S&P Dow Jones Indices

S&P Global

RESEARCH

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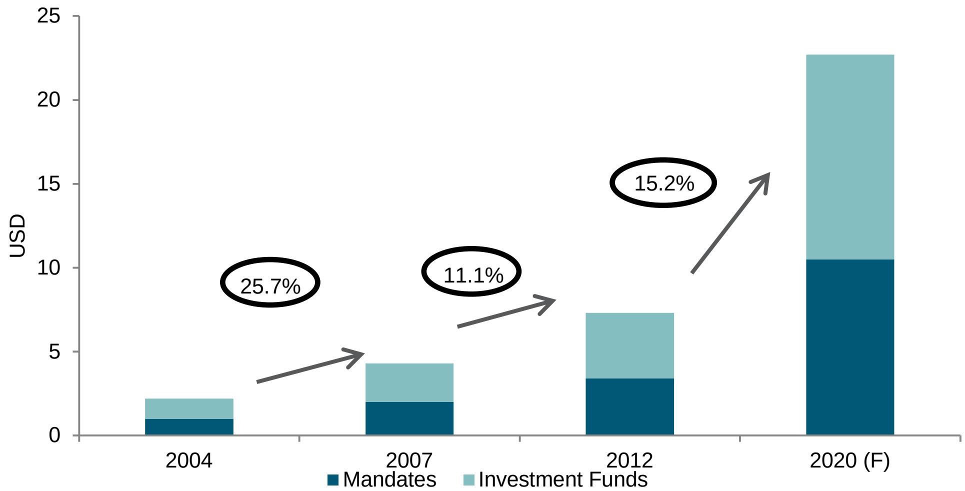
SPIVA®: A Cross-Country Comparison

The contention surrounding the merit of active management over that of passive management has been going on for years, especially against the backdrop of the staggering rise of exchange-traded and passive funds. A recent PricewaterhouseCoopers report has brought this into sharp relief and forecasts that passive investments will continue to experience remarkable growth rates (see Exhibit 1).

Exhibit 1: Global Passive Investments Assets Under Management Projection for 2020

