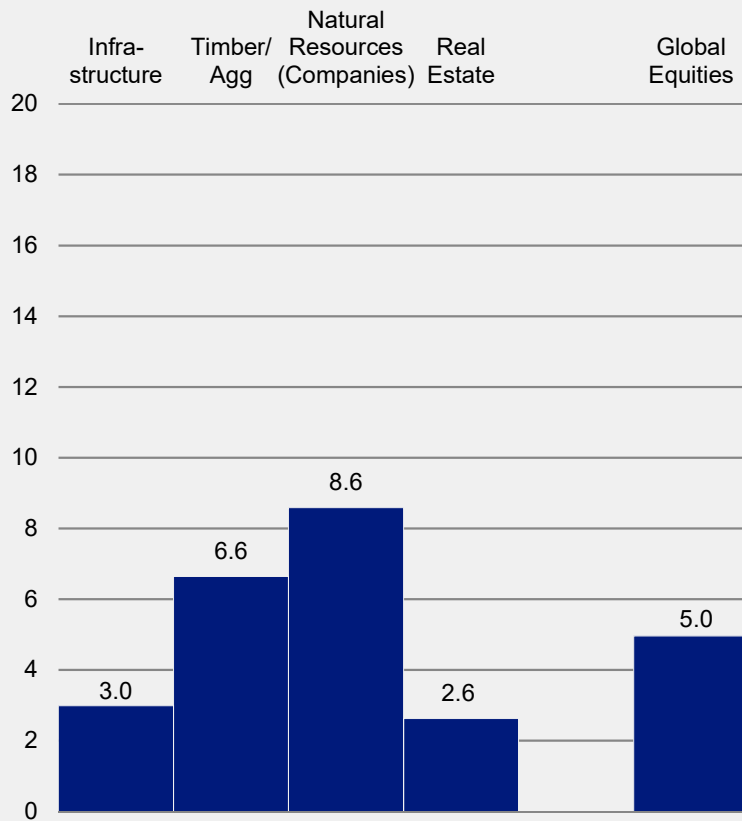
Source: Invesco Real Estate, S&P and FTSE EPRA Nareit using data from Bloomberg as of 31 December 2018. US Equities represented by the S&P 500 Index; Global Equities represented by MSCI World Index; Global Bonds represented by Bloomberg Barclays Global Aggregate Index; Global Real Assets represented by S&P Real Assets Equity Total Return Index; Global Real Estate represented by FTSE EPRA Nareit Developed Index. Past performance is not indicative of future results.

Real Assets Performance During Periods of Rising Interest Rates

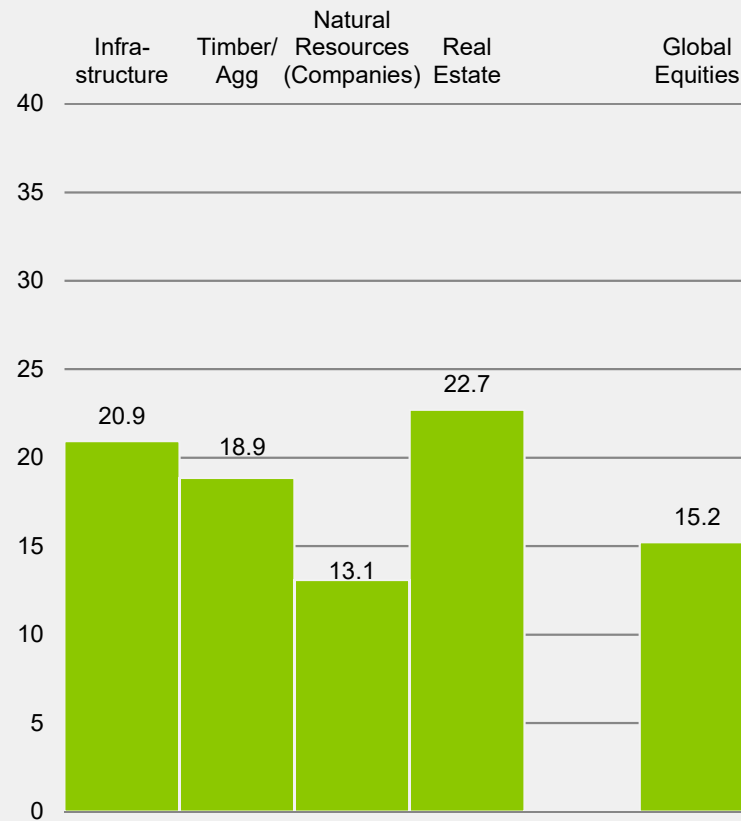


Average Performance (%)

+50 bps rise



Subsequent 1 Year



Source: Invesco Real Estate and Lipper. Average total returns where the cumulative rise in 10-Year Treasury yields for each full month period is above 50 basis points (bps) and the one-year subsequent periods from January 2003 through December 2018. Past performance does not guarantee future results.

Available data is from January 1, 2003 to December 31, 2018.

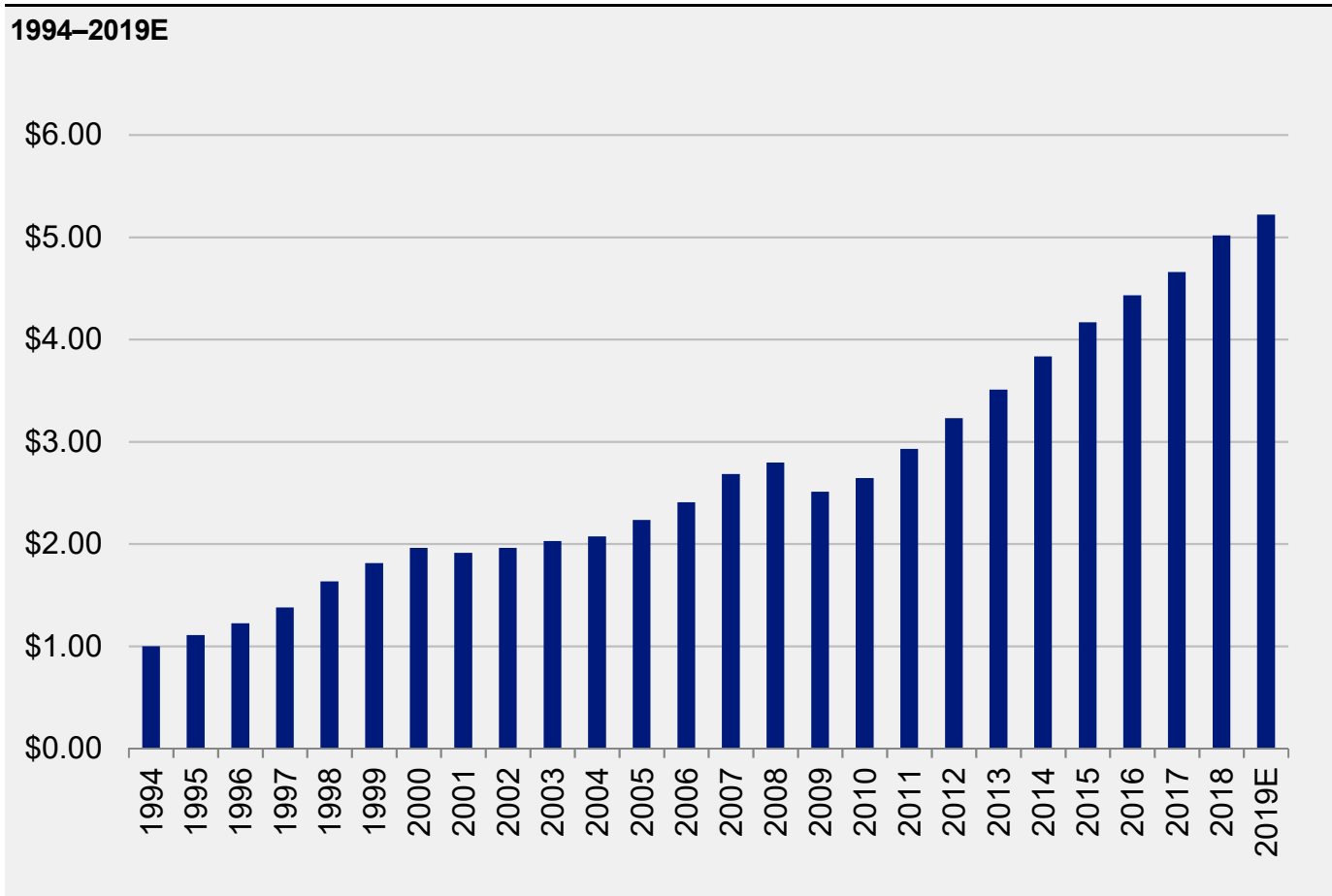
Note: Infrastructure represented by Dow Jones Brookfield Global Infrastructure Index; Timber/Agriculture represented by S&P Global Timber and Forestry Index; Natural Resources (Companies) represented by MSCI World Energy Index; Real Estate represented by FTSE EPRA Nareit Developed Real Estate Index; Global equities represented by MSCI World Index

