

Persistence of Australian Active Funds

Contributor

Priscilla Luk

Managing Director
Global Research & Design
priscilla.luk@spglobal.com

EXECUTIVE SUMMARY

- While comparing active funds against a benchmark index is a typical practice used to evaluate their performance, persistence is an additional test that reveals fund managers' skills in different market environments.
- In this report, we measure the performance persistence of active funds that outperformed their peers and benchmarks over consecutive three- and five-year periods, and we analyze their transition matrices over subsequent periods.
- A minority of Australian high-performing funds persisted in outperforming their respective benchmarks or consistently stayed in their respective top quartiles for three consecutive years, and even fewer maintained these traits consistently for the five-year period.
- Out of the top-performing funds in the 12-month period ending June 2015, only 2.1% persistently maintained a top-quartile rank, and 1.7% consistently beat their benchmarks in the following four consecutive years.
- Over two successive three- and five-year periods, the majority of outperforming funds failed to persistently beat their respective benchmarks, and most funds in the top quartile did not stay there consistently.
- Out of the 164 Australian funds that ranked in their respective top quartile in the five-year period ending June 2014, fewer than half of them remained in the top two quartiles, and 13.4% were liquidated or merged in the subsequent five-year period.
- Out of the 269 Australian funds that outperformed their respective benchmark in the five-year period ending June 2014, only 21.2% continued to outperform their respective benchmark in the following five-year period, and 15.6% of them were liquidated.
- Overall, the majority of Australian fund categories showed weak performance persistence in top-performing funds across the three- and five-year periods.

MEASURING PERFORMANCE PERSISTENCE OF AUSTRALIAN ACTIVE FUNDS

Research suggests that actively managed winning streaks are often short lived. Twice a year, S&P Dow Jones Indices releases the Persistence Scorecard, which tracks the performance consistency of U.S. actively managed funds over consecutive years. We have consistently observed that relatively few U.S. active funds can stay at the top for years.¹ In this report, we use similar matrices to measure the persistence of Australian active funds that outperform their benchmarks and their peers over three- and five-year periods. Our study follows the fund categories and benchmarks defined in the [SPIVA® Australia Scorecard](#), a biannual report that tracks the number of active Australian funds that beat their comparable benchmarks over short- and long-term horizons.

Exhibit 1: 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 Large Midcap
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.

We measure the following matrices based on Australian active funds that maintain a top-quartile ranking among their peers and those that outperform their respective benchmark indices.

1. Performance Persistence over Three Consecutive Years
2. Performance Persistence over Five Consecutive Years
3. Three-Year Transition Matrix—Performance over Two Non-Overlapping Three-Year Periods
4. Five-Year Transition Matrix—Performance over Two Non-Overlapping Five-Year Periods

SECTION 1: PERSISTENCE OF FUNDS THAT MAINTAIN TOP-QUARTILE RANKING AMONG THEIR PEERS

Performance Persistence over Three Consecutive 12-Month Periods (June 2016-June 2019): In the 12-month period ending June 2017, there were 195 Australian active funds ranked in their respective top quartiles across five fund categories. Of these, 12 (6.2%) remained in the top quartile in the next two consecutive 12-month periods (June 2017-June 2019). Out of the 76 top-performing Australian Equity General funds, only four of them (5.3%) consistently remained in the top quartile in the following two consecutive 12-month periods. No funds in the Australian Equity Mid- and Small-Cap categories managed to stay in the top quartile for three consecutive years (see Exhibit 2).

Performance Persistence over Five Consecutive 12-Month Periods (June 2014-June 2019): Out of the 189 top-quartile Australian active funds in the 12-month period ending June 2015, only four of them (2.1%) stayed in the same quartile in the next four consecutive 12-month periods (June 2015-June 2019). No funds in the Australian Equity Mid- and Small-Cap and Australian Equity A-REIT categories managed to stay in the top quartile for five consecutive years (see Exhibit 3).

¹ For details, please refer to the latest [Persistence Scorecard](#).