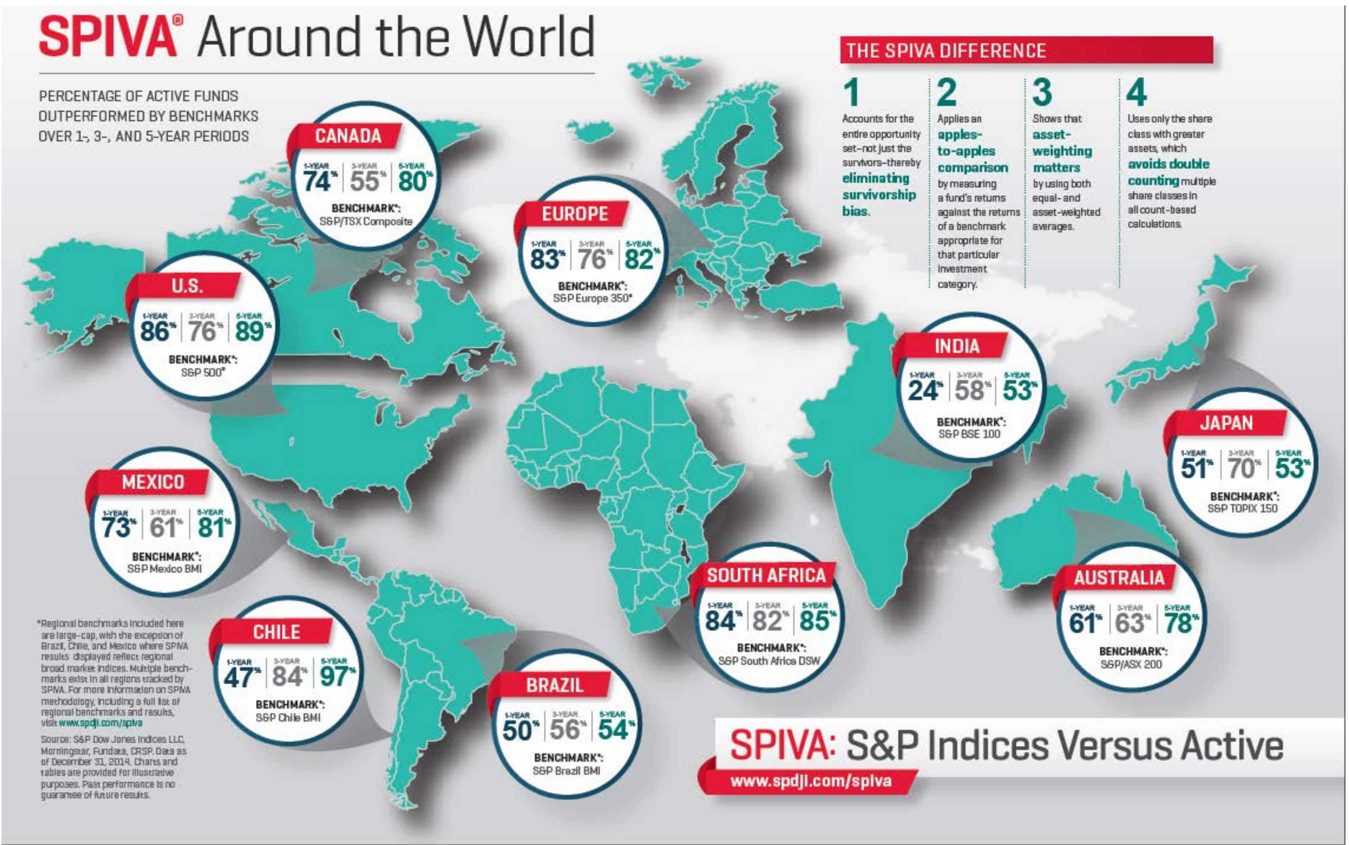


Source: *Asset Management: A Brave New World, 2020*, PriceWaterhouseCoopers. Chart is provided for illustrative purposes.

Admittedly, this discussion has been somewhat polarized, and even so, S&P Dow Jones Indices has assumed the role of an independent arbiter of the ongoing passive versus active debate, with the publication of the first SPIVA U.S. report in 2002. Since then, we have established ourselves as the authority on the subject through the publication of semiannual reports with coverage spanning different regions across all six continents; notably the U.S., Canada, Latin America, Europe, South Africa, India, Japan, and Australia. These biannual reports examine both domestic and international funds across equities and fixed income (see Exhibit 2 for a summary of the most recent results), and while the reports will not lead to a permanent resolution to this debate, we hope to continue to make a constructive contribution to it. To that end, the Global Research and Design team at S&P Dow Jones Indices has jointly authored this research article, which deals with topics and questions that are regularly raised by our readers and not usually covered in our regular publications.

In addition, instead of focusing narrowly on a single region, we have broadened our review to cover all of the regions where SPIVA reports are published. To begin, Section 1 examines the impact of fees on the returns of passive and active funds across the globe. Then, Section 2 analyzes how the performance of active managers in developed markets measured up to those in developing markets, and how managers of large-cap funds compared with those who manage mid- and small-cap funds. Finally, Section 3 assesses whether fund size, in terms of assets under management (AUM), is relevant in determining the success or failure of active funds.

Exhibit 2: S&P Indices Versus Active Fund Results at the End of 2014



Source: S&P Dow Jones Indices, LLC. Chart is provided for illustrative purposes. Data is as of Dec. 31, 2014.

1.0 IMPACT OF FEES ON INVESTMENT FUNDS

This first section aims to examine the fees of domestic funds in both the passive and active management space and, in particular, how these fees have affected cumulative performance over time across different countries.

Exhibit 3 presents the average annual expense ratio of active funds and passive funds over the five-year period ending December 2014, where sufficient data is available. While it may not come as a surprise that active funds levy higher charges than passive funds, it is notable that the expense ratios of active funds can vary significantly and were at least double those of passive funds across the board, regardless of where they were domiciled. The largest discrepancies were seen in emerging markets, namely Chile (1.99% per year) and Mexico (1.60% per year). Europe also saw significant differences, in that the average active fund charged more than five-times the average passive fund. The U.S., which has the largest mutual fund and exchange-traded fund market in the world[1], had by far the lowest expense ratios overall in both fund categories. Even so, U.S. active funds still levied about three-times more fees than passive funds.

Exhibit 3: Average Annual Expenses Levied on Domestic Equity Funds and Their Impact on Performance

Equities	Average Annual Expense Ratios[2] (% per Year)			Average Cumulative Impact of Fee Differentials Over Five Years (%)[3]
	Active Funds	Passive Funds	Difference	
Developed Markets				
Canada Equities	2.14	0.95	1.19	-5.59
Europe Equities	1.88	0.34	1.54	-7.36
U.S. Large-Cap Equities	0.75	0.27	0.48	-2.35
U.S. Mid- and Small-Cap Equities	1.13	0.37	0.76	-3.69
Emerging Markets				
Chile Equities	4.50	2.52	1.99	-8.58
Mexico Equities	2.02	0.42	1.60	-7.62
Indian Large-Cap Equities	1.87	0.49	1.37	-6.58
Indian Mid- and Small-Cap Equities	2.00	1.00	1.00	-4.71

Source: S&P Dow Jones Indices LLC based on information from Morningstar. Data as of December 2014. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

The significant differential in fees between passive and active funds underscores how much an average active fund manager would need to outperform an average passive fund manager in order to achieve the same net-of-fees return. Exhibit 3 displays the cumulative impact of this differential across different regions compounded over five years. This is estimated at 2%-9%, which is the amount that the active manager would have to outperform a passive manager, before fees and on a cumulative five-year basis, in order to have comparable after-fees performance. This significant drag is an important factor in why the vast majority of active funds underperformed their respective benchmarks, as revealed by SPIVA reports across different regions.