Section 3

Real Estate- Update and Investment Outlook

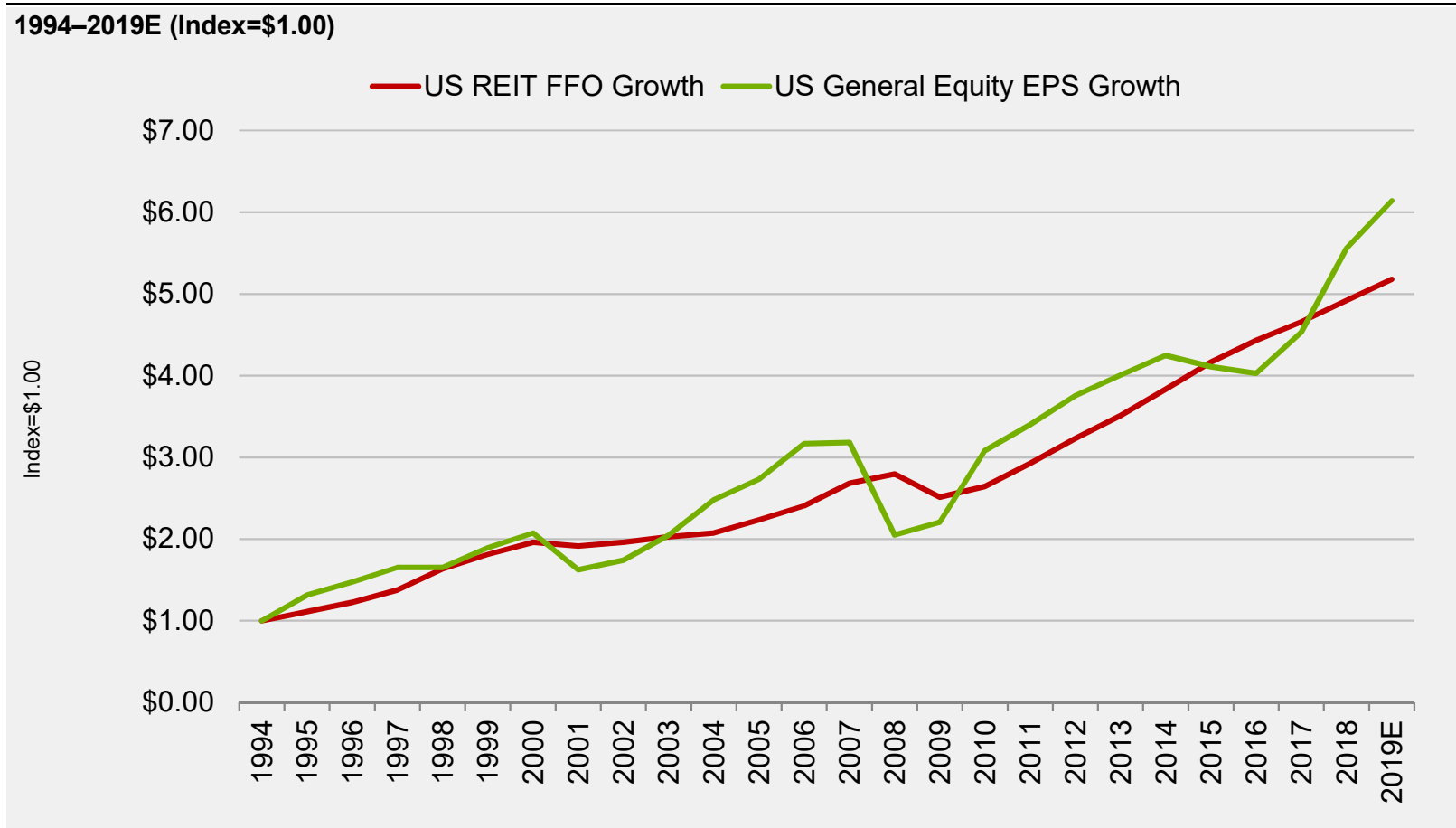


US REIT Cash Flow Display Steady Growth Over Time



**~7% Annual
Cash Flow
Growth**

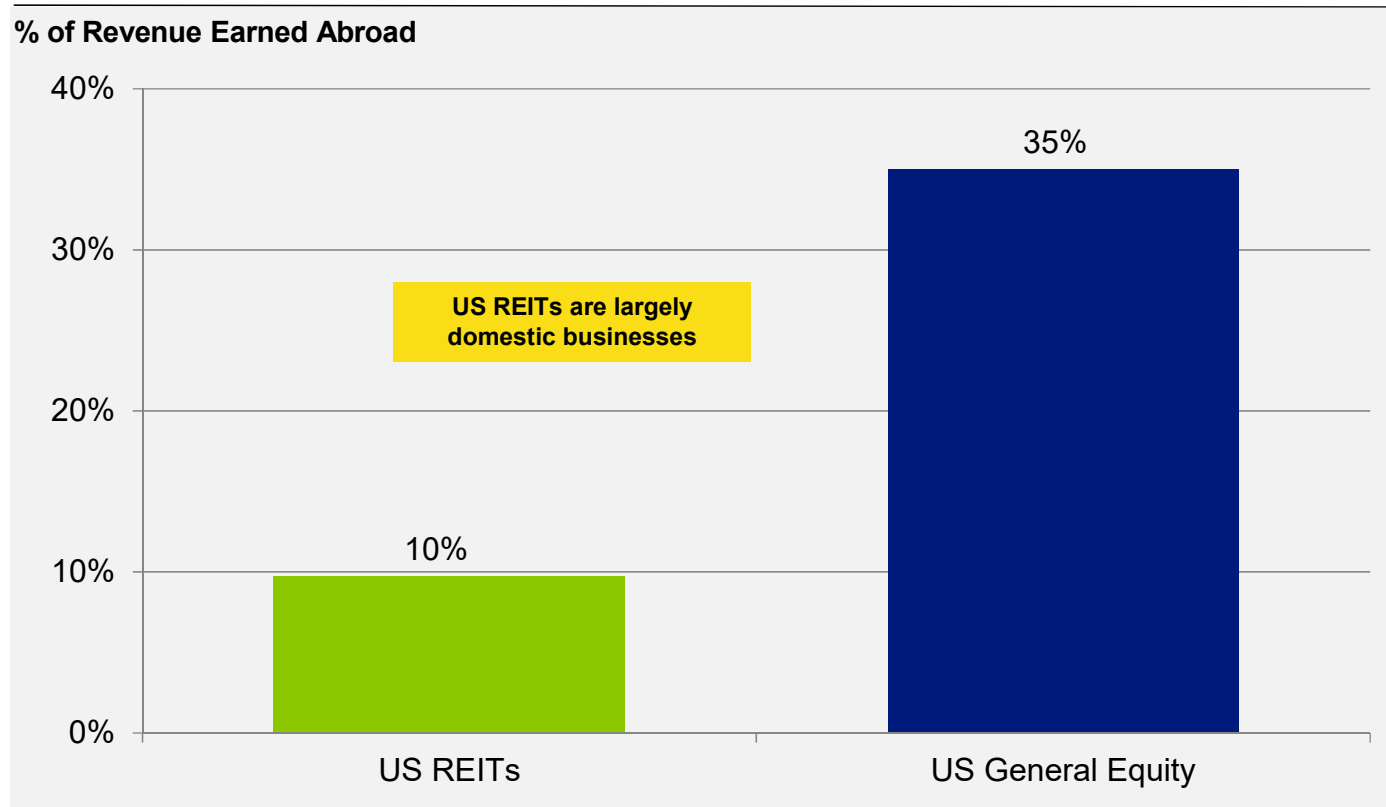
US REITs vs US General Equity Growth



Source: Invesco Real Estate estimates as of 31 December 2018, Bloomberg and FTSE Nareit. FFO Growth estimates are derived from consensus estimates of recurring Funds From Operations which may be adjusted in order to eliminate the effects of one-time items or extraordinary gains or losses.

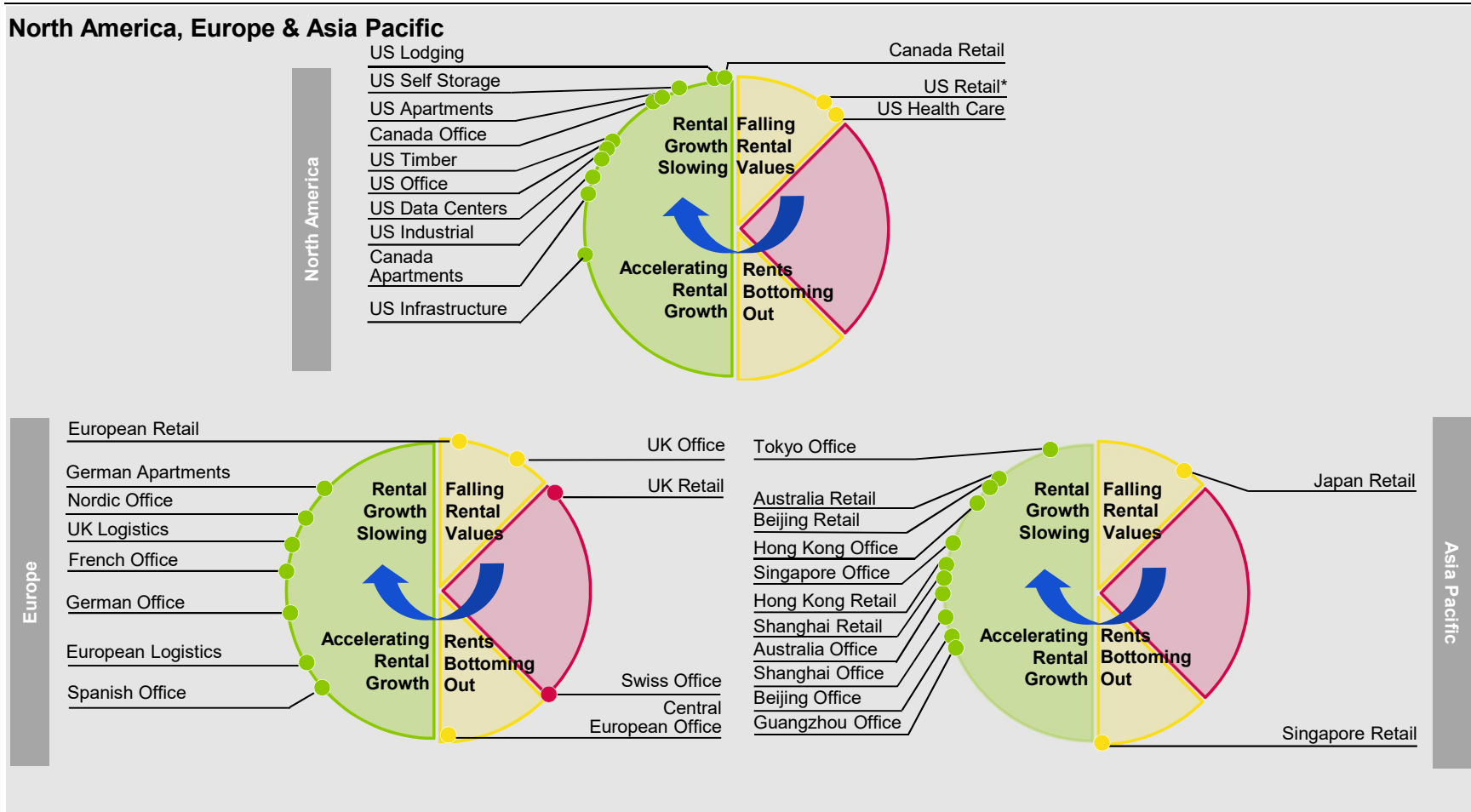
Equity growth is derived from the S&P 500 index. Trailing 12 month EPS represents previous years and BEST EPS represents current year estimate. Data is sourced from Bloomberg which is subject to revisions by Bloomberg.

US REITs vs. US General Equity Foreign Earnings



19 Source: Invesco Real Estate using data from Bloomberg and REIT company filings. US REITs represented by the FTSE/Nareit All Equity REITs Index. US General Equity represented by the S&P 500 Index. Data as of 31 December 2018.

