



Asia Pacific Real Estate Association

September 2018

GPR/APREA AsiaPac Performance Snapshot

...your guide to listed real estate returns in AsiaPac



What is the GPR/APREA snapshot?

The **GPR/APREA AsiaPac Performance Snapshot** tracks the dynamics of listed real estate securities (including REITs) across 12 AsiaPac countries/regions and eight sectors, over multiple time horizons.

The following asset classes are covered:

- Listed real estate (including REITs): GPR/APREA Composite Index
- REITs: GPR/APREA Composite REIT Index
- Equities: MSCI Asia Pacific Equities Index
- Bonds: JPM Govt Bonds – Asia Pacific

All data in this **Snapshot** is calculated on a USD denominated basis. The GPR/APREA series is separately available in a country local currency format.

Overview – September 2018

Nine months into the year, the September edition report reveals the following results:

All Asset Classes: AsiaPac REITs were the strongest long-term performer.

- AsiaPac equities recorded the highest (and only positive) return in September.
- REITs were the top-performing asset class over a one year, 5-year and 10-year horizon.

Listed Real Estate: Thailand and other sectors outperform

- Thailand (3.6% total return) was the top-performing listed real estate sector in September.
- Listed real estate companies in the “others” sector category (such as data centres, storage etc) recorded the highest total return: 2.2%.

REITs: China was the top-performing country market

- China REITs recorded the highest return: 4.5%.
- Hong Kong REITs remain the outstanding long-term performer.

Asia versus the World: Asian REITs least volatile

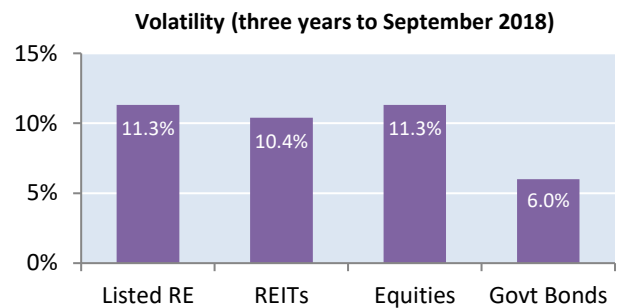
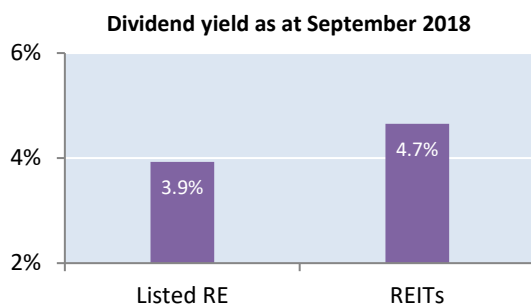
The **GPR 250 REIT Index** provides a benchmark for comparing global performance based on larger cap stocks. (Please note that this is therefore a different sample of funds compared to the GPR/APREA series and also separates Asia from Oceania)

- Asian REITs posted a total return of 0.9% in September, compared to negative 2.7% in the USA and negative 3.2% in Europe.
- Asia remains the least volatile region with a 36-month volatility of 7.0%, compared to the global average of 10.0%.

September 2018 Results – total returns

| % Total Returns (USD) | Sep-18 | 1yr | 3yrs* | 5yrs* | 10yrs* |
|-------------------------------|------------|------------|-------------|------------|------------|
| GPR/APREA Listed Real Estate | -1.6 | 1.1 | 9.9 | 4.2 | 8.6 |
| GPR/APREA REITs | -0.8 | 9.3 | 11.5 | 6.8 | 9.1 |
| MSCI Asia Pacific Equities | 0.4 | 5.4 | 13.1 | 6.4 | 7.3 |
| JPM Govt Bonds – Asia Pacific | -0.4 | -2.0 | 3.4 | 1.4 | 4.1 |

