

RBC Global Asset Management

Volatility in Perspective

February 28, 2020



Maintaining perspective

- While recent volatility has been painful, the S&P 500 Index has only retreated back to where it was in October 2019.

The S&P 500 Index in the last 10 years



Source: Bloomberg, RBC GAM. S&P 500 Price Return Index from February 26, 2010 to February 27, 2020. Chart on right shows the 10-minute intraday intervals from February 12, 2020 to February 27, 2020.

Volatility is a normal part of investing

Monthly returns of the S&P 500

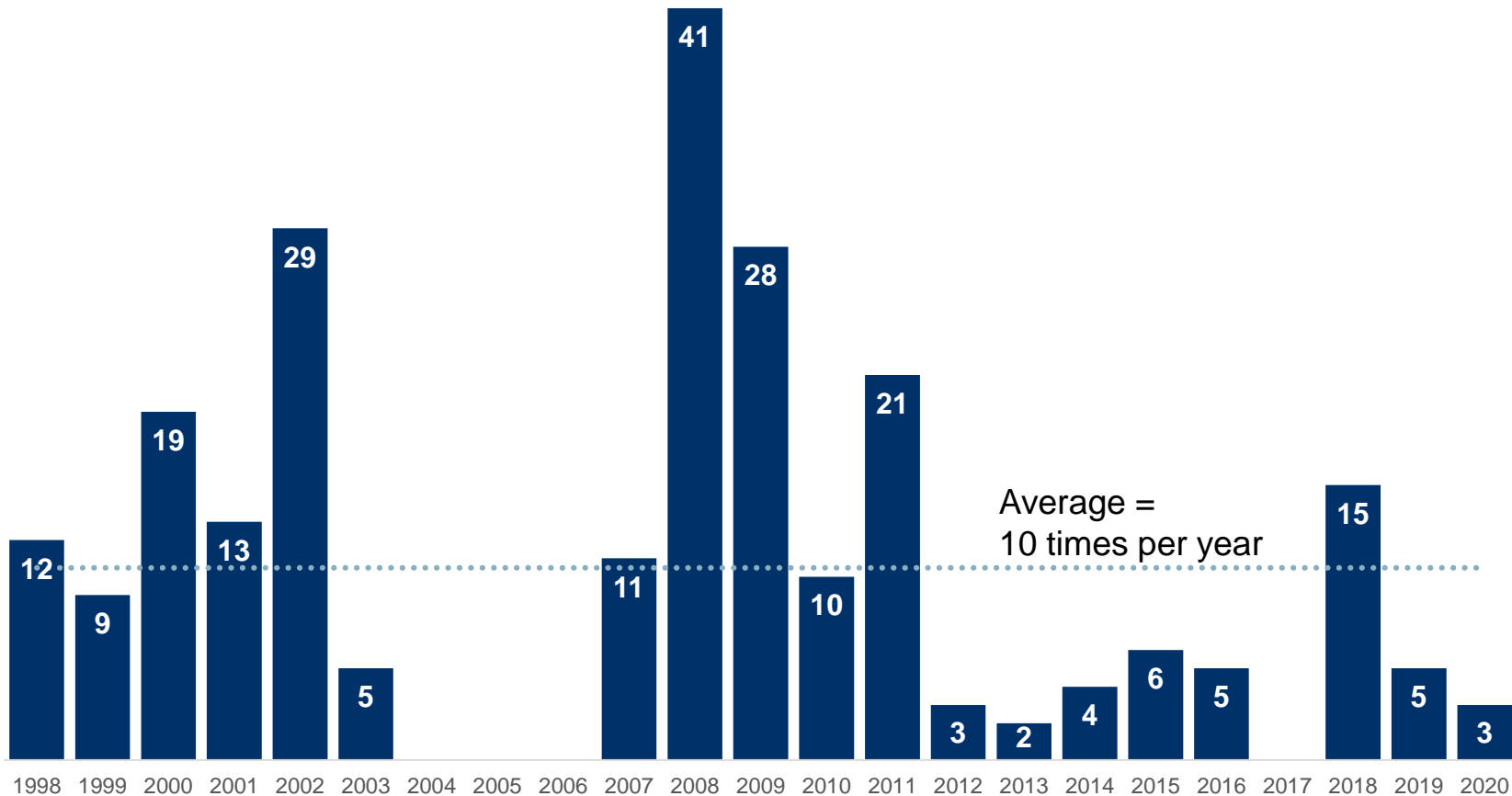
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	0.0%											
2019	8.0%	3.2%	1.9%	4.0%	-6.4%	7.0%	1.4%	-1.6%	1.9%	2.2%	3.6%	3.0%
2018	5.7%	-3.7%	-2.5%	0.4%	2.4%	0.6%	3.7%	3.3%	0.6%	-6.8%	2.0%	-9.0%
2017	1.9%	4.0%	0.1%	1.0%	1.4%	0.6%	2.1%	0.3%	2.1%	2.3%	3.1%	1.1%
2016	-5.0%	-0.1%	6.8%	0.4%	1.8%	0.3%	3.7%	0.1%	0.0%	-1.8%	3.7%	2.0%
2015	-3.0%	5.8%	-1.6%	1.0%	1.3%	-1.9%	2.1%	-6.0%	-2.5%	8.4%	0.3%	-1.6%
2014	-3.5%	4.6%	0.8%	0.7%	2.4%	2.1%	-1.4%	4.0%	-1.4%	2.4%	2.7%	-0.3%
2013	5.2%	1.4%	3.8%	1.9%	2.3%	-1.3%	5.1%	-2.9%	3.1%	4.6%	3.1%	2.5%
2012	4.5%	4.3%	3.3%	-0.6%	-6.0%	4.1%	1.4%	2.3%	2.6%	-1.9%	0.6%	0.9%
2011	2.4%	3.4%	0.0%	3.0%	-1.1%	-1.7%	-2.0%	-5.4%	-7.0%	10.9%	-0.2%	1.0%
2010	-3.6%	3.1%	6.0%	1.6%	-8.0%	-5.2%	7.0%	-4.5%	8.9%	3.8%	0.0%	6.7%
