Volatility Accompanies COVID-19 Pandemic

By Richard J. Wylie, MA, CFA
Vice-President, Investment Strategy, Assante Wealth Management

On February 19, 2020, the S&P 500 Index closed the trading day with a solid 0.5% advance, establishing a new all-time high. A day later, the S&P/TSX Composite Index rose 0.1% to close at its most recent all-time high. While the novel coronavirus had certainly hit the news, the new reality had yet to be revealed. The eventual spread of COVID-19 and the subsequent shuttering of North America's economies have been accompanied by record levels of volatility and the fastest-ever onset of equity bear markets in both Canada and the U.S. Investors who experienced the financial crisis of 2008/09 were reminded of how quickly market volatility can make itself felt. Periods of great uncertainty have occurred in the past, and all of these times have had unique features. Even though the present circumstances are unsettling for both health reasons and their impact on your investments, the assistance of a professional advisor can help to put things into perspective. Having a well-diversified portfolio that includes regularly scheduled rebalancing is the best way to preserve and grow wealth during troubling times.

Fast bears

Bear Market Timing - S&P/TSX*

Date of High Close	Market Level	Date of Bear Onset (initial 20% decline)	Market Level	Days Elapsed form High Close to Bear Close	Actual Decline	Date of Eventual Trough	Market Level	Days Elapsed form Bear Close to Trough Close	Total Decline	Date of Recovery (market closes at or above previous high close)	Market Level	Days Elapsed form Trough Close to Recovery Close	Days Elapsed form Bear Onset to Recovery	Days Elapsed form High Close to Recovery Close
Jul-56	617.7	Sep-57	483.3	427	-21.8%	Dec-57	432.1	91	-30.0%	Apr-61	633.4	1,217	1,308	1,735
May-69	1,131.0	May-70	828.2	365	-26.8%	Jun-70	810.8	31	-28.3%	Aug-72	1,189.3	792	823	1,188
Oct-73	1,319.3	May-74	1,031.7	212	-21.8%	Dec-74	835.4	214	-36.7%	10-Oct-78	1,324.9	1,409	1,623	1,835
29-Feb-80	2,192.6	27-Mar-80	1,702.5	27	-22.4%	27-Mar-80	1,702.5	0	-22.4%	23-Jul-80	2,195.8	118	118	145
28-Nov-80	2,402.2	24-Sep-81	1,896.6	300	-21.0%	08-Jul-82	1,346.4	287	-44.0%	06-May-83	2,436.2	302	589	889
26-Sep-83	2,598.3	24-Jul-84	2,079.7	302	-20.0%	24-Jul-84	2,079.7	0	-20.0%	30-Jan-85	2,604.0	190	190	492
13-Aug-87	4,112.9	19-Oct-87	3,198.2	67	-22.2%	28-Oct-87	2,837.8	9	-31.0%	25-Aug-93	4,122.9	2,128	2,137	2,204
06-Oct-89	4,037.8	24-Sep-90	3,227.1	353	-20.1%	16-Oct-90	3,009.9	22	-25.5%	18-Aug-93	4,069.3	1,037	1,059	1,412
22-Apr-98	7,822.3	24-Aug-98	6,248.9	124	-20.1%	05-Oct-98	5,336.2	42	-31.8%	25-Nov-99	7,853.4	416	458	582
01-Sep-00	11,388.8	13-Nov-00	9,115.1	73	-20.0%	21-Sep-01	6,513.1	312	-42.8%	03-Jan-06	11,441.6	1,565	1,877	1,950
07-Mar-02	7,958.1	22-Jul-02	6,366.7	137	-20.0%	09-Oct-02	5,695.3	79	-28.4%	03-Dec-03	7,959.9	420	499	636
18-Jun-08	15,073.1	17-Sep-08	11,877.7	91	-21.2%	09-Mar-09	7,566.9	173	-49.8%	18-Jun-14	15,109.3	1,927	2,100	2,191
05-Apr-11	14,270.5	03-Oct-11	11,251.8	181	-21.2%	04-Oct-11	11,177.9	1	-21.7%	04-Mar-14	14,289.9	882	883	1,064
03-Sep-14	15,657.6	07-Jan-16	12,448.2	491	-20.5%	20-Jan-16	11,843.1	13	-24.4%	10-Feb-17	15,729.1	387	400	891
			AVG	195	-20.8%			85	-31.1%			852	937	1,132
Current						As of May 31/2020								
20-Feb-20	17,944.1	11-Mar-20	14,270.1	20	-20.5%	23-Mar-20	11,228.5	12	-37.4%	*Reliable daily closing data is available beginning only in 1977				