Exhibit 2: Performance Persistence of Australian Active Funds over Three Consecutive 12-Month Periods (June 2016-June 2019)

FUND CATEGORY	NUMBER OF FUNDS IN TOP QUARTILE AT START	% OF FUNDS STAYING IN TOP QUARTILE		
	JUNE 2017	JUNE 2018	JUNE 2019	
Australian Equity General	76	21.1	5.3	
Australian Equity Mid- and Small-Cap	29	17.2	0.0	
International Equity General	59	32.2	10.2	
Australian Bonds	14	35.7	7.1	
Australian Equity A-REIT	17	29.4	5.9	
All Categories	195	25.6	6.2	

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 3: Performance Persistence of Australian Active Funds over Five Consecutive 12-Month Periods (June 2014-June 2019)

FUND CATEGORY	NUMBER OF FUNDS IN TOP QUARTILE AT START	% OF FUNDS STAYING IN TOP QUARTILE				
	JUNE 2015	JUNE 2016	JUNE 2017	JUNE 2018	JUNE 2019	
Australian Equity General	78	52.6	7.7	3.8	1.3	
Australian Equity Mid- and Small-Cap	26	23.1	7.7	0.0	0.0	
International Equity General	54	27.8	11.1	7.4	3.7	
Australian Bonds	13	46.2	15.4	15.4	7.7	
Australian Equity A-REIT	18	33.3	11.1	11.1	0.0	
All Categories	189	39.2	9.5	5.8	2.1	

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Three-Year Transition Matrix (period from June 2013 to June 2016 versus period from June 2016 to June 2019): The transition matrix tracks the trajectory of funds in each quartile over two non-overlapping periods. Out of the 73 top-quartile funds in the Australian Equity General category in the three-year period ending June 2016, 30.1% remained in the top quartile in the subsequent three-year period (June 2016 to June 2019). Top-quartile funds in the International Equity General category showed the lowest persistence (only 20.8% maintained a top-quartile rank), while those in the Australian Bonds category had the lowest turnover in the top quartile (69.2% of funds maintained a top-quartile rank; see Exhibit 4).

Five-Year Transition Matrix (period from June 2009 to June 2014 versus period from June 2014 to June 2019): Out of the 164 Australian funds that ranked in their respective top quartile in the five-year period ending June 2014, fewer than half of them stayed in the top two quartiles in the subsequent five-year period (June 2014 to June 2019). Top-quartile funds in the Australian Equity General category showed the lowest persistence, with only 20.6% of funds maintaining a top-quartile rank. In contrast, Australian Bonds exhibited the strongest persistence in the top quartile over the two non-overlapping five-year periods (see Exhibit 5).

**Exhibit 4: Three-Year Transition Matrix – Performance over Two Non-Overlapping Three-Year Periods
(Period from June 2013 to June 2016 versus Period from June 2016 to June 2019)**

QUARTILE	FUND COUNT AT START (JUNE 2016)	THREE-YEAR PERCENTAGES AT END JUNE 2019 (%)					
		1ST QUARTILE	2ND QUARTILE	3RD QUARTILE	4TH QUARTILE	MERGED/ LIQUIDATED	TOTAL
AUSTRALIAN EQUITY GENERAL							
1st Quartile	73	30.1	15.1	27.4	17.8	9.6	100.0
2nd Quartile	74	31.1	25.7	14.9	10.8	17.6	100.0
3rd Quartile	73	5.5	26.0	23.3	20.5	24.7	100.0
4th Quartile	73	20.5	13.7	17.8	30.1	17.8	100.0
AUSTRALIAN EQUITY MID- AND SMALL-CAP							
1st Quartile	24	37.5	20.8	16.7	12.5	12.5	100.0
2nd Quartile	24	8.3	20.8	33.3	20.8	16.7	100.0
3rd Quartile	24	20.8	8.3	33.3	25.0	12.5	100.0
4th Quartile	24	20.8	16.7	12.5	12.5	37.5	100.0
INTERNATIONAL EQUITY GENERAL							
1st Quartile	48	20.8	35.4	18.8	18.8	6.3	100.0
2nd Quartile	47	12.8	25.5	29.8	17.0	14.9	100.0
3rd Quartile	48	12.5	22.9	27.1	16.7	20.8	100.0
4th Quartile	47	14.9	10.6	8.5	34.0	31.9	100.0
AUSTRALIAN BONDS							
1st Quartile	13	69.2	23.1	7.7	0.0	0.0	100.0
2nd Quartile	10	20.0	60.0	20.0	0.0	0.0	100.0
3rd Quartile	12	8.3	8.3	33.3	41.7	8.3	100.0
4th Quartile	11	0.0	9.1	27.3	45.5	18.2	100.0
AUSTRALIAN EQUITY A-REIT							
1st Quartile	17	35.3	23.5	11.8	23.5	5.9	100.0
2nd Quartile	17	47.1	17.6	17.6	11.8	5.9	100.0
3rd Quartile	16	6.3	25.0	37.5	25.0	6.3	100.0
4th Quartile	17	5.9	29.4	17.6	35.3	11.8	100.0
ALL CATEGORIES							
1st Quartile	175	32.0	22.9	20.6	16.6	8.0	100.0
2nd Quartile	172	23.8	26.2	22.1	13.4	14.5	100.0
3rd Quartile	173	9.8	21.4	27.7	22.0	19.1	100.0
4th Quartile	172	16.3	14.5	15.1	30.2	23.8	100.0