Fundamentals In Key Markets

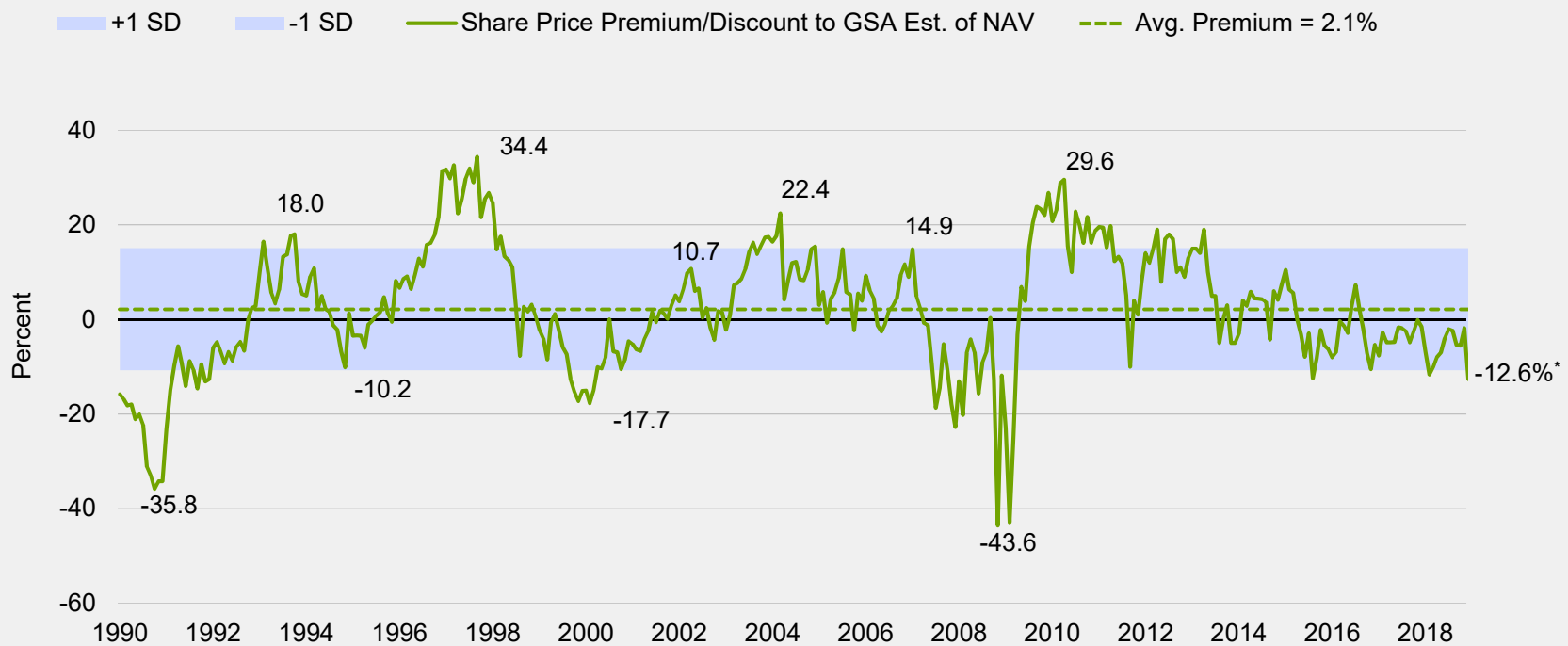


*Retail includes Regional Malls, Shopping Centers, and Triple Net.

US Real Estate Securities Valuation Metrics



Share Price Premium/Discount to GSA Estimate of NAV



*Note: GSA estimate of NAV at 2 January 2019 assumes a cap rate of 5.6%

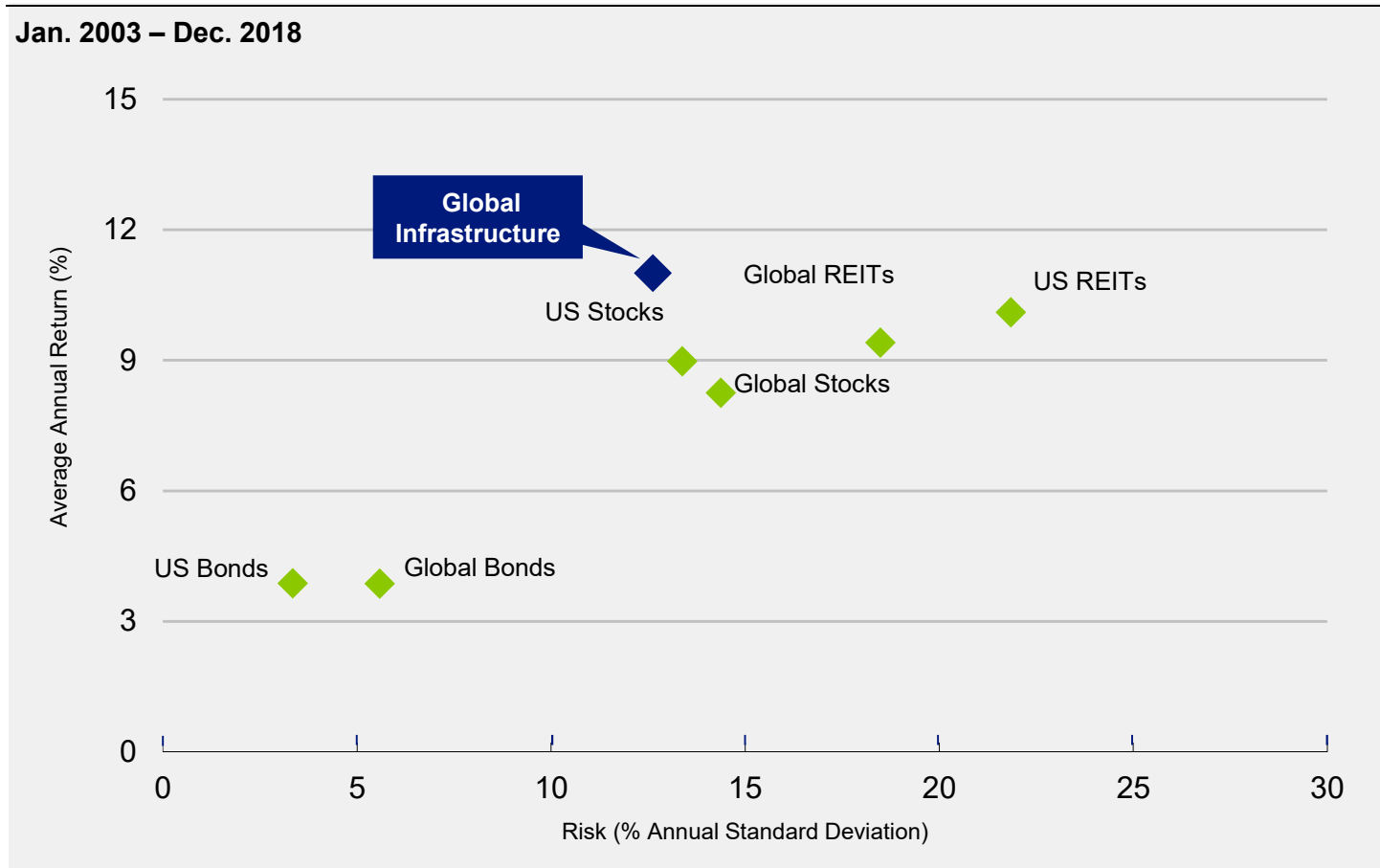
Source: Used by permission of Green Street Advisors (GSA) (Real Estate Securities Monthly, 2 January 2019). For illustrative purposes only. Weighted average (weighted by NAV shares outstanding) of all US-listed companies in Green Street's coverage universe, excluding Hotels and those without a published opinion. Equally-weighted average prior to Jan '93.

Section 4

Infrastructure- Update and Investment Outlook



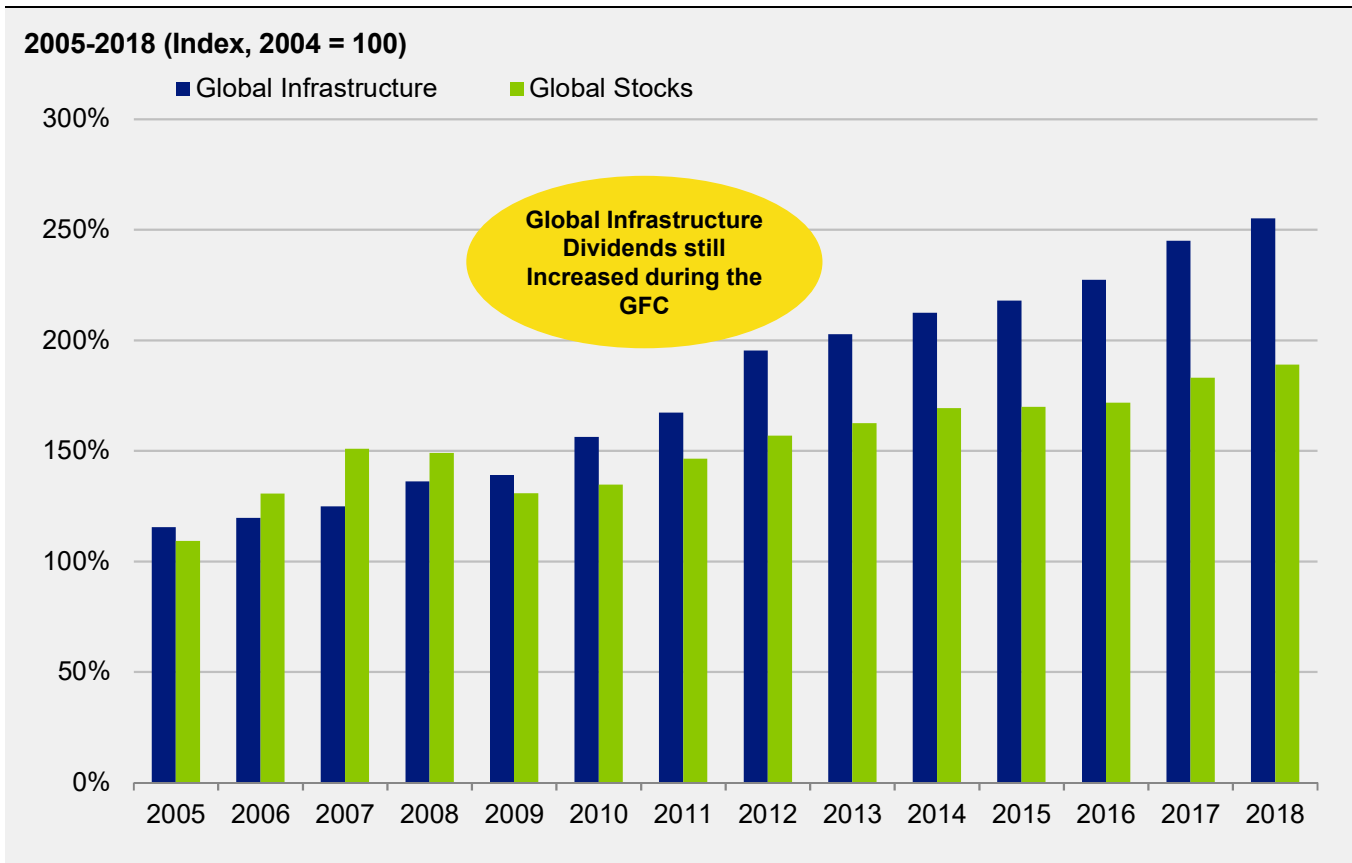
Competitive Risk-Adjusted Returns



Note: Global Infrastructure represented by Dow Jones Brookfield Global Infrastructure Index; US Stocks represented by S&P 500; Global Stocks represented by MSCI World; US Bonds represented by Bloomberg Barclays US Aggregate Index, Global Bonds represented by Bloomberg Barclays Global Aggregate Index; US REITs represented by FTSE Nareit All Equity REIT Index; Global REITs represented by FTSE EPRA Nareit Developed Index.

23 Source: Invesco Real Estate using data from StyleADVISOR (31 December 2018). Past performance is not a guarantee of future results; current performance may be lower or higher. An investment cannot be made directly into an index.