2009	-8.4%	-10.7%	8.8%	9.6%	5.6%	0.2%	7.6%	3.6%	3.7%	-1.9%	6.0%	1.9%
2008	-6.0%	-3.3%	-0.4%	4.9%	1.3%	-8.4%	-0.8%	1.5%	-8.9%	-16.8%	-7.2%	1.1%
2007	1.5%	-2.0%	1.1%	4.4%	3.5%	-1.7%	-3.1%	1.5%	3.7%	1.6%	-4.2%	-0.7%
2006	2.7%	0.3%	1.2%	1.3%	-2.9%	0.1%	0.6%	2.4%	2.6%	3.3%	1.9%	1.4%
2005	-2.4%	2.1%	-1.8%	-1.9%	3.2%	0.1%	3.7%	-0.9%	0.8%	-1.7%	3.8%	0.0%
2004	1.8%	1.4%	-1.5%	-1.6%	1.4%	1.9%	-3.3%	0.4%	1.1%	1.5%	4.1%	3.4%
2003	-2.6%	-1.5%	1.0%	8.2%	5.3%	1.3%	1.8%	2.0%	-1.1%	5.7%	0.9%	5.2%
2002	-1.5%	-1.9%	3.8%	-6.1%	-0.7%	-7.1%	-7.8%	0.7%	-10.9%	8.8%	5.9%	-5.9%
2001	3.6%	-9.1%	-6.3%	7.8%	0.7%	-2.4%	-1.0%	-6.3%	-8.1%	1.9%	7.7%	0.9%
2000	-5.0%	-1.9%	9.8%	-3.0%	-2.1%	2.5%	-1.6%	6.2%	-5.3%	-0.4%	-7.9%	0.5%
1999	4.2%	-3.1%	4.0%	3.9%	-2.4%	5.6%	-3.1%	-0.5%	-2.7%	6.3%	2.0%	5.9%
1998	1.1%	7.2%	5.1%	1.0%	-1.7%	4.1%	-1.1%	-14.5%	6.4%	8.1%	6.1%	5.8%
1997	6.3%	0.8%	-4.1%	6.0%	6.1%	4.5%	8.0%	-5.6%	5.5%	-3.3%	4.6%	1.7%
1996	3.4%	0.9%	1.0%	1.5%	2.6%	0.4%	-4.4%	2.1%	5.6%	2.8%	7.6%	-2.0%
1995	2.6%	3.9%	3.0%	2.9%	4.0%	2.3%	3.3%	0.3%	4.2%	-0.4%	4.4%	1.9%
1994	3.4%	-2.7%	-4.4%	1.3%	1.6%	-2.5%	3.3%	4.1%	-2.5%	2.3%	-3.6%	1.5%
1993	0.8%	1.4%	2.1%	-2.4%	2.7%	0.3%	-0.4%	3.8%	-0.8%	2.1%	-1.0%	1.2%
1992	-1.9%	1.3%	-1.9%	2.9%	0.5%	-1.5%	4.1%	-2.1%	1.2%	0.4%	3.4%	1.2%
1991	4.4%	7.2%	2.4%	0.2%	4.3%	-4.6%	4.7%	2.4%	-1.7%	1.3%	-4.0%	11.4%
1990	-6.7%	1.3%	2.7%	-2.5%	9.8%	-0.7%	-0.3%	-9.0%	-4.9%	-0.4%	6.5%	2.8%

