



Marking 20 Years of the S&P/ASX Index Series: A Look Back at the Growth of Index-Based Investing in Australia

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Since its debut in April 2000, the S&P/ASX Index Series has helped to define the Australian equity market. As Australia's most widely followed market indicator, the [S&P/ASX 200](#) serves as the de facto measure of the value and performance of the nation's stock market. Market peaks and valleys are defined by the level of the S&P/ASX 200.

Beyond the headlines, however, the index series serves an integral role in Australia's investment infrastructure. For example, the fund management industry utilizes the S&P/ASX 200 and other S&P/ASX Indices to serve as the investable universe for active investment strategies and to benchmark fund performance. Likewise, asset owners, such as superannuation funds, use S&P/ASX Indices to benchmark their domestic portfolios. With an estimated AUD 309 billion¹ of Australian equity funds benchmarked to S&P/ASX Indices, the series represents by far the most widely used benchmarks for Australian investment funds.

Perhaps most importantly, the S&P/ASX Index Series served as the foundation for the growth of index-based investing in Australia. The deep ecosystem of liquid financial products tracking key S&P/ASX Indices allows active and passive investors to express investment views in an efficient manner. S&P DJI's [SPIVA®](#) research has also shined a light on the inability of most Australian fund managers to beat their benchmarks, further highlighting the benefits of passive investing. As has occurred in other parts of the world, the growth of index investing has democratized investment solutions that were previously only available to large institutions and lowered the cost of investing for millions of Australians.

EVOLUTION OF THE S&P/ASX INDEX SERIES (2000-2020)

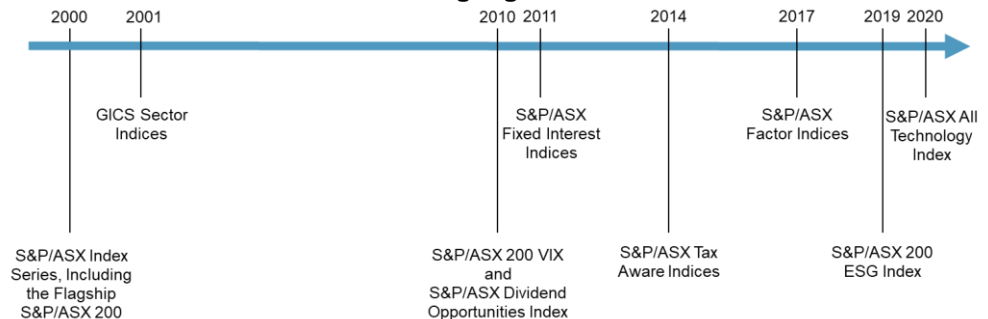
April 2000 marked not only the introduction of the S&P/ASX 200, but also the launch of the [S&P/ASX 300](#) and other size segment indices such as the [S&P/ASX 50](#), [S&P/ASX 100](#), [S&P/ASX Small Ordinaries](#), and [S&P/ASX MidCap 50](#). This landmark event paved the way for two decades of index innovation in the Australian market, as the S&P/ASX series expanded to a wide range of equity market segments, asset classes, and investment

¹ Source: S&P DJI; Morningstar; Evestment. Data as of Dec. 31, 2018.

themes and strategies. For a full chronology of the S&P/ASX Index Series, see Appendix A. However, we've highlighted several notable index innovations in Exhibit 1.

Exhibit 1: S&P/ASX Index Launch Highlights

The S&P/ASX 200 serves as the de facto measure of the value and performance of the Australian stock market...



Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes.

In 2001, a suite of sector indices using the globally recognized GICS® framework was created based on the S&P/ASX 200 and other size segment indices. This development allowed investors to dissect broad benchmark performance along sector lines and led to the creation of products linked to indices such as the [S&P/ASX 200 A-REIT](#), [S&P/ASX 200 Resources](#), and several other Australian equity sectors.

The [S&P/ASX 200 VIX](#)—known as the “fear barometer” of the Australian market—was launched in 2010 to measure implied equity market volatility. The [S&P/ASX Dividend Opportunities Index](#) was likewise introduced in 2010, offering exposure to high-dividend-yielding Australian companies.

The S&P/ASX Fixed Interest Indices were brought to market in 2011, complementing the S&P/ASX Equity Series by providing a complete offering across key fixed interest asset classes.

In 2014, we rolled out our “Tax Aware” index suite, which incorporates the impact of franking credits on the total returns of several major S&P/ASX equity benchmarks. These indices have been adopted by many Australian superannuation funds and tax-exempt investors as benchmarks to better reflect after-tax investment performance.

The S&P/ASX 200 Factor Indices were introduced to the Australian investment community in 2017, including the four core factors: quality, enhanced value, momentum, and low volatility. These indices allow market participants to decompose the S&P/ASX 200 along factor lines and are designed to serve as the basis for index-linked products.

The [S&P/ASX 200 ESG Index](#) was introduced in 2019 and represents S&P DJI’s first core ESG offering for the Australian market. The index is designed to have similar risk/return characteristics as the S&P/ASX 200 while delivering an improved sustainability profile.

...and the S&P/ASX Index Series has served as the foundation for the growth of index-based investing in Australia.

Finally, our newest addition to the S&P/ASX series—launched in February 2020—is the [S&P/ASX All Technology Index](#), which cuts across multiple technology-related GICS categories to capture the rapidly growing set of ASX-listed technology companies.