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**Exhibit 5: Five-Year Transition Matrix – Performance over Two Non-Overlapping Five-Year Periods
(Period from June 2009 to June 2014 versus Period from June 2014 to June 2019)**

QUARTILE	FUND COUNT AT START (JUNE 2014)	FIVE-YEAR PERCENTAGES AT END JUNE 2019 (%)					
		1ST QUARTILE	2ND QUARTILE	3RD QUARTILE	4TH QUARTILE	MERGED/ LIQUIDATED	TOTAL
AUSTRALIAN EQUITY GENERAL							
1st Quartile	68	20.6	25.0	22.1	19.1	13.2	100.0
2nd Quartile	69	23.2	21.7	21.7	17.4	15.9	100.0
3rd Quartile	68	13.2	22.1	20.6	14.7	29.4	100.0
4th Quartile	68	17.6	14.7	14.7	25.0	27.9	100.0
AUSTRALIAN EQUITY MID- AND SMALL-CAP							
1st Quartile	23	26.1	17.4	34.8	8.7	13.0	100.0
2nd Quartile	20	5.0	30.0	25.0	15.0	25.0	100.0
3rd Quartile	22	13.6	18.2	13.6	31.8	22.7	100.0
4th Quartile	21	23.8	19.0	4.8	23.8	28.6	100.0
INTERNATIONAL EQUITY GENERAL							
1st Quartile	45	24.4	20.0	26.7	13.3	15.6	100.0
2nd Quartile	44	13.6	22.7	15.9	20.5	27.3	100.0
3rd Quartile	45	13.3	13.3	22.2	17.8	33.3	100.0
4th Quartile	44	18.2	15.9	4.5	31.8	29.5	100.0
AUSTRALIAN BONDS							
1st Quartile	11	54.5	45.5	0.0	0.0	0.0	100.0
2nd Quartile	12	8.3	25.0	33.3	8.3	25.0	100.0
3rd Quartile	11	36.4	18.2	18.2	18.2	9.1	100.0
4th Quartile	11	0.0	0.0	27.3	27.3	45.5	100.0
AUSTRALIAN EQUITY A-REIT							
1st Quartile	17	29.4	11.8	11.8	29.4	17.6	100.0
2nd Quartile	16	50.0	6.3	6.3	25.0	12.5	100.0
3rd Quartile	17	17.6	47.1	29.4	5.9	0.0	100.0
4th Quartile	16	0.0	12.5	37.5	31.3	18.8	100.0
ALL CATEGORIES							
1st Quartile	164	25.6	22.6	22.6	15.9	13.4	100.0
2nd Quartile	161	19.9	21.7	19.9	18.0	20.5	100.0
3rd Quartile	163	15.3	21.5	20.9	17.2	25.2	100.0
4th Quartile	160	15.6	14.4	13.8	27.5	28.8	100.0

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

SECTION 2: PERSISTENCE OF FUNDS THAT OUTPERFORM THEIR RESPECTIVE BENCHMARK INDICES

Performance Persistence over Three 12-Month Periods (June 2016-June 2019): There were 354 Australian active funds that outperformed their respective benchmarks across five fund categories in the 12-month period ending June 2017. Only 20 of them (5.6%) continued to outperform the benchmark in the next two consecutive 12-month periods (June 2017-June 2019). Out of the 121 Australian large-cap equity funds that beat the [S&P/ASX 200](#) in the 12-month period ending June

2016, only two (1.7%) of them consistently outperformed in the two following 12-month periods (see Exhibit 6).