[1] Source: Investment Company Institute, *2015 Investment Company Fact Book*, 2015.

[2] Expense ratios are calculated on the basis of the amount of AUM in the fund (i.e., asset weighted) and only available data is taken into account.

[3] The average cumulative impact of fee differentials is calculated on the basis that the average annual expense ratio remains constant over the five years and is compounded annually.

Aside from the diverse average levels of fees levied in different regions, we also noticed a general downward trend in the amount of fees active managers charge (see Exhibit 3), and if this trend were to persist, it would evidently have implications on the performance gap of the average fund manager as previously highlighted. This also begs the question of whether the tendency in lower expense ratios ensues from active fund managers' desire to compete in the beta space by closing the performance gap, which has been magnified by handsome management fees. Alternatively, they may wish to ensure that their creditable stock-picking skills come to the foreground and are not entirely eroded by elevated expense ratios. No matter what the underlying motivation is, it is unquestionable that active management fees are likely to come down further as investors are increasingly demanding value for money, especially when management fees are juxtaposed with the disenchanting after-fees performance figures (see Exhibit 2). This is effectively what was witnessed in the developed world over the past five years (see Exhibit 4).

In emerging markets however, there is no uniform trend; two countries saw decreased fees, while two saw increased fees over the five-year span. Fees imposed by Chilean domestic funds have fallen the most, but they have also achieved the worst performance among the funds considered in Exhibit 2, with 97% of funds trailing the category benchmark. This contrasts with Indian domestic funds, which have witnessed a substantial uplift in fees, which may be a product of the regulation changes initiated in 2013. In an attempt to widen investor participation, Indian asset managers are now allowed to introduce a supplementary 30 bps surcharge for broadening investor inflows from cities beyond that of their primary focus.[4]

Exhibit 4: Annual Fund Fees Charged by Active Equity Funds

Region	Annual Expense Ratios (% per Year)					Compound Annual Growth Rate Over the Period (% per Year)
	2010	2011	2012	2013	2014	
Developed Markets						
Canada Equities	2.21	2.28	2.26	2.22	2.19	-0.18
Canada Mid- and Small-Cap Equities	2.70	2.78	2.68	2.68	2.65	-0.37
Europe Equities	2.04	1.96	1.91	1.86	1.83	-2.15
Europe Large- and Flex-Cap Equities	2.02	1.96	1.91	1.88	1.82	-2.06
Europe Mid- and Small-Cap Equities	2.16	1.94	1.93	1.76	1.86	-2.95
U.S. Large-Cap Equities	1.05	1.03	1.01	0.98	0.97	-1.57
U.S. Mid- and Small-Cap Equities	1.28	1.25	1.23	1.21	1.18	-1.61
Emerging Markets						
Chile Equities	4.57	4.09	4.08	4.06	4.13	-2.00
Indian Equities	2.17	2.27	2.16	2.34	2.58	3.52
Indian Mid- and Small-Cap Equities	2.28	2.10	2.22	2.50	2.69	3.36
Mexico Equities	2.21	2.43	2.48	2.44	2.40	1.66
South Africa Equities	1.35	1.32	1.31	1.27	1.29	-0.91

Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

[4] Source: Securities and Exchange Board of India, "Master Circular for Mutual Funds," September 2013.

2.0 PERFORMANCE OF ACTIVE FUND MANAGERS ACROSS DIFFERENT MARKETS

The second section seeks to appraise the performance of active funds across different geographies and investment styles. First, we assessed how active managers have performed in domestic and international equity markets, and then we looked at how large-cap managers fared relative to small-and-mid-cap managers tracking domestic equity markets.

2.1 Assessing the Performance of Funds Across Different Geographies

Over the five-year period ending December 2014, an overwhelming majority of domestic equity funds trailed their respective benchmarks across different markets (see Exhibit 5). Among them, domestic equity funds in Chile, the U.S., and South Africa fared the worst, with the highest proportion of funds underperforming their benchmarks. Their asset-weighted average returns lagged the benchmarks by 4.2%, 1.7%, and 2.1%, respectively. In contrast, figures for Indian and Japanese equity funds were markedly more favorable, with only 52.9% and 53.4% of funds underperforming their benchmarks, respectively. Their asset-weighted returns were also higher than their respective benchmark returns, which may suggest that active investment opportunities could be present in these markets. The performance of Indian domestic funds seems to give some weight to the claim that stock picking may be more effective in less-efficient emerging markets, which has become something of an aphorism in finance. However, this assertion was not substantiated by the performance in other emerging markets, namely South Africa and Latin America, where performance figures were equally, if not more dismal, than those in developed markets.

