



CAN YOU TAKE ADVANTAGE OF STOCK MARKET SEASONALITY?

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Are market moves purely random? It can be challenging to provide explanations for market price movement with so many factors driving one group to buy and another to sell. Many find it easier to just accept dynamic moves as unpredictable. However, history contains many examples of human behavior influencing patterns in financial markets and sometimes creating investment opportunities.

Seasonal market trends may be one of the most cited examples. More specifically, the U.S. equity markets have historically outperformed, on average, during the six-month period from November 1 through April 30 compared to the other six months of the year¹ (see table below).

**Comparative Performance (%) of Dow Jones Industrial Average During Seasonally Favorable Months vs. Unfavorable Months Using November 1st Entry and April 30th Exit
May 1, 2002 through April 30, 2016**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Favorable Months Return Nov. 1- Apr. 30	+1.0	+4.3	+1.6	+8.9	+8.1	-8.0	-12.4	+13.3	+15.2	+10.5	+13.3	+6.7	+2.6	+0.6	+15.4
Unfavorable Months Return May 1 - Oct. 31	-15.6	+15.6	-1.9	+2.4	+6.3	+6.6	-27.3	+18.9	+1.0	-6.7	-0.9	+4.8	+4.9	-1.0	+2.1

Source: Stock Trader's Almanac 2018. The performance included is index performance and does not represent any BTS portfolios. This table is for illustrative purposes. Past performance is no guarantee of future results. Returns do not reflect management fees. BTS clients will pay management fees, may pay custodial fees and brokerage commissions and which vary depending on the custodian chosen. The Dow Jones Industrial Average is a price-weighted average of 30 major stocks traded on the New York Stock Exchange and the NASDAQ.

Other well-known seasonal anomalies such as the Monday effect, the Friday effect, the Turn of the Month effect, the Holiday effect, and the January effect are often mentioned, but these tend to lose strength when submitted to more rigorous examination. However, the Sell in May anomaly, as the November through April seasonality effect is sometimes called, has weathered a fair amount of academic scrutiny and appears to happen often. The historical pattern of springtime sell-offs is well documented and can even be traced as far back as 1694 Britain².

The first comprehensive study on the topic, from Bouman and Jacobsen (2002), drew on extensive data to demonstrate the substantial difference between returns from May-October and from November-April. Concluding that "the economic significance of this particular anomaly is considerable," the authors went on to compare "a simple trading strategy based on the saying" with a buy and hold portfolio using past data in multiple countries. In many of these countries, the seasonality-inspired portfolio compared favorably. The authors then noted that that the scale of the Sell in May effect is highly correlated to the length of a particular country's average summer vacation. While Bouman and Jacobson suggest that this trend relates to a decrease in risk aversion during one's vacation, others have assumed that the risk aversion has more to do with Seasonal Affective Disorder (SAD)³ or that investor behavior is directly linked to temperature changes⁴.

It's possible that other factors with more narrow calendar-related effects may contribute to the overall seasonal effect. For example, commentators sometimes speculate that changes in liquidity brought on by an influx of capital at year-end contribute to the 'January effect,' which falls within the longer November-April timeframe. Another suggestion is that year-end bonuses and commissions may be distributed within a few months of December 31. Others point to year-end earnings announcements. Another consideration is that many employer matches on retirement plans are invested at that time or taxpayers may be receiving tax refunds and investing them in the early part of the year.

Past performance does not guarantee future results.

While definitive causes remain elusive, the persistence of stock market seasonality seems apparent at the overall November through April level. A follow-up study to Bouman and Jacobsen's research, this time conducted by Andrade, Chhaochharia and Fuerst in 2012, again found persistent benefits from following 'Sell in May and go away' as a market-timing strategy. The authors found "an economically large and statistically significant Sell in May effect in strategies exploiting the Value, Size, Credit Risk, FX Carry Trade, and Volatility risk premiums."¹

The seasonality effect suggests investor actions may impact market moves which do not appear to be purely random. Tracking seasonal market factors may be one approach to taking advantage of that over time.

BTS seeks opportunity using a seasonality strategy in some tactical portfolios. This hybrid approach considers equities during the historically favorable period November through April and has the potential benefit of minimal transaction costs. The strategy's parameters guide the purchase of equities around the start of November and moves out of those positions around the end of April. In the remaining months, the portfolio is managed using BTS' tactical fixed income strategy. We attempt to further enhance returns by using our proprietary model to determine exit and entry points, as well as stop-loss protection to help preserve principal in declining markets. We believe that history has shown that markets are indeed inefficient. Strategies that exploit seasonality patterns have the potential to produce enhanced investment returns.

¹Andrade, Chhaochharia, and Fuerst. 2012. "'Sell in May and Go Away' Just Won't Go Away." Financial Analysts Journal. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2115197

²Bouman and Jacobsen. 2002. "'The Halloween Indicator', 'Sell in May and Go Away': Another Puzzle." American Economic Review. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2154873

³Kamstra, Kramer and Levi. 1993. "Winter Blues: Seasonal Affective Disorder (SAD) and Stock Market Returns." American Economic Review.

⁴Coa and Wei. 2005. "Stock Market Returns: A note on temperature anomaly." Journal of Banking and Finance.

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Actual performance under the Seasonality Investment Programs will differ from the actual performance of the underlying stock index in part because BTS clients will pay advisory fees, custodial fees and brokerage commissions and which vary depending on the mutual fund chosen. The design and implementation of seasonality technical models is subject to uncertainties. Loss of capital is possible. Periodic grading and evaluation of all indicators is vital to the reliability of the risk management systems and models in making investment decisions. The choice in equity mutual funds utilized in the Seasonality Program will directly impact investment returns. Equity mutual funds may not have the same or similar investment risks including volatility, capitalization and liquidity.

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