*Annualised compound growth

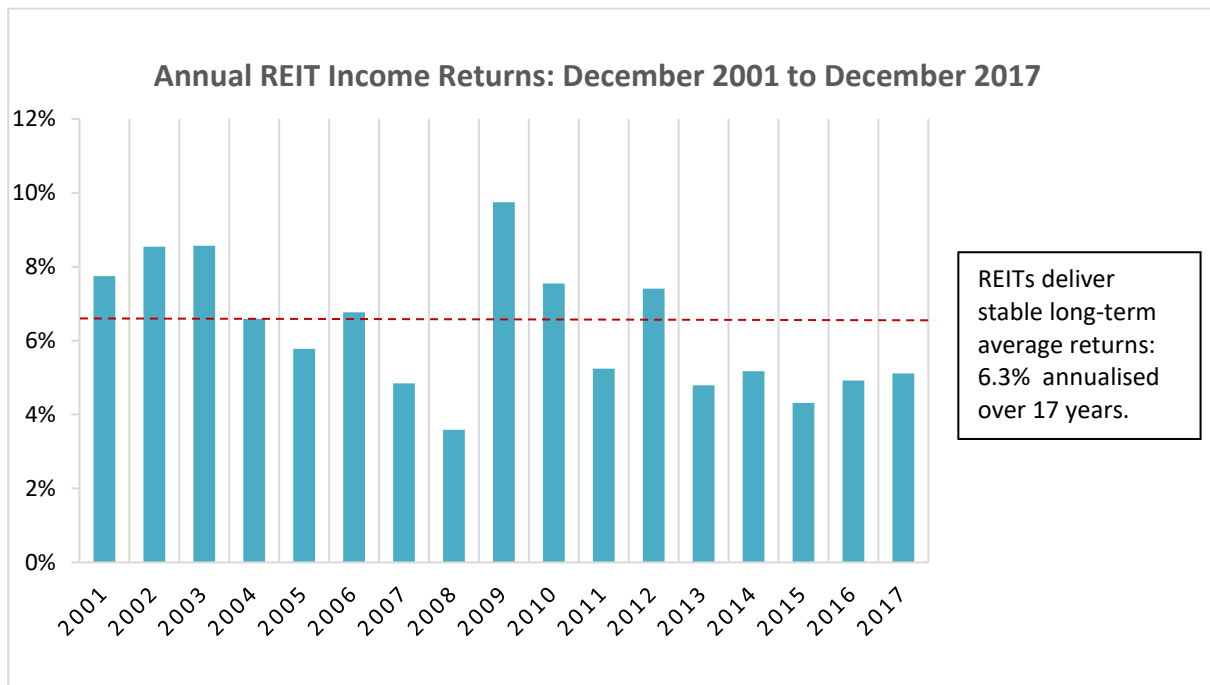
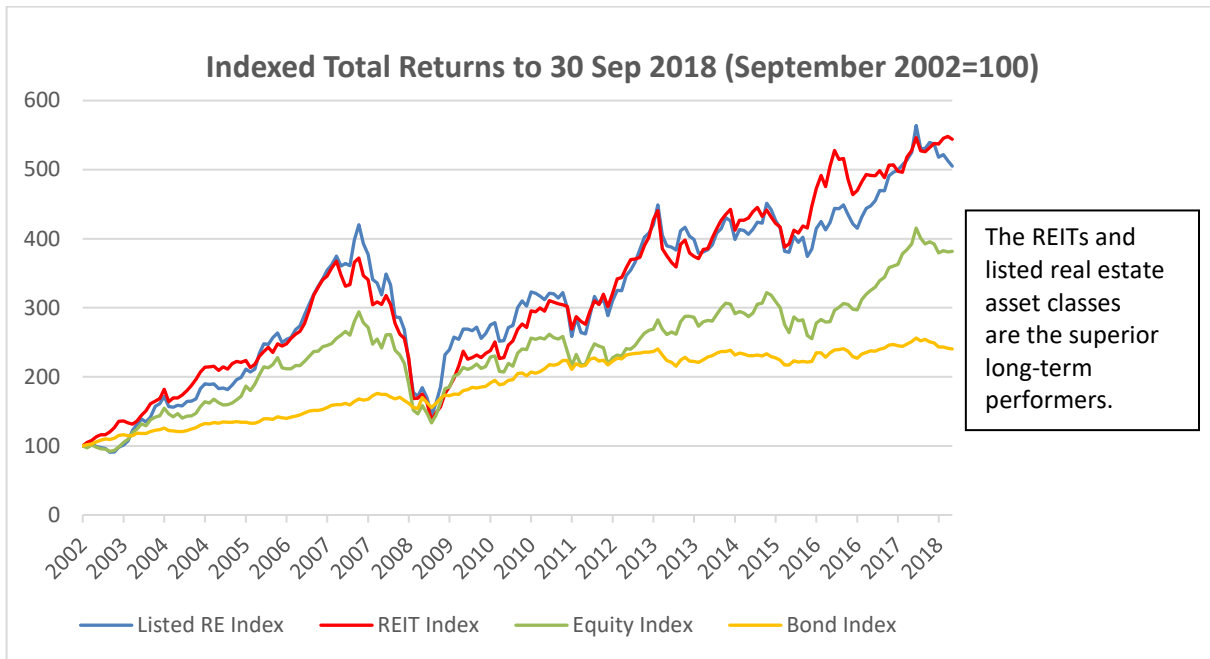


Correlation (three years to September 2018)

| | Listed RE | REITs | Equities | Bonds |
|-----------|-----------|-------|----------|-------|
| Listed RE | 1.00 | | | |
| REITs | 0.85 | 1.00 | | |
| Equities | 0.99 | 0.78 | 1.00 | |
| Bonds | 0.94 | 0.88 | 0.90 | 1.00 |

Total Returns – key results

- The AsiaPac equities asset class was the top total return performer in September 2018 and on a three-year basis.
- REITs were the strongest performing asset class over a one year, 5-year and 10-year horizon.