Exhibit 5: Percentage of Underperformance by Domestic Active Funds, Asset-Weighted and Benchmark Returns Across Different Markets

Domestic Active Fund Categories (Large Caps)	Benchmarks	Funds Underperforming their Benchmarks Over Five Years (% per Year)	Asset-Weighted Fund Return Over Five Years (% per Year)	Benchmark Return Over Five Years (% per Year)	Fund Excess Return (% per Year)
Developed Markets					
Canada Equities	S&P/TSX Composite	80.00	7.35	7.53	-0.18
Europe Equities	S&P Europe 350	81.51	8.94	9.63	-0.69
U.S. Equities	S&P 500®	88.65	13.71	15.45	-1.74
Australia Equities	S&P/ASX 200	77.56	6.91	6.75	0.16
Japan Equities	S&P/TOPIX 150	53.35	11.20	10.73	0.47
Emerging Markets					
Chile Equities	S&P Chile BMI	97.44	-1.45	2.75	-4.20
India Equities	S&P BSE 100	52.94	12.53	10.97	1.56
Mexico Equities	S&P Mexico BMI	80.56	9.09	8.45	0.64
South African Equities	S&P South Africa Domestic Shareholder Weighted Index	84.68	15.52	17.66	-2.14
Developed Market–Average		76.21	-	-	-0.40
Emerging Market–Average		79.65	-	-	-1.17

Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA Australia, Canada, Europe, Japan, India, Latin America, South Africa, and U.S. Scorecards Year-End 2014. Table is provided for illustrative purposes. Past performance is no guarantee of future results. It is not possible to invest directly in an index, and index returns do not reflect expenses an investor would pay.

In regard to international equity funds, asset managers failed to beat their respective benchmarks and delivered low asset-weighted return across most categories over the same period. By far the worst was the U.S. equity fund categories, where managers in Canada, Europe, and Japan underperformed the benchmark by 4.90% per year on average, and 96.03% of the funds did not beat their benchmarks (see Exhibit 6). These figures were decidedly poorer than those achieved by U.S. domestic equity fund managers, which may suggest that domestic fund managers performed better than foreign fund managers in selecting U.S. equities.

As for global and international equity funds, they underperformed their respective benchmarks by 2.85% and 1.55% per year on average, respectively, and 90.62% and 80.95% of funds failed to keep up with their benchmarks, respectively. Overall, global and international funds in the U.S. delivered better relative performance than those domiciled in other markets, and although 62.5% of U.S. international equity funds underperformed the benchmark, their asset-weighted returns exceeded their respective benchmarks by 0.51% per year.

Across all the foreign equity fund categories examined, emerging market funds fared the best, insofar as the least proportion of them underperformed their benchmarks, and they achieved the highest excess returns. This may imply that asset allocation and stock selection may work slightly better in the overall less-efficient emerging markets than in developed markets. Nevertheless, it should be highlighted that the majority of foreign emerging market funds domiciled in various markets still trailed their benchmarks.

Exhibit 6: Percentage of Underperformance by Foreign Active Funds, Asset-Weighted, and Benchmark Returns Across Different Markets					
Market	**Benchmark**	**Funds Underperforming their Benchmarks (Five-Year) (%)**	**Asset-Weighted Fund Return (Five-Year, Annualized) (%)**	**Benchmark Return (Five-Year, Annualized) (%)**	**Fund Excess Return (Five-Year, Annualized) (%)**
U.S. Equity Funds					
Canada	S&P 500 (CAD)	97.10	13.56	17.78	-4.22
Europe (EUR)	S&P 500 (EUR)	98.47	15.53	19.46	-3.93
Europe (GBP)	S&P 500 (GBP)	94.41	13.68	16.27	-2.59
Japan	S&P 500 (JPY)	94.12	12.59	21.45	-8.86
Average		96.03	-	-	-4.90
Global Equity Funds					
U.S.	S&P Global 1200 (USD)	75.46	9.38	10.49	-1.11
Canada	S&P Developed LargeMidCap (CAD)	97.17	9.15	12.89	-3.74
Europe (EUR)	S&P Global 1200 (EUR)	97.17	10.08	14.27	-4.19
Europe (GBP)	S&P Global 1200 (GBP)	90.36	9.59	11.28	-1.69
Japan	S&P Global 1200 (JPY)	86.90	12.05	16.21	-4.16
South Africa	S&P Global 1200 (SAR)	96.67	18.73	20.92	-2.19
Average		90.62	-	-	-2.85
International Equity Funds					
U.S.	S&P 700 (USD)	62.54	5.91	5.40	0.51
Canada	S&P EPAC LargeMidCap (CAD)	86.84	5.21	7.96	-2.75
Australia	S&P Developed Ex-Australia LargeMidCap (AUD)	86.09	11.18	12.98	-1.80
Japan	S&P Global 1200 Ex Japan (JPY)	88.33	14.50	16.65	-2.15
Average		80.95	-	-	-1.55
Emerging Market Equity Funds					
U.S.	S&P/IFCI (USD)	72.19	3.16	2.69	0.47
Europe (EUR)	S&P/IFCI (EUR)	90.71	4.26	6.24	-1.98
Europe (GBP)	S&P/IFCI (GBP)	72.50	4.26	3.40	0.86
Japan	S&P Emerging BMI (JPY)	61.40	6.65	7.67	-1.02
Average		74.20	-	-	-0.42

Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA Australia, Canada, Europe, Japan, India, Latin America, South Africa, and U.S. Scorecards Year-End 2014. Table is provided for illustrative purposes. Past performance is no guarantee of future results. It is not possible to invest directly in an index, and index returns do not reflect expenses an investor would pay.