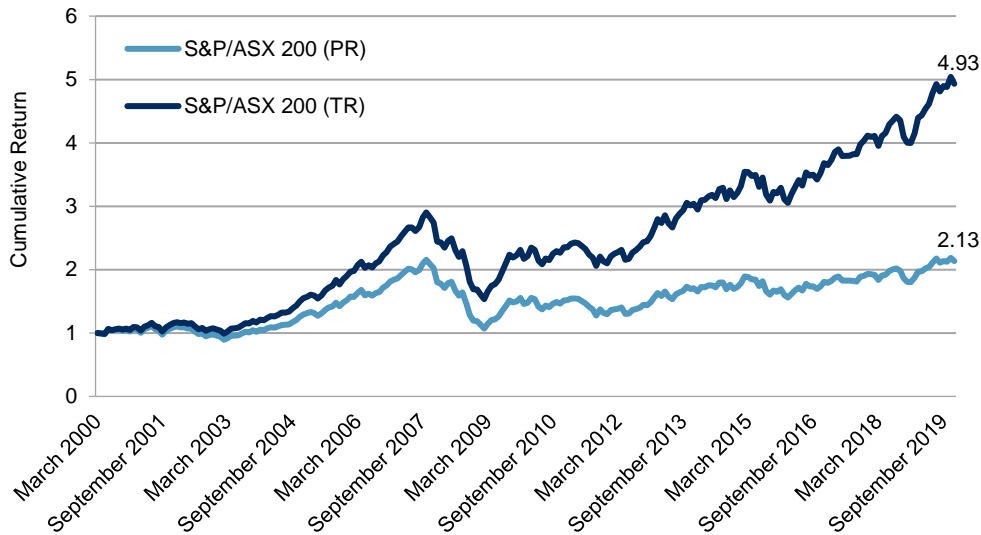
From the 2000 launch to the end of 2019, the S&P/ASX 200 gained 113% on a price return basis.

CHARTING THE PAST 20 YEARS WITH THE S&P/ASX 200

From the 2000 launch to the end of 2019, the S&P/ASX 200 gained 113% on a price return basis. However, as even the most casual market observers are aware, it was far from a straight-line advance. After some fits and starts throughout the first few years, the index more than doubled in price between March 2003 and its pre-financial-crisis peak on Nov. 1, 2007. The index subsequently lost 54% of its value between November 2007 and the index low on March 6, 2009, during the depths of the global financial crisis. It then took more than a decade before the S&P/ASX 200 surpassed its pre-crisis peak, when the index closed at 6,863.998 on Nov. 28, 2019.

While the S&P/ASX 200’s 113% return over nearly 20 years is respectable, it is important to remember that price appreciation is only one component of total investment returns. In a market like Australia, where companies are known for their hefty dividend payouts, incorporating dividends into the return calculation is critical. As illustrated in Exhibit 2, the S&P/ASX 200’s total return, which includes reinvested dividends, was nearly 400% from March 31, 2000, through year-end 2019; dividends accounted for about 71% of the index’s total return.

Exhibit 2: Cumulative Price and Total Return of the S&P/ASX 200



The index’s total return was nearly 400% over the same period.

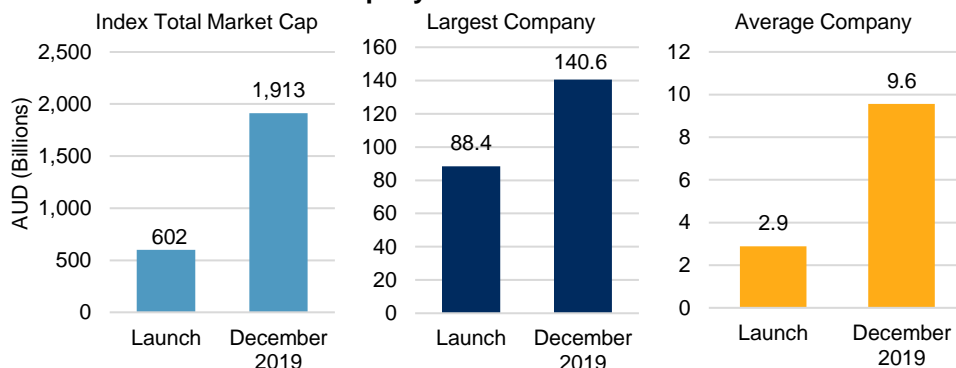
Source: S&P Dow Jones Indices LLC. Data from March 31, 2000, to Dec. 31, 2019. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

So, while AUD 1.00 invested on March 31, 2000, would have turned into AUD 2.13 as of the end of 2019 based on price appreciation only, it would have grown into a much larger AUD 4.93 when including reinvested dividends.

The total market cap of companies included in the S&P/ASX 200 increased from just over AUD 600 billion at launch to AUD 1.91 trillion as of year-end 2019.

Exhibit 3 illustrates how the total value of the S&P/ASX 200 and size characteristics of the index evolved over the past two decades. The total market cap of companies included in the S&P/ASX 200 increased from just over AUD 600 billion at launch to AUD 1.91 trillion as of year-end 2019, a more than threefold increase.

Exhibit 3: S&P/ASX 200 Company Size Characteristics – Then and Now



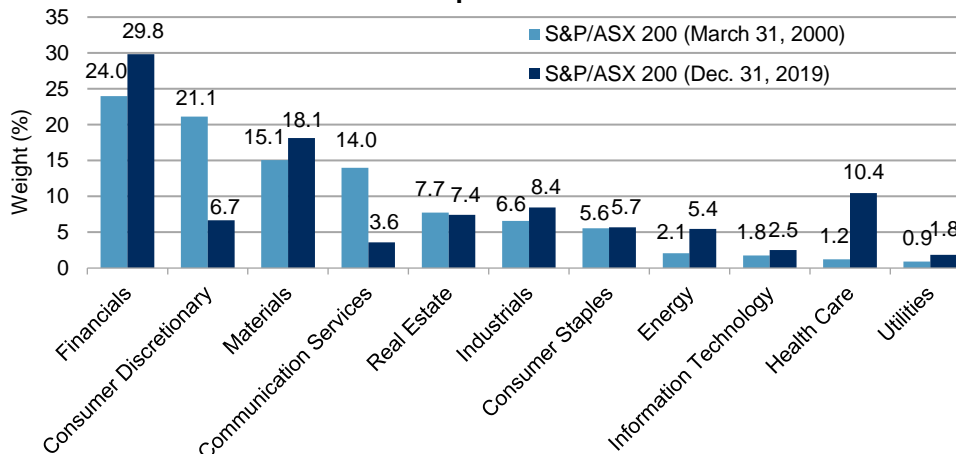
Source: S&P Dow Jones Indices LLC. Data as of March 31, 2000, and Dec. 31, 2019. Charts are provided for illustrative purposes.

