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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 16 years of experience publishing the report by expanding scorecard coverage into Australia, Canada, Europe, India, Japan, Latin America, and South Africa.
- The SPIVA Australia Scorecard reports on the performance of actively managed Australian mutual funds against their respective benchmark indices over 1-, 3-, 5-, 10-, and 15-year investment horizons.¹ In this scorecard, we evaluated returns of more than 849 Australian equity funds (large, mid, and small cap, as well as A-REIT), 425 international equity funds, and 116 Australian bond funds.
- In the one-year period ending June 30, 2018, the majority of Australian funds in most categories underperformed their respective benchmarks, apart from the Australian mid- and small-cap category. However, the yearly active versus index figures varied across market cycles without consistent trends.
- We have consistently observed that the majority of Australian active funds in most categories fail to beat their comparable benchmark indices over the long term. Over the 10-year period ending June 30, 2018, almost 90% of international equity funds and more than 70% of Australian equity general, Australian bond, and A-REIT funds underperformed their respective benchmarks on an absolute basis. In contrast, more than half of Australian small-cap funds beat their benchmarks.
- Observations based on risk-adjusted returns were similar for most categories, with the result for the Australian bond and A-REIT funds being more favorable across various measured periods.

Experience the Active vs. Passive Debate on a Global Scale on [INDEXOLOGY[®]](#).

¹ The fund returns used are net of fees, excluding loads.

- **Australian Equity General Funds:** Over the one-year period ending June 30, 2018, the [S&P/ASX 200](#) gained 13.0%, while Australian large-cap equity funds recorded a return of 12.3%, with 57.6% of funds underperforming the S&P/ASX 200. Over the 5-, 10-, and 15-year periods, 68.7%, 71.4%, and 80.2% of funds in this category failed to beat the S&P/ASX 200, respectively.
- **Australian Equity Mid- and Small-Cap Funds:** As of June 30, 2018, the S&P/ASX Mid-Small Index recorded a 12-month return of 18.8%, while Australian mid- and small-cap funds gained a higher average return of 20.8%, with 44.9% of funds underperforming the benchmark. Over the three- and five-year periods, more than 70% of funds in this category underperformed the benchmark, which was higher than the observations over the longer measured periods.
- **International Equity General Funds:** As of June 30, 2018, this fund category had the highest portion of funds underperforming the benchmark, the [S&P Developed Ex-Australia LargeMidCap](#), across the majority of the measured periods. Over the one-year period, the international equity general funds posted a smaller average return (14.1%) than the benchmark's return (15.8%), with more than 70% of funds underperforming the benchmark.
- **Australian Bond Funds:** The Australian bond funds gained 2.4% over the 12-month period ending June 30, 2018, with 69.1% of them lagging the [S&P/ASX Australian Fixed Interest 0+ Index](#). The majority of funds in this category delivered lower-than-benchmark returns across different measured periods, but their risk-adjusted performance appeared more favorable, with 52.7%, 66.0%, and 69.0% of funds lagging the benchmark over the 1-, 5-, and 10-year periods, respectively, on a risk-adjusted basis.
- **Australian Equity A-REIT Funds:** As of June 30, 2018, the vast majority of Australian A-REIT funds (91.3%) underperformed the [S&P/ASX 200 A-REIT](#) over the one-year period. The S&P/ASX 200 A-REIT gained 13.0%, while funds in this category delivered a lower average return of 11.2% over the same period. Observations based on risk-adjusted returns were less unfavorable for the A-REIT funds, with 78.3% of funds underperforming the benchmark.
- **Fund Survivorship:** In the one-year period ending June 30, 2018, 3.4% of Australian funds from all measured categories were merged or liquidated, with Australian mid- and small-cap funds disappearing at the fastest rate and Australian bond and A-REIT funds recording a 100% survival rate. Over the longer periods, less than 60% and 50% of funds across all categories survived for the 10- and 15-year periods, respectively, with Australian bond and international equity funds having the lowest survival rates.
- **Equal-Weighted Average Fund Returns:** Apart from the Australian mid- and small-cap funds, equal-weighted average returns of all fund categories were below their respective benchmark returns for the one-year period ending June 30, 2018. Observations over the 10-year periods were similar, as Australian mid- and small-cap equity funds recorded average excess returns of 4.4% per year, while international equity funds lagged the benchmark by 1.8% per year.
- **Asset-Weighted Average Fund Returns:** Aside from Australian mid- and small-cap funds, the asset-weighted average returns were broadly higher than their respective equal-weighted average returns for all fund categories, which indicates that larger funds tended to perform better than smaller funds in these categories.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

