Timing the Canadian equity market: A two-sided coin[1]

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- Advice to investors routinely mentions how difficult it is to successfully time the equity market. Although the possibility for success at market-timing does exist, the probability of victory is slight.[2]
- On the other hand, a review of historical returns shows that investors who managed to avoid market downturns—even just a handful of the worst days—would have seen their returns improve compared with those of a static equity allocation.
- However, debates about the prudence of market-timing versus "staying the course" have been common and, ironically, have often relied on different sides of the same coin to support their views.

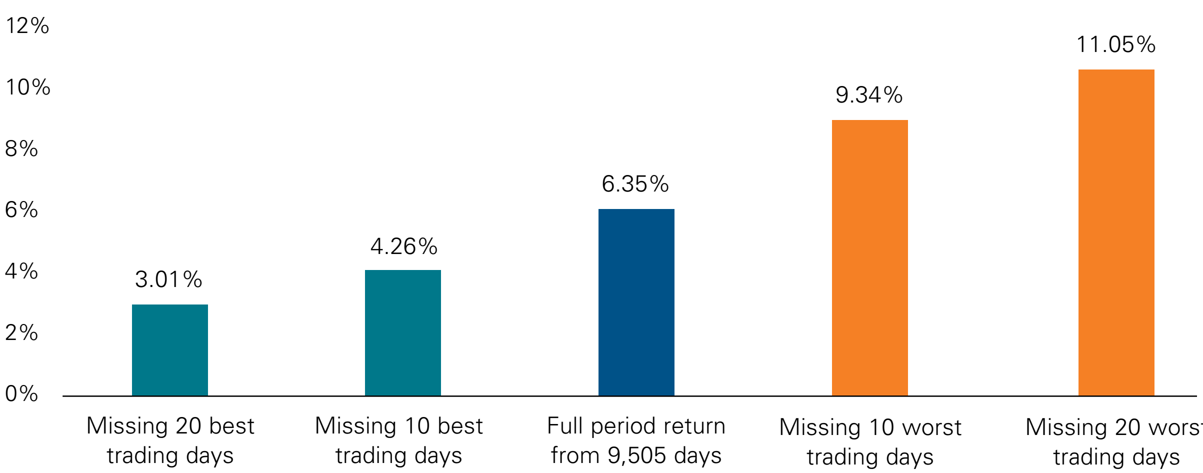
One side of the coin: The theoretical benefits of perfect market-timing

Figure 1 illustrates the price return of the S&P TSX Composite Index from July 1, 1979, through December 31, 2016, which averaged 6.35% for the period. We used price returns in the figure because of limitations in the availability of daily total returns before 1989 (dividends accounted for an additional 2.80% per year over the period). Consistent with common sense and simple mathematics, investors would certainly have improved their returns during this time if they were able to sidestep the market's worst days.

On the other hand, they would have reduced their returns if they happened to miss out on the market's best days. Historical results bear this out: Missing either the 20 worst or 20 best trading days in the 38 ½ -year period (or 0.43% of the 9,505 total trading days) would have altered an investor's overall return significantly, nearly doubling it if the worst 20 days were missed and reducing it by more than half if the best 20 days were missed.

Although a 38 ½ -year streak of such impeccable timing would be improbable, to put it mildly, the magnitude of the return differentials may seem adequate justification to attempt this feat. As often happens, however, the investor considers the results of only one action or inaction. Rather than assess the risks of missing the market's best days, for example, an investor will focus only on the benefits of avoiding the worst—one-half of the results presented in Figure 1. Investors may overlook the forest for the trees.

Figure 1: Impact to price return of the S&P TSX Composite Index, 1979 to 2016



1 This research note updates the 2010 Vanguard paper *Market timing: A two-sided coin*, by Donald Bennyhoff and Yan Zilbering.

2 Harbron, Garett L., Daren Roberts, and Todd Schlanger, 2017. *The case for low cost index-fund investing.* Valley Forge, The Vanguard Group.

Notes: Price returns from the S&P TSX Composite Index. Data runs from July 1, 1979, to December 31, 2016.

Source: Vanguard calculations, using data from Factset.

On the other side: The daunting practical challenges of market-timing

Looking at the sequence, rather than the magnitude, of best and worst days provides a more instructional perspective on the challenge of effective market-timing: Not uncommonly, the best and worst trading days occur within days of each other (see blue shaded areas in Figure 2). Perhaps more significantly for the average investor, the best days for the S&P 500 Index have closely followed the worst. Of the 20 best days during the period, 14 (or 70%) occurred within 10 trading days of one of the 20 worst days. This nuance is important:

As stated earlier, the perfect market-timing necessary to achieve the results in Figure 1 is improbable. Also, although some traders might be inclined to view a significant daily decrease as indicative of more to come, this has not necessarily been the case. In many cases, negative returns did linger following some of the 20 worst days, but the weeks following those worst days posted positive returns, on average (see Figure 3).