GPR/APREA Composite Listed Real Estate Index – September 2018

| % Total Returns (USD) | Sep-18 | 1yr | 3yrs* | 5yrs* | 10yrs* | Volatility |
|-----------------------|------------|-------------|-------------|-------------|-------------|-------------|
| Australia | -1.3 | 5.7 | 12.2 | 7.7 | 7.0 | 12.9 |
| China | -6.9 | -7.9 | 22.3 | 10.6 | 15.1 | 24.1 |
| Hong Kong | -0.3 | 0.3 | 10.7 | 6.9 | 10.8 | 16.0 |
| India | -17.7 | -26.9 | 10.5 | 9.8 | -4.7 | 29.0 |
| Indonesia | -3.9 | -33.2 | -1.3 | -4.8 | 4.1 | 22.2 |
| Japan | 0.4 | 6.4 | 4.5 | -0.4 | 6.4 | 9.6 |
| Malaysia | -2.9 | -10.3 | 3.5 | -4.1 | 7.3 | 13.6 |
| New Zealand | 2.5 | 8.3 | 13.3 | 8.1 | 11.5 | 14.5 |
| Philippines | -8.0 | -15.7 | 1.3 | 4.4 | 16.1 | 21.2 |
| Singapore | -0.8 | 0.1 | 11.8 | 4.3 | 9.8 | 13.9 |
| Taiwan | 1.2 | 19.5 | 10.6 | 3.0 | 14.0 | 13.5 |
| Thailand | 3.6 | 19.0 | 21.1 | 10.0 | 18.0 | 12.0 |

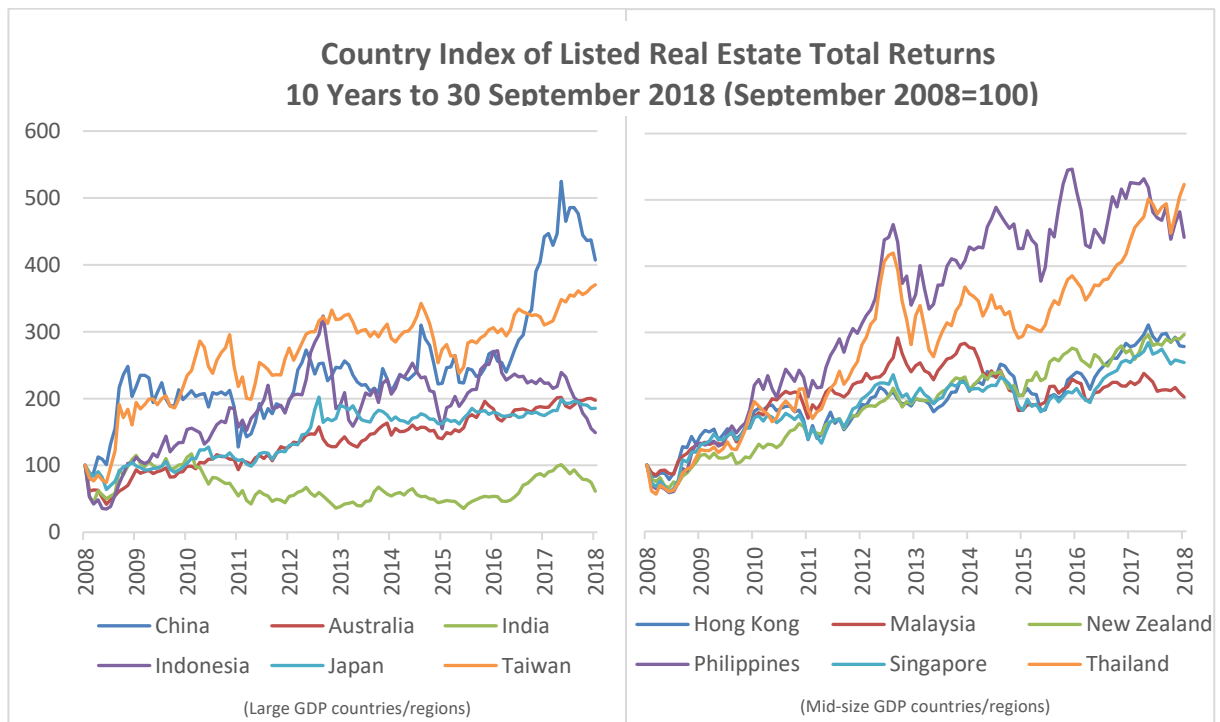
*Annualised compound growth

** Volatility is the 36-month standard deviation of total returns expressed as a percentage

Listed Real Estate – key results by country/region

- The September pace setter was Thailand.
- Taiwan was the top performer during the past 12 months.
- China stood out on a three-year and five-year basis.
- Thailand posted the best performance over a 10-year horizon.