2.2 Assessing the Performance of Funds Across Different Investment Styles

With respect to large-cap domestic equity funds, a significant number of funds in the U.S., Canada, Europe, Australia, and Brazil fared worse than the benchmarks over the five-year period preceding December 2014. This stands in sharp contrast with the funds in Japan and India, where the performance of active funds was more favorable, even though just over one-half of them still underperformed their benchmarks (see Exhibit 7). As for asset-weighted excess returns, India had the best return, followed by Japan, Europe, and Australia. This may suggest that active managers that were tapping into a large asset base were more skillful in picking stocks or were able to function more efficiently in those markets, thereby generating a higher net-of-fees return. Conversely, the U.S., Canada, and Brazil all registered negative excess returns over the same period.

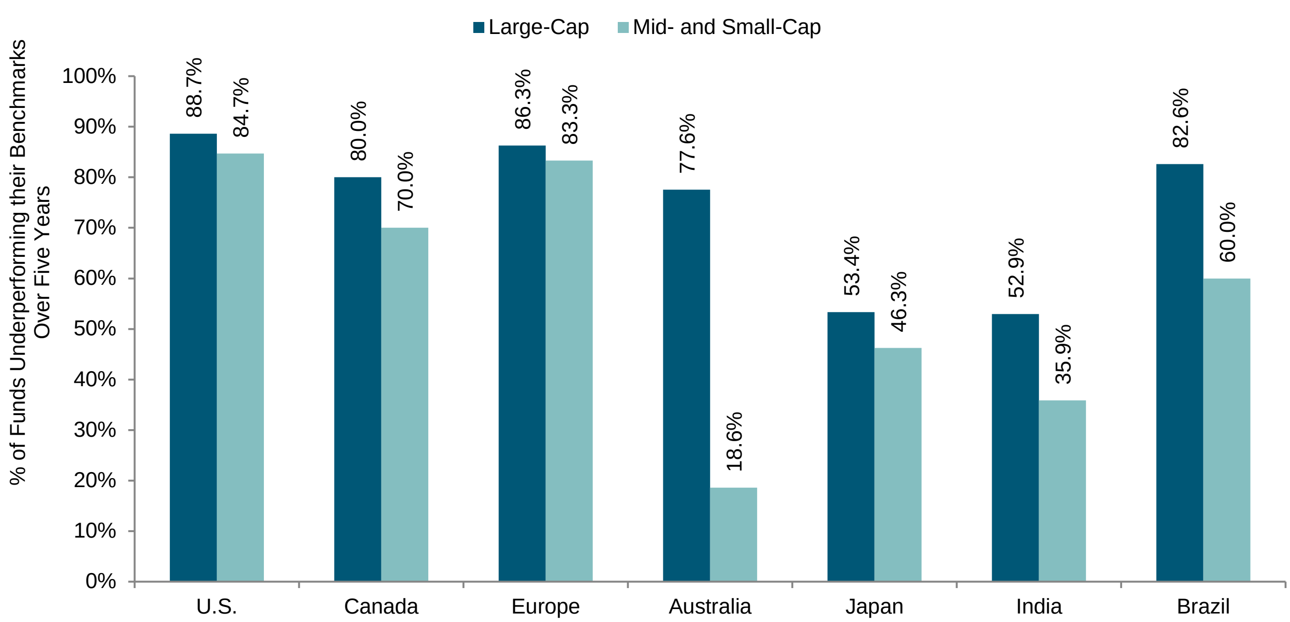
From the results in Exhibits 7 and 8, the most intriguing observation is that despite only 13.6% of funds outperforming the benchmark, the asset-weighted excess return in Europe was positive and stood at 0.46% per year over the five-year period preceding December 2014. A similar result was also seen in Australia, where an excess return of 0.16% was generated, even though only 22.44% of funds beat the benchmark.

Relative to the large-caps, the results for mid- and small-cap domestic equity funds look somewhat different. Australia performed the best, with 81.4% of active funds outperforming the benchmark. India and Japan were the only other countries where most of the active managers beat their benchmarks. The rest of the studied countries were characterized by a significant number of managers trailing the relevant benchmarks.

When this is compared with the amount of excess return generated in each region, a similar pattern was observed. Australia, India, and Japan were the only countries that registered material excess return. Over this period, Canada achieved a positive excess return of 0.32% per year even though only 30% of the funds surpassed the benchmark.