A WINDOW INTO THE EVOLUTION OF THE AUSTRALIAN MARKET VIA THE S&P/ASX 200

In addition to measuring the growth in value of the market, the S&P/ASX 200 also provides a window into how the composition of Australia’s stock market evolved over the past two decades. As depicted in Exhibit 4, the sector composition of the S&P/ASX 200 changed considerably over the past 20 years.

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Exhibit 4: S&P/ASX 200 Sector Composition – Then and Now



Source: S&P Dow Jones Indices LLC. Data as of March 31, 2000, and as of Dec. 31, 2019. Chart is provided for illustrative purposes.

The reduction in weighting to Consumer Discretionary raised the weights of the largest sectors, such as Financials and Materials.

The most notable shift was the sharp drop in weight of the Consumer Discretionary sector, which was largely the result of News Corp's 2004 change in incorporation from Australia to the U.S. At launch, News Corp was the largest holding in the S&P/ASX 200, at roughly 15%. While it currently remains an S&P/ASX 200 component, its influence is much smaller, since foreign companies are represented within the S&P/ASX series at a reduced weighting factor reflective of their Australian shareholder base.

Naturally, the reduction in weighting to Consumer Discretionary raised the weights of the largest sectors, such as Financials and Materials. However, other notable moves were the reduced weight to Communication Services and a sharp increase in exposure to Health Care.

Drilling down further into the top holdings, we can see that out of the 10 largest S&P/ASX 200 constituents at launch (nine companies, since News Corp was represented via two share classes), eight remained in the index as of Dec. 31, 2019, and six remained in the top 10. Acquired by Singtel in 2001, Cable & Wireless Optus is the only original top 10 constituent to no longer be an S&P/ASX 200 member.

Other notable moves were the reduced weight to Communication Services and a sharp increase in exposure to Health Care.

CSL stands out as the star performer, posting a share price return in excess of 3,900% since March 31, 2000, propelling the company's market cap from AUD 2.7 billion to AUD 124 billion and becoming Australia's second-largest company behind only Commonwealth Bank.

Exhibit 5: S&P/ASX 200 Top 10 Constituents – Then and Now**MARCH 31, 2000**

| CONSTITUENT | TICKER | SECTOR | INDEX WEIGHT (%) | TOTAL MARKET CAP (AUD MILLIONS) |
|-------------------------|--------|------------------------|------------------|---------------------------------|
| Telstra Corporation | TLS | Communication Services | 8.4 | 48,797 |
| News Corporation | NCP | Consumer Discretionary | 8.0 | 46,731 |
| News Corporation | NCPDP | Consumer Discretionary | 7.1 | 41,696 |
| National Australia Bank | NAB | Financials | 5.4 | 31,653 |
| Broken Hill | BHP | Materials | 5.4 | 31,622 |
| Cable & Wireless Optus | CWO | Communication Services | 4.3 | 24,909 |
| Commonwealth Bank | CBA | Financials | 3.5 | 20,364 |
| Westpac Banking Group | WBC | Financials | 3.2 | 18,912 |
| AMP Limited | AMP | Financials | 2.9 | 16,949 |
| Australia & NZ Bank | ANZ | Financials | 2.8 | 16,081 |
| Total | | | 51.0 | 297,713 |

DEC. 31, 2019

| CONSTITUENT | TICKER | SECTOR | INDEX WEIGHT (%) | TOTAL MARKET CAP (AUD MILLIONS) |
|-----------------------------|--------|------------------------|------------------|---------------------------------|
| Commonwealth Bank Australia | CBA | Financials | 7.9 | 140,611 |
| CSL Ltd | CSL | Health Care | 7.0 | 124,776 |
| BHP Group Ltd | BHP | Materials | 6.4 | 114,555 |
| Westpac Banking Corp | WBC | Financials | 4.7 | 83,225 |
| ANZ Banking Group | ANZ | Financials | 4.0 | 71,287 |
| National Australia Bank Ltd | NAB | Financials | 4.0 | 71,008 |
| Woolworths Group Ltd | WOW | Consumer Staples | 2.7 | 47,490 |
| Wesfarmers Ltd | WES | Consumer Discretionary | 2.6 | 46,941 |
| Macquarie Group Ltd | MQG | Financials | 2.4 | 46,909 |
| Telstra Corp Ltd | TLS | Communication Services | 2.4 | 42,102 |
| Total | | | 43.9 | 788,905 |

Source: S&P Dow Jones Indices LLC. Data as of March 31, 2000, and as of Dec. 31, 2019. Table is provided for illustrative purposes.

Despite so many similar names appearing in the top 10 holdings, there has been quite a bit of movement in their ranking. For example, Telstra, which was ranked second behind News Corp in 2000, fell to 10th place as of the end of 2019. Commonwealth Bank jumped from seven to number one.

THE ADOPTION OF INDEX INVESTING IN AUSTRALIA

The increasing adoption of low-cost passive strategies may be one of the most important and fundamental changes in the global investment landscape this century. Aggregate assets under management in index-tracking funds have increased to record highs globally, and Australia has

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participated in the trend. The S&P/ASX Index Series provided the foundations for the growing adoption of indexing in Australia; as of September 2019, approximately 24% of Australian domestic equity funds under management were invested through index-tracking vehicles.²

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Since the original launch of broad-based equity benchmarks, a wide range of indices and associated products were developed to track size and sector segments of the Australian market, as well as other investment themes and strategies. Including products such as index funds and institutionally managed passive portfolios, S&P DJI estimated that there was approximately AUD 50 billion in assets tracking the various S&P/ASX Indices as of December 2018.³ Exchange-traded funds (ETFs) proved to be a particularly popular format for index-based products; as of December 2019, domestic equity-focused ETFs listed in Australia had attracted AUD 21.9 billion of investments, of which 68% (AUD 14.7 billion)⁴ was based on the S&P/ASX Index Series.