Global Infrastructure provides Stable Cash Flows with Growth



**Global Infrastructure:
11.1% Annual Dividend Growth**

**Global Stocks:
6.4% Annual Dividend Growth**

The Global Need for Infrastructure

2017 Report Card for America's Infrastructure



| Category | 1988* | 1998 | 2001 | 2005 | 2009 | 2013 | 2017 |
|-------------------------------------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Aviation | B- | C- | D | D+ | D | D | D |
| Bridges | - | C- | C | C | C | C+ | C+ |
| Dams | - | D | D | D+ | D | D | D |
| Energy | - | - | D+ | D | D+ | D+ | D+ |
| Levees | - | - | - | - | D- | D- | D |
| Rail | - | - | - | C- | C- | C+ | B |
| Roads | C+ | D- | D+ | D | D- | D | D |
| Transit | C- | C- | C- | D+ | D | D | D- |
| Ports | - | - | - | - | - | C | C+ |
| America's Infrastructure GPA | C | D | D+ | D | D | D+ | D+ |
| Cost to Improve | - | - | \$1.3 trillion | \$1.6 trillion | \$2.2 trillion | \$3.6 trillion | \$4.6 trillion |

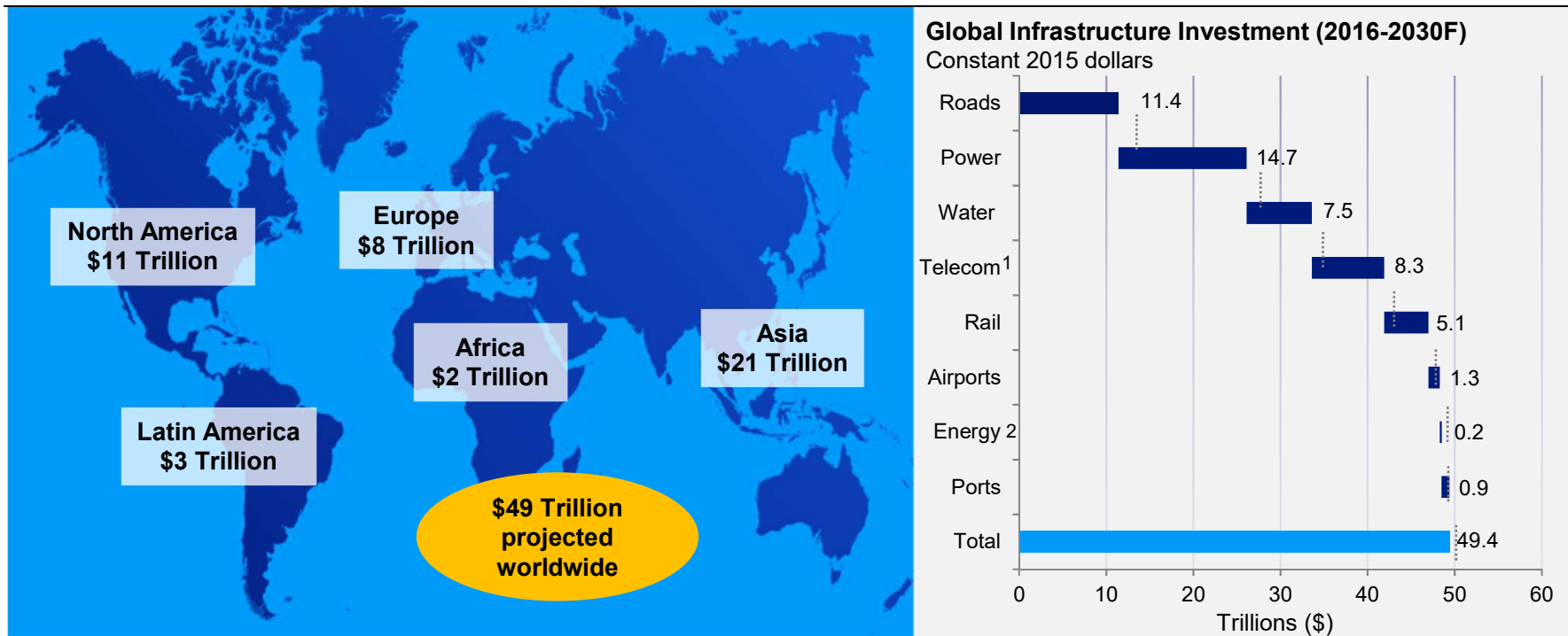
By 2040, US estimated to require \$10 Trillion in infrastructure investment

Source: US American Society of Civil Engineers 2017, latest data available. \$=US.

*The First infrastructure grades were given by the National Council on Public Works Improvements in its report Fragile Foundations: A Report on America's Public Works, released in February 1988. ASCE's first Report Card for America's Infrastructures was issued a decade later. GPA=Grade Point Average.

The Global Need For Infrastructure

Not Just A U.S. Story



Map Source: Invesco Real Estate, IHS Global Insight, ITF, GWI, National Statistics, McKinsey Global Institute analysis. This is not financial advice or a recommendation to buy / hold / sell these securities. There is no guarantee that Invesco will hold these securities within its funds in the future.

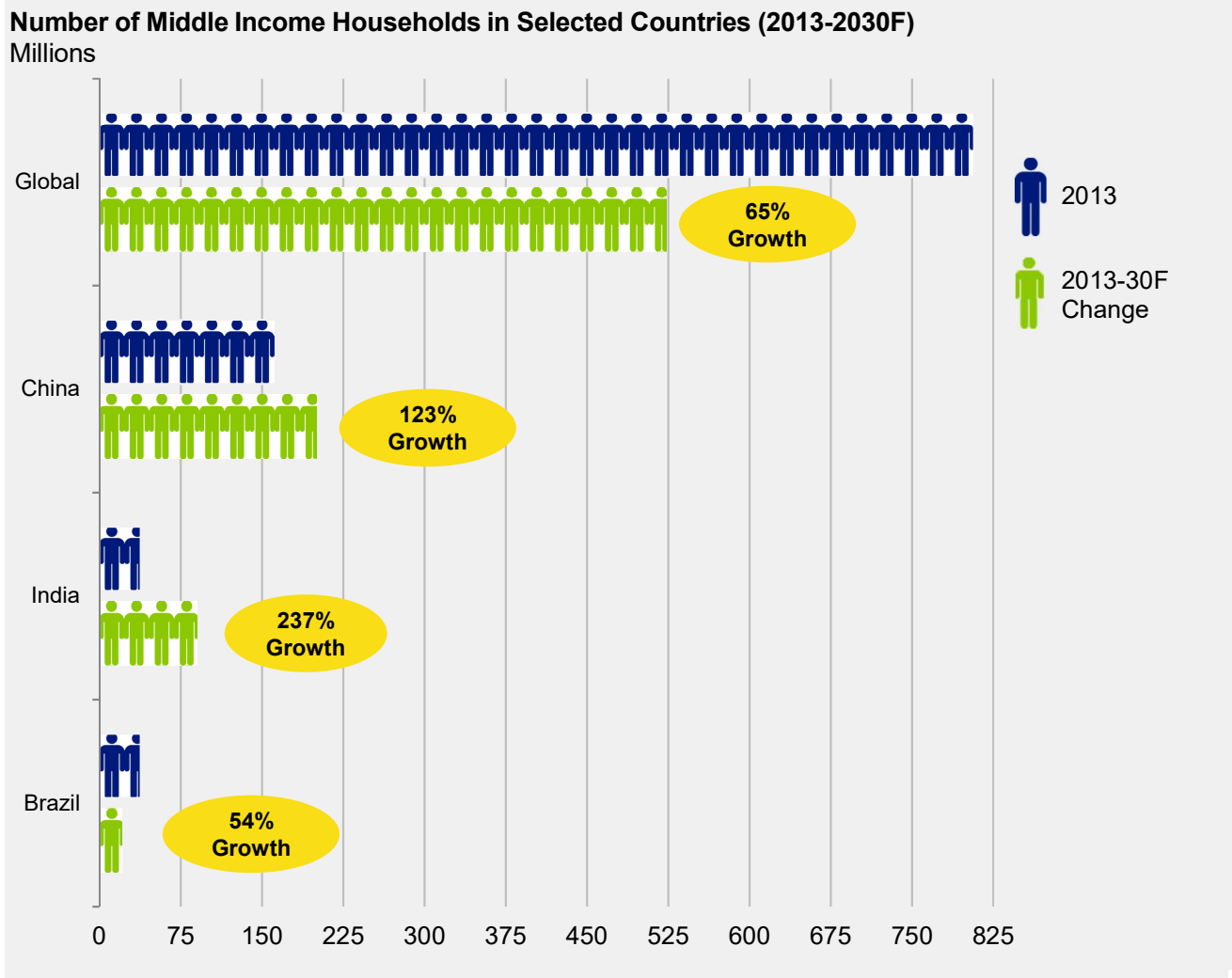
Chart Source: OECD; IHS Global Insight; GWI; IEA; McKinsey Global Institute analysis as of June 2018. \$=US.

¹ OECD telecom estimate covers only OECD members plus Brazil, China and India.

² Energy estimate through 2023.

The Global Need for Infrastructure

Rise of the Middle Class



765 Million Middle Income Households Globally by 2030

40% Increase in Municipal Water Demand by 2025

Electric Power demand expected to Double by 2025

Note: Middle-income is defined as US\$10,000-US\$70,000 per household (resident based, constant 2012 prices)

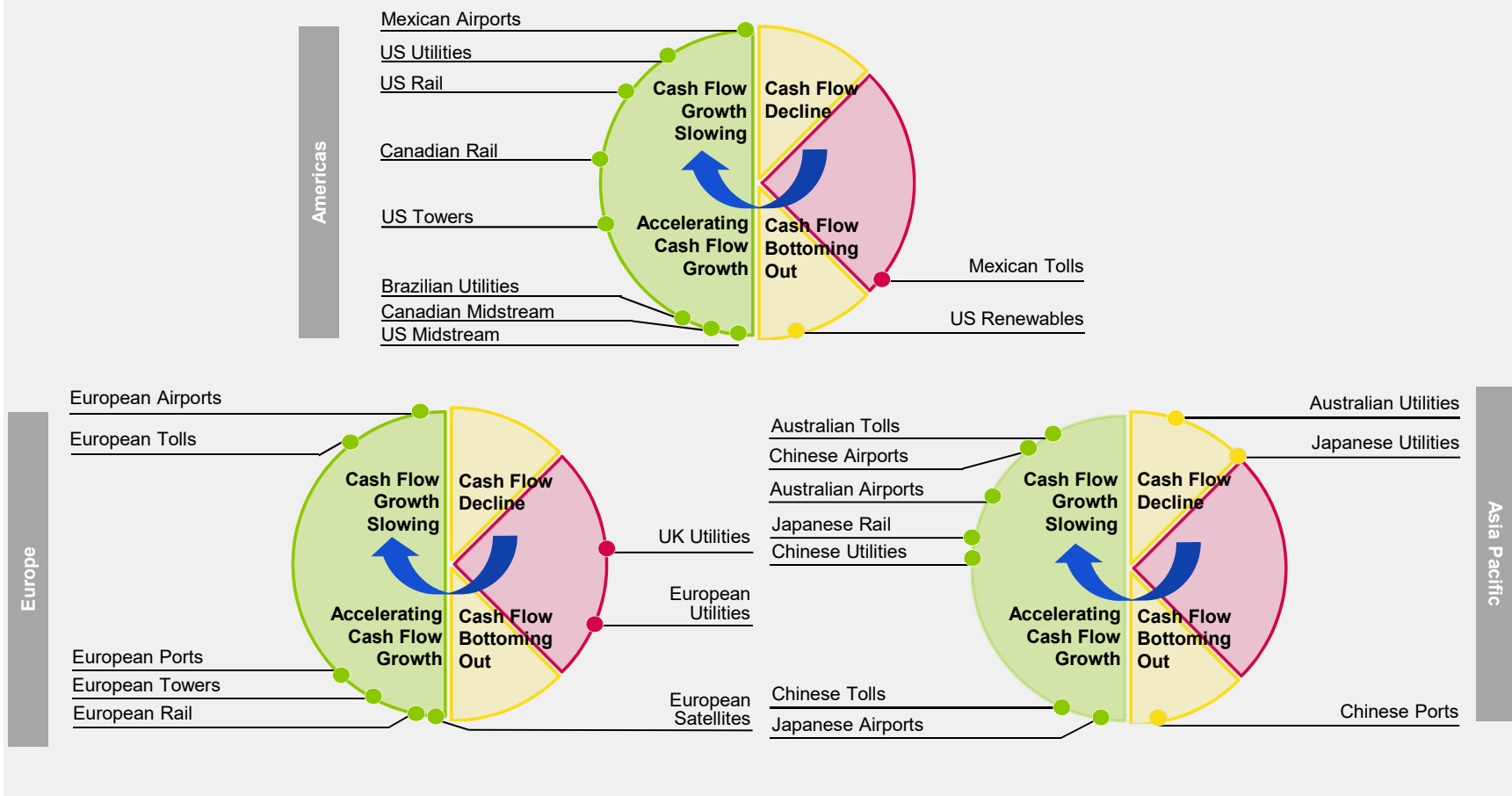
27 Source: Invesco Real Estate using data from Oxford Economics as of May 2014. Latest data available.