GPR/APREA Composite Listed Real Estate Country Index over the Long-Term



GPR/APREA Composite Listed Real Estate Sector Index – September 2018

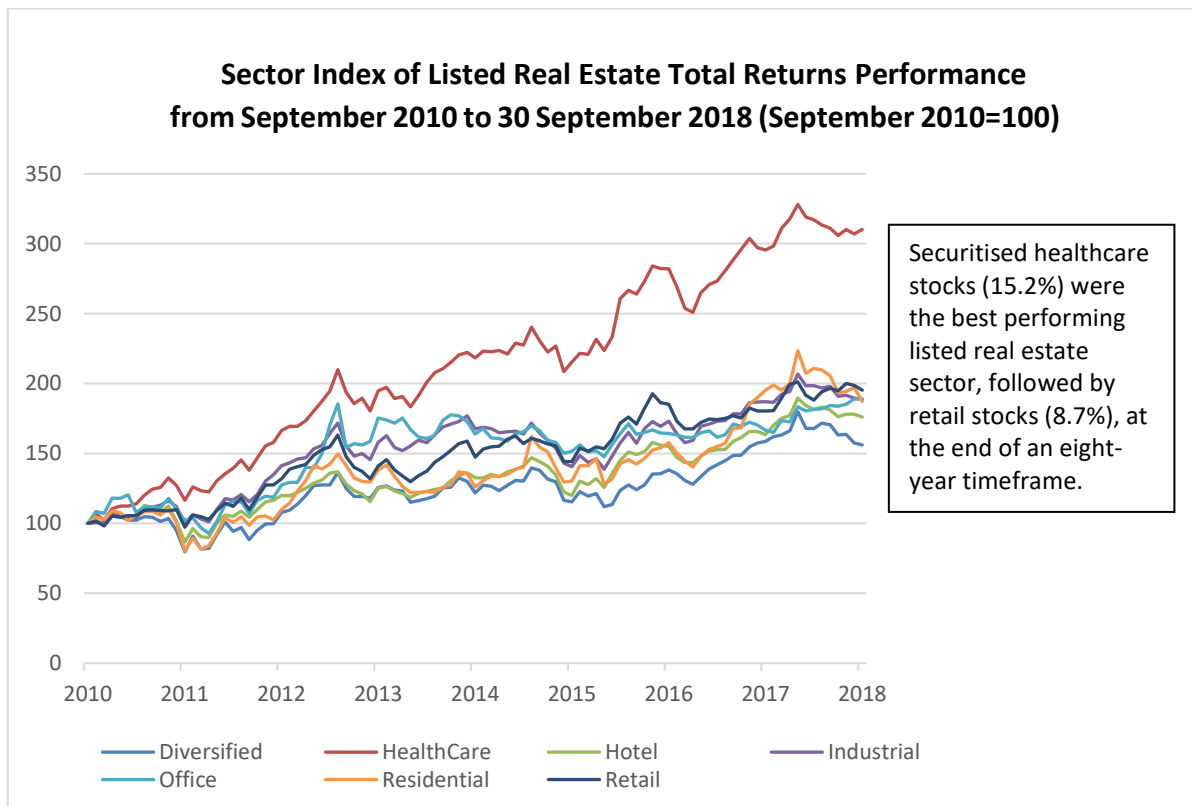
| % Total Returns (USD) | Sep-18 | 1yr | 3yrs* | 5yrs* | 10yrs* | Volatility** |
|-----------------------|------------|-------------|-------------|------------|-------------|--------------|
| Diversified | -0.9 | -1.6 | 10.7 | 4.5 | 8.6 | 12.7 |
| Office | -0.1 | 13.4 | 7.6 | 1.5 | 8.1 | 8.9 |
| Residential | -5.0 | -4.0 | 12.9 | 6.3 | 9.2 | 16.7 |
| Retail | -1.7 | 8.3 | 10.6 | 6.7 | 10.0 | 11.2 |
| Industrial | -0.4 | 0.9 | 10.3 | 3.6 | 10.4 | 12.1 |
| Hotel | -1.1 | 7.7 | 13.6 | 7.1 | 12.3 | 11.4 |
| Healthcare | 1.1 | 4.9 | 12.9 | 9.7 | 15.5 | 11.1 |
| Other | 2.2 | 5.8 | 14.1 | 9.6 | 10.7 | 10.2 |

*Annualised compound growth

**Volatility is the 36-month standard deviation of total returns expressed as a percentage

Listed Real Estate – key results by sector

- Listed real estate companies in emerging sectors, including data centres, storage etc, recorded the highest total return result in September and over three years.
- The office sector was the top-performer during the past 12 months.
- Healthcare stood out on a three-year and five-year basis.



GPR/APREA Composite REIT Index – September 2018

| % Total Returns (USD) | Sep-18 | 1yr | 3yrs* | 5yrs* | 10yrs* | Volatility** |
|-----------------------|------------|-------------|-------------|-------------|-------------|--------------|
| Australia | -1.4 | 5.3 | 11.8 | 7.4 | 6.6 | 13.0 |
| China*** | 4.5 | 8.5 | 10.4 | - | - | 9.9 |
| Hong Kong | -1.8 | 9.1 | 17.7 | 15.3 | 19.6 | 11.0 |
| Japan | -0.8 | 11.1 | 8.0 | 4.0 | 9.0 | 13.4 |
| Malaysia | -2.0 | 0.1 | 9.2 | 1.8 | 9.9 | 13.7 |
| Singapore | 0.3 | 7.1 | 13.7 | 6.7 | 12.1 | 12.5 |
| Taiwan | 0.4 | 15.3 | 4.4 | 0.2 | 8.4 | 7.9 |