Source: RBC GAM. Monthly Returns in the S&P 500 TR (USD) Index since January 1990.

Volatility is a normal part of investing

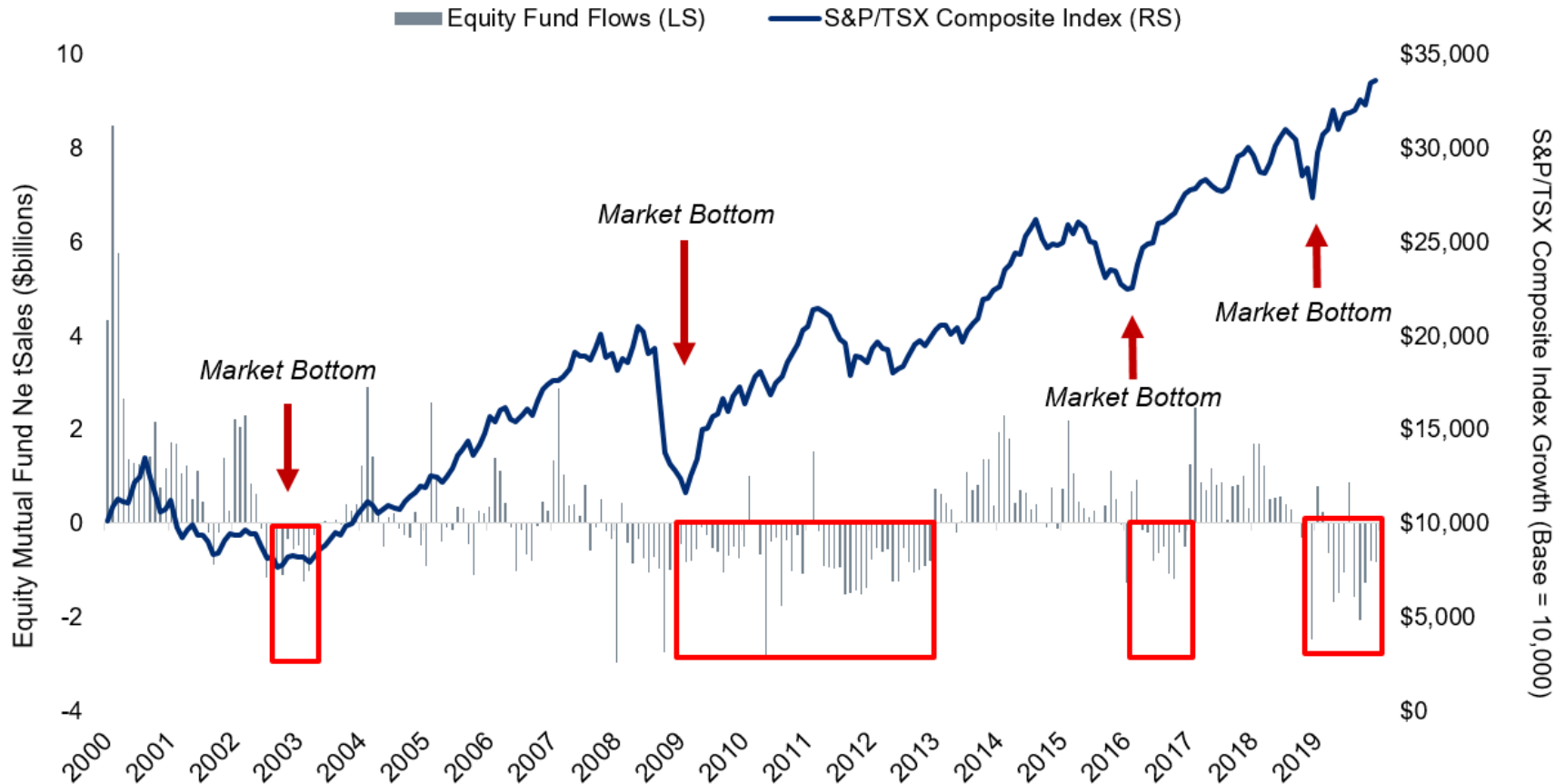
Number of down days greater than 2%

S&P 500 Index



Source: RBC Global Asset Management, Bloomberg. Based on S&P 500 Index data as of February 27, 2020. An investment cannot be made directly into an index. The graph does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. The peak is measured at the highest level of the index during the year and the trough is its lowest level following the peak.

