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# SPIVA® Canada Scorecard

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Experience the active vs. passive debate on a global scale.

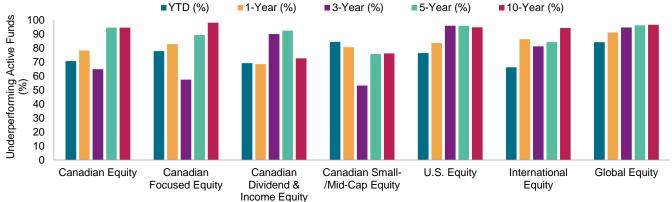
Since the first publication of the S&P Indices Versus Active (SPIVA) U.S. Scorecard in 2002, S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate.

The SPIVA Canada Scorecard measures the performance of Canadian actively managed funds against their respective benchmarks over various time horizons, covering large-, mid- and small-cap segments, as well as international and global equity funds.

# Mid-Year 2023 Highlights

The first half of 2023 was relatively challenging for most actively managed funds in Canada. More than two-thirds of active funds underperformed their benchmarks in several categories, including Canadian Equity funds at 71%, Canadian Focused Equity funds at 78%, U.S. Equity funds at 76% and Global Equity funds at 84% (see Exhibit 1 and Report 1). International Equity funds posted the lowest mid-year underperformance, with 66% lagging the benchmark. Underperformance rates generally increased with time horizons.





Source: S&P Dow Jones Indices LLC, Fundata. Data as of June 30, 2023. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

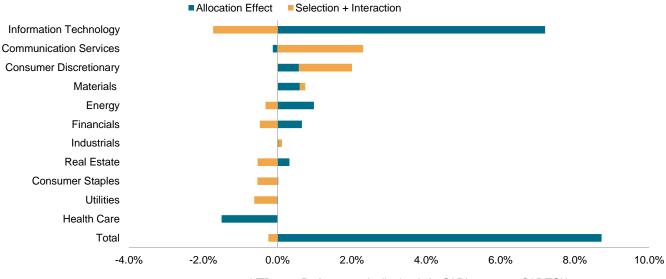
Canadian Equity Funds: The <u>S&P/TSX Composite Index</u> gained 5.7% in H1 2023, while Canadian Equity funds gained 5.1% and 5.4% on equal- and asset-weighted bases, respectively. Underperformance rates hit 71% over six months, climbing to 65%, 95% and 95% over the 3-, 5- and 10-year horizons, respectively.

- Canadian Focused Equity Funds: The blended benchmark of 50% S&P/TSX Composite Index + 25% <u>S&P 500®</u> + 25% <u>S&P EPAC LargeMidCap gained</u> 8.8% in H1 2023, outperforming 78% of Canadian Focused Equity funds. Underperformance rates were 57%, 89% and 98% over the 3-, 5- and 10-year horizons, respectively.
- Canadian Dividend & Income Equity Funds: The <u>S&P/TSX Canadian Dividend</u> <u>Aristocrats® Index</u> gained 4.2% during H1 2023, while Canadian Dividend & Income Equity funds gained 3.5% and 2.9% on equal- and asset-weighted bases, respectively. Underperformance rates reached 69% over the six-month period, rising to 90%, 92% and 73% over the 3-, 5- and 10-year horizons, respectively.
- Canadian Small-/Mid-Cap Equity Funds: The <u>S&P/TSX Completion Index</u> rose 5.6% in H1 2023, and 84% of Canadian Small-/Mid-Cap Equity funds underperformed the index. Funds in this category gained 3.1% and 3.5% on equal- and asset-weighted bases, respectively, over the six-month period.
- U.S. Equity Funds: The S&P 500 gained 14.2% in H1 2023, and 76% of U.S. Equity funds underperformed the index. Few funds in the U.S. Equity category outperformed over the long term, with 96%, 96% and 95% underperforming over 3-, 5- and 10-year horizons, respectively.
- International Equity Funds: 66% of International Equity funds trailed the S&P EPAC LargeMidCap in H1 2023, and 84% and 94% underperformed over the 5- and 10-year periods, respectively.
- Global Equity Funds: The <u>S&P Developed LargeMidCap</u> rose 12.9% in H1 2023 and Global Equity funds gained 9.1% and 7.5% on equal- and asset-weighted bases, respectively. Over the six-month period, 84% of funds in the category trailed the benchmark. Over the 3-, 5- and 10-year periods, 95%, 96% and 97% of funds underperformed, respectively.
- Fund Survivorship: Liquidation rates for all categories were in single digits for the sixmonth period ending June 30, 2023. Over the 10-year period, 47% of Canadian Equity funds merged or liquidated, and 39% of funds disappeared across all categories (see Report 2).