Infrastructure Fundamentals in Key Markets



Infrastructure sectors include Tolls, Utilities, Satellites, Airports, Ports, Towers, Midstream Energy & Rail

Americas, Europe & Asia Pacific



DJ Brookfield Global Infrastructure Index Valuation Metrics

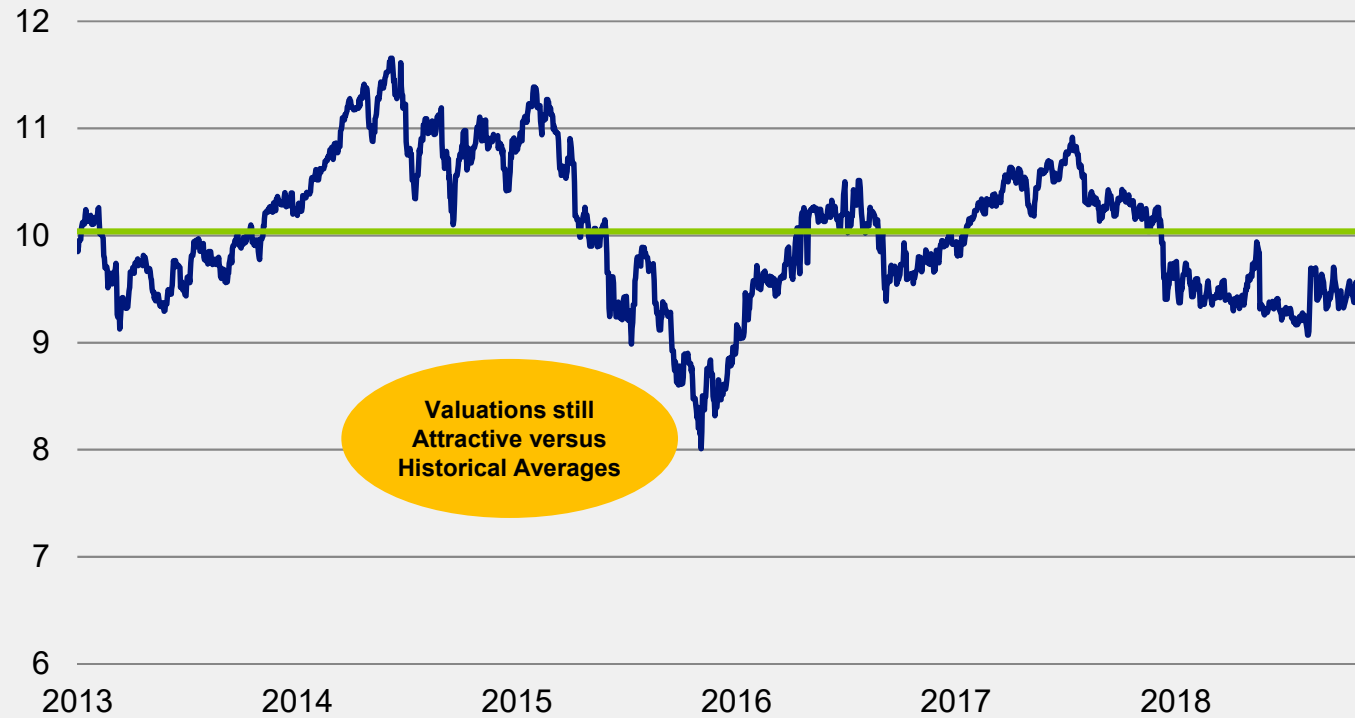
As of 31 December 2018



DJ Brookfield Index Price to Cash Flow from Operations¹

Avg. Price to Cash Flow = 10.0x

Current Price to Cash Flow (As of 31 December 2018) = 9.0x

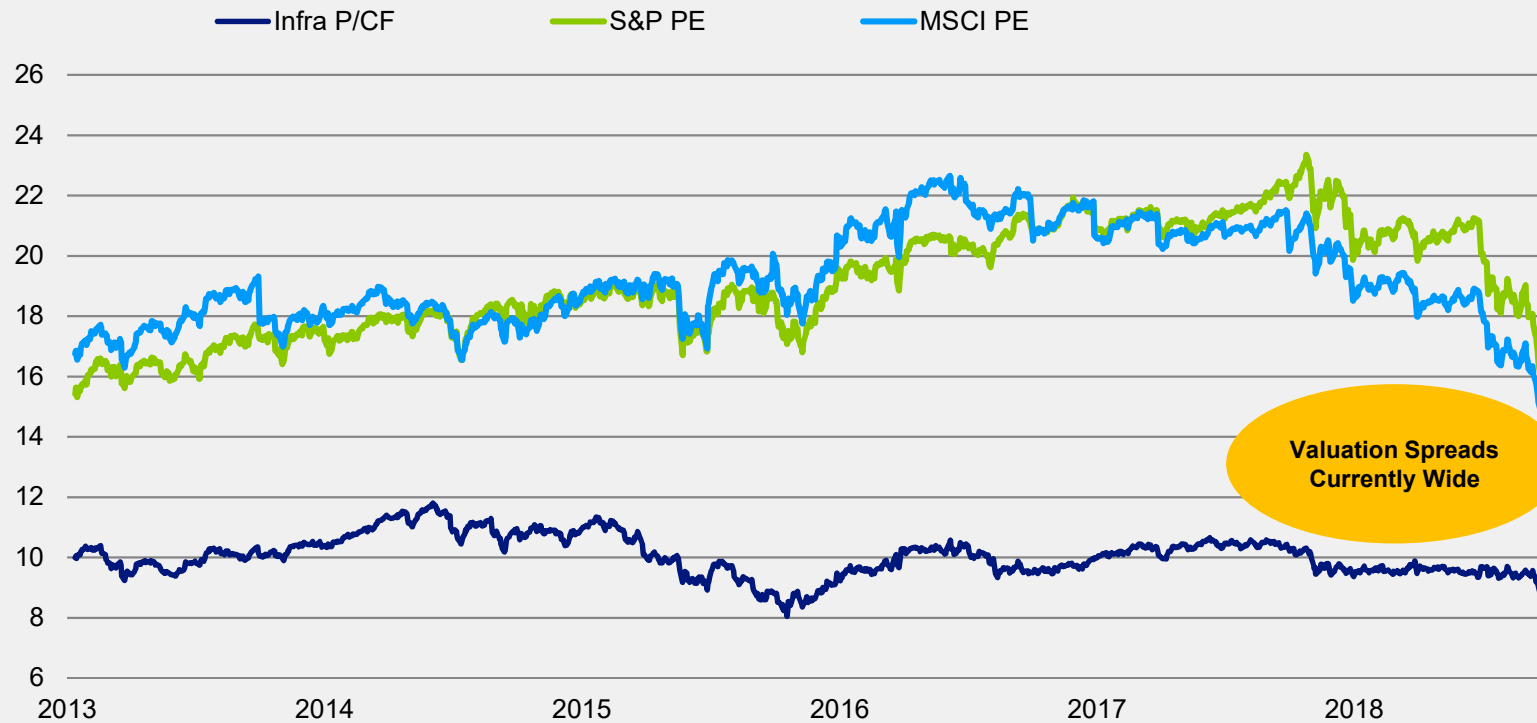


Source: Invesco Real Estate, Dow Jones and Bloomberg. An investment cannot be made directly into an index.

Infrastructure multiples

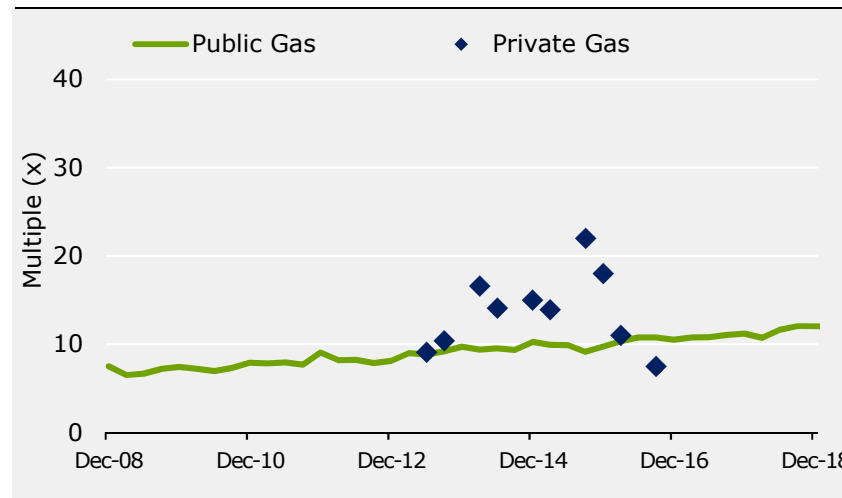
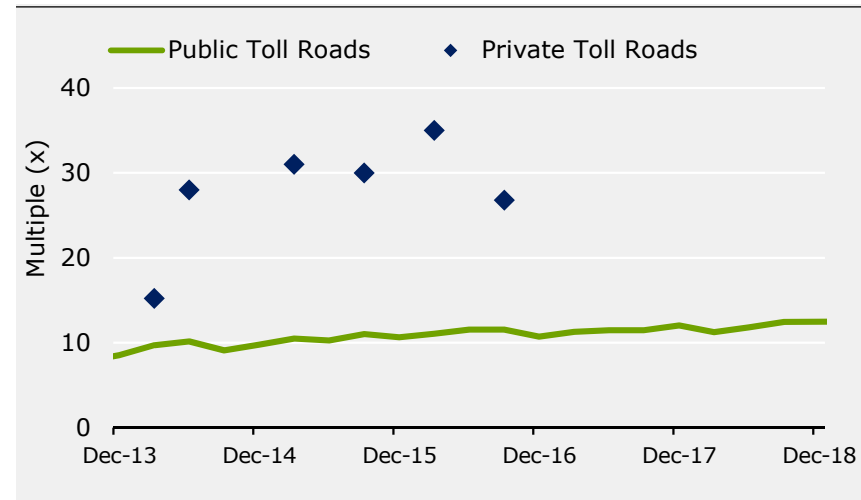
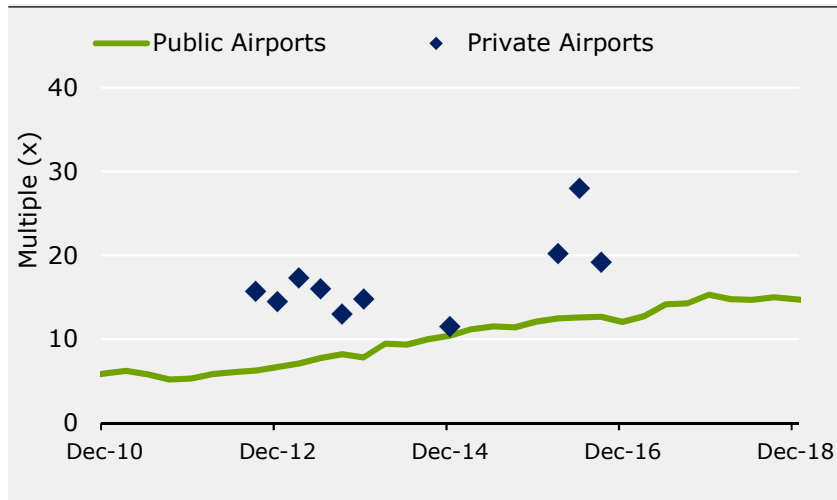


