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SPIVA[®] Australia Scorecard

SUMMARY

- S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since the first publication of the SPIVA U.S. Scorecard in 2002. Over the years, we have built on our 15 years of experience publishing the report by expanding scorecard coverage into Australia, Canada, Europe, India, Japan, Latin America, and South Africa.
- While the report will not end the debate on active versus passive investing in Australia, we hope to make a meaningful contribution by examining market segments in which one strategy works better than the other.
- The SPIVA Australia Scorecard reports on the performance of actively managed Australian mutual funds against their respective benchmark indices over 1-, 3-, 5-, and 10-year investment horizons. In this scorecard, we evaluated returns of more than 731 Australian equity funds (large, mid, and small cap, as well as A-REIT), 363 international equity funds, and 83 Australian bond funds.
- In the 12-month period ending June 30, 2017, the majority of Australian funds in most categories underperformed their respective benchmarks, apart from the Australian A-REIT category. There is no consistent trend in the yearly active versus index figures, but we have consistently observed that the majority of Australian active funds in most categories fail to beat the comparable benchmark indices over long-term horizons.
- Over the 10-year period ending June 30, 2017, more than 85% of international equity and Australian bond funds and more than 70% of Australian general equity and A-REIT funds underperformed their respective benchmarks on an absolute basis. However, only 36.8% of Australian small-cap funds lagged their benchmarks. Observations based on risk-adjusted returns were similar for most categories, with the result for the Australian bond funds being slightly more favorable.

- **Australian General Equity Funds:** In the 12-month period ending June 30, 2017, the [S&P/ASX 200](#) recorded a gain of 14.1%, while Australian large-cap equity funds posted an average return of 13.2%. On an absolute and risk-adjusted basis, 62% and 55% of funds, respectively, lagged the S&P/ASX 200. Over the 5- and 10-year periods, more than 64% and 75% of funds in this category underperformed the benchmark on both an absolute and risk-adjusted basis, respectively.
- **Australian Mid- and Small-Cap Equity Funds:** The S&P/ASX Mid-Small gained 13.1% in the 12-month period, while Australian mid- and small-cap funds recorded a smaller average return of 8.3%, with more than 80% of funds underperforming the benchmark. This is in contrast to the observations over the 5- and 10-year periods, when only 52% and 37% of funds, respectively, underperformed the S&P/ASX Mid-Small. On a risk-adjusted basis, 71%, 57%, and 37% of funds lagged the benchmark in the 1-, 5-, and 10-year periods, respectively.
- **International Equity Funds:** The vast majority of international equity funds failed to beat the [S&P Developed Ex-Australia LargeMidCap](#) in the 5- and 10-year periods on an absolute and risk-adjusted basis. Over the 12-month period, the figures have been less unfavorable, with 56% of funds recording smaller absolute and risk-adjusted returns than the benchmark. The asset-weighted average fund return exceeded the benchmark return and the equal-weighted average fund return for the 12-month period, indicating that larger funds have performed better than smaller funds.
- **Australian Bond Funds:** In the 12-month period ending June 30, 2017, 66% and 64% of Australian bond funds recorded a smaller absolute and risk-adjusted return, respectively, than the [S&P/ASX Australian Fixed Interest 0+ Index](#). Funds with larger assets delivered higher returns than those with smaller assets in this category, as the asset-weighted average fund return beat the benchmark return and vice versa for the equal-weighted average fund return.
- **Australian A-REIT Funds:** The [S&P/ASX 200 A-REIT](#) lost 6.3% in the 12-month period, while Australian A-REIT funds recorded a small loss of 3.9% over the same period, with the vast majority (88%) of funds outperforming the benchmark. This is the best 12-month relative performance Australian A-REIT funds that we have recorded since the SPIVA Australia Scorecard has been published. Over the 5- and 10-year horizons, 77% and 72% of funds, respectively, recorded a smaller absolute return than the benchmark.
- **Fund Survivorship:** Over the 12-month period, 6.1% of Australian funds from all measured categories were merged or liquidated. International equity funds disappeared at the fastest rate, while Australian bond funds had the highest survival rate. Over the 10-year horizon, international equity funds had the lowest survival rate, at 52.8%, while the Australian mid- and small-cap funds had the highest rate, at 71.3%. Funds in all categories had an overall survivorship rate of 60.5% over the 10-year period.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