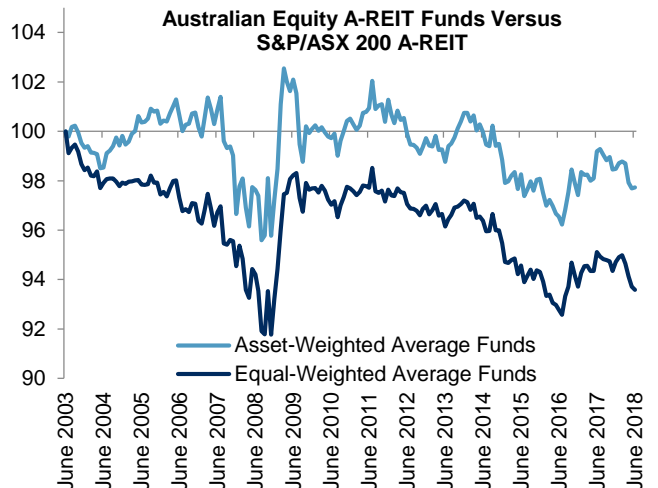
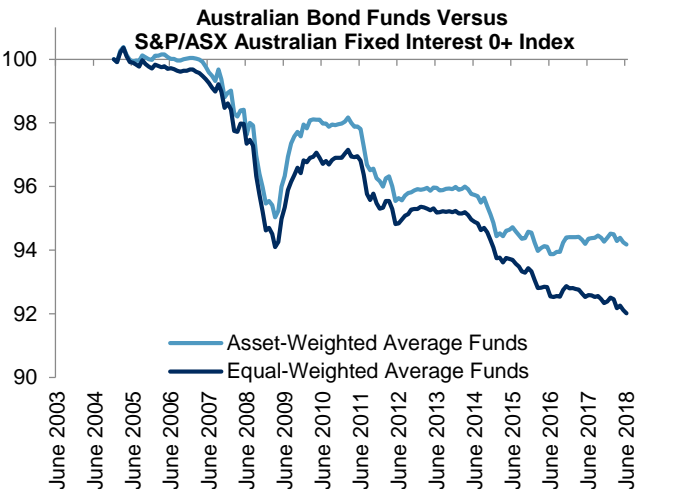
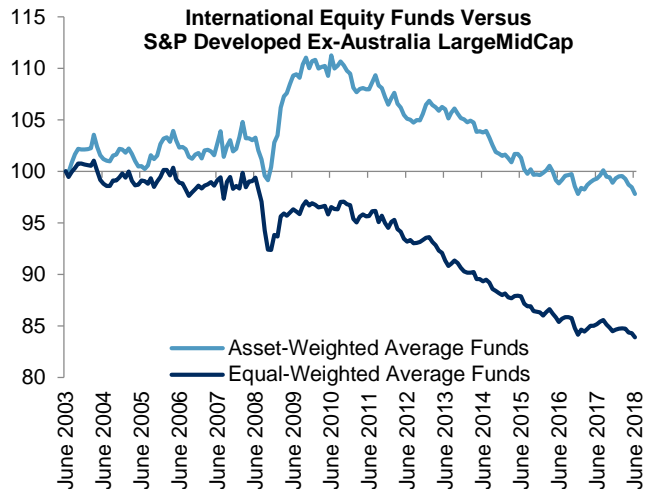
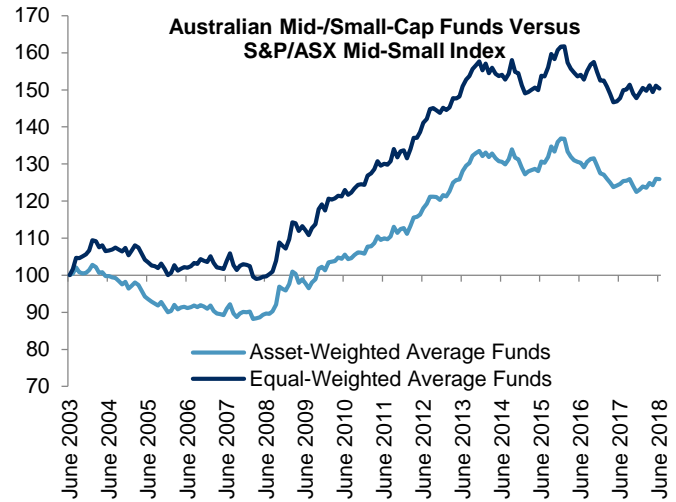
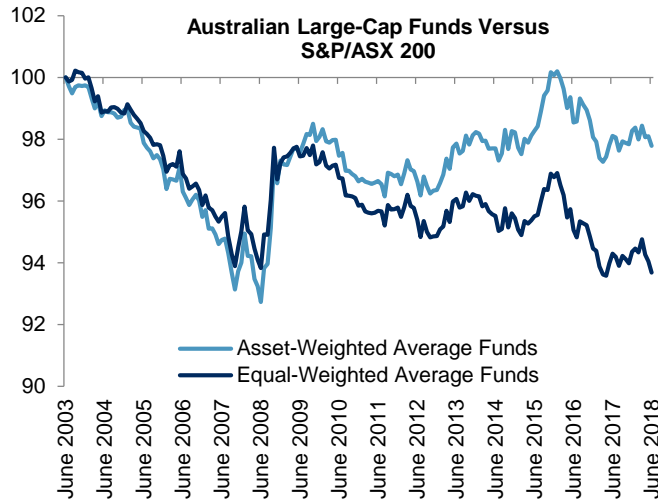
There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication 16 years ago, the SPIVA Scorecard has served 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.