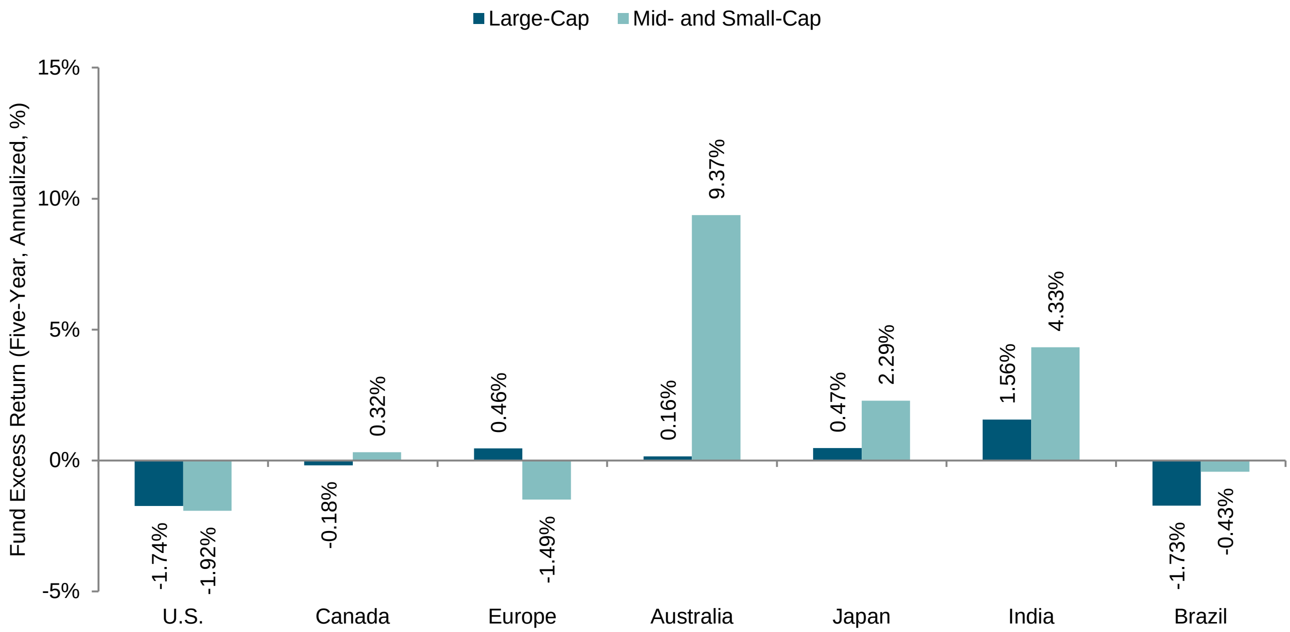
In all, it appears that it is difficult to generate alpha in the large-cap fund space, as the majority of funds underperformed their benchmarks, and for those regions where managers were able to achieve a positive excess return, it was negligible. On the other hand, there appeared to be some outperformance in the mid- and small-cap fund space, in particular in Australia, Japan, and India, but the results were not consistent across the board.

Exhibit 7: Percentage of Underperforming Domestic Active Funds in the Large-, Mid-, and Small-Cap Categories



Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA Australia, Canada, Europe, Japan, India, Latin America, and U.S. Scorecards Year-End 2014. Chart is provided for illustrative purposes. Past performance is no guarantee of future results. It is not possible to invest directly in an index, and index returns do not reflect expenses an investor would pay.

Exhibit 8: Excess Return of Domestic Active Funds in the Large-, Mid-, and Small-Cap Categories Against Their Benchmarks



Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA Australia, Canada, Europe, Japan, India, Latin America, and U.S. Scorecards Year-End 2014. Chart is provided for illustrative purposes. Past performance is no guarantee of future results. It is not possible to invest directly in an index, and index returns do not reflect expenses an investor would pay.