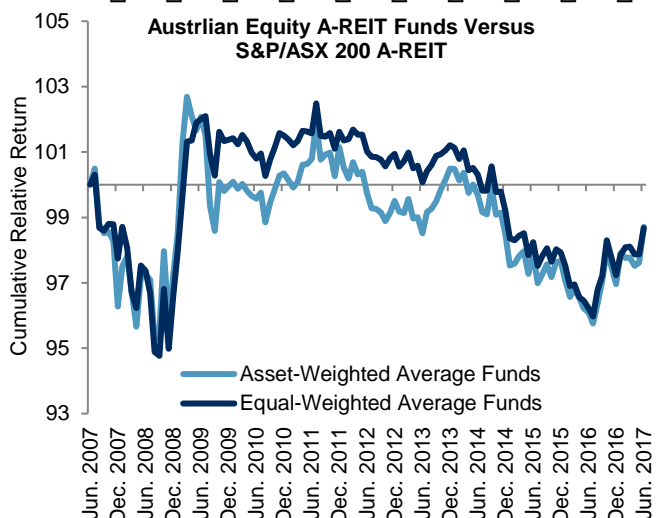
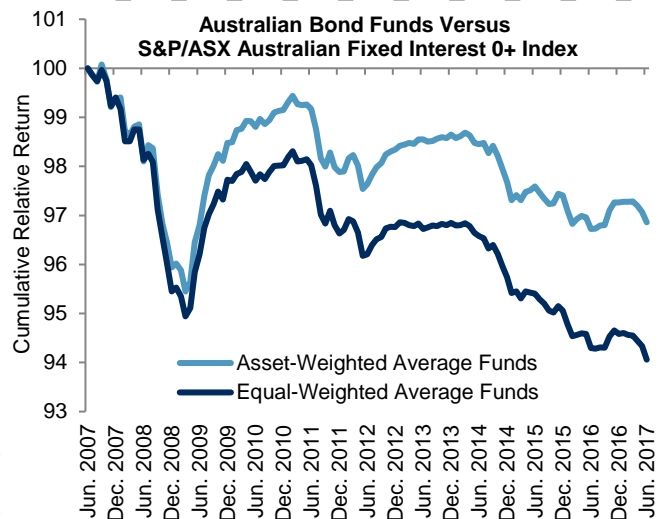
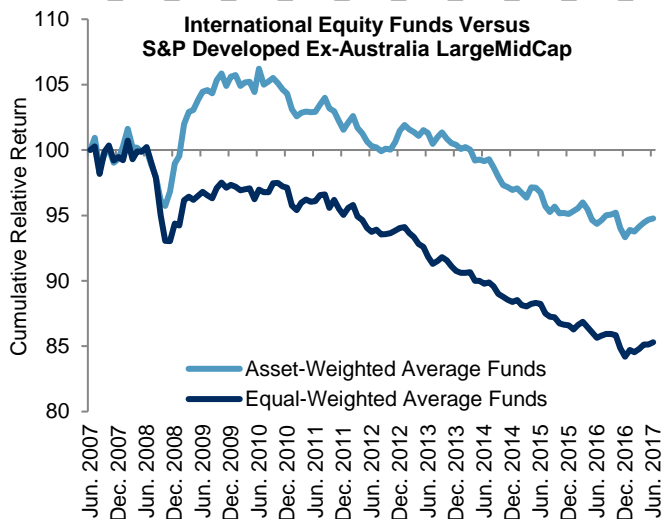
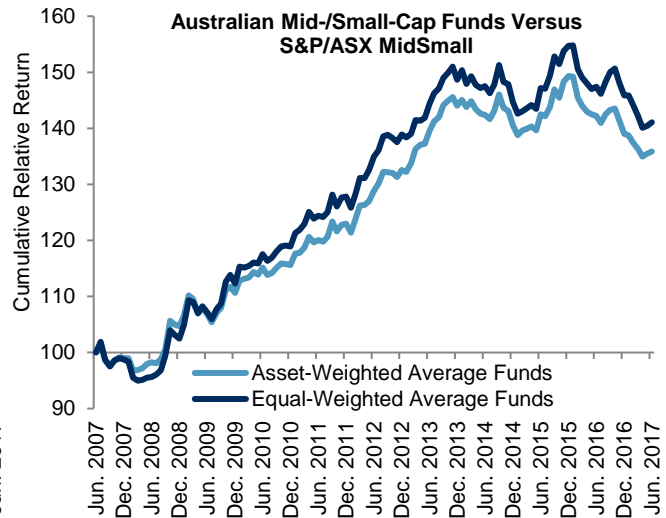
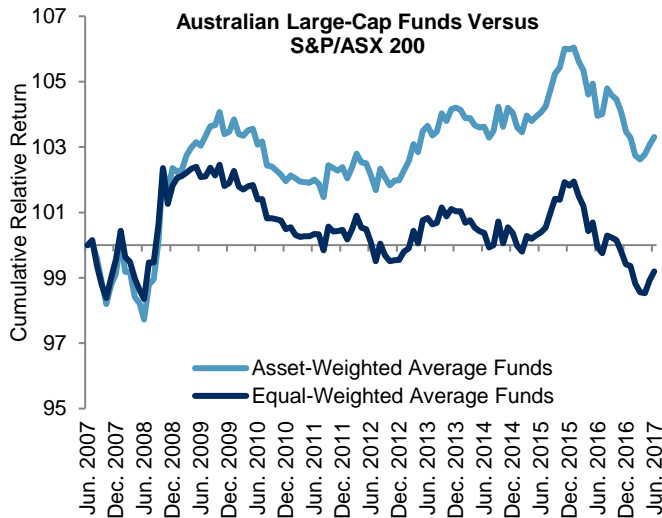
There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication 15 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. Over the years, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