# Market Context

After a tumultuous 2022, the S&P/TSX Composite Index was up 6% in H1 2023. Meanwhile, U.S. performance was even more impressive, with the S&P 500 up 14% in Canadian dollars, outpacing the <u>S&P/TSX 60</u>, its Canadian large-cap counterpart, by 8%. Exhibit 2 illustrates that overall, weighting differences across sectors was a key driver of U.S. outperformance, particularly in Information Technology, the biggest sectoral contributor to outperformance.

Exhibit 2: Information Technology Exposure Was Key to U.S. Equity Outperformance



YTD 2023 Performance Attribution (%) - S&P/500 versus S&P/TSX 60

Source: S&P Dow Jones Indices LLC, FactSet. Data as of June 30, 2023. Index performance based on total return in CAD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

We've previously noted that one well-known source of potential outperformance for Canadian managers has been tilting toward large-cap U.S. equities. However, despite this tailwind, 71% of Canadian Equity funds underperformed. One possible reason may have been the outperformance of U.S. mega caps, with the <u>S&P 500 Top 50</u> up an impressive 28% in U.S. dollar terms, creating challenges for managers who were underweight U.S. mega caps. However, Exhibit 3 shows that mega-cap outperformance was not limited to the U.S. One of Canada's darling stocks, Shopify Inc, staged a dramatic turnaround, outperforming the S&P/TSX 60 by 76% in the first six months of the year, and also happened to be one of the 10 largest stocks within the index. Outperformance of a large local constituent may have created additional headwinds for managers who were underweight Shopify during this period.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> As of Dec 30, 2022, Shopify's weight in the S&P/TSX 60 was 2.5%. Over the course of H1 2023, this stock had a total return of 82% and ended with a 4.4% weight in the S&P/TSX 60.

100 YTD 2023 Constituent Excess Return versus the S&P/TSX 60 (%) 80 Shopify Inc. 60 40 20 0 -20 -40 0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 YTD 2023 Average Constituent Weight (%)

Exhibit 3: Shopify Inc. Posted the Highest Excess Return versus the S&P/TSX 60 in H1 2023

Source: S&P Dow Jones Indices LLC, FactSet. Data as of June 30, 2023. Index performance based on total return in CAD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Meanwhile, results for U.S. Equity funds domiciled in Canada, were equally bleak, with 76% underperforming the S&P 500, worse than their U.S.-domiciled counterparts. U.S. fund managers may have faced a similar headwind as their Canadian counterparts resulting from the strength of U.S. mega caps.

An additional hurdle could have arisen from the underperformance of international equities relative to the U.S. Exhibit 4 shows that outperformance of the S&P EPAC LargeMidCap versus the S&P 500 historically tended to coincide with reduced U.S. equity underperformance rates, suggesting a tendency for U.S. managers in Canada to tilt overseas. That was not a favorable option in H1 2023, with the S&P EPAC LargeMidCap underperforming the S&P 500 by 5%.

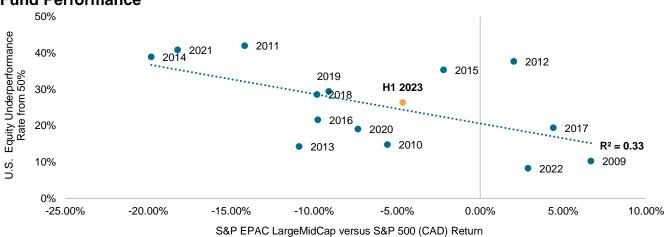
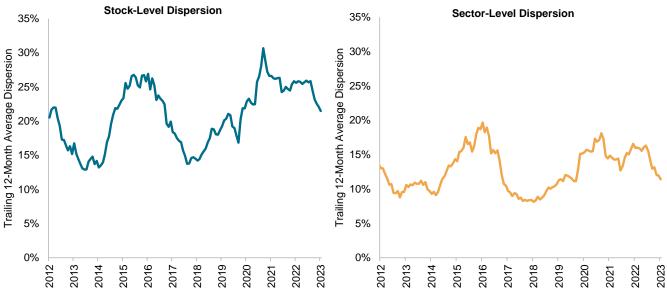