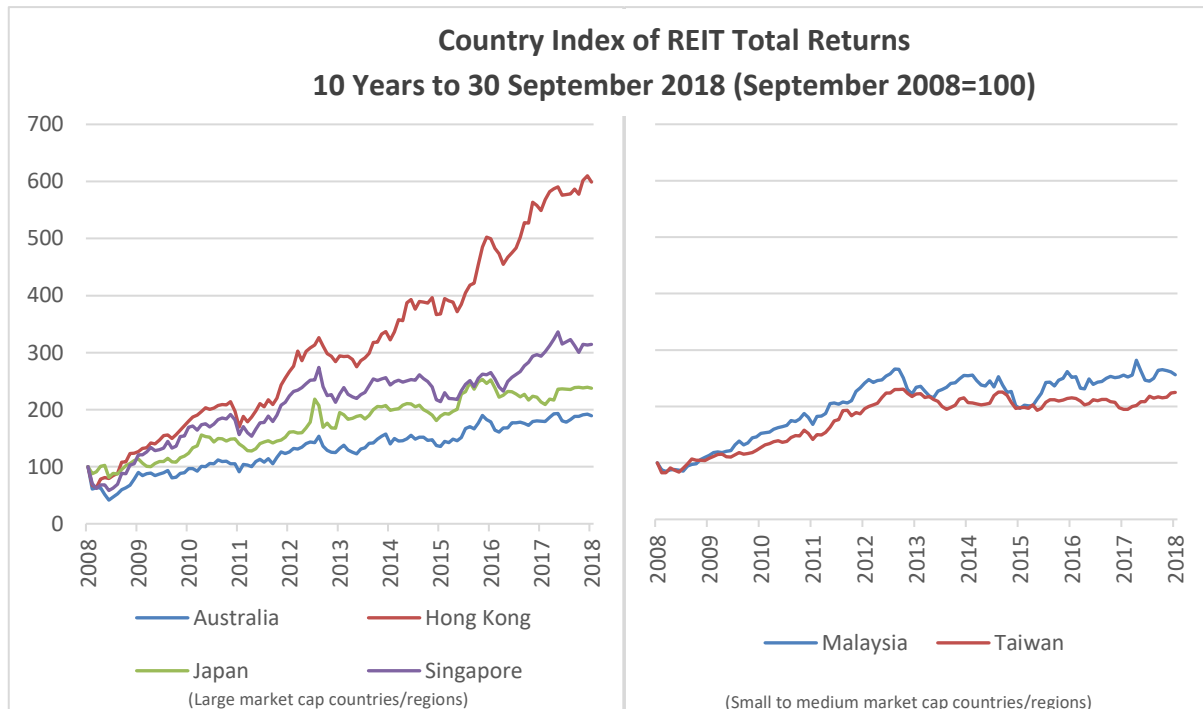
*Annualised compound growth

**Volatility is the 36-month standard deviation of total returns expressed as a percentage

REITs – key results by country/region

- China REITs were the top-performing REIT market in September.
- Taiwan REITs were the top-performing REIT market during the past 12 months.
- Hong Kong REITs stood out on a three-year, five-year and 10-year basis.