Performance Persistence over Five Consecutive 12-Month Periods (June 2014-June 2019):

There were 287 Australian active funds that beat their respective benchmark in the 12-month period ending June 2015, and five (1.7%) of them managed to continue their outperformance in the following four 12-month periods (June 2015-June 2019). Outperforming funds in the Australian Bonds category tended to have higher persistence in beating the benchmark over five consecutive 12-month periods (see Exhibit 7).

FUND CATEGORY	NUMBER OF OUTPERFORMING FUNDS AT START (JUNE 2017)	% OF FUNDS OUTPERFORMING THE BENCHMARK IN CONSECUTIVE PERIODS	
		JUNE 2018	JUNE 2019
Australian Equity General	121	47.1	1.7
Australian Equity Mid- and Small-Cap	25	32.0	8.0
International Equity General	114	33.3	9.6
Australian Bonds	31	45.2	12.9
Australian Equity A-REIT	63	9.5	1.6
All Categories	354	34.7	5.6

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

FUND CATEGORY	NUMBER OF OUTPERFORMING FUNDS AT START (JUNE 2015)	% OF FUNDS OUTPERFORMING THE BENCHMARK IN CONSECUTIVE PERIODS			
		JUNE 2016	JUNE 2017	JUNE 2018	JUNE 2019
Australian Equity General	154	46.8	13.0	10.4	0.6
Australian Equity Mid- and Small-Cap	50	48.0	10.0	2.0	2.0
International Equity General	75	24.0	13.3	6.7	2.7
Australian Bonds	4	50.0	25.0	25.0	25.0
Australian Equity A-REIT	4	50.0	50.0	0.0	0.0
All Categories	287	41.1	13.2	8.0	1.7

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Three-Year Transition Matrix (period from June 2013 to June 2016 versus period from June 2016 to June 2019): In the three-year period ending June 2016, 194 Australian active funds outperformed their respective benchmarks. Of these, 25.8% had persistent outperformance in the subsequent three-year period (June 2016-June 2019). Outperformers among the Australian Bonds funds showed the strongest persistence (66.7%), while those in the Australian Equity A REIT category had the least tendency to continue to outperform (20.0%; see Exhibit 8).

Five-Year Transition Matrix (period from June 2009 to June 2014 versus period from June 2014 to June 2019): Out of the 269 Australian funds that outperformed in the five-year period ending June 2014, 21.2% of them persistently beat their respective benchmark in the following five years (June 2014-June 2019). No fund category showed strong persistence in outperformance over two consecutive five-year periods (see Exhibit 9).

**Exhibit 8: Three-Year Transition Matrix – Performance over Two Non-Overlapping Three-Year Periods
(Period from June 2013 to June 2016 versus Period from June 2016 to June 2019)**

RELATIVE PERFORMANCE	FUND COUNT AT START (JUNE 2016)	THREE-YEAR PERCENTAGES AT END JUNE 2019 (%)			
		OUTPERFORM BENCHMARK	UNDERPERFORM BENCHMARK	MERGED/ LIQUIDATED	TOTAL
AUSTRALIAN EQUITY GENERAL					
Outperform Benchmark	111	25.2	61.3	13.5	100.0
Underperform Benchmark	182	12.1	68.1	19.8	100.0
AUSTRALIAN EQUITY MID- AND SMALL-CAP					
Outperform Benchmark	51	21.6	64.7	13.7	100.0
Underperform Benchmark	45	20.0	53.3	26.7	100.0
INTERNATIONAL EQUITY GENERAL					
Outperform Benchmark	21	28.6	61.9	9.5	100.0
Underperform Benchmark	169	20.1	60.4	19.5	100.0
AUSTRALIAN BONDS					
Outperform Benchmark	6	66.7	33.3	0.0	100.0
Underperform Benchmark	40	17.5	75.0	7.5	100.0
AUSTRALIAN EQUITY A-REIT					
Outperform Benchmark	5	20.0	60.0	20.0	100.0
Underperform Benchmark	62	33.9	59.7	6.5	100.0
ALL CATEGORIES					
Outperform Benchmark	194	25.8	61.3	12.9	100.0
Underperform Benchmark	498	18.7	63.7	17.7	100.0