DRIVERS OF THE GROWTH OF INDEX INVESTING IN AUSTRALIA

The shift to passive investment has been driven, in part, by the relatively disappointing performance record of active managers in the past two decades. The [S&P Indices Versus Active \(SPIVA\) Scorecard](#), published semiannually, measures the performance of actively managed funds against a relevant benchmark. The first SPIVA report for Australia was issued in 2009, measuring active fund performance in Australian equities, international equities, Australian REITs, and Australian bonds. Exhibit 6 provides an outline of the relevant benchmark for each fund category used in the scorecards, while Exhibit 7 summarizes the record of active funds over the past decade.

The shift to passive investment has been driven, in part, by the relatively disappointing performance record of active managers in the past two decades.

Exhibit 6: 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 |
| 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. Between 2009 and 2012, the MSCI World Ex Australia Index was used as the benchmark index for International Equity General. Between 2009 and 2011, the UBS Composite Bond Index 0+Y was used as the benchmark for Australian Bonds.

² Rainmaker Information. Data as of Sept. 30, 2019.

³ Source: S&P Dow Jones Indices LLC; Morningstar; Evestment Data as of Dec. 31, 2018. Includes enhanced index products.

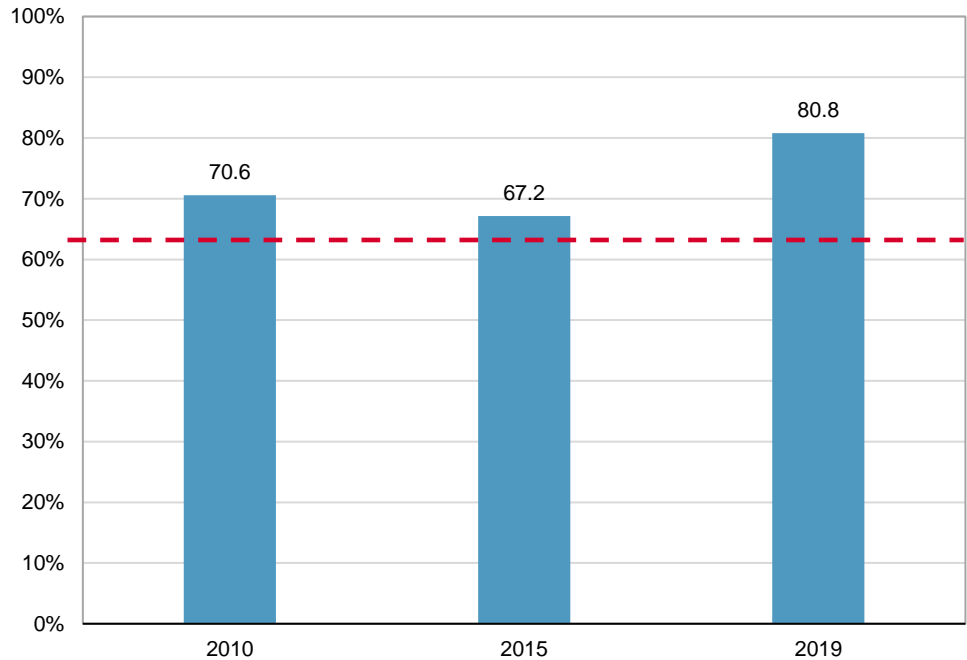
⁴ Source: ASX Investment Products Monthly Update, as of December 2019. Figures include domestic equity and property ETFs.

Exhibit 7: Passive Versus Active Investing in Australia

| % OF ACTIVE FUNDS OUTPERFORMED BY THE BENCHMARK OVER A ONE-YEAR PERIOD | | | | | |
|--|---------------------------|--------------------------------------|------------------------------|------------------|--------------------------|
| YEAR | AUSTRALIAN EQUITY GENERAL | AUSTRALIAN EQUITY MID- AND SMALL-CAP | INTERNATIONAL EQUITY GENERAL | AUSTRALIAN BONDS | AUSTRALIAN EQUITY A-REIT |
| 2009 | 50.8 | 38.8 | 24.1 | 16.7 | 21.1 |
| 2010 | 80.9 | 44.2 | 68.6 | 62.2 | 76.5 |
| 2011 | 66.5 | 7.9 | 79.6 | 88.2 | 74.4 |
| 2012* | 72.7 | 15.8 | 88.4 | 100.0 | 86.4 |
| 2013 | 32.2 | 5.4 | 77.6 | 44.6 | 59.6 |
| 2014 | 61.4 | 23.7 | 80.6 | 94.1 | 91.7 |
| 2015 | 36.2 | 27.3 | 72.3 | 85.7 | 84.1 |
| 2016 | 76.4 | 81.7 | 86.0 | 63.0 | 77.1 |
| 2017 | 59.0 | 74.0 | 52.5 | 68.6 | 43.9 |
| 2018 | 86.7 | 51.9 | 70.4 | 98.4 | 78.9 |
| 2019 | 61.5 | 46.9 | 71.3 | 72.2 | 65.2 |

62% of actively managed Australian general equity funds underperformed the S&P/ASX 200 in 2019 and 81% underperformed over the prior five years.

Percentage of Australian Equity Funds Outperformed by the S&P/ASX 200 Index over a Five-Year Trailing Period



Source: S&P Dow Jones Indices LLC. Note: *Apart from figures for 2012, which are based on SPIVA Australia Mid-Year scorecards, all other annual figures are based on SPIVA Australia Year End Scorecards. Data as of Dec. 31, 2019. Past performance is not a guarantee of future results. Charts are provided for illustrative purposes and reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

With the majority of active managers underperforming, it is perhaps not surprising that many investors turned to low-cost, index-based strategies.

Exhibit 7 illustrates that the past couple of years have been particularly challenging for active managers, with 62% of actively managed Australian general equity funds underperforming the S&P/ASX 200 in 2019 and 81% underperforming over the prior five years. With the majority of active managers underperforming most of the time, it is perhaps not surprising that many investors turned instead to low-cost, index-based strategies for investment.

But what of those funds that did outperform? S&P DJI's annual [Persistence of Australian Active Funds](#) scorecard provides evidence that for active funds, it's hard to stay at the top. According to the most recent report, as of June 2019, only 1.3% of actively managed Australian general equity funds that were in the top quartile of performance in June 2014 were able to maintain their position. In the Australian equity general fund category, only 0.6% outperformed the S&P/ASX 200 for five consecutive years.