Beyond the SPIVA Scorecard's widely cited headline numbers is a rich data set that addresses issues related to measurement techniques, universe composition, and fund survivorship that are far less frequently discussed, but are often much more fascinating. These data sets are rooted in the following fundamental principles of the SPIVA Scorecard, with which regular readers will be familiar.

- **Survivorship Bias Correction:** Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.
- **Apples-to-Apples Comparison:** Fund returns are often compared with a popular benchmark regardless of their investment category. The SPIVA Australia Scorecard makes an appropriate comparison by measuring a fund's returns against the returns of a benchmark that reflects the fund's investment category.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which results in the returns of an AUD 10 billion fund affecting the average in the same manner as the returns of an AUD 10 million fund. However, the SPIVA Australia Scorecard shows both equal- and asset-weighted averages. Equal-weighted returns are a measure of average fund performance, while asset-weighted returns are a measure of the performance of the average invested dollar.
- **Data Cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations, using only the share class with greater assets. Since this is meant to be a scorecard for active managers, index funds, leveraged, and inverse funds and other index-linked products are excluded.

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CUMULATIVE AVERAGE FUND RETURN RELATIVE TO BENCHMARK



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. All returns in AUD. Past performance is no guarantee of future results. Charts are provided for illustrative purposes.

REPORTS

Report 1a: Percentage of Funds Outperformed by the Index (Based on Absolute Return)

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE-YEAR (%)	FIVE-YEAR (%)	TEN-YEAR (%)
Australian Equity General	S&P/ASX 200	61.69	65.69	64.69	75.32
Australian Equity Mid- and Small-Cap	S&P/ASX Mid-Small	81.08	68.63	51.55	36.78
International Equity General	S&P Developed Ex-Australia LargeMidCap	56.47	84.11	91.18	90.00
Australian Bonds	S&P/ASX Australian Fixed Interest 0+ Index	66.04	96.00	78.00	86.44
Australian Equity A-REIT	S&P/ASX 200 A-REIT	12.50	71.83	76.62	72.09

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1b: Percentage of Funds Outperformed by the Index (Based on Risk-Adjusted Return)

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE-YEAR (%)	FIVE-YEAR (%)	TEN-YEAR (%)
Australian Equity General	S&P/ASX 200	54.55	64.71	64.03	75.00
Australian Equity Mid- and Small-Cap	S&P/ASX Mid-Small	70.27	65.69	56.70	36.78
International Equity General	S&P Developed Ex-Australia LargeMidCap	55.60	84.58	93.14	89.05
Australian Bonds	S&P/ASX Australian Fixed Interest 0+ Index	64.15	82.00	68.00	74.58
Australian Equity A-REIT	S&P/ASX 200 A-REIT	25.00	40.85	51.95	72.09

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the measured periods. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of Funds		
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
ONE-YEAR		
Australian Equity General	311	93.25
Australian Equity Mid- and Small-Cap	111	96.40
International Equity General	236	92.37
Australian Bonds	54	98.15
Australian Equity A-REIT	72	94.44
THREE-YEAR		
Australian Equity General	309	86.08
Australian Equity Mid- and Small-Cap	102	88.24
International Equity General	217	79.72
Australian Bonds	50	86.00
Australian Equity A-REIT	71	90.14
FIVE-YEAR		
Australian Equity General	307	83.06
Australian Equity Mid- and Small-Cap	97	84.54
International Equity General	207	74.88
Australian Bonds	50	84.00
Australian Equity A-REIT	77	80.52
TEN-YEAR		
Australian Equity General	316	63.29
Australian Equity Mid- and Small-Cap	87	71.26
International Equity General	214	52.80
Australian Bonds	59	54.24
Australian Equity A-REIT	86	62.79

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal-Weighted)

INDEX/PEER GROUP	ONE-YEAR (%)	THREE-YEAR ANNUALIZED (%)	FIVE-YEAR ANNUALIZED (%)	TEN-YEAR ANNUALIZED (%)
S&P/ASX 200	14.09	6.63	11.81	3.61
Australian Equity General	13.24	6.21	11.61	3.52
S&P/ASX Mid-Small	13.10	11.69	11.48	1.05
Australian Equity Mid- and Small-Cap	8.25	10.04	12.47	4.59
S&P Developed Ex-Australia LargeMidCap	15.69	13.57	18.77	5.76
International Equity General	15.22	11.65	16.55	4.09
S&P/ASX Australian Fixed Interest 0+ Index	0.62	4.38	4.34	6.27
Australian Bonds	0.37	3.46	3.87	5.62
S&P/ASX 200 A-REIT	-6.26	11.98	14.14	0.07
Australian Equity A-REIT	-3.87	11.38	13.61	-0.06

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. All returns in AUD. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average Fund Performance (Asset-Weighted)

INDEX/PEER GROUP	ONE-YEAR (%)	THREE-YEAR ANNUALIZED (%)	FIVE-YEAR ANNUALIZED (%)	TEN-YEAR ANNUALIZED (%)
S&P/ASX 200	14.09	6.63	11.81	3.61
Australian Equity General	13.37	6.52	12.07	3.94
S&P/ASX Mid-Small	13.10	11.69	11.48	1.05
Australian Equity Mid- and Small-Cap	8.05	9.96	12.67	4.19
S&P Developed Ex-Australia LargeMidCap	15.69	13.57	18.77	5.76
International Equity General	16.21	11.87	17.43	5.19
S&P/ASX Australian Fixed Interest 0+ Index	0.62	4.38	4.34	6.27
Australian Bonds	0.76	3.82	4.17	5.93
S&P/ASX 200 A-REIT	-6.26	11.98	14.14	0.07
Australian Equity A-REIT	-3.70	11.62	13.91	-0.05