GPR/APREA Composite REIT Country Index over the Long-term



GPR/APREA Composite REIT Sector Index – September 2018

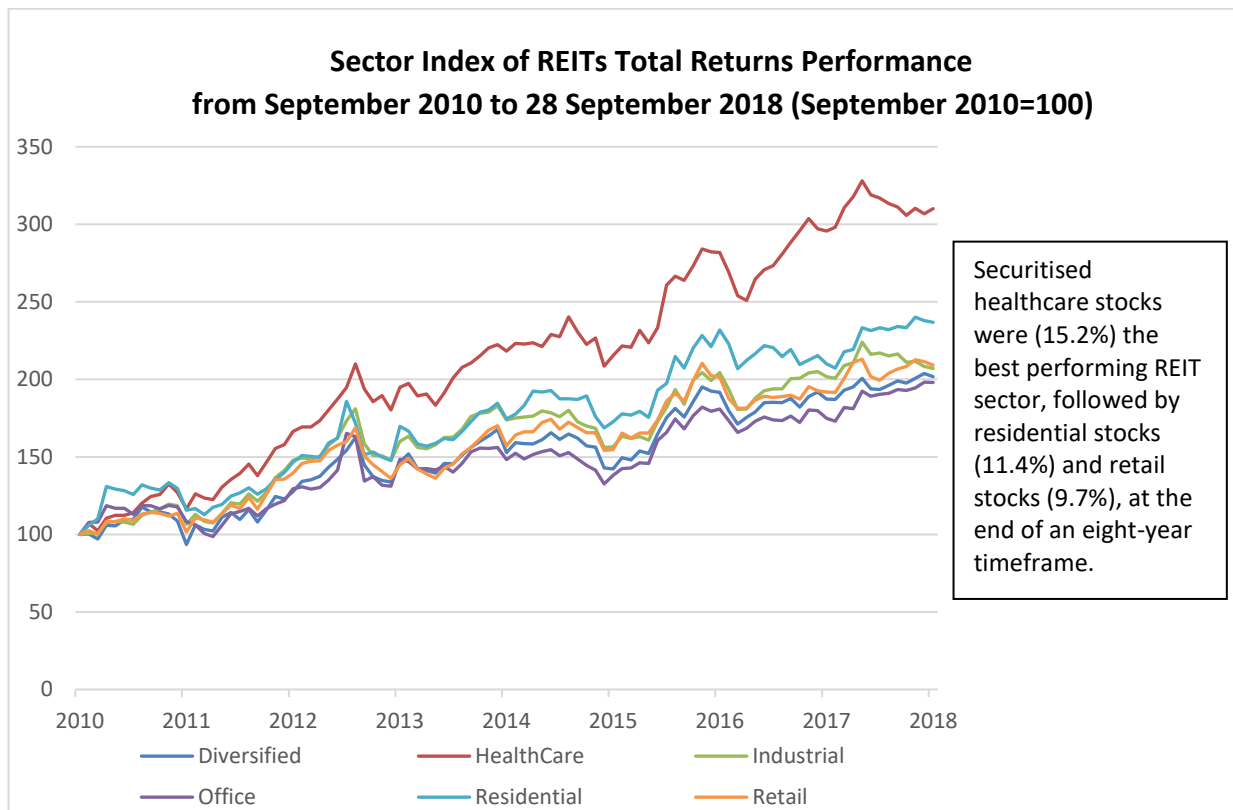
| % Total Returns (USD) | Sep-18 | 1yr | 3yrs* | 5yrs* | 10yrs* | Volatility** |
|-----------------------|------------|-------------|-------------|------------|-------------|--------------|
| Diversified | -1.0 | 7.7 | 12.4 | 6.6 | 7.7 | 10.9 |
| Office | -0.1 | 13.3 | 12.7 | 5.9 | 8.8 | 11.1 |
| Residential | -0.4 | 12.8 | 11.1 | 6.9 | 13.9 | 11.9 |
| Retail | -1.1 | 9.1 | 10.6 | 7.6 | 11.1 | 11.9 |
| Industrial | -0.6 | 2.6 | 9.8 | 5.3 | 12.2 | 10.5 |
| Hotel | -1.9 | 7.4 | 10.7 | 6.1 | - | - |
| Healthcare | 1.1 | 4.9 | 12.9 | 9.7 | 15.5 | 12.5 |
| Other | 3.6 | 9.2 | - | - | - | 11.5 |

*Annualised compound growth

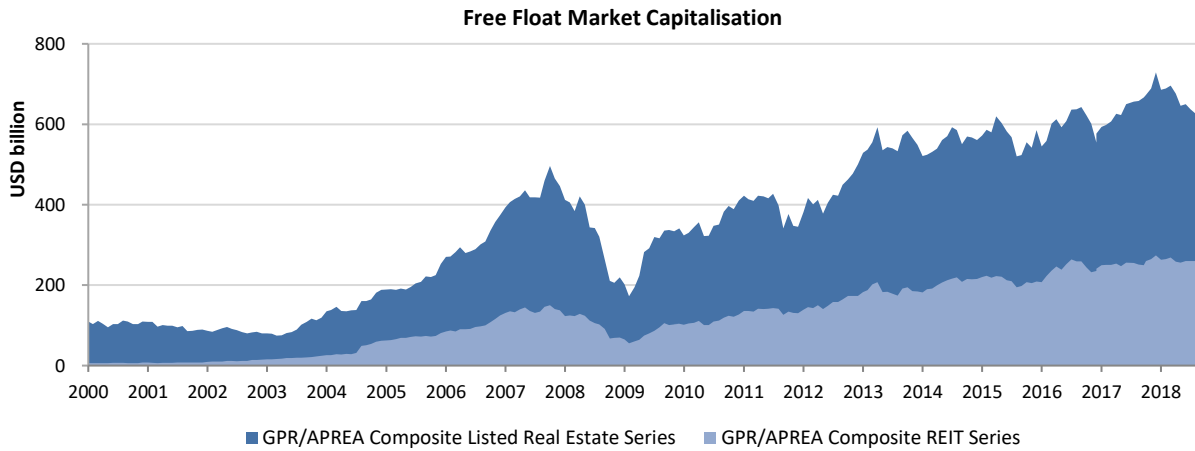
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REIT – key results by sector

- REITs in emerging sectors, including data centres, storage etc, recorded the highest total return in September.
- Office REITs recorded the highest total return during the past 12 months.
- Healthcare was the top performer on 3-year, 5-year and 10-year basis.