THE S&P/ASX INDEX ECOSYSTEM IS NOTABLE FOR ITS LIQUIDITY

As of June 2019, only 1.3% of actively managed Australian general equity funds that were in the top quartile of performance in June 2014 maintained their position.

Interest in passive investments may have been supported by performance considerations, but other dynamics, in particular liquidity, have also encouraged investors toward the S&P/ASX Series. Futures and options based on the S&P/ASX 200 were first listed in 2000, and in August 2001, the first ETFs were listed in Australia, tracking the S&P/ASX 200, S&P/ASX 50, and S&P/ASX 100. With usage of index-linked products growing over the years, the associated trading has grown too.

In the paper [A Window on Index Liquidity: Volumes Linked to S&P DJI Indices](#), S&P DJI introduced a simple method for aggregating and reporting the depth of liquidity associated to flagship benchmarks. Exhibit 8 provides a breakdown of the index equivalent trading volume⁵ (IET) associated with selected S&P/ASX Indices. The data encompass a 12-month period of trading in more than 40 products tracking over 15 indices listed in six different countries.

⁵ The economic value, or IET, in futures and options trading represents the value of notional exposure to the underlying index that is being traded. See Bennett, Chris, Tim Edwards, and Sherifa Issifu, "[A Window on Index Liquidity: Volumes Linked to S&P DJI Indices](#)," (2019), for details of how the IET is calculated for various types of products.

Liquidity has encouraged investors toward the S&P/ASX Series.

Exhibit 8: IET of S&P DJI Indices

| INDEX CATEGORY | IET (AUD MILLIONS, 12-MONTH PERIOD) | | | | |
|-------------------------|--|-----------|--------|--------------|------------|
| | TOTAL | FUTURES | ETP | INDEX OPTION | ETF OPTION |
| S&P/ASX 200 | 2,979,466 | 2,719,653 | 6,294 | 253,431 | 88 |
| S&P/ASX 300 | 3,980 | 0 | 3,980 | 0 | 0 |
| S&P/ASX Sectors | 4,972 | 3,130 | 1,842 | 0 | 0 |
| S&P/ASX Dividend Income | 288 | 0 | 288 | 0 | 0 |
| S&P/ASX Other Equity | 2,831 | 0 | 2,831 | 0 | 0 |
| Fixed Income | 1,040 | 0 | 1,040 | 0 | 0 |
| Total | 2,992,577 | 2,722,783 | 16,275 | 253,431 | 88 |

Source: S&P Dow Jones Indices LLC, FIA, Bloomberg. Data as of Dec. 31, 2019. Each product was placed into one of three product categories: futures, options, or exchange-traded products (ETPs), the latter of which includes “vanilla” ETFs and less common structures, such as leveraged and inverse ETFs and exchange-traded notes. Note that the options column includes options linked to indices and options on index-linked ETPs. Further details are provided in Appendix B. Table is provided for illustrative purposes.

With trillions of dollars in reported annual volumes, the statistics associated with the S&P/ASX Index Series illustrate the deep ecosystem of liquid, tradable products available to support investors as they enter (and exit) their investments. Additionally, although the S&P/ASX 200 stands out in particular for its associated liquidity, other indices have benefited from their connections to the flagship index.

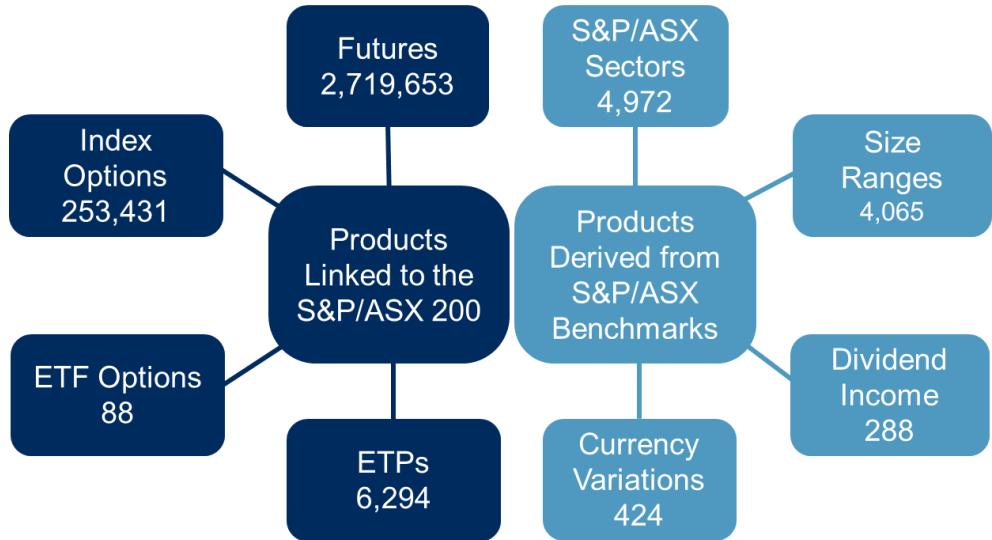
THE S&P/ASX TRADING ECOSYSTEM

With trillions of dollars in reported annual volumes, the S&P/ASX Index Series has a deep ecosystem of liquid, tradable products available to support investors.

Beyond the links between products tracking the same index, there is a network of connections between related products and indices, fostering a trading ecosystem within the S&P/ASX Series. Products linked to sectors of the S&P/ASX 200 provide one example of connected instruments, with a cumulative traded value of approximately AUD 5 billion in 2019. Exhibit 9 illustrates this network, with trading statistics for the different products linked to the S&P/ASX 200 on the left side, and the trading statistics for products tracking other related indices or exposures on the right.

Exhibit 9: The S&P/ASX Ecosystem – Aggregate Index Equivalent Trading in Millions of Australian Dollars

By enabling market makers to recycle their risks elsewhere, a large and active ecosystem helps to limit mispricings and improve price transparency.



Source: S&P Dow Jones Indices LLC, FIA, Bloomberg. Data from the 12-month-period ending Dec. 31, 2019. Chart is provided for illustrative purposes. See Appendix B for more details.