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. All returns in AUD. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of Fund Performance			
FUND CATEGORY	THIRD QUARTILE	SECOND QUARTILE	FIRST QUARTILE
ONE-YEAR			
Australian Equity General	10.41	13.42	15.91
Australian Equity Mid- and Small-Cap	3.35	8.48	12.46
International Equity General	12.52	15.40	17.87
Australian Bonds	-0.43	0.32	0.86
Australian Equity A-REIT	-5.62	-4.63	-3.05
THREE-YEAR			
Australian Equity General	4.53	5.93	7.67
Australian Equity Mid- and Small-Cap	6.57	9.05	13.80
International Equity General	10.10	11.83	13.36
Australian Bonds	3.04	3.60	4.06
Australian Equity A-REIT	10.67	11.37	12.19
FIVE-YEAR			
Australian Equity General	10.33	11.50	12.60
Australian Equity Mid- and Small-Cap	8.87	12.54	15.68
International Equity General	15.59	16.90	18.01
Australian Bonds	3.38	3.88	4.34
Australian Equity A-REIT	12.74	13.64	14.28
TEN-YEAR			
Australian Equity General	2.67	3.40	4.23
Australian Equity Mid- and Small-Cap	2.09	4.06	6.35
International Equity General	3.44	4.33	5.14
Australian Bonds	5.35	5.88	6.25
Australian Equity A-REIT	-0.94	-0.18	0.83

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2017. All returns in AUD. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX A

SPIVA Styles and Morningstar Fund Classifications

Data from Morningstar is obtained for all managed funds domiciled in Australia for which month-end data is available during the performance period. The data includes the most comprehensive Australian fund data on active and finalized (merged or liquidated) funds over the chosen period. Funds are classified based on the Morningstar fund classification system, and the SPIVA Australia Scorecard covers the Australian Equity General (large-cap equity), Australian Equity Mid- and Small-Cap, International Equity General, Australian Bonds, and Australian Equity A-REIT categories.

The Morningstar classification system produces narrow, style-based classifications for Australian equity funds. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given value and growth style segments are not consistently discernible over the past five years.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

Exhibit 1: Australian Equity Funds: SPIVA and Morningstar Categories	
SPIVA CATEGORY	MORNINGSTAR CATEGORY
Australian Equity General	Australia Fund Equity - Australia Large Blend
	Australia Fund Equity - Australia Large Growth
	Australia Fund Equity - Australia Large Value
Australian Equity Mid- and Small-Cap	Australia Fund Equity - Australia Mid/Small Blend
	Australia Fund Equity - Australia Mid/Small Growth
	Australia Fund Equity - Australia Mid/Small Value
International Equity General	Australia Fund Equity - World Large Blend
	Australia Fund Equity - World Large Growth
	Australia Fund Equity - World Large Value
Australian Bonds	Australia Fund Bonds – Australia
Australian Equity A-REIT	Australia Fund Equity - Australia Real Estate

Source: S&P Dow Jones LLC and Morningstar. Table is provided for illustrative purposes.

Benchmarks

The chosen benchmarks are shown in Exhibit 2. All index returns are total returns (i.e., include dividend reinvestment) in Australian dollars. There has been no deduction from index returns to account for fund investment expenses. It is important to note that active fund returns are after expenses, but they do not include loads and entry fees.

The benchmarks chosen are the most commonly adopted benchmarks for funds that fall into the respective fund peer groups. In some instances, a fund may not adopt the benchmarks stipulated. However, a vast majority do set their performance hurdle based on the assigned benchmarks in this report, ensuring that the study is robust and fair.