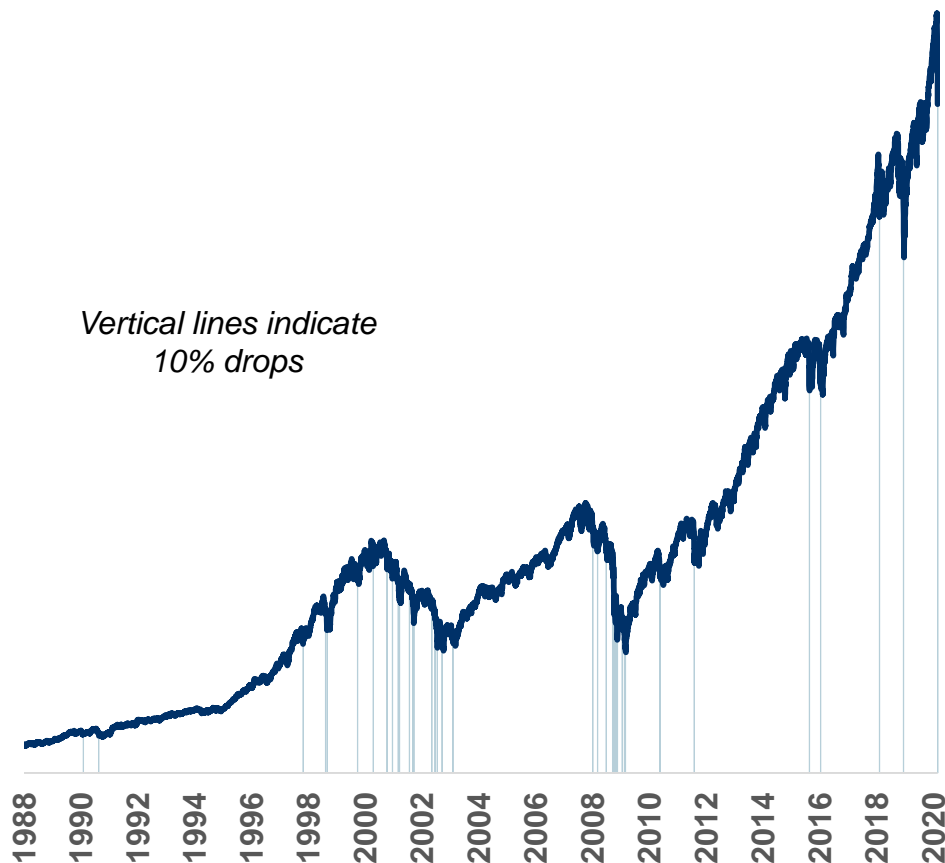
Investors often redeem at the worst times



*Includes net equity mutual fund flows. Source: RBC GAM, IFIC, Bloomberg. As of December 31, 2019. An investment cannot be made directly into an index. The graph does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. The peak is measured at the highest level of the index during the year and the trough is its lowest level following the peak.