Exhibit 4: Weakness in International Equity Markets May Have Hampered U.S. Equity Fund Performance

Source: S&P Dow Jones Indices LLC, Fundata. Data as of June 30, 2023. Index performance based on total return in CAD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

In addition to capitalization and country challenges, there were reduced opportunities to find excess returns compared to 2022. Exhibit 5 shows that dispersion—a measure of the difference in performance between index constituents and an indication of the opportunity set for stock picking—declined in H1 2023 toward its long-run average, indicating moderate opportunities to add value from stock selection skill. Opportunities to showcase skillful sector allocation were also rewarded less compared to last year, as demonstrated by the trend downward in sector dispersion levels within the S&P/TSX Composite Index.

Exhibit 5: S&P/TSX Composite Index Stock- and Sector-Level Dispersion Trended Downward



Source: S&P Dow Jones Indices LLC. Data as of June 30, 2023. Charts are provided for illustrative purposes.

Overall, an amalgamation of headwinds led to a relatively dreary set of results, with an average of 76% of funds across categories underperforming their respective benchmarks in H1 2023. Long-term trends were even poorer, as our statistics show that the average underperformance increased to 90% over the 10-year horizon.

# A Unique Scorecard for the Active Versus Passive Debate

Since its first publication in the U.S. over 20 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For two decades, 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 Canada 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 means the returns of a CAD 10 billion fund affect the average in the same manner as the returns of a CAD 10 million fund. An accurate representation of how market participants fared in a particular period can be ascertained by calculating weighted average returns, where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- Data Cleaning: SPIVA Scorecards avoid double-counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

# Reports

Report 1a: Percentage of Funds Underperforming Their Benchmarks (Based on Absolute Return)

(Dased on Absolute Neturn)						
Fund Category	Comparison Index	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
Canadian Equity	S&P/TSX Composite Index	70.67	78.21	64.79	94.52	94.57
Canadian Focused Equity	50% S&P/TSX Composite Index + 25% S&P 500 (CAD) + 25% S&P EPAC LargeMidCap (CAD)	77.78	82.81	57.35	89.29	98.08
Canadian Dividend & Income Equity	S&P/TSX Canadian Dividend Aristocrats Index	69.23	68.52	90.00	92.42	72.58
Canadian Small- /Mid-Cap Equity	S&P/TSX Completion Index	84.38	80.65	53.13	75.68	76.19
U.S. Equity	S&P 500 (CAD)	76.39	83.56	95.95	95.80	94.83
International Equity	S&P EPAC LargeMidCap (CAD)	66.22	86.30	81.16	84.13	94.29
Global Equity	S&P Developed LargeMidCap (CAD)	84.15	91.19	94.69	96.14	96.60

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1b: Percentage of Funds Underperforming Their Benchmarks (Based on Risk-Adjusted Return)

Fund Category	Comparison Index	3-Year (%)	5-Year (%)	10-Year (%)
Canadian Equity	S&P/TSX Composite Index	57.75	93.15	87.93
Canadian Focused Equity	50% S&P/TSX Composite Index + 25% S&P 500 (CAD) + 25% S&P EPAC LargeMidCap (CAD)	63.24	90.48	96.61
Canadian Dividend & Income Equity	S&P/TSX Canadian Dividend Aristocrats Index	95.00	78.79	48.98
Canadian Small-/ Mid-Cap Equity	S&P/TSX Completion Index	53.13	72.97	75.00
U.S. Equity	S&P 500 (CAD)	89.19	97.20	100.00
International Equity	S&P EPAC LargeMidCap (CAD)	84.06	85.71	92.00
Global Equity	S&P Developed LargeMidCap (CAD)	92.65	97.00	97.92

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Risk-adjusted return is computed as the annualized average monthly return divided by the annualized standard deviation of the monthly return for the measured periods. Results shown for all time horizons over which the comparison index total return was positive. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 2: Survivorship of Funds** 