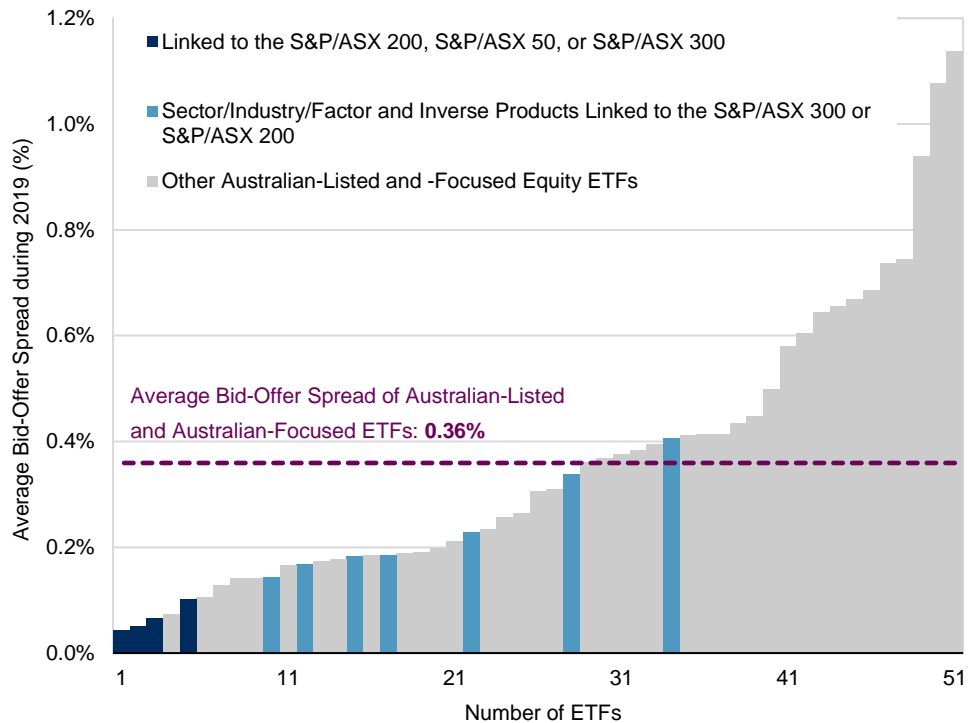
By enabling market makers to recycle their risks elsewhere, a large and active ecosystem helps to limit mispricings and improve price transparency. For investors, one benefit of the broader ecosystem illustrated in Exhibit 9 is the potential for lower trading costs when entering or exiting a position tracking an index within the S&P/ASX Series.

One benefit of the broader ecosystem is the potential for lower trading costs when entering or exiting a position tracking an index within the S&P/ASX Series.

Demonstrating the potential reduction in costs, Exhibit 10 shows the average bid-offer spreads of all Australian-focused, equity-linked ETFs listed in Australia for the calendar year 2019, with those linked to the S&P/ASX Indices highlighted. The top three ETFs with the lowest average bid-offer spreads were linked to the S&P/ASX 200, S&P/ASX 50, or S&P/ASX 300. More broadly, the ETFs tracking S&P/ASX Indices tended to display lower-than-average spreads compared with those using other indices.

Exhibit 10: Average Bid-Offer Spread on Australian-Listed and Australian-Focused ETFs

The top three ETFs with the lowest average bid-offer spreads were linked to the S&P/ASX 200, S&P/ASX 50, or S&P/ASX 300.



Source: S&P Dow Jones Indices LLC and Bloomberg. Data as of Dec. 31, 2019. Average spreads are based on data from Jan. 1, 2019, to Dec. 31, 2019. Chart is provided for illustrative purposes.

The variety of products, their performance, and their liquidity have all helped to make the S&P/ASX Index Series an integral part of investing in the Australian market.

CONCLUSION

Much has happened in the 20 years since the launch of the S&P/ASX Series. Australians have witnessed sharp ups and downs in the stock market, though over the long term, growth has trended upward. A deep and liquid ecosystem of financial products, including ETFs and listed futures and options, has developed around key S&P/ASX benchmarks, allowing both active and passive investors to more efficiently deploy capital and hedge market exposures. This has accompanied a broader trend toward index-based investing, which has reduced investment costs and allowed easier access to different segments of the Australian market via index-linked products. Through all of this, the S&P/ASX 200 has been there to serve as the official barometer of the market and will continue to do so for years to come.