DJ Brookfield Global Infrastructure Index Price to Cash Flow from Operations¹



Source: Invesco Real Estate, Dow Jones and Bloomberg. As of 31 December 2018. Past performance is no guarantee of future results.

Public Valuations versus Private Transactions



31 Public transactions based on available EBITDA multiples from Preqin infrastructure database. Public transactions based on EV/EBITDA multiples for sector constituents of the DJ Brookfield Global Infrastructure Index. Source: Dow Jones, Preqin, and Bloomberg as of 31 December 2018. An investment cannot be made directly into an index.

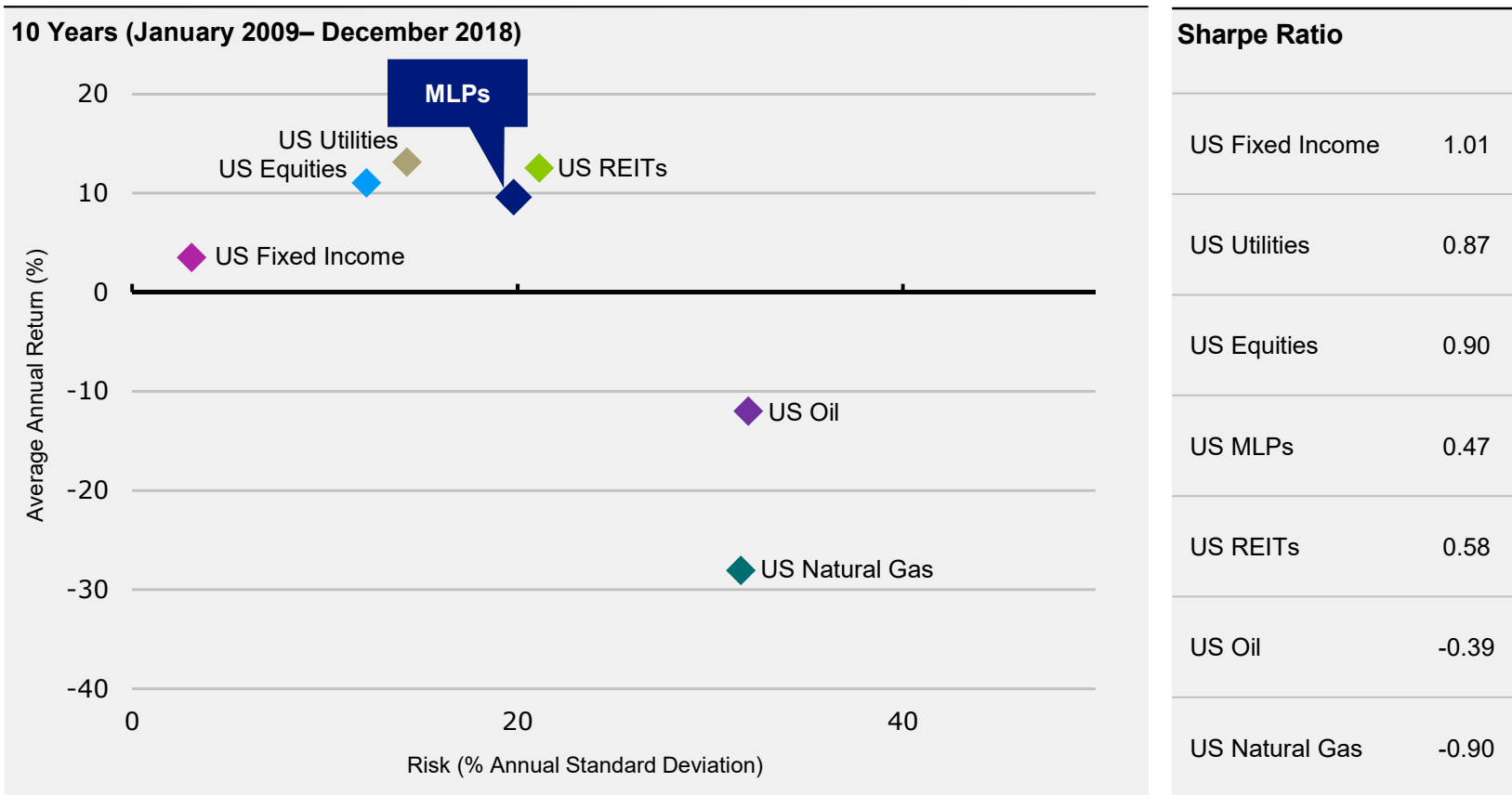
Section 5

MLPs- Update and Investment Outlook



Total Return

Competitive Risk-Adjusted Returns



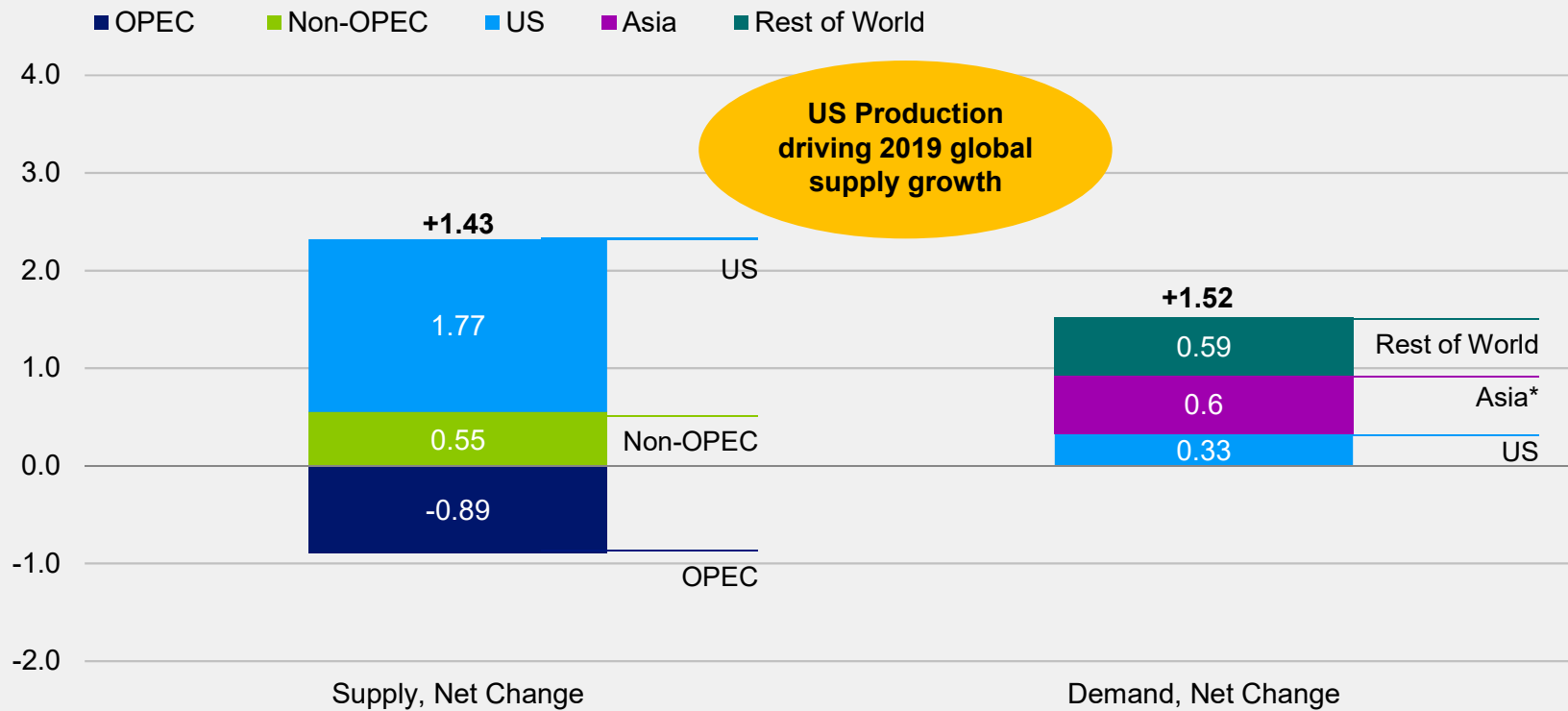
Note: MLPs represented by Alerian MLP Index; US REITs represented by FTSE Nareit All Equity REITs Index; US Utilities represented by Dow Jones Utilities Index; US Equities represented by S&P 500; US Fixed Income represented by Bloomberg Barclays US Aggregate Index; Oil represented by S&P GSCI Crude Oil; Natural Gas represented by S&P GSCI Natural Gas.

Source: Invesco Real Estate using data from StyleADVISOR (31 December 2018). Past performance is not a guarantee of future results; current performance may be lower or higher. An investment cannot be made directly into an index.