Fund Category	Number of Funds at Start	Survivorship (%)
YTD		
Canadian Equity	75	96.00
Canadian Focused Equity	63	93.65
Canadian Dividend & Income Equity	52	100.00
Canadian Small-/Mid-Cap Equity	32	93.75
U.S. Equity	144	96.53
International Equity	74	98.65
Global Equity	265	96.23
All Categories	705	96.45
1-Year		
Canadian Equity	78	92.31
Canadian Focused Equity	64	90.63
Canadian Dividend & Income Equity	54	98.15
Canadian Small-/Mid-Cap Equity	31	93.55
U.S. Equity	146	95.89
International Equity	73	98.63
Global Equity	261	95.02
All Categories	707	95.05
3-Year		
Canadian Equity	71	85.92
Canadian Focused Equity	68	82.35
Canadian Dividend & Income Equity	60	93.33
Canadian Small-/Mid-Cap Equity	32	90.63
U.S. Equity	148	88.51
International Equity	69	91.30
Global Equity	245	89.39
All Categories	693	88.74

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of Funds (cont.)

Fund Category	Number of Funds at Start	Survivorship (%)
5-Year		
Canadian Equity	73	76.71
Canadian Focused Equity	84	65.48
Canadian Dividend & Income Equity	66	80.30
Canadian Small-/Mid-Cap Equity	37	78.38
U.S. Equity	143	78.32
International Equity	63	82.54
Global Equity	233	82.83
All Categories	699	78.68
10-Year		
Canadian Equity	92	53.26
Canadian Focused Equity	104	43.27
Canadian Dividend & Income Equity	62	70.97
Canadian Small-/Mid-Cap Equity	42	64.29
U.S. Equity	116	69.83
International Equity	70	57.14
Global Equity	206	66.50
All Categories	692	61.13

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal-Weighted)

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Index/Fund Category	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P/TSX Composite Index	5.70	10.43	12.42	7.62	8.43
Canadian Equity	5.14	8.72	11.67	5.23	6.67
50% S&P/TSX Composite Index + 25% S&P 500 (CAD) + 25% S&P EPAC LargeMidCap (CAD)	8.77	16.33	11.67	8.22	10.26
Canadian Focused Equity	7.27	12.09	11.48	6.42	7.12
S&P/TSX Canadian Dividend Aristocrats Index	4.16	5.90	15.04	7.79	7.69
Canadian Dividend & Income Equity	3.47	5.20	12.04	5.59	6.45
S&P/TSX Completion Index	5.58	13.54	11.75	5.96	6.49
Canadian Small-/Mid-Cap Equity	3.11	9.17	12.43	5.04	5.78

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Returns for periods greater than one year are annualized. Index performance based on total return. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal-Weighted) (cont.)

Index/Fund Category	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P 500 (CAD)	14.16	22.68	13.50	12.44	15.45
U.S. Equity	10.69	17.47	9.50	7.99	11.23
S&P EPAC LargeMidCap (CAD)	9.49	21.84	7.97	4.80	8.28
International Equity	8.94	18.29	5.59	2.99	6.20
S&P Developed LargeMidCap (CAD)	12.87	22.01	11.26	9.48	12.41
Global Equity	9.13	15.48	7.31	5.65	8.06

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Returns for periods greater than one year are annualized. Index performance based on total return. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average Fund Performance (Asset-Weighted)

Index/Fund Category	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P/TSX Composite Index	5.70	10.43	12.42	7.62	8.43
Canadian Equity	5.45	9.80	12.98	5.70	7.12
50% S&P/TSX Composite Index + 25% S&P 500 (CAD) + 25% S&P EPAC LargeMidCap (CAD)	8.77	16.33	11.67	8.22	10.26
Canadian Focused Equity	7.20	11.30	11.61	6.42	7.12
S&P/TSX Canadian Dividend Aristocrats Index	4.16	5.90	15.04	7.79	7.69
Canadian Dividend & Income Equity	2.92	4.89	12.34	6.50	7.47
S&P/TSX Completion Index	5.58	13.54	11.75	5.96	6.49
Canadian Small-/Mid-Cap Equity	3.46	8.57	11.43	4.54	5.61
S&P 500 (CAD)	14.16	22.68	13.50	12.44	15.45
U.S. Equity	12.49	19.35	8.20	8.35	11.85
S&P EPAC LargeMidCap (CAD)	9.49	21.84	7.97	4.80	8.28
International Equity	8.30	18.78	5.49	3.84	6.89
S&P Developed LargeMidCap (CAD)	12.87	22.01	11.26	9.48	12.41
Global Equity	7.46	14.38	6.37	5.06	8.06