3.0 DOES FUND SIZE AFFECT PERFORMANCE? A COMPARISON BETWEEN EQUAL-WEIGHTED AND ASSET-WEIGHTED RETURNS

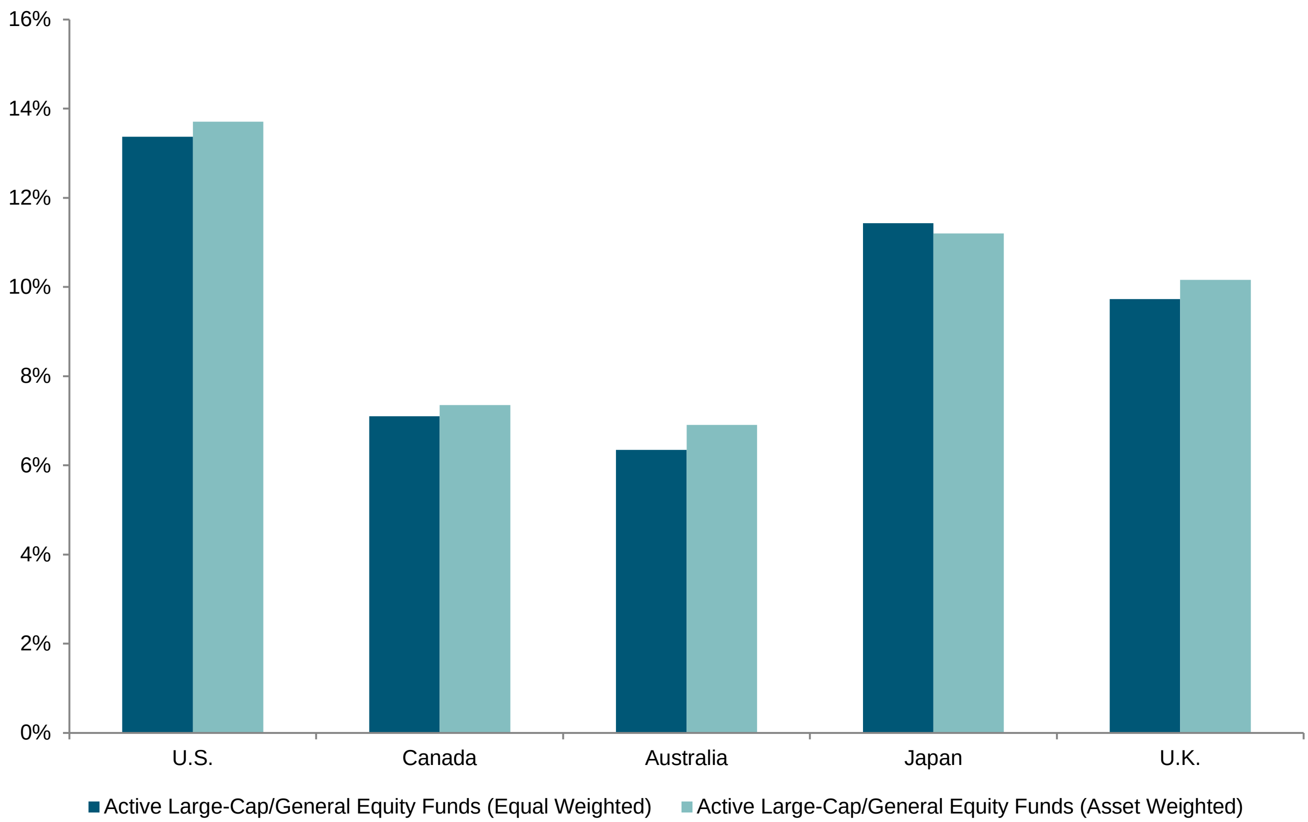
Performance studies are usually conducted on the basis of equally weighting the returns of studied funds, and while equal weighting is a good measure of the performance of the average manager, asset weighting represents the performance of the average invested dollar and, hence, it can be argued that it is more reflective of investors' true investment experience over a particular period. In SPIVA reports, both figures are published so as to allow investors to understand both the average manager performance and the average dollar performance for a given category of funds.

Looking at this from another angle, equal-weighted and asset-weighted returns can also be used as a means of gauging whether the AUM are pertinent in determining the overall fund performance. Generally speaking, conventional wisdom dictates that asset-weighted average returns should be higher than equal-weighted average returns, since funds with larger assets should reap benefits concomitant with economies of scale, compared with smaller funds. This should, in turn, allow them to produce better execution and potentially deliver higher returns to end investors, all else equal. On the contrary, when average equal-weighted returns are higher than average asset-weighted returns, this means that smaller funds have performed better than larger funds, and depending on the region and asset class, equal-weighted and asset-weighted returns can differ meaningfully. We have sought to underscore this through our analysis of the performance results of five developed economies, namely the U.S., Canada, the U.K., Japan, and Australia.

In regard to large-cap or general equity fund categories, the results in Exhibit 9 show that the amount of AUM appears to matter. Asset-weighted returns were higher than equal-weighted returns for four out of the five markets studied over the five years ending December 2014, with Japan being the only exception. It is also interesting to note that the asset-weighted returns are consistently lower in Japan, regardless of the time horizon under consideration. In all, the difference in performance produced by the two weighting schemes hovers around 0.25%-0.56% per year.

As for the small-cap equity space, the results are a little more mixed. Whereas the asset returns were higher for small-cap funds in the U.S., Australia, and the U.K, they were lower for Japan and Canada. Another notable observation is that the difference between asset-weighed and equal-weighed returns is fairly immaterial (about 0.3% per year) in most cases, barring the U.K., where this difference was immense and averaged 1.53% per year. This may indicate that the size of the fund plays a major role in the U.K. small-cap fund industry. For an average U.K. investor, selecting a fund with a larger asset base over a smaller one could translate into a substantial additional cumulative return of approximately 7.60% over five years—a period during which small-cap equities have been among one of the best-performing asset classes (see Exhibit 10). This finding is congruous with Otten and Reijnders (2012)[5], who found that larger U.K. small-cap funds tended to perform better than smaller ones. The authors concluded that economies of scale likely played a role, and that the U.K. small-cap funds could still grow larger and may have not reached their optimal size yet.