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**Exhibit 9: Five-Year Transition Matrix – Performance over Two Non-Overlapping Five-Year Periods
(Period from June 2009 to June 2014 versus Period from June 2014 to June 2019)**

RELATIVE PERFORMANCE	FUND COUNT AT START (JUNE 2014)	FIVE-YEAR PERCENTAGES AT END JUNE 2019 (%)			
		OUTPERFORM BENCHMARK	UNDERPERFORM BENCHMARK	MERGED/ LIQUIDATED	TOTAL
AUSTRALIAN EQUITY GENERAL					
Outperform Benchmark	101	21.8	66.3	11.9	100.0
Underperform Benchmark	172	16.3	56.4	27.3	100.0
AUSTRALIAN EQUITY MID- AND SMALL-CAP					
Outperform Benchmark	82	23.2	56.1	20.7	100.0
Underperform Benchmark	4	25.0	25.0	50.0	100.0
INTERNATIONAL EQUITY GENERAL					
Outperform Benchmark	35	20.0	62.9	17.1	100.0
Underperform Benchmark	143	15.4	55.9	28.7	100.0
AUSTRALIAN BONDS					
Outperform Benchmark	27	11.1	74.1	14.8	100.0
Underperform Benchmark	18	11.1	61.1	27.8	100.0
AUSTRALIAN EQUITY A-REIT					
Outperform Benchmark	24	25.0	62.5	12.5	100.0
Underperform Benchmark	42	19.0	69.0	11.9	100.0
ALL CATEGORIES					
Outperform Benchmark	269	21.2	63.2	15.6	100.0
Underperform Benchmark	379	16.1	57.5	26.4	100.0

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. The fund returns used in the analysis are net of fees, excluding loads. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

SECTION 3: CONCLUSION

While comparing returns against a benchmark is a common practice to evaluate the performance of active funds, performance persistence is an additional test on the fund managers' skills at overcoming different market environments. In this report, we measured the performance persistence of active funds that outperformed their peers and benchmarks over consecutive three- and five-year periods, and their transition matrices over subsequent time periods.

The results showed that only a small portion of Australian outperforming or high-performing funds showed persistent outperformance against their respective benchmarks or consistently stayed in their respective top quartiles over three consecutive years, and even fewer could maintain outperformance for five consecutive years. Out of the top-performing funds in the 12-month period ending June 2015, only 2.1% persistently maintained a top-quartile rank, and 1.7% consistently beat the benchmarks in the following four consecutive years.

The transition matrices show that over two successive three- and five-year periods, a majority of outperforming funds failed to beat their respective benchmarks, and most of the top-quartile funds did not remain in the same quartile consistently. Out of the 164 Australian funds that ranked in their respective top quartile in the five-year period ending June 2014, fewer than half of them remained in the top two quartiles, and 13.4% were liquidated or merged in the subsequent five-year period. Furthermore, out of the 269 Australian funds that outperformed their respective benchmark in the five-year period ending June 2014, only 21.2% continued to outperform their respective benchmark and 15.6% of them were liquidated in the following five-year period.

Overall, results from various evaluation matrices suggest weak performance persistence in top-performing funds in Australia across the three- and five-year periods, with Australian Bond funds tending to have the strongest performance persistence among all the categories.

GENERAL DISCLAIMER

Copyright © 2019 S&P Dow Jones Indices LLC. All rights reserved. STANDARD & POOR'S, S&P, S&P 500, S&P 500 LOW VOLATILITY INDEX, S&P 100, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, S&P TARGET DATE INDICES, GICS, SPIVA, SPDR and INDEXOLOGY are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"). DOW JONES, DJ, DJIA and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage 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. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

ASX, ALL ORDINARIES are trademarks of ASX Operations Pty Ltd. and have been licensed for use by S&P Dow Jones Indices.