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Returns for periods greater than one year are annualized. Index performance based on total return. 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 (%)
YTD			
Canadian Equity	3.60	4.67	6.08
Canadian Focused Equity	4.49	6.62	8.55
Canadian Dividend & Income Equity	2.04	3.01	4.44
Canadian Small-/Mid-Cap Equity	1.12	3.13	5.25
U.S. Equity	5.00	9.61	14.02
International Equity	7.24	8.73	10.67
Global Equity	6.03	7.78	10.72
1-Year			
Canadian Equity	6.80	8.52	10.06
Canadian Focused Equity	8.16	10.82	14.89
Canadian Dividend & Income Equity	3.52	5.00	6.64
Canadian Small-/Mid-Cap Equity	6.06	9.25	11.20
U.S. Equity	13.31	17.33	20.71
International Equity	15.41	18.84	20.47
Global Equity	12.49	15.20	18.30
3-Year			
Canadian Equity	9.79	11.86	13.29
Canadian Focused Equity	9.76	11.78	13.13
Canadian Dividend & Income Equity	10.96	12.08	14.03
Canadian Small-/Mid-Cap Equity	8.01	11.78	15.60
U.S. Equity	7.78	9.83	11.67
International Equity	3.38	5.34	7.72
Global Equity	5.89	7.79	9.21

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Returns for periods greater than one year are annualized. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 5: Quartile Breakpoints of Fund Performance (cont.)** 

Fund Category	Third Quartile (%)	Second Quartile (%)	First Quartile (%)
5-Year			
Canadian Equity	4.31	5.70	6.37
Canadian Focused Equity	5.37	6.71	7.99
Canadian Dividend & Income Equity	5.21	5.88	6.60
Canadian Small-/Mid-Cap Equity	3.02	5.24	7.88
U.S. Equity	6.63	8.24	9.74
International Equity	1.89	2.76	3.84
Global Equity	4.39	5.58	7.08
10-Year			
Canadian Equity	5.96	6.76	7.97
Canadian Focused Equity	6.41	7.38	8.74
Canadian Dividend & Income Equity	5.53	7.09	7.82
Canadian Small-/Mid-Cap Equity	5.26	6.24	7.14
U.S. Equity	9.78	11.56	13.15
International Equity	5.63	6.32	7.31
Global Equity	6.78	7.81	9.88

Source: S&P Dow Jones Indices LLC, Fundata. Data for periods ending June 30, 2023. Returns for periods greater than one year are annualized. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

# Appendix A: SPIVA Methodology

#### Data

S&P Dow Jones Indices obtains a custom feed of monthly return data from Fundata Canada for all equity funds<sup>2</sup> in its database. The feed includes data on funds that have merged or liquidated. Fundata applies the following filters to the file S&P DJI receives.

- All non-equity funds are excluded.
- All pooled funds, segregated funds or other specialized categories that do not qualify as retail mutual funds are excluded.
- Multiple occurrences of the same fund's portfolio reporting in two or more currencies are also excluded, as S&P DJI only uses the Canadian dollar version.
- Only a single share class is included.

The file contains the following data fields on a monthly basis.

- Fund name
- Fund identifier
- Month and year
- Fund returns for the month, after management and other costs, including distributions
- Fund assets under management in that month
- Fund categorization in that month
- Management type (i.e., whether the fund is indexed or actively managed)

S&P DJI then excludes index funds, limiting the data to funds that are actively managed.

<sup>&</sup>lt;sup>2</sup> Includes mutual funds and ETFs.

# **Fund Categories**

S&P Dow Jones Indices chooses funds that, at any point in the previous 120 months, were classified in at least one of the following seven Canadian Investment Funds Standards Committee (CIFSC) categories.