Source: Bank of Canada, Yahoo Finance, Stooq

The thought of a lumbering bear slowly picking its way through an abandoned picnic basket may naturally come to mind. Still, experts warn that it is unwise for anyone to try to outrun a bear[1]. Recently, the financial markets have mimicked nature as the main North American equity indices made their fastest move ever from all-time highs into bear territory[2]. Domestically, as can be seen in the above table, the S&P/TSX tumbled from the February 20 high to close in on bear territory on March 11, a scant 20-day interval (only 14 trading sessions). For context, the previous record for the fastest onset of a bear market domestically was the 27 days (19 trading sessions) it took to go from the then record high close on February 29, 1980 to a

[1] Olympic sprinting legend Usain Bolt has been clocked at 44.6 km/h. An adult male Grizzly bear weighing in at a full 270 kg can run 56.3 km/h.

[2] The general industry consensus is that a "bull" market is a rally that exceeds 20%, which is never interrupted by a 20% drop or "bear" market. Conversely, "bear" markets can be interrupted by brief bursts of 20% gains, often referred to colloquially as "dead cat bounces" rather than actual "bull" markets.

bear market at the close of trading on March 27, 1980. The last bear market before COVID-19 was the slowest to appear, with a full 491 days between the market peak on September 3, 2014 and the emergence of the bear on January 7, 2016. On average, however, the onset of a bear market had historically taken some 195 calendar days to set in. While significant uncertainty remains, the most recent low in the market was set on March 23, 2020 with a cumulative 37.4% decline. It remains to be seen if this low will hold, as the intensity of the restart of the domestic economy is far from certain. Still, on average, 852 days have elapsed between the date of the market trough and the subsequent recovery. The shortest such recovery was 118 days and the longest was 2,128 days.

Bear Market Timing - S&P 500

Date of High Close	Market Level	Date of Bear Onset (initial 20% decline)	Market Level	Days Elapsed form High Close to Bear Close	Actual Decline	Date of Eventual Trough	Market Level	Days Elapsed form Bear Close to Trough Close	Total Decline	Date of Recovery (market closes at or above previous high close)	Market Level	Days Elapsed form Trough Close to Recovery Close	Days Elapsed form Bear Onset to Recovery	Days Elapsed form High Close to Recovery Close
29-May-46	19.3	09-Sep-46	15.0	103	-22.0%	19-May-47	13.8	252	-28.5%	09-Jun-50	19.3	1,117	1,369	1,472
15-Jun-48	17.1	13-Jun-49	13.6	363	-20.6%	13-Jun-49	13.6	0	-20.6%	09-Jan-50	17.1	210	210	573
15-Jul-57	49.1	21-Oct-57	39.2	98	-20.3%	22-Oct-57	39.0	1	-20.7%	16-Sep-58	49.4	329	330	428
12-Dec-61	72.6	28-May-62	55.5	167	-23.6%	26-Jun-62	52.3	29	-28.0%	03-Sep-63	72.7	434	463	630
09-Feb-66	94.1	29-Aug-66	74.5	201	-20.8%	07-Oct-66	73.2	39	-22.2%	04-May-67	94.3	209	248	449
29-Nov-68	108.4	29-Jan-70	85.7	426	-20.9%	26-May-70	69.3	117	-36.1%	06-Mar-72	108.8	650	767	1,193
11-Jan-73	120.2	27-Nov-73	95.7	320	-20.4%	03-Oct-74	62.3	310	-48.2%	17-Jul-80	121.4	2,114	2,424	2,744
28-Nov-80	140.5	22-Feb-82	111.6	451	-20.6%	12-Aug-82	102.4	171	-27.1%	03-Nov-82	142.9	83	254	705
25-Aug-87	336.8	19-Oct-87	224.8	55	-33.2%	04-Dec-87	223.9	46	-33.5%	26-Jul-89	338.1	600	646	701
24-Mar-00	1,527.5	12-Mar-01	1,180.2	353	-22.7%	09-Oct-02	776.8	576	-49.1%	30-May-07	1,530.2	1,694	2,270	2,623
09-Oct-07	1,565.2	07-Jul-08	1,252.3	272	-20.0%	09-Mar-09	676.5	245	-56.8%	28-Mar-13	1,569.2	1,480	1,725	1,997
			AVG	255	-22.3%			162	-33.7%			811	973	1,229
Current						As of May 31/2020								
19-Feb-20	3,386.1	12-Mar-20	2,480.6	22	-26.7%	23-Mar-20	2,237.40	11	-33.9%					