Please note that neither S&P Dow Jones Indices, nor any of its affiliates make any assurance or provide any investment recommendation on the appropriateness of investing in either index or active investing. S&P Dow Jones Indices does not sponsor, endorse, sell, or promote any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. The SPIVA Australia Scorecard simply provides semi-annual statistics according to the SPIVA methodology and a brief analysis of those statistics. Further, S&P Dow Jones Indices does advise that anyone reading this report also read the SPIVA methodology in the report in order to understand how the data was derived.

CUMULATIVE AVERAGE FUND RETURN RELATIVE TO BENCHMARK



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)	15-YEAR (%)
Australian Equity General	S&P/ASX 200	57.63	67.32	68.69	71.43	80.18
Australian Equity Mid- and Small-Cap	S&P/ASX Mid-Small Index	44.92	70.37	70.71	48.45	47.37
International Equity General	S&P Developed Ex-Australia LargeMidCap	70.67	81.82	90.00	89.78	91.28
Australian Bonds	S&P/ASX Australian Fixed Interest 0+ Index	69.09	79.25	82.00	74.14	NA
Australian Equity A-REIT	S&P/ASX 200 A-REIT	91.30	60.81	79.73	70.33	81.01

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)	15-YEAR (%)
Australian Equity General	S&P/ASX 200	58.64	66.34	67.00	72.92	80.18
Australian Equity Mid- and Small-Cap	S&P/ASX Mid-Small Index	45.76	75.93	67.68	48.45	52.63
International Equity General	S&P Developed Ex-Australia LargeMidCap	64.44	79.55	90.00	91.56	90.60
Australian Bonds	S&P/ASX Australian Fixed Interest 0+ Index	52.73	60.38	66.00	68.97	NA
Australian Equity A-REIT	S&P/ASX 200 A-REIT	78.26	43.24	50.00	67.03	77.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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 (%)
1-YEAR		
Australian Equity General	303	96.70
Australian Equity Mid- and Small-Cap	120	92.50
International Equity General	238	96.64
Australian Bonds	57	100.00
Australian Equity A-REIT	70	100.00
All Categories	788	96.57
3-YEAR		
Australian Equity General	313	86.26
Australian Equity Mid- and Small-Cap	110	83.64
International Equity General	231	84.85
Australian Bonds	55	92.73
Australian Equity A-REIT	75	92.00
All Categories	784	86.48
5-YEAR		
Australian Equity General	305	83.28
Australian Equity Mid- and Small-Cap	101	79.21
International Equity General	211	76.78
Australian Bonds	51	84.31
Australian Equity A-REIT	75	85.33
All Categories	743	81.16
10-YEAR		
Australian Equity General	348	58.62
Australian Equity Mid- and Small-Cap	100	62.00
International Equity General	235	53.19
Australian Bonds	59	57.63
Australian Equity A-REIT	93	61.29
All Categories	835	57.72
15-YEAR		
Australian Equity General	235	54.04
Australian Equity Mid- and Small-Cap	58	55.17
International Equity General	157	45.22
Australian Bonds	68	36.76
Australian Equity A-REIT	81	54.32
All Categories	599	49.92