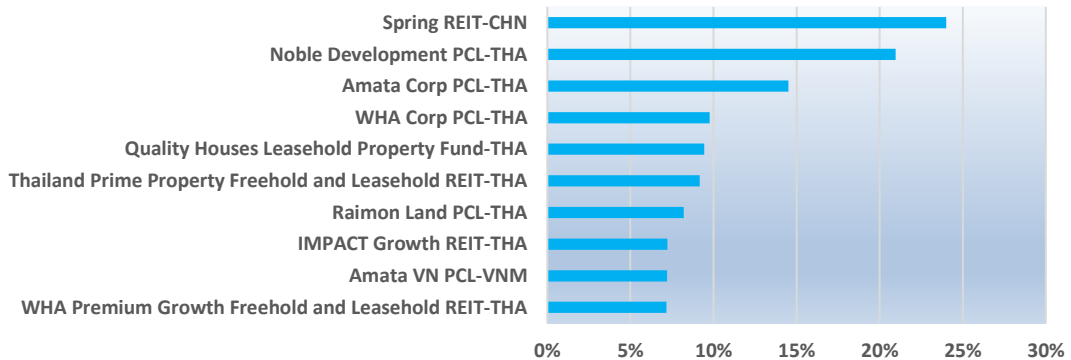
What's covered by the GPR/APREA Index



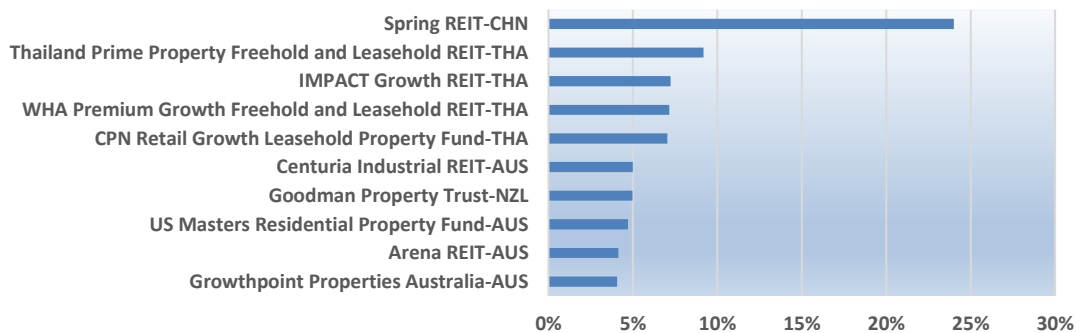
| Market Cap in Numbers | Constituents | Free float in USD billion | Free float change (m-o-m) | Free float change (y-o-y) |
|--------------------------|--------------|---------------------------|---------------------------|---------------------------|
| Listed real estate index | 427 | 626 | -1.7% | -4.9% |
| REIT index | 165 | 260 | 0 | 3.6% |

Top performers in September 2018 – listed property companies and REITs

10 Top Performing Listed Property Companies (USD - September 2018)



10 Top performing REITs (USD- September 2018)



Methodology Q&A

Q. What sources of information underpin this report?

A. There are multiple sources, including GPR, APREA Research and Bloomberg.

Q. Which geographical markets are covered?

A. Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, Taiwan and Thailand. Allocations are based on country of operation.

Q. Which sectors are covered and what comprises “other”?

A. Diversified, office, residential, retail, industrial, hotel, healthcare and other. Other can include, data centres, storage etc.

Q. What sort of companies are included in the listed composite index and why are REITs part of the series?

A. The listed composite index is representative of the AsiaPac property stock market and includes developers, landlords and REITs listed on one or more of the regional stock exchanges. REITs are included in the composite index as they comprise around 40% of the listed real estate landscape. The basic inclusion rules for stocks are:

- \$50mn minimum free float market capitalisation for two consecutive months
- 15% minimum free float factor
- at least 60% of operational turnover derived from investment activities and/or development activities

Q. What does the REIT index cover and what is a REIT for the purposes of this index?

A. The REIT index includes companies that comply with REIT legislation in their country of primary listing. Singapore business trusts are included in the REIT index only if they comply with both the following criteria:

1. the business trust derives at least 90% of operational turnover from investment activities; and
2. the business trust must formally commit to distribute at least 90% of income as dividends.

Q. How is a “total return” defined in this index?

A. Total return includes both the total of dividends received and the change in unit price over a period. This figure is expressed as a percentage over the beginning period price.

Q. What is the difference between “free float” and “value” or market capitalisation”?

A. Free-float market capitalisation is calculated by taking an equity’s price and multiplying it by the number of shares available in the market. Instead of using the total of active and inactive shares, as with the full-market capitalisation method, the free-float method excludes locked-in shares such as those held by insiders, promoters and governments.

Q. Are the indices weighted? How?

A. Yes, the property stocks included in all indices are assigned a base weighting derived from their free float market capitalisation on a quarterly date of periodic adjustment. The country weights are the sum of weighting factors of eligible individual constituents in each country.

Q. How often are the weightings and selection of the component countries and property stocks adjusted?

A. The adjustments to the base weightings and selection of stocks and countries in the listed composite index occur quarterly in March, June, September and December.

Q. From where is the information on individual company performance sourced?

A. Bloomberg

Q. Why were the MSCI Asia Pacific Equities Index series and JPM Govt Bonds-Asia Pacific series chosen to represent equity and bond performance?