Source: Yahoo Finance

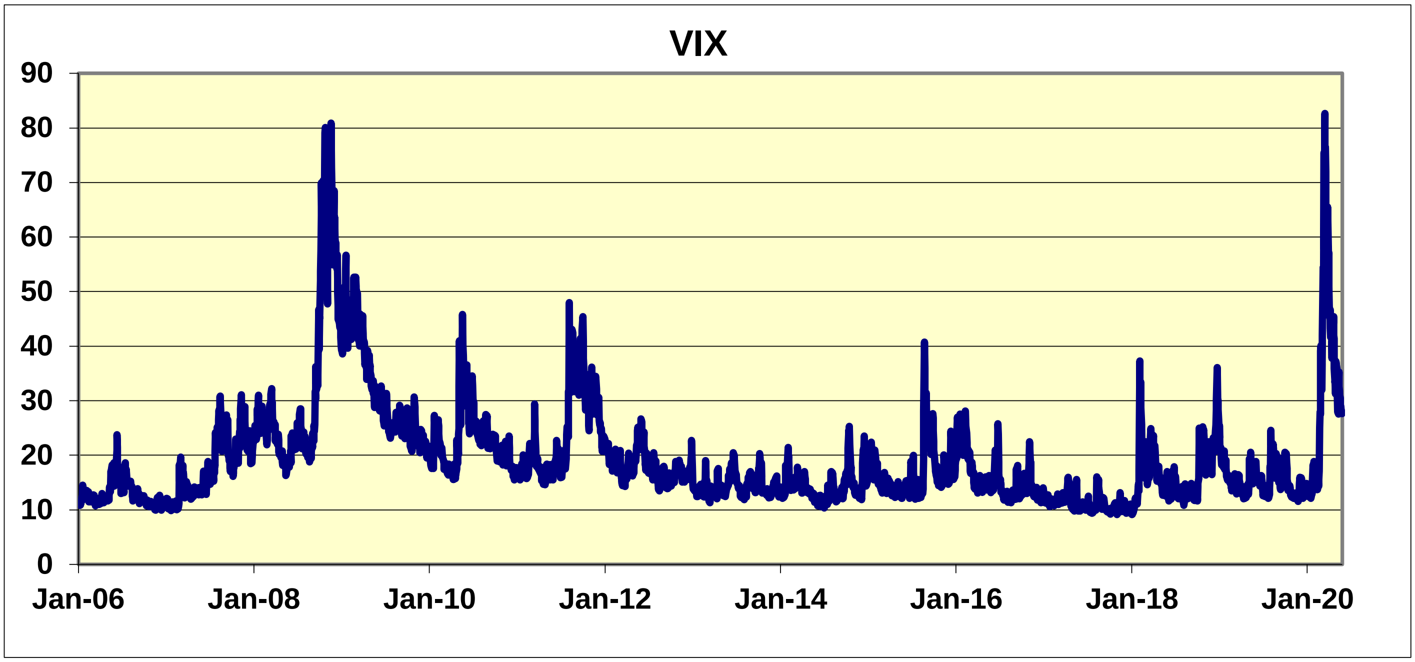
A very similar decline was seen in the U.S. in February 2020. After hitting its all-time high on February 19, the S&P 500 fell dramatically, and the bear finally closed in on March 12 after a 22-day interval (16 trading sessions). This was the quickest bear on record and, in the U.S., the difference between the onset of this bear market and the previous "quickest" was far greater. The previous U.S. record for the fastest bear market was 55 days (38 trading sessions), between August 25, 1987 and October 19, 1987. Here, the bear market of the early 1980s was the slowest to appear, taking 451 days between the market peak on November 28, 1980 and the onset of the bear on February 22, 1982. In the U.S., the onset of a bear market had historically taken an average of 255 calendar days. As in the domestic market, significant uncertainty remains. But, like the Canadian benchmark, the recent low for the S&P 500 was established on March 23, 2020 with a cumulative 33.9% decline. Like the rest of the world, there is no guarantee that the market will not reverse its recent growth and reset a new low water mark for this cycle. Nevertheless, on average, 811 days have elapsed between the date of the market trough in the U.S. and its subsequent recovery. The shortest such recovery was 83 days and the longest was 2,114 days.

Volatility

During periods of heightened volatility, the VIX[3] garners plenty of press. This measure of volatility is often called the "fear index" because it tends to rise as equity markets fall. Unfortunately, the predecessor for the current VIX was only initiated in 1993, so no identical readings are available for the comparison to all of the earlier bear markets examined above. However, as can be seen in the graph below, the VIX closed at an all-

[3] VIX (inaugurated in 2003) is the ticker symbol for the Chicago Board Options Exchange Volatility Index, which reflects the market's expectation of 30-day volatility based upon the pricing of put and call options on the S&P 500 index. The VXO (inaugurated in 1993) was the predecessor index, which continues to exist and is based on the narrower S&P 100 Index.

time high reading of 82.7 on March 16, 2020. This move surprised many seasoned market participants as the new level outstripped the former record high close of 80.9 set on November 20, 2008, during the last financial crisis. VIX readings below 20 usually correspond to less stressful, or even complacent times in the markets. Values greater than 30 are generally associated with high volatility, brought on by investor fear or uncertainty. Even though lasting VIX levels associated with a complacent market may still be some time off, recent improvements in the markets are encouraging.