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal-Weighted)

INDEX/PEER GROUP	1-YEAR (%)	3-YEAR ANNUALIZED (%)	5-YEAR ANNUALIZED (%)	10-YEAR ANNUALIZED (%)	15-YEAR ANNUALIZED (%)
S&P/ASX 200	13.01	9.04	9.98	6.40	9.58
Australian Equity General	12.29	8.34	9.43	6.39	9.11
S&P/ASX Mid-Small Index	18.76	16.02	14.15	5.00	9.36
Australian Equity Mid- and Small-Cap	20.84	15.16	14.07	9.40	12.38
S&P Developed Ex-Australia LargeMidCap	15.78	10.57	15.43	9.83	8.02
International Equity General	14.07	8.89	13.49	7.99	6.77
S&P/ASX Australian Fixed Interest 0+ Index	3.07	3.41	4.34	6.06	NA
Australian Bonds	2.42	2.78	3.63	5.47	4.85
S&P/ASX 200 A-REIT	13.04	9.70	12.01	5.99	5.84
Australian Equity A-REIT	11.22	9.31	11.41	5.92	5.37

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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	1-YEAR (%)	3-YEAR ANNUALIZED (%)	5-YEAR ANNUALIZED (%)	10-YEAR ANNUALIZED (%)	15-YEAR ANNUALIZED (%)
S&P/ASX 200	13.01	9.04	9.98	6.40	9.58
Australian Equity General	12.640	8.86	9.96	6.97	9.42
S&P/ASX Mid-Small Index	18.76	16.02	14.15	5.00	9.36
Australian Equity Mid- and Small-Cap	20.02	14.61	13.77	8.63	11.05
S&P Developed Ex-Australia LargeMidCap	15.78	10.57	15.43	9.83	8.02
International Equity General	14.04	9.29	13.58	9.24	7.86
S&P/ASX Australian Fixed Interest 0+ Index	3.07	3.41	4.34	6.06	NA
Australian Bonds	2.87	3.21	3.95	5.68	5.10
S&P/ASX 200 A-REIT	13.04	9.70	12.01	5.99	5.84
Australian Equity A-REIT	11.38	9.50	11.77	6.00	5.68

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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
1-YEAR			
Australian Equity General	9.51	12.54	14.97
Australian Equity Mid- and Small-Cap	14.57	20.93	25.64
International Equity General	11.50	14.02	16.79
Australian Bonds	2.02	2.75	3.15
Australian Equity A-REIT	10.02	11.01	12.22
3-YEAR			
Australian Equity General	6.65	8.35	10.14
Australian Equity Mid- and Small-Cap	12.26	14.23	16.93
International Equity General	7.41	8.90	10.36
Australian Bonds	2.48	2.91	3.39
Australian Equity A-REIT	8.56	9.33	9.99
5-YEAR			
Australian Equity General	7.99	9.39	10.75
Australian Equity Mid- and Small-Cap	11.50	13.40	15.29
International Equity General	12.10	13.39	14.63
Australian Bonds	3.22	3.79	4.27
Australian Equity A-REIT	10.83	11.30	11.96
10-YEAR			
Australian Equity General	5.50	6.41	7.28
Australian Equity Mid- and Small-Cap	7.07	9.10	10.88
International Equity General	7.31	8.53	9.66
Australian Bonds	5.06	5.85	6.30
Australian Equity A-REIT	5.20	5.86	6.67
15-YEAR			
Australian Equity General	8.55	9.31	9.94
Australian Equity Mid- and Small-Cap	10.40	11.71	13.56
International Equity General	6.28	7.20	7.89
Australian Bonds	4.86	5.30	5.62
Australian Equity A-REIT	4.78	5.60	6.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. 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 p th 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 INDEX

The S&P/ASX Mid-Small Index 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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