- Canadian Equity
- Canadian Focused Equity
- Canadian Dividend & Income Equity
- Canadian Small-/Mid-Cap Equity
- U.S. Equity
- International Equity
- Global Equity

The categories reviewed in this report represent the major areas of interest for Canadian market participants. The CIFSC governs the categorization of Canadian mutual funds.

#### **Benchmarks**

The chosen benchmarks are shown in Exhibit 6. All index returns are total returns (i.e., include dividend reinvestment) in Canadian 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. To ensure the study is robust and fair, representative benchmarks were selected for each fund category, but not all funds adopt the benchmarks stipulated. However, a vast majority do set their performance hurdle based on either the assigned benchmarks in this report or a similar alternative.

**Exhibit 6: SPIVA Categories and Their Benchmarks** 

SPIVA Category	Benchmark Index
Canadian Equity	S&P/TSX Composite Index
Canadian Focused Equity	50% S&P/TSX Composite Index + 25% S&P 500 (CAD) + 25% S&P EPAC LargeMidCap (CAD)
Canadian Dividend & Income Equity	S&P/TSX Canadian Dividend Aristocrats Index
Canadian Small-/Mid-Cap Equity	S&P/TSX Completion Index
U.S. Equity	S&P 500 (CAD)
International Equity	S&P EPAC LargeMidCap (CAD)
Global Equity	S&P Developed LargeMidCap (CAD)

Source: S&P Dow Jones Indices LLC, Fundata. 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 percentage of funds that did not survive and beat the index.

#### Survivorship (%)

The survivorship measure represents the percentage of funds in existence at the beginning of the time period that are still active at the end of the time period.

#### **Equal-Weighted Fund Performance**

Equal-weighted returns for a particular style category and time horizon are determined by compounding the simple average of the monthly returns of all active funds that were available at the start of the period.

# Asset-Weighted Fund Performance

Asset-weighted returns for a particular style category are calculated similarly, except based on a weighted average return of fund returns each month, with each fund's return weighted by its total net assets. Asset-weighted returns can be a better indicator of category performances because they reflect the returns of the total money invested across the sample of funds.

# Quartile Breakpoints

The p<sup>th</sup> 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 75<sup>th</sup> percentile, which is the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50<sup>th</sup> percentile, and the third quartile is the 25<sup>th</sup> percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest surviving 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. The SPIVA reports remove this bias in three ways. The first method to remove the bias is to use 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. The second is explicitly to show the survivorship rate in each category. The final way is to construct a 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 500

Widely regarded as the best single gauge of the U.S. equities market, this index includes a representative sample of 500 leading companies in leading industries of the U.S. economy and provides over 80% market coverage of the U.S. equities market.

#### S&P/TSX Composite Index

This is the headline index and the principal broad market measure for Canadian equity markets. The S&P/TSX Composite Index is the basis for numerous subindices, which break down the Canadian market by different factors, including size, liquidity and Global Industry Classification Standard (GICS®).

#### S&P/TSX Completion Index

This is a modular component of the S&P/TSX Composite Index. This index comprises constituents of the S&P/TSX Composite Index that are not in the S&P/TSX 60.

#### S&P/TSX Canadian Dividend Aristocrats Index

This index is designed to measure the performance of Canadian securities that have followed a managed dividends policy of consistently increasing dividends every year for at least five years.

#### S&P EPAC LargeMidCap

This index is a float-weighted, rules-based benchmark that is designed to measure the universe of securities in the developed markets, excluding North America. The S&P EPAC LargeMidCap constitutes the top 85% of the available market capitalization of the <u>S&P EPAC BMI</u>. The S&P EPAC LargeMidCap was previously named the S&P/Citigroup EPAC PMI Index and represented 80% of the available market cap. On Oct. 1, 2008, the new size divisions and name change took effect.

#### S&P Developed LargeMidCap

This index is a float-weighted, rules-based benchmark that is designed to measure securities in the developed markets. The S&P Developed LargeMidCap constitutes the top 85% of the available market cap of the <u>S&P Developed BMI</u>. The S&P Developed LargeMidCap was previously named the S&P/Citigroup World PMI Index and represented 80% of the available market capitalization. On Oct. 1, 2008, the new size divisions and name change took effect.

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