Exhibit 2: SPIVA Categories and Their Benchmarks	
SPIVA CATEGORY	BENCHMARK INDEX
Australian Equity General	S&P/ASX 200
Australian Equity Mid- and Small-Cap	S&P/ASX Mid-Small Index
International Equity General	S&P Developed Ex-Australia LargeMidCap
Australian Bonds	S&P/ASX Australian Fixed Interest 0+ Index
Australian Equity A-REIT	S&P/ASX 200 A-REIT

Source: S&P Dow Jones LLC and Morningstar. Table is provided for illustrative purposes.

APPENDIX B: GLOSSARY

Percentage of Funds Outperformed by the Index

To correct for survivorship bias, we use the opportunity set available at the beginning of the period as the denominator. We determine the count of funds that have survived and beat the index. We then report the index outperformance percentage.

Survivorship (%)

This measure represents the percentage of funds in existence at the beginning of the time period that is still active at the end of the time period.

Equal-Weighted Fund Performance

Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month.

Asset-Weighted Fund Performance

Asset-weighted returns for a particular style category are determined by calculating a weighted average return of all funds in that category in a particular month, with each fund's return weighted by its total net assets. Asset-weighted returns are a better indicator of fund category performance because they more accurately reflect the returns of the total money invested in that particular style category.

Quartiles Breakpoints

The pth percentile for a set of data is the value that is greater than or equal to p% of the data, but is less than or equal to (100-p)% of the data. In other words, it is a value that divides the data into two parts: the lower p% of the values and the upper (100-p)% of the values. The first quartile is the 75th percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest share class of the fund net of fees, excluding loads.

Survivorship Bias

Many funds might liquidate or merge during a period of study. This usually occurs due to continued poor performance by the fund. Therefore, if index returns were compared to fund returns using only surviving funds, the comparison would be biased in favor of the fund category. These reports remove this bias by (a) using the entire investment opportunity set, made up of all funds in that particular category at the outset of the period, as the denominator for outperformance calculations, (b) explicitly showing the survivorship rate in each category, and (c) constructing peer average return series for each category based on all available funds at the outset of the period.

Fees

The fund returns used are net of fees, excluding loads.

Indices

A benchmark index provides an investment vehicle against which fund performance can be measured.

S&P/ASX 200

The [S&P/ASX 200](#) is recognized as the institutional investable benchmark in Australia. The index covers approximately 80% of Australian equity market capitalization. Index constituents are drawn from eligible companies listed on the Australian Securities Exchange. The S&P/ASX 200 is a highly liquid and investable index that is designed to address investment managers' needs to benchmark against a portfolio characterized by sufficient size and liquidity.

S&P/ASX MID-SMALL

The S&P/ASX Mid-Small is designed to measure performance of companies included in the [S&P/ASX 300](#), but not in the [S&P/ASX 50](#). It is a combination of the [S&P/ASX MidCap 50](#) and the [S&P/ASX Small Ordinaries](#). The index covers approximately 18% of Australian equity market capitalization.

S&P DEVELOPED EX-AUSTRALIA LARGEMIDCAP

The [S&P Developed Ex-Australia LargeMidCap](#) is a float-adjusted, market-capitalization-weighted index comprising large- and mid-cap companies in developed markets, excluding Australia. It represents approximately 85% of each relevant market's total available capital. This index is part of the S&P Global BMI (Broad Market Index) Series.

S&P/ASX AUSTRALIAN FIXED INTEREST 0+ INDEX

The [S&P/ASX Australian Fixed Interest 0+ Index](#) is part of the S&P/ASX Australian Fixed Interest 0+ Index Series, a broad benchmark index family designed to measure the performance of Australian bonds meeting investability criteria.

S&P/ASX 200 A-REIT

The [S&P/ASX 200 A-REIT](#) is a sector subindex of the S&P/ASX 200. The index seeks to provide investors with exposure to Australian Real Estate Investment Trusts (A-REITs), which are captured under the Global Industry Classification Standard (GICS® Tier 2).

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