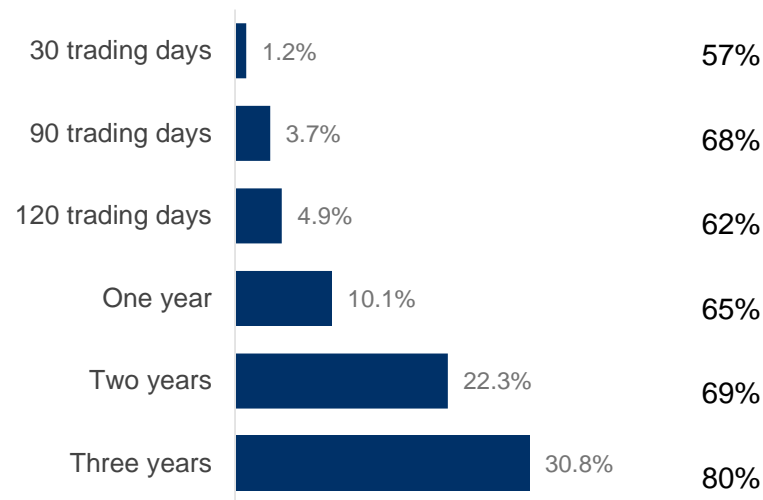
Performance after a pullback

The S&P 500 has fallen 10% from a high 38 times since 1988



**After market declines 10%,
the subsequent return is
historically positive...**

**...with greater than
50% probability**

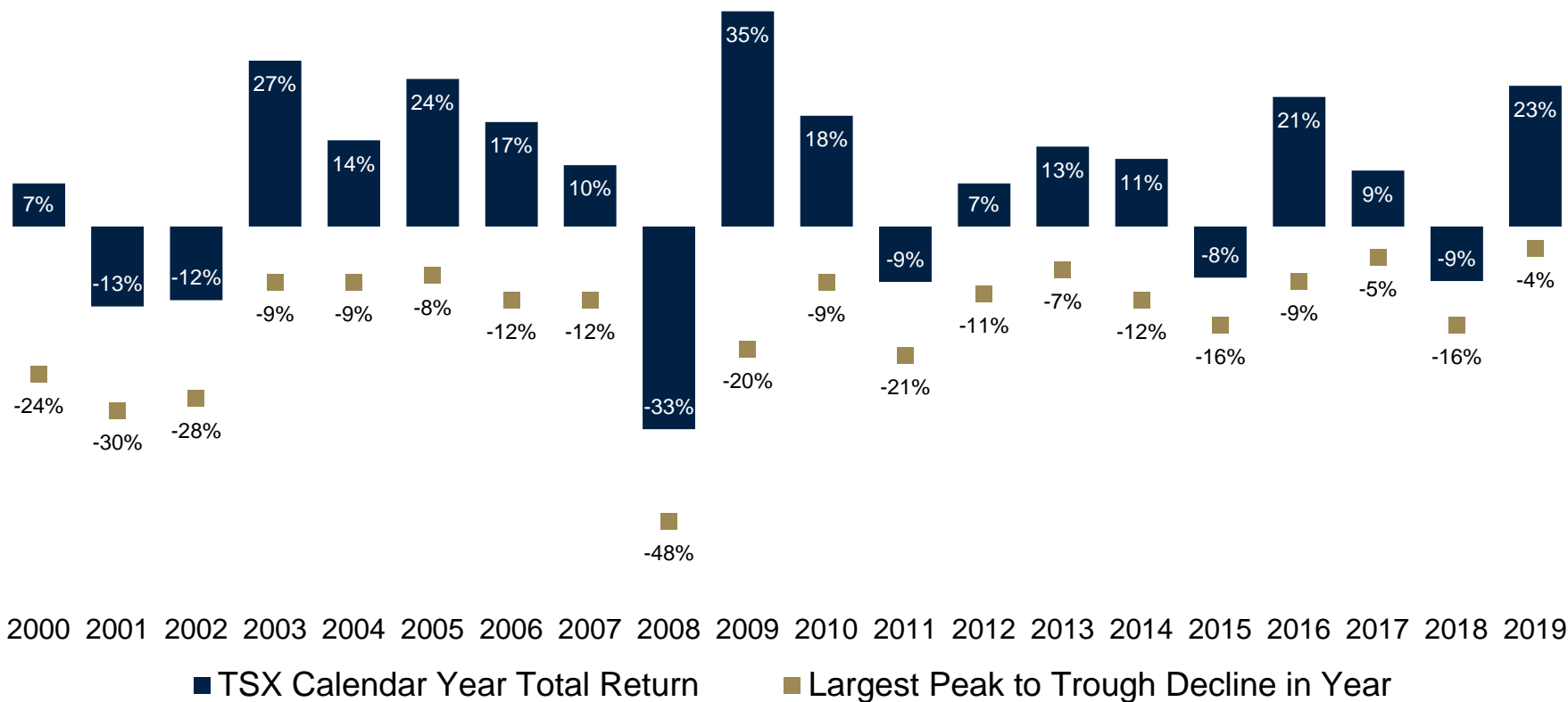


S&P 500 TR index (USD) from Jan 1, 1988 to Feb 27, 2020. One year represented by its average of 252 trading days. 10% drop is from an all-time high or the end of a previous drop. An investment cannot be made directly into an index. The graph does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. The peak is measured at the highest level of the index during the year and the trough is its lowest level following the peak.