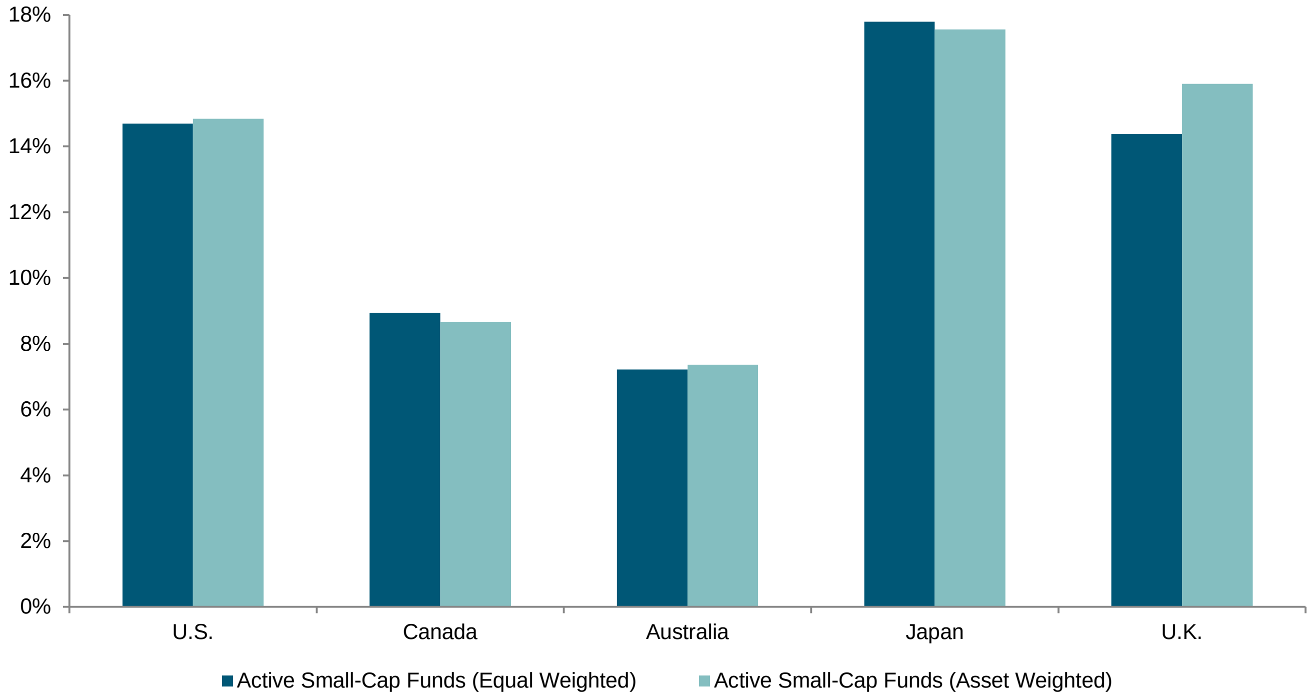
Exhibit 9: Comparison of Asset-Weighted and Equal-Weighted Returns for Select Large-Cap Funds



Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA U.S., Canada, Europe, Japan, and Australia Scorecards Year-End 2014. Chart is provided for illustrative purposes. Past performance is no guarantee of future results.

[5] Source: Otten and Reijnders (2012), *The Performance of Small Cap Mutual Funds: Evidence for the U.K.*, Maastricht University.

Exhibit 10: Comparison of Asset-Weighted and Equal-Weighted Returns for Select Small-Cap Funds



Source: S&P Dow Jones Indices LLC, based on information from Morningstar. Data as of December 2014, as reported in the SPIVA U.S., Canada, Europe, Japan, and Australia Scorecards Year-End 2014. Chart is provided for illustrative purposes. Past performance is no guarantee of future results.

Exhibit 11: Performance Differentials of Asset-Weighted and Equal-Weighted Returns

	U.S.	Canada	Australia	Japan	U.K.
Absolute Difference Per Year (Large-Cap) (%)	0.34	0.25	0.56	0.23	0.43
Absolute Difference Per Year (Small-Cap) (%)	0.14	0.28	0.14	0.23	1.53

Source: S&P Dow Jones Indices LLC. Data as of December 2014, as reported in the SPIVA U.S., Canada, Europe, Japan, and Australia Scorecards Year-End 2014. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

4.0 CONCLUSION

Since the first publication of the U.S. SPIVA report, S&P Dow Jones Indices has continued to expand coverage to other regions and countries in order to keep track of the ongoing passive versus active debate. In this research paper, we have found that the amount of fees that investors have to pay can vary depending on the domicile of the active fund, and the compounding effect of this can have a material impact on cumulative return.

Looking across different countries, we found some evidence that developed market managers underperformed their benchmarks less than emerging market managers in the sample we examined, although this was not consistent across the board. In terms of investment style, we noted that both India and Japan saw the highest level of outperformance over their benchmarks in both the large-cap and mid- and small-cap spaces.

Finally, we observed that the amount of AUM was relevant in determining the success of a given large-cap fund, with the notable exception of Japan among the countries analyzed. In the small-cap space, the results were more mixed, but the size of the fund was seen as relevant in the U.K.

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