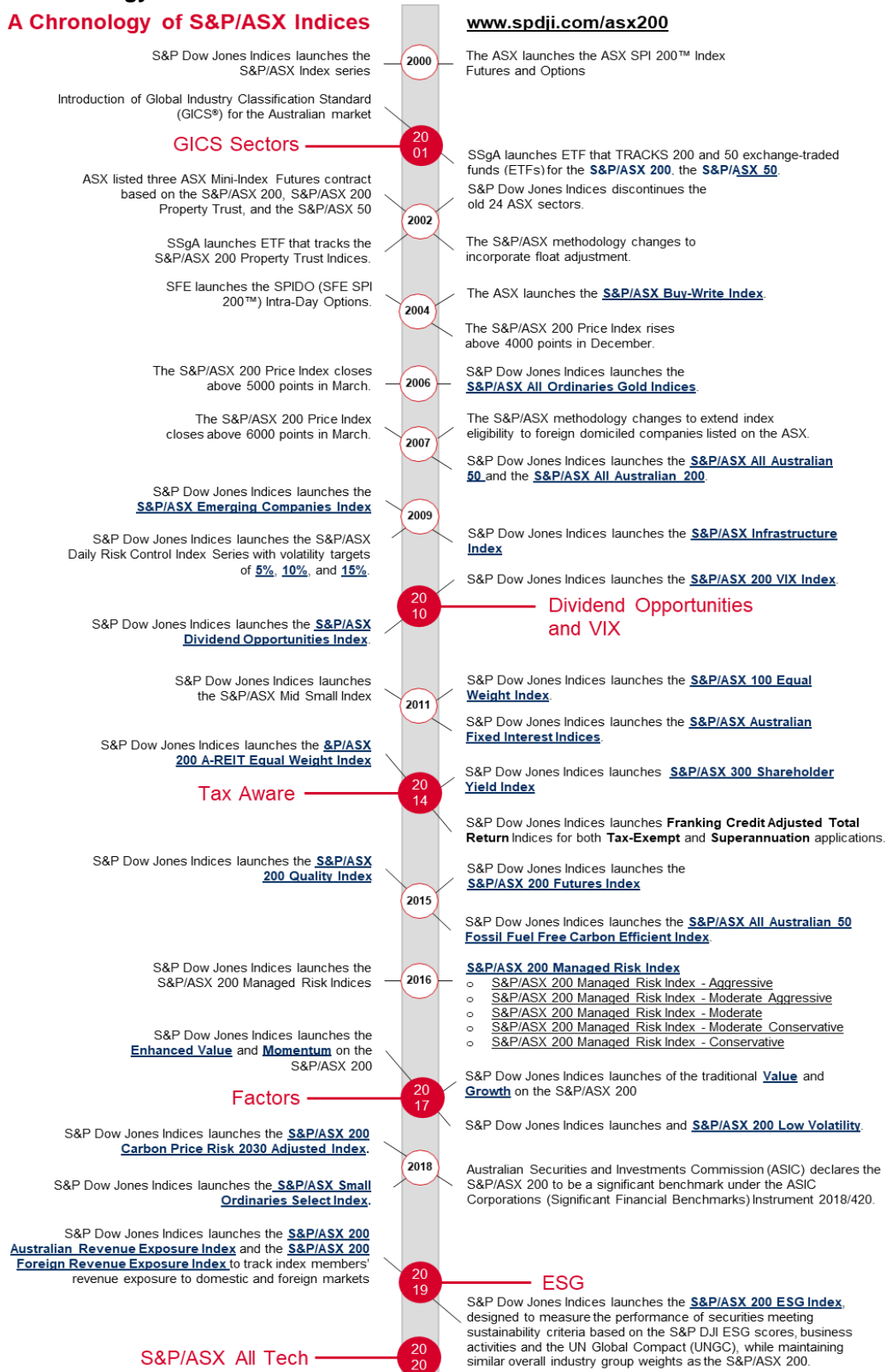
The S&P/ASX 200 has served as the official barometer of the Australian equity market for 20 years and will likely continue to do so for years to come.

The authors would like to acknowledge Tim Edwards and Adrian Carranza for their contribution to this paper.

APPENDIX A

Exhibit 11: A Chronology of S&P/ASX Indices

A Chronology of S&P/ASX Indices



Source: S&P Dow Jones Indices LLC. Chart is provided for illustrative purposes. Compiled as of March 2020.

APPENDIX B

| Exhibit 12: Australian & New Zealand-Listed Exchange-Traded Products | | | | |
|--|--|-----------------|----------|--------|
| EQUITY | EXCHANGE-TRADED FUND | CURRENCY HEDGED | EXCHANGE | TICKER |
| AUSTRALIAN & NEW ZEALAND EQUITIES | | | | |
| ALL-CAP | | | | |
| S&P/ASX 200 | SPDR® S&P/ASX 200 Fund | | ASX | STW |
| | iShares® S&P/ASX 200 ETF | | ASX | IOZ |
| | BetaShares Australian Equities Bear | | ASX | BEAR |
| | BetaShares Australian Equities Strong Bear | | ASX | BBOZ |
| | BetaShares Geared Australian Equity Fund | | ASX | GEAR |
| S&P/ASX 300 | Vanguard® Australian Shares Index ETF | | ASX | VAS |
| LARGE-CAP | | | | |
| S&P/ASX 50 | SPDR S&P/ASX 50 Fund | | ASX | SFY |
| S&P/ASX 20 | iShares S&P/ASX 20 ETF | | ASX | ILC |
| | Smartshares AUS Top 20 Fund | | NZX | OZY |
| S&P/NZX 50 | Smartshares NZ Top 50 Fund | | NZX | FNZ |
| S&P/NZX 10 | Smartshares NZ Top 10 Fund | | NZX | TNZ |
| MID-CAP | | | | |
| S&P/ASX MidCap 50 | Smartshares AUS Mid Cap Fund | | NZX | MZY |
| | VanEck Vectors S&P/ASX MidCap ETF | | ASX | MVE |
| S&P/NZX MidCap | Smartshares NZ Mid Cap Fund | | NZX | MDZ |
| SMALL-CAP | | | | |
| S&P/ASX Small Ordinaries | iShares S&P/ASX Small Ordinaries ETF | | ASX | ISO |
| S&P/ASX Small Ordinaries | iShares S&P/ASX Small Ordinaries ETF | | ASX | ISO |
| | SPDR S&P/ASX Small Ordinaries Fund | | ASX | SSO |
| INTERNATIONAL EQUITIES | | | | |
| GLOBAL | | | | |
| S&P Global 100 | iShares Global 100 ETF | | ASX | IOO |
| S&P Global 100 AUD Hedged | iShares Global 100 AUD Hedged ETF | AUD | ASX | IHO0 |
| S&P Developed Ex-Australia LargeMidCap (AUD) | SPDR S&P World ex Australia Fund | | ASX | WXOZ |
| S&P Developed Ex-Australia LargeMidCap Hedged (AUD) (AUHejjHedged (AUD) | SPDR S&P World ex Australia (Hedged) Fund | AUD | ASX | WXHG |
| ASIA (DEVELOPED) | | | | |
| S&P Asia 50 | iShares Asia 50 ETF | | ASX | IAA |
| S&P Japan Exporters Hedged AUD Index | BetaShares Japan ETF - Currency Hedged | AUD | ASX | HJPN |
| EMERGING MARKETS | | | | |
| S&P Emerging LargeMidCap | SPDR S&P Emerging Markets Fund | | ASX | WEMG |
| EUROPE (DEVELOPED) | | | | |
| S&P Europe 350 | iShares Europe ETF | | ASX | IEU |
| S&P Eurozone Exporters Hedged AUD Index | BetaShares Europe ETF - Currency Hedged | AUD | ASX | HEUR |