2019 Oil Supply/Demand Projections



Global Supply and Demand Net Change (million barrels per day)



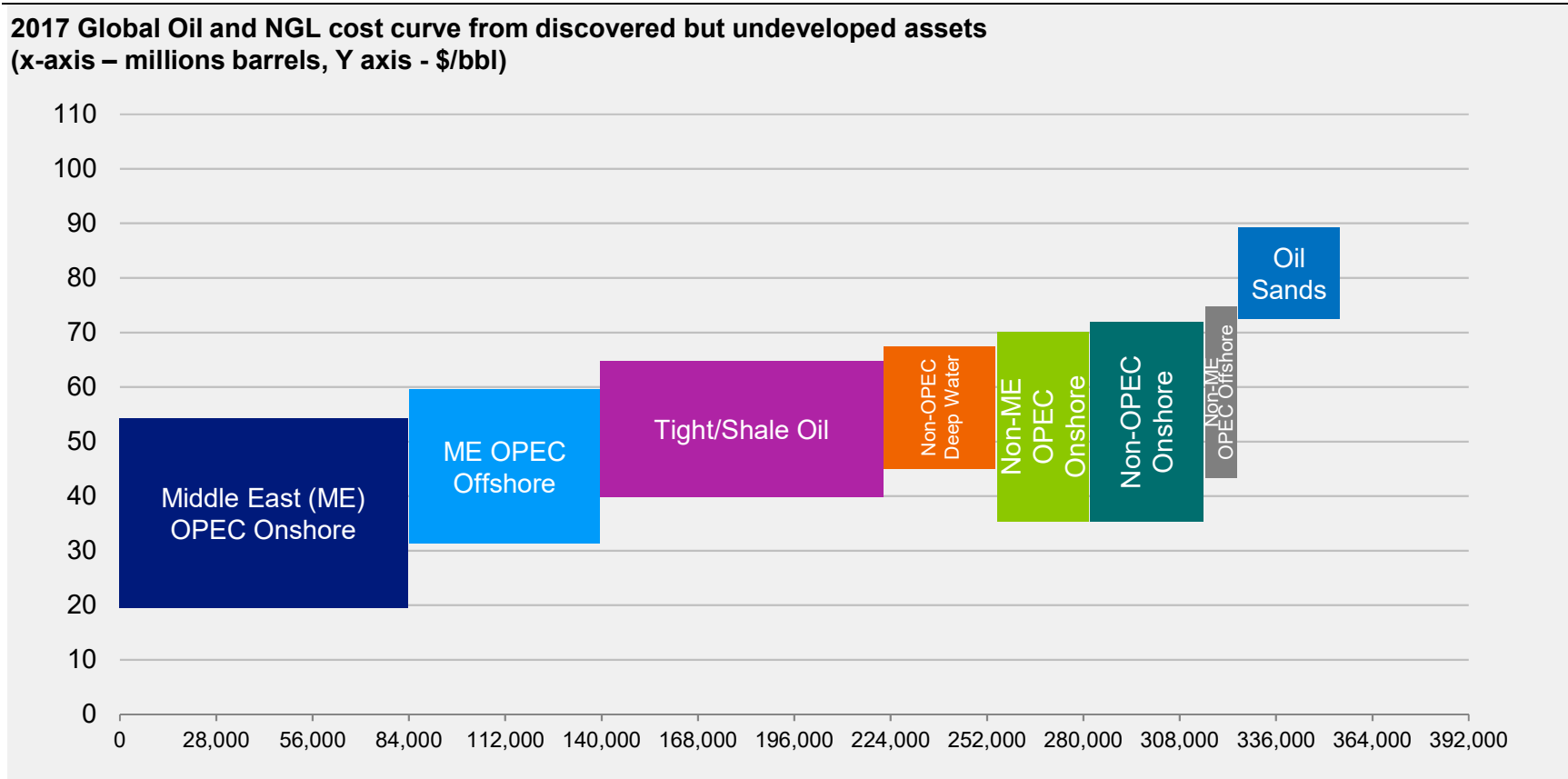
*Asia includes China, Japan and India.

Global Breakeven Oil Price Production

How Competitive Is US Shale?

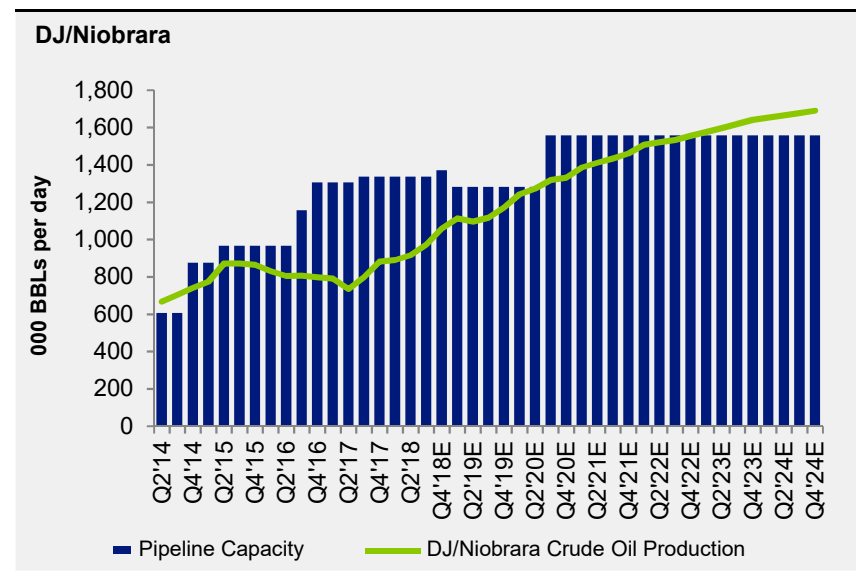
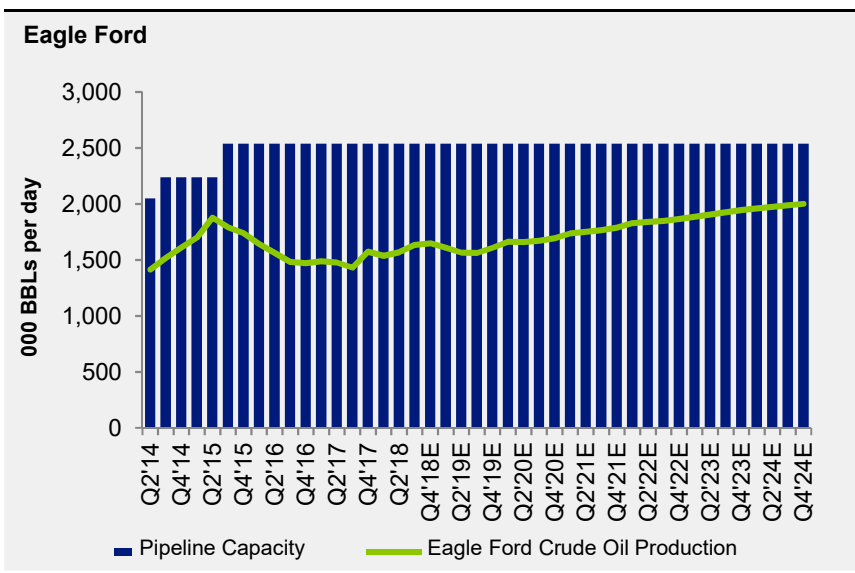
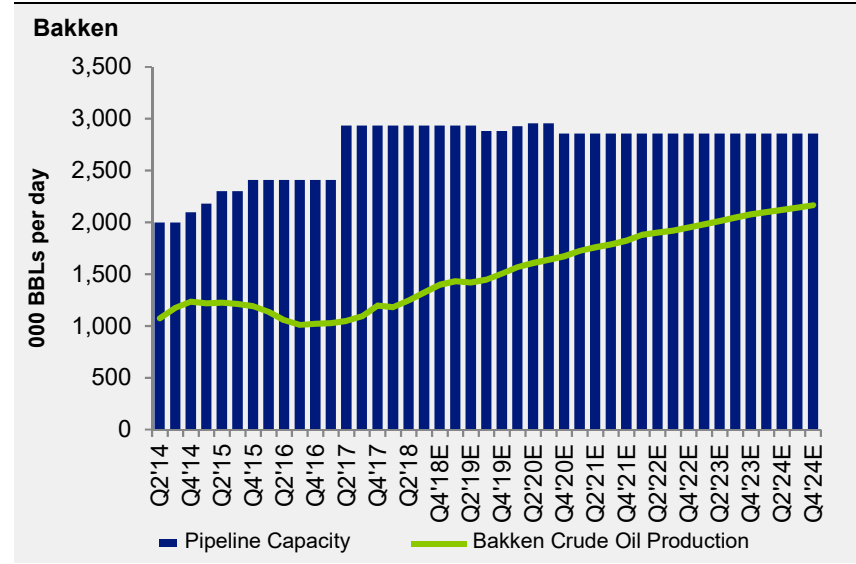
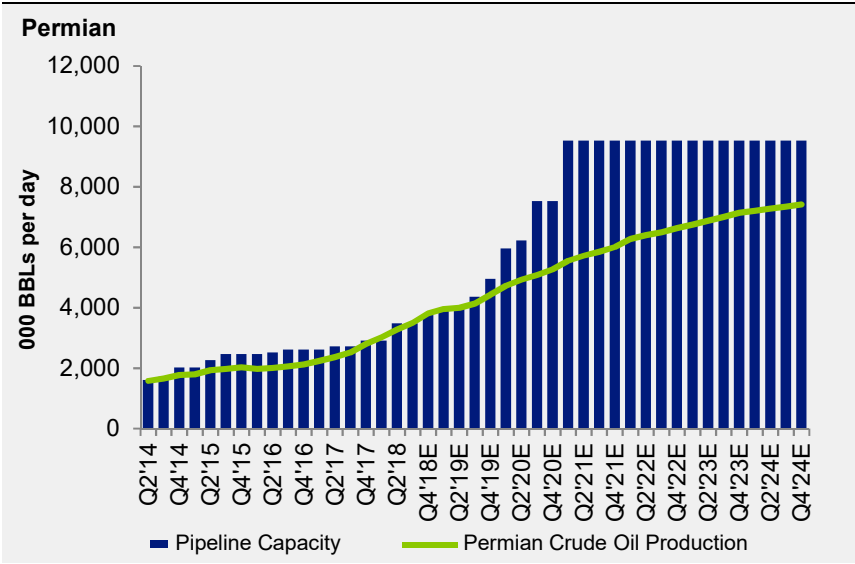