Source: Yahoo Finance

North American markets

Looking directly at the main market indices can provide another way to evaluate the recent surge in volatility. Examining the occurrences of trading sessions with a 4% trading range[4] is one way to directly view this volatility. The graph below shows the U.S. S&P 500 Index (blue line) and trading sessions when the index experienced a 4% (or more) trading range, as indicated by the solid black vertical lines. As would be expected, over long periods of market history for the S&P 500, these exceptionally volatile trading sessions are comparatively rare. Between January 1, 1961[5], and September 14, 2008, there were approximately 12,000 trading sessions. Of those, just 85 saw a 4% trading range. This translates into approximately one trading day every five months, or less than one out of a hundred trading sessions. Between September 15, 2008 and March 31, 2009, the period typically associated with the height of the

[4] A trading range is calculated by taking the difference between the "high" and "low" quote for the day and dividing it by the value of the previous day's closing level.

[5] The S&P 500 Index was inaugurated on March 4, 1957. Its predecessor 90-stock index was first formulated and published in 1926. 1961 is used as a starting date as reliable intra-day data is available from this time.

financial crisis, the market experienced a 4.0% trading range on 58 of the 137 trading days. This is the equivalent of more than 42 occurrences out of 100 trading sessions or 60 times the “normal” rate. Following the financial crisis there were modest bouts of volatility, but the frequency of 4% trading range days largely returned to normal. Between April 1, 2009, and February 21, 2020, there were 18 occurrences of 4% trading range days out of a total of 2,742 trading sessions, or less than one occurrence for every 100 trading sessions. However, since the onset of the COVID-19 pandemic, volatility has clearly returned. Between February 24, 2020, and April 30, 2020 (48 trading sessions), there were 17 of these 4% trading range sessions, the equivalent of 35 per 100 trading day, or 50 times the “normal” rate.

Source: Yahoo Finance

Similarly, the Canadian market had, fortunately, only experienced these volatile 4% trading range days occasionally. Between the beginning of 1980[6], and September 14, 2008, the Canadian market had about 7,236 trading sessions. Of these, 24 were sessions with a 4% trading range. Here at home, the experience showed less volatility than in the U.S., with approximately one 4% trading range per year or once in every 250 trading sessions. As you can see in the graph below, examining the same September 15, 2008 to March 31, 2009 time period of the financial crisis, the Canadian market experienced a 4% trading range on 54 of the 137 trading days. This is the equivalent of about 39 occurrences out of 100 trading sessions, or 119 times the “normal” Canadian rate. Following the financial crisis, Canadian markets also experienced modest bouts of volatility, but the frequency of these 4% trading range days declined. Between April 1, 2009, and February 21, 2020, there were seven occurrences of 4% trading range days out of a total of 2,733 trading sessions, returning to the one occurrence for every 250 trading sessions. However, as seen in the U.S., volatility returned with the COVID-19 pandemic. Between February 24, 2020, and April 30, 2020 (48

[6] **Reliable intra-day market data in Canada has a significantly shorter history than that available in the U.S.**

trading sessions), there were 11 of these 4% trading range sessions, the equivalent of 23 per 100 trading days or 69 times the "normal" Canadian rate.

As of this writing, the last occurrence of a 4% trading range session in the U.S. was April 6, 2020. Domestically, the most recent 4% trading session occurred on March 25, 2020. With the last real experience of a "post-pandemic" economy having occurred a century ago, considerable uncertainty exists. Not only does this uncertainty include the unknown responses of consumers and businesses as they move out of lockdown, it encompasses the timing and scope of future changes to monetary and fiscal policies as the world attempts to unwind the dramatic actions taken to bridge the global economy until functioning market-based activity can resume. Periods of elevated volatility can easily prompt an emotional response. This is particularly true at present when families are also dealing with concerns over health and personal safety. Having an advisor can help investors avoid emotional investing.

Source: Yahoo Finance

Conclusions

- The current pandemic and the associated market volatility represent a significant challenge to investors. Worries over health and safety coupled with concerns over the prospects for wealth erosion are a troubling combination.
- The weight of current concerns can easily prompt an emotional response and a desire to exit the market prematurely. Having an advisor can help investors avoid acting on their emotions.
- Taking advantage of professional advice and establishing a financial plan with a diversified portfolio and regular rebalancing can help ensure a disciplined approach to investing.