Even the good years have dark days

60% of years have 10% drawdown or more

S&P/TSX Index

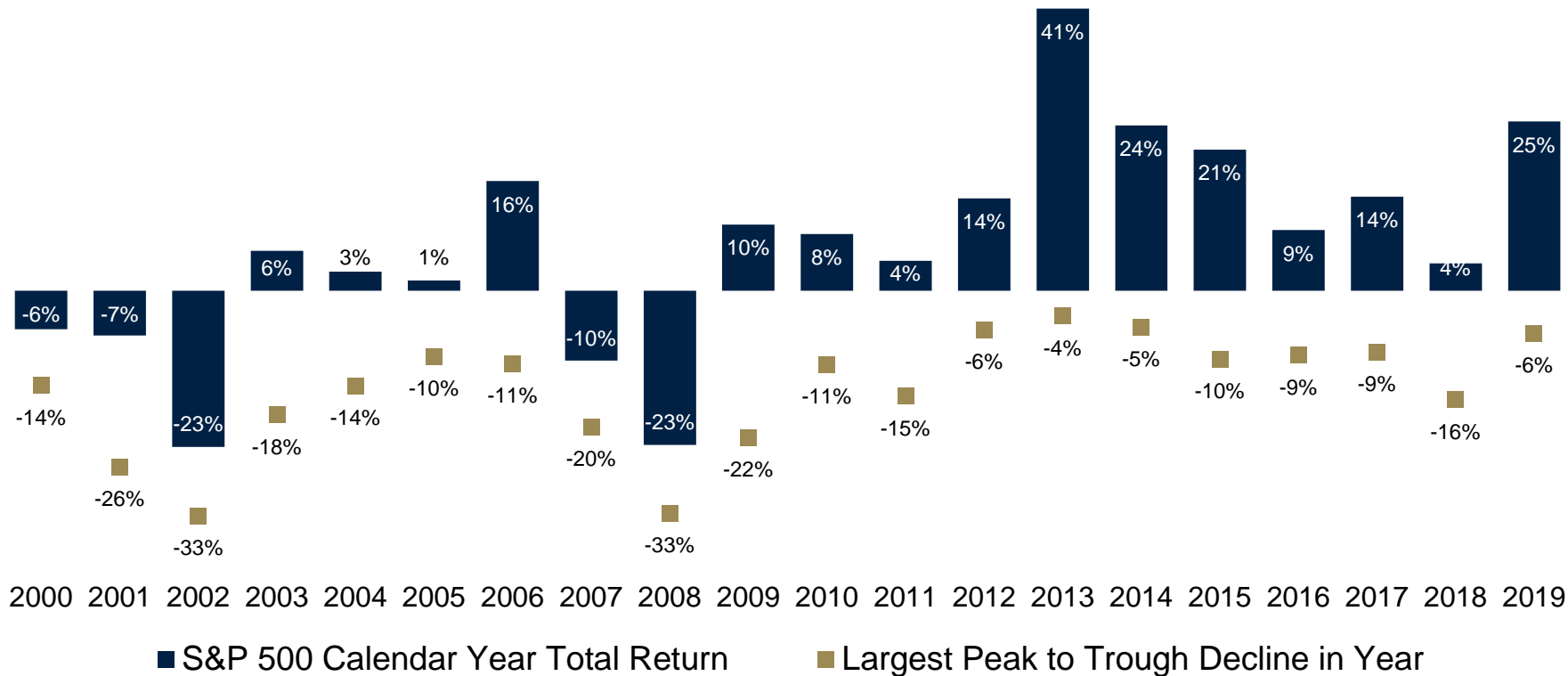


Source: Bloomberg & Morningstar Direct. Performance reflective of S&P/TSX Composite Index, denoted in Canadian dollars. Performance data as of December 31, 2019. An investment cannot be made directly into an index. The graph does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. The peak is measured at the highest level of the index during the year and the trough is its lowest level following the peak.

Even the good years have dark days

70% of years have 10% drawdown or more

S&P 500 Index



Source: Bloomberg & Morningstar Direct. Performance reflective of S&P 500 TR Index, denoted in Canadian dollars. Data as of December 31, 2019. An investment cannot be made directly into an index. The graph does not reflect transaction costs, investment management fees or taxes. If such costs and fees were reflected, returns would be lower. Past performance is not a guarantee of future results. The peak is measured at the highest level of the index during the year and the trough is its lowest level following the peak.

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