

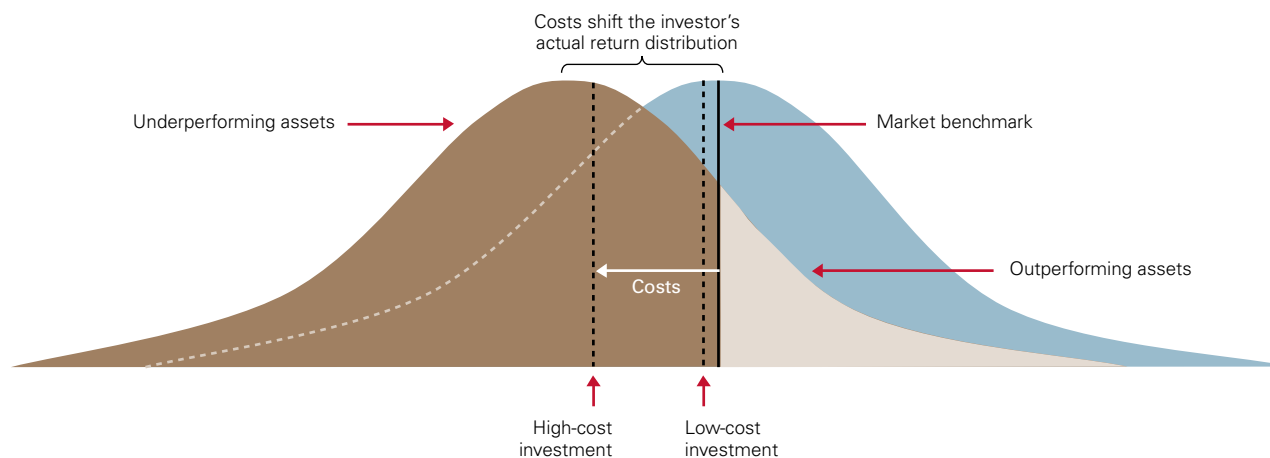
The case for low-cost index fund investing for Canadian investors

April 2018

Investing is a zero-sum game

- In the aggregate, investors play a zero-sum game. That is, half of investor dollars outperform and the other half underperform the market average.
- Once investing costs are subtracted, it is much more difficult for investors to outperform the market as a whole.
- To be successful at the zero-sum game, investors must be able to find the minority of active investments that can consistently beat the market, despite their higher costs.
- An alternative is to use an indexing strategy that minimizes costs so that, over time, investors achieve a return close to the market average.

Half of all dollars invested will outperform the market return before costs (blue curve). After costs (brown curve), a much smaller portion (tan) outperforms the market return.



Note: For illustrative purposes only. This illustration does not represent the return on any particular investment.

Source: The Vanguard Group, Inc.

(continued on reverse)

Closer look at data weakens appeal of active approaches

- Canadian actively managed funds have fared poorly, on average, versus their benchmarks over the past decade.
- Relative performance doesn't measure the degree of difference, whereas excess return quantifies that difference.
- Median "excess" return figures are mostly negative, due to the cost burden faced by active management.
- Primarily because of their low-cost structure, well-managed index funds and ETFs have generally offered long-term outperformance relative to higher cost investments (*The case for low-cost index-fund investing*, Rowley Jr., 2018).
- Additional benefits can include greater diversification, style consistency and tax efficiency than actively managed funds offer.
- Talk to your financial advisor to learn more about the benefits of indexing.

Equity fund returns

	5 years	10 years
Large	63%	82%
	0.17%	-0.53%
Medium	40%	66%
	2.91%	1.57%
Small	69%	81%
	0.65%	-0.41%

Fixed income fund returns

	5 years	10 years
Short	92%	93%
	-0.79%	-0.76%
Intermediate	90%	89%
	-0.93%	-0.73%

Non-Canadian fund returns

	5 years	10 years
International equity	77%	85%
	-1.12%	-1.33%
U.S. equity	97%	94%
	-3.56%	-2.93%

- Percentage underperforming prospectus benchmark, adjusted for survivorship bias*
- Median fund excess return, survivors only

Sources: Vanguard calculations using data from Morningstar, Inc. and Thomson Reuters Datastream. Fund classifications provided by Morningstar. Benchmarks reflect those identified in each fund's prospectus. Data as of December 31, 2017.

Fund universe includes funds available for sale in Canada from the following Morningstar categories: Canadian equity, Canadian small/mid Cap equity, Canadian short-term fixed income, and Canadian intermediate-term fixed income. Fund performance is shown in Canadian dollar terms, net of fees, gross of withholding, with income reinvested, based on closing NAV prices. Past performance is not a reliable indicator of future results.

*Survivorship bias is introduced when funds are merged or liquidated, and so are not represented throughout full time period examined. See *The case for low-cost index-fund investing*, Rowley Jr., 2018, for more information.

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The first date of publication by Vanguard Investments Canada Inc. is April 2018.

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