A. The two series are considered representative of regional equity and bond performance.

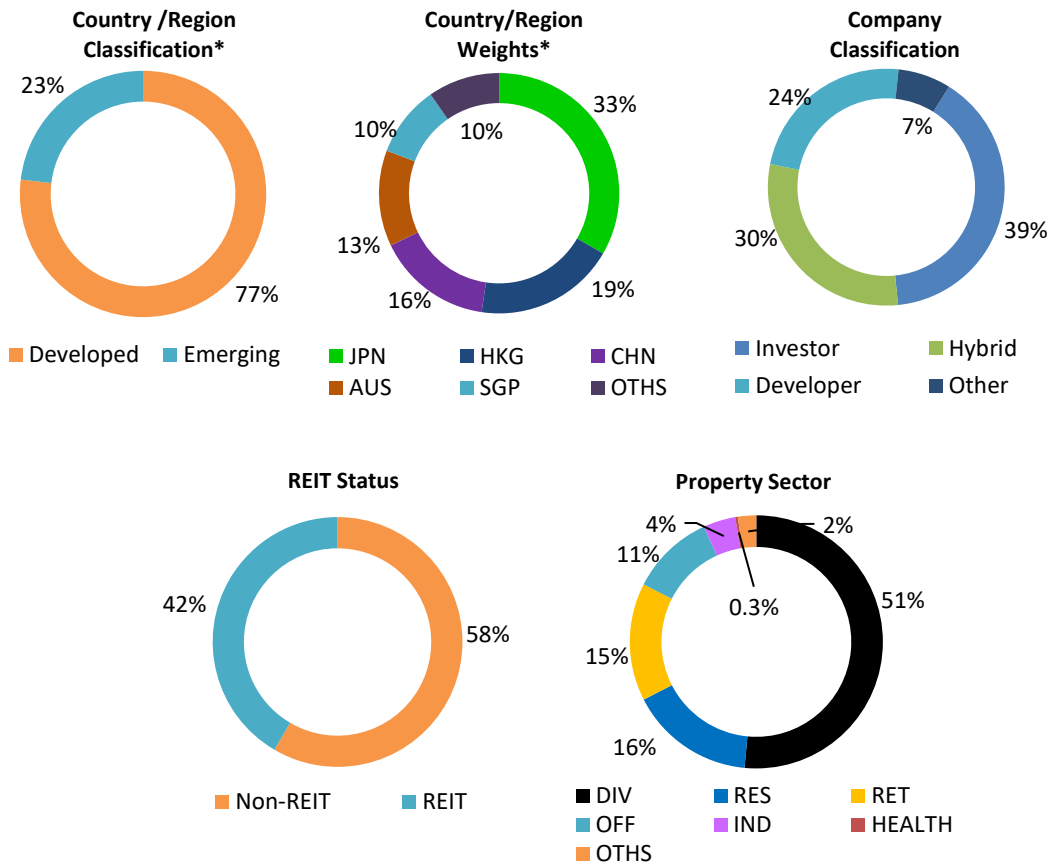
Q. What is GPR?

A. Global Property Research (GPR) provides services for leading financial institutions with top of-the-line benchmarks. All index products are based on an extensive and unique proprietary database of global listed property and infrastructure companies. GPR has a proven track record since 1995. For more on GPR, please contact Jeroen Vreeker at j.vreeker@gpr.nl or Floris van Dorp at f.van.dorp@gpr.nl

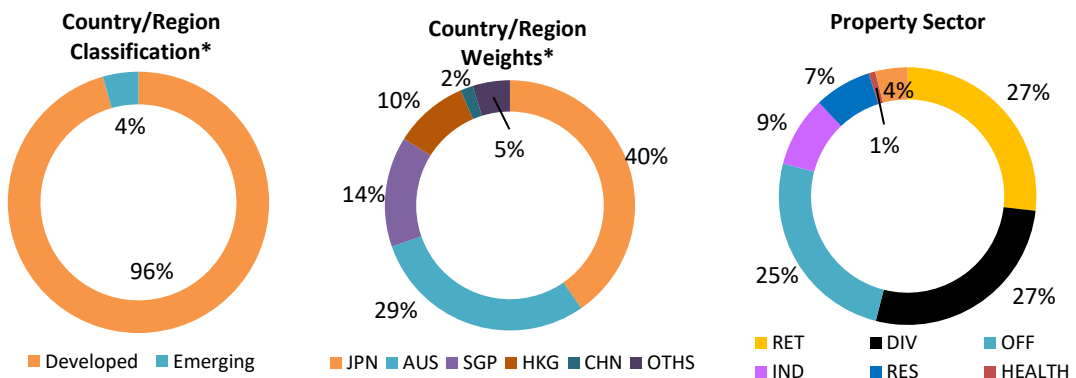
Q. How can I learn more about this index or APREA?

A. Please contact **Allan Zhang** at allan.zhang@aprea.asia, or visit APREA’s website www.aprea.asia

Listed Real Estate - index constituents and profile




REITs - index constituents and profile




*Based on country of operations



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