During volatile markets, it's easy to see how active strategies that offer the prospect of better returns may appear tempting. However, the prospect of better returns does not necessarily translate into an improved probability of achieving higher returns. Historically, the best and worst trading days tend to cluster in brief time periods, often during periods of heightened uncertainty and distress, making the prospect of successful market-timing improbable.

Figure 2: Twenty best and worst trading days for the S&P TSX Composite Index, 1979 to 2016 (chronologically)

Date	Percentage change	Trading days	Date	Percentage change	Trading days
3/27/80	-5.32%	-	9/30/08	4.15%	1
3/28/80	5.09%	1	10/2/08	-6.95%	2
10/12/82	4.27%	928	10/6/08	-5.30%	4
10/20/87	-25.67%	1,834	10/10/08	-5.57%	4
10/22/87	16.18%	2	10/14/08	9.82%	4
10/26/87	-7.56%	4	10/15/08	-6.35%	1
10/30/87	5.11%	4	10/20/08	7.20%	5
10/27/97	-6.17%	3,650	10/22/08	-5.71%	2
8/27/98	-6.04%	304	10/27/08	-8.14%	5
10/15/98	4.80%	49	10/28/08	7.20%	1
1/18/99	5.63%	95	11/12/08	-5.32%	15
4/14/00	-5.49%	452	11/13/08	4.82%	1
10/25/00	-8.12%	194	11/20/08	-9.02%	7
10/31/00	4.18%	6	11/21/08	5.57%	1
12/8/00	4.17%	38	11/28/08	5.90%	7
2/16/01	-6.40%	70	12/1/08	-9.32%	3
1/21/08	-4.75%	2,530	12/8/08	5.55%	7
1/22/08	4.19%	1	3/2/09	-5.36%	84
9/19/08	7.03%	241	3/10/09	4.14%	8
9/29/08	-6.93%	10	3/23/09	5.32%	13

Notes: Price returns from the S&P TSX Composite Index. Data runs from July 1, 1979, to December 31, 2016.

Source: Vanguard calculations, using data from FactSet.

Figure 3: Twenty worst days for S&P TSX Composite Index (1979 to 2016) and returns for 20 trading days following each

		Trading days			
Date	Percentage change	5	10	15	20
10/20/87	-25.67%	7.53%	12.38%	12.38%	8.84%
12/1/08	-9.32%	1.91%	0.66%	0.66%	6.92%
11/20/08	-9.02%	13.32%	4.31%	4.31%	9.07%
10/27/08	-8.14%	13.87%	13.49%	13.49%	-1.13%
10/25/00	-8.12%	0.86%	0.43%	0.43%	-7.02%
10/26/87	-7.56%	8.20%	1.87%	1.87%	1.90%
10/2/08	-6.95%	-11.93%	-12.28%	-12.28%	-10.44%
9/29/08	-6.93%	-9.35%	-11.78%	-11.78%	-18.90%
2/16/01	-6.40%	-4.34%	-4.60%	-4.60%	-7.64%
10/15/08	-6.35%	-0.93%	1.91%	1.91%	-4.30%
10/27/97	-6.17%	5.25%	3.33%	3.33%	1.90%
8/27/98	-6.04%	-1.52%	1.55%	1.55%	0.80%
10/22/08	-5.71%	2.87%	7.04%	7.04%	-8.08%
10/10/08	-5.57%	13.09%	-5.82%	-5.82%	6.88%
4/14/00	-5.49%	4.12%	9.25%	9.25%	9.54%
3/2/09	-5.36%	-1.57%	9.10%	9.10%	11.82%
11/12/08	-5.32%	-4.84%	-3.13%	-3.13%	-3.23%
3/27/80	-5.32%	5.35%	10.30%	10.30%	8.30%
10/6/08	-5.30%	-2.69%	-4.25%	-4.25%	-1.11%
1/21/08	-4.75%	7.05%	9.28%	9.28%	10.84%
Average	-7.48%	2.31%	2.15%	2.15%	0.75%
Median	-6.26%	2.39%	1.89%	1.89%	1.35%

Source: Vanguard.

Notes: Price returns from the S&P TSX Composite Index. Data runs from July 1, 1979, to December 31, 2016.

Source: Vanguard calculations, using data from Factset.

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