2017 Global Oil and NGL cost curve from discovered but undeveloped assets
(x-axis – millions barrels, Y axis - \$/bbl)



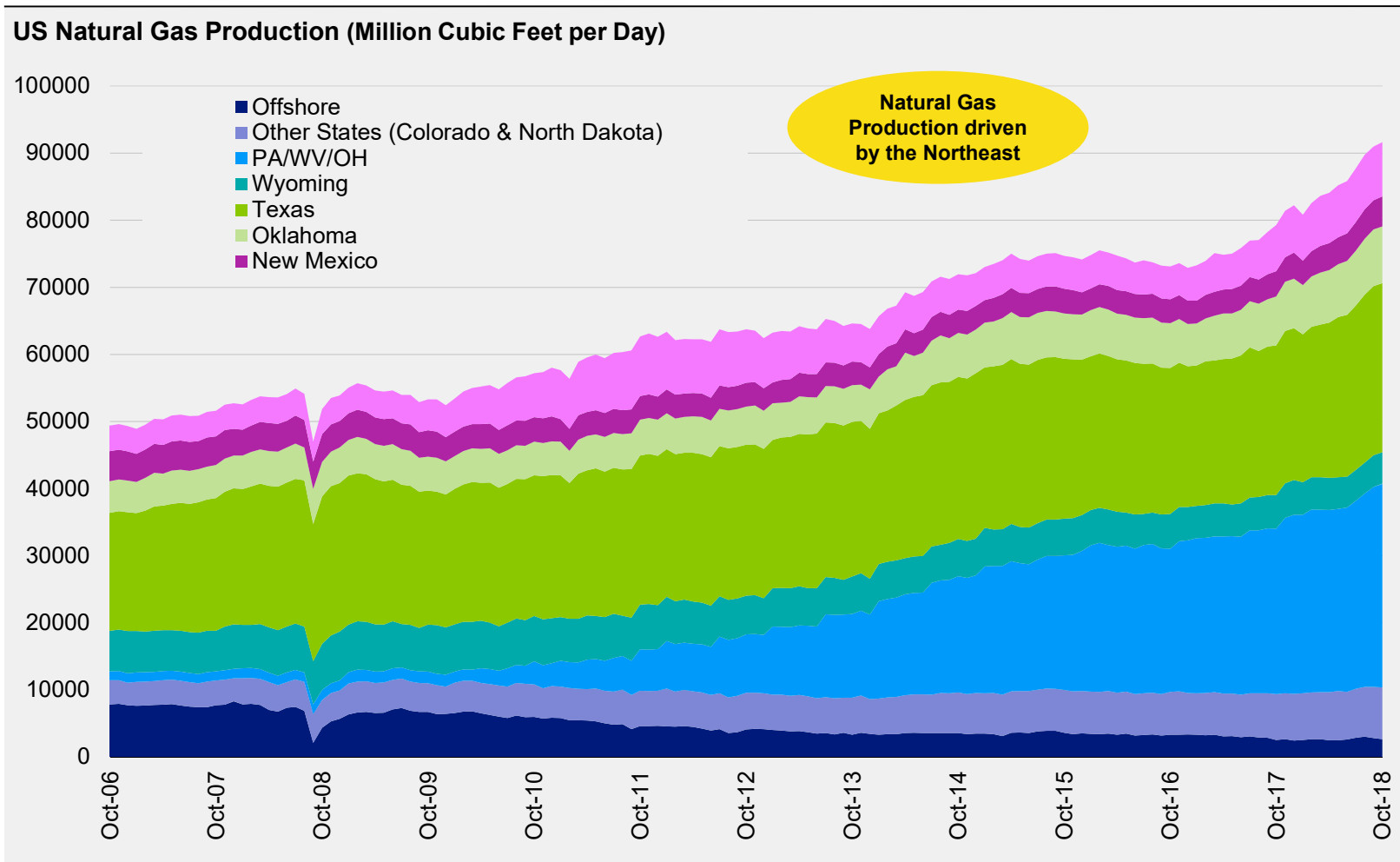
Includes estimates for discovered resources. NGL refers to natural gas liquids.

US Pipeline Takeaway Capacity



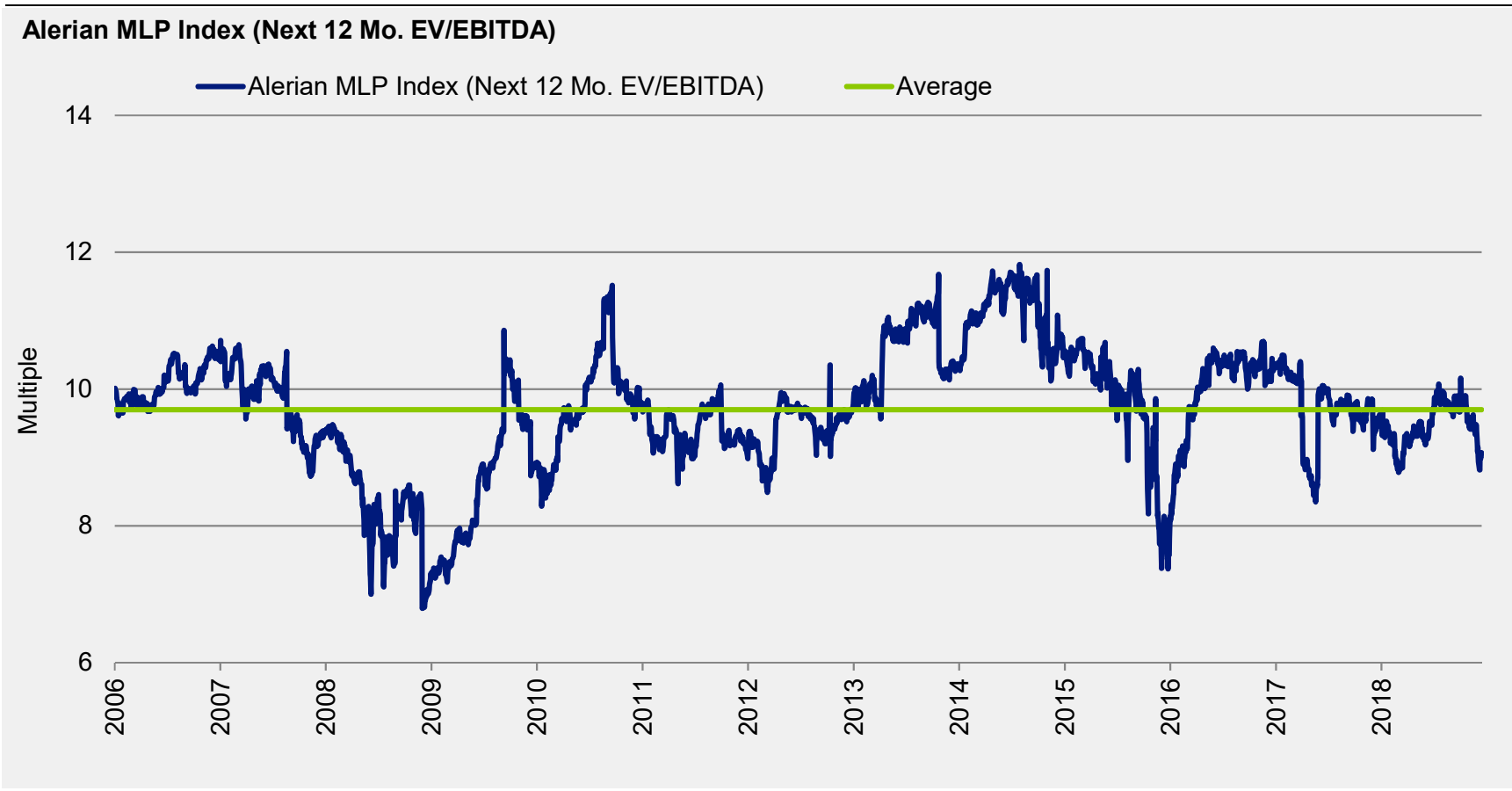
US Natural Gas Production

Coal Retirement Already Occurring

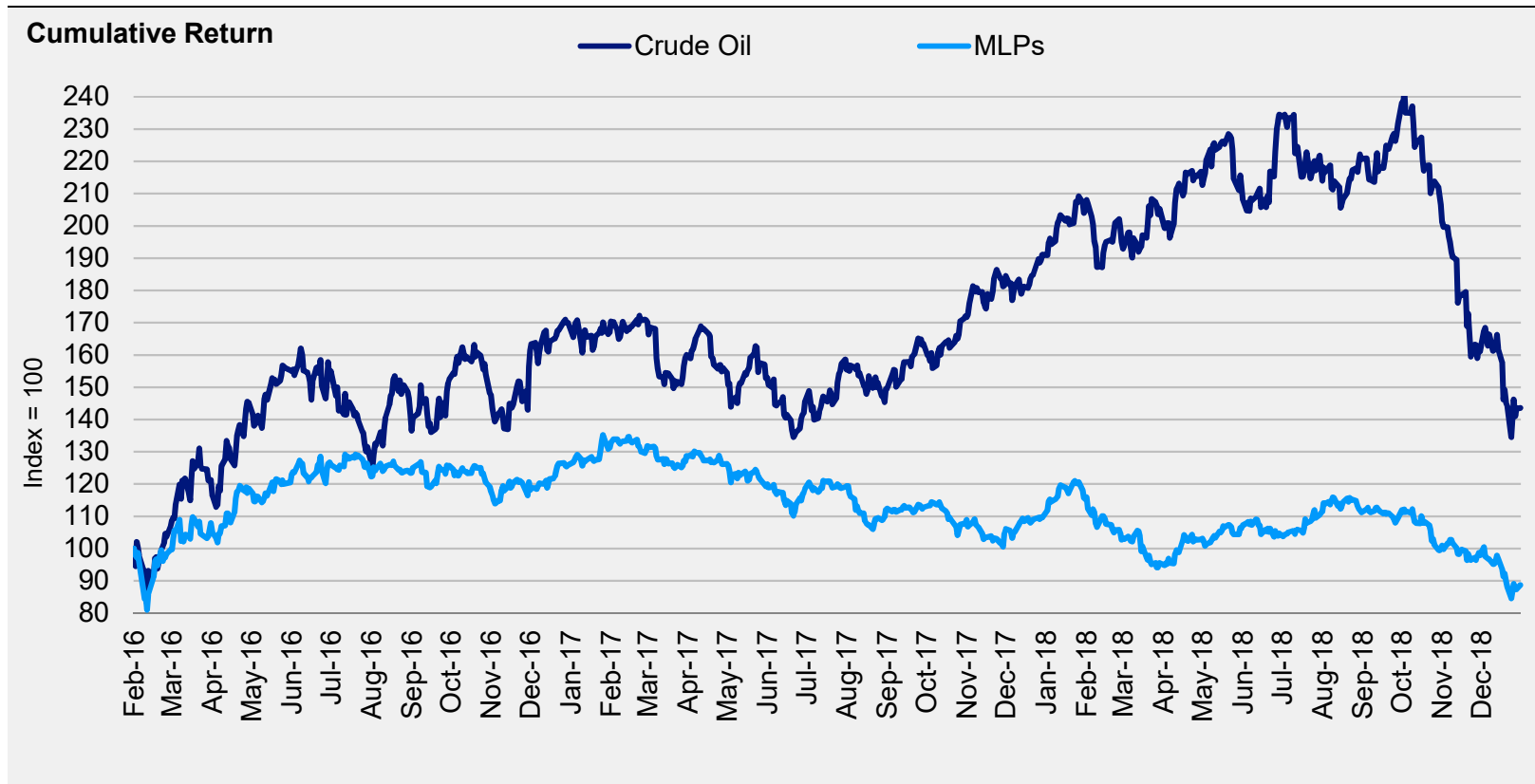


MLP Valuation

As of 31 December 2018



MLPs Have Underperformed Recent Commodity Recovery



Section 6

Summary of Key Takeaways



Key Takeaways



Real Estate

- Real estate holds characteristics that offer investors real asset exposure, with contractually binding earnings that can adjust over time to economic strength and inflation.
- As the economic cycle matures, capital markets, including real estate, are beginning to show higher levels of return volatility. However, the prospect of slower policy normalization, or further policy loosening, offers the potential for a change to recent capital market structure and correlation and volatility relationships.

Infrastructure

- Macroeconomic policy and events may continue to influence equity performance in the near term. However, the outlook for continued earnings growth for listed infrastructure companies appears favorable in most world markets.
- Listed infrastructure valuations are running at a discount to long-term average and have generally been well below the valuations for private side transactions.

MLPs

- Expectations for dividend growth remain solid given the contractual nature of existing cashflows, combined with a still healthy project backlog.
- The Permian and Marcellus basins appear to be the strongest basins, with drilling economics that are relatively attractive and production volumes that have remained insulated from downward pressure.
- MLPs did not participate in the 2017/18 rally in crude oil prices and appear undervalued relative to long-term average multiples.

Q&A