Source: S&P Dow Jones Indices LLC. Data as of March 2020. Table is provided for illustrative purposes.

| Exhibit 12: Australian & New Zealand-Listed Exchange-Traded Products (cont.) | | | | |
|---|--|------------------------|-----------------|---------------|
| EQUITY | EXCHANGE-TRADED FUND | CURRENCY HEDGED | EXCHANGE | TICKER |
| U.S. | | | | |
| S&P 500® | iShares Core S&P 500 ETF | | ASX | IVV |
| | SPDR S&P 500 ETF Trust | | ASX | SPY |
| | US 500 Smartshares Fund | | NZX | USF |
| S&P 500 AUD Hedged | iShares S&P 500 AUD Hedged ETF | AUD | ASX | IHVV |
| | BetaShares Geared US Equity Fund - Currency Hedged | AUD | ASX | GGUS |
| S&P Midcap 400® | iShares Core S&P MidCap ETF | | ASX | IJH |
| S&P SmallCap 600® | iShares Core S&P SmallCap ETF | | ASX | IJR |
| SMART BETA (FACTOR-BASED) EQUITIES | | | | |
| AUSTRALIAN & NEW ZEALAND | | | | |
| S&P/ASX 200 | BetaShares Managed Risk Australian Share Fund | | ASX | AUST |
| S&P/ASX 300 Shareholder Yield Index | ETFS S&P/ASX 300 High Yield Plus ETF | | ASX | ZYAU |
| S&P/ASX Dividend Opportunities Index | iShares S&P/ASX Dividend Opportunities ETF | | ASX | IHD |
| | Smartshares AUS Dividend Fund | | NZX | ASD |
| S&P/NZX 50 High Dividend Index | Smartshares NZ Dividend Fund | | NZX | DIV |
| U.S. | | | | |
| S&P 500 | BetaShares S&P 500 Yield Maximizer Fund (managed fund) | | ASX | UMAX |
| S&P 500 Low Volatility High Dividend Index | ETFS S&P 500 High Yield Low Volatility ETF | | ASX | ZYUS |
| GLOBAL | | | | |
| S&P Global Dividend Aristocrats | SPDR S&P Global Dividend Fund | | ASX | WDIV |
| EQUITY SECTORS | | | | |
| S&P/ASX 200 Financials Ex-A-REIT | SPDR S&P/ASX 200 Financial ex A-REIT Fund | | ASX | OZF |
| | Smartshares AUS Financials Fund | | NZX | ASF |
| S&P/ASX 200 Resources | SPDR S&P/ASX 200 Resources Fund | | ASX | OZR |
| | Smartshares AUS Resources Fund | | NZX | ASR |
| S&P/ASX All Technology | Betashares S&P/ASX Australian Technology ETF | | ASX | ATEC |
| GLOBAL (DEVELOPED) | | | | |
| S&P Global 1200 Consumer Staples | iShares Global Consumer Staples ETF | | ASX | IXI |
| S&P Global 1200 Health Care | iShares Global Healthcare ETF | | ASX | IXJ |
| S&P Global 1200 Telecommunication Services | iShares Global Telecoms ETF | | ASX | IXP |
| S&P Biotechnology Select Industry Index | ETFS S&P Biotech ETF | | ASX | CURE |

Source: S&P Dow Jones Indices LLC. Data as of March 2020. Table is provided for illustrative purposes.

| Exhibit 12: Australian & New Zealand-Listed Exchange-Traded Products (cont.) | | | | |
|---|---|------------------------|-----------------|---------------|
| FIXED INTEREST | EXCHANGE-TRADED FUND | CURRENCY HEDGED | EXCHANGE | TICKER |
| AUSTRALIA & NEW ZEALAND | | | | |
| S&P/ASX Australian Fixed Interest Index | SPDR S&P/ASX Australian Bond Fund | | ASX | BOND |
| S&P/ASX Government Bond Index | SPDR S&P/ASX Australian Government Bond Fund | | ASX | GOVT |
| S&P/NZX A-Grade Corporate Bond Index | Smartshares NZ Bond Fund | | NZX | NZB |
| S&P/NZX Bank Bill 90-Day Index | Smartshares NZ Cash Fund | | NZX | NZC |
| S&P/ASX Bank Bill Index | iShares Core Cash ETF | | ASX | BILL |
| | iShares Enhanced Cash ETF | | ASX | ISEC |
| REAL ASSETS | EXCHANGE-TRADED FUND | CURRENCY HEDGED | EXCHANGE | TICKER |
| COMMODITIES | | | | |
| S&P/GSCI Agriculture | BetaShares Agriculture ETF - Currency Hedged (synthetic) | AUD | ASX | QAG |
| S&P/GSCI Crude Oil | BetaShares Crude Oil Index ETF - Currency Hedged (synthetic) | AUD | ASX | OOO |
| S&P/GSCI Light Energy | BetaShares Commodities Basket ETF - Currency Hedged (synthetic) | AUD | ASX | QCB |
| REAL ESTATE & REITS | | | | |
| S&P/ASX 200 A-REIT | SPDR S&P/ASX 200 Listed Property Fund | | ASX | SLF |
| S&P/ASX 200 A-REIT Equal Weight Index | Smartshares AUS Property Fund | | NZX | ASP |
| S&P/ASX 300 A-REIT | Vanguard Australian Property Securities Index ETF | | ASX | VAP |
| S&P/NZX Real Estate Select Index | Smartshares NZ Property Fund | | NZX | NPF |
| Dow Jones Global Select Real Estate Securities Index | SPDR Dow Jones Global Real Estate Fund | | ASX | DJRE |
| RESOURCES | | | | |
| S&P/ASX 200 Resources | SPDR S&P/ASX 200 Resources Fund | | ASX | OZR |
| | Smartshares AUS Resources Fund | | NZX | ASR |

Source: S&P Dow Jones Indices LLC. Data as of March 2020. Table is provided for illustrative purposes.

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The S&P/ASX Australian Fixed Interest 0+ Index was launched September 5, 2014. The S&P/ASX Mid-Small was launched August 15, 2011. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. Complete index methodology details are available at www.spdji.com. Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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