

Like any investment process, trend following is not without its share of ups and downs. Over time, buying winners and cutting losers can foster a strong point-to-point return stream, but the inter-period experience of momentum investing can be difficult to stomach as natural rotation occurs and trends change. Time and time again, shifts in leadership create uncomfortable situations that often run counter to our natural “gut” instincts, causing even the most loyal trend follower to consider deviating from the rules. These untimely breakdowns in systematic rule-following allow emotion to creep in at precisely the wrong moment, potentially erasing years’ worth of discipline- either psychologically, monetarily, or quite often, both.

With that in mind, we have taken the opportunity to break down several of the major roadblocks and common arguments that inevitably arise for trend followers. Our hope is that by better understanding the typical pitfalls of momentum investing, we can more appropriately contextualize returns over time.

Major arguments commonly raised against the momentum factor typically include:

- 1) Trend following is “streaky” and, as a result, does not belong in the average portfolio.
- 2) Trend following often “chases winners” inefficiently, leading to frequent whipsaws.
- 3) Frequent rotation driven by changing market leadership creates material tax inefficiencies.

Momentum’s Streaky Nature: Fair or Falsehood?

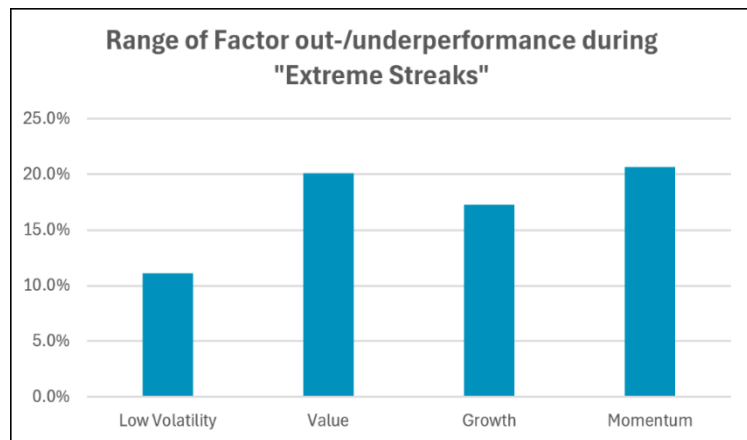
While it isn’t entirely false that momentum itself can be streaky, the misnomer in play is the idea that momentum is inherently erratic in comparison to other factors included in today’s average portfolio. To test this, we created a performance quilt of eight different common factors, displaying their yearly returns since 2000 below. They include: Momentum (PDP), Core (SPY), Equal Weight Core (RSP), High Quality (SPHQ), Growth (RPG), Value (RPV), Low Volatility (SPLV) and High Dividend (PEY).

From there, we used the return data to answer the question: Did any specific factor find themselves spending more than a year in a row in the top/bottom quartile (2) of overall performance? If momentum’s comparatively erratic nature is true, then we should find momentum spending more time at our “performance extremes” than other factors.

Across the 26-year sample period, our momentum proxy recorded five episodes in which it ranked within the top or bottom two for at least two consecutive years (19.23% of the time). Comparatively, other factors spend an average of 14.29% fulfilling the same criteria- roughly 3.7 episodes per factor. While this metric does point to a slightly higher “streak factor” for momentum, it’s not as extreme as many assume. The widely accepted value factor, for instance, exhibits eight such streaks in our dataset.

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
PEY 34.55	PEY 17.29	PEY -3.98	PDP 47.05	RPV 23.07	PDP 12.44	RPV 17.41	PDP 17.18	SPLV -23.61	RPV 49.26	RPG 26.35	SPLV 10.87	RPV 22.98	RPV 45.53	SPLV 14.48	SPLV 1.61	PEY 26.82	RPG 25.44	SPLV -2.28	PDP 32.78	PDP 36.34	RPV 31.52	PEY -1.76	SPY 24.29	RPG 27.90	SPY 16.35	PDP 5.27
SPLV 20.68	RPV 8.07	SPLV -9.83	RPG 41.55	PDP 15.97	RPV 10.86	SPLV 16.49	SPHQ 16.77	SPY -38.28	RPG 48.43	PDP 26.26	PEY 4.40	PDP 17.16	RPG 42.65	SPHQ 14.06	RPG 1.48	RPV 17.05	PDP 22.93	RPG -4.94	SPHQ 31.50	RPG 28.51	RPG 29.39	RPV -3.53	SPHQ 22.91	PDP 25.87	RPV 14.58	RPG 3.87
SPHQ 12.76	SPLV 1.54	SPHQ -11.63	RSP 38.89	RPG 15.51	RPG 6.54	RSP 14.12	RPG 5.80	RPG -39.23	RSP 42.19	RPV 20.89	SPHQ 4.39	RSP 15.21	RSP 33.63	PEY 13.92	PDP 0.76	RSP 13.05	SPY 19.38	PDP -6.12	SPY 28.79	SPY 16.16	RSP 27.61	SPLV -6.89	PDP 20.32	SPHQ 23.95	RPG 13.12	SPLV 3.28
RPV 9.31	SPHQ -0.99	PDP -11.93	RPV 37.31	RSP 15.29	RSP 6.26	SPY 13.80	SPY 3.24	RSP -41.08	PDP 27.19	SPHQ 19.79	PDP 1.36	RPG 13.97	PDP 31.27	RPG 13.12	SPHQ -0.64	SPHQ 12.37	SPHQ 17.16	SPY -6.35	RPG 27.23	SPHQ 15.15	SPY 27.04	RSP -13.21	RSP 11.72	SPY 23.31	SPHQ 11.97	RPV 3.01
RSP 7.63	RSP -1.85	RSP -19.43	SPY 25.94	SPLV 14.38	SPY 2.99	PEY 9.98	RSP -0.34	PEY -41.49	SPY 23.49	RSP 19.68	RPG -0.02	SPY 13.47	SPHQ 29.84	RSP 12.35	SPY -0.81	SPY 9.64	RSP 16.61	SPHQ -8.67	RSP 26.61	RSP 10.21	SPHQ 26.36	SPHQ -17.31	RPG 6.39	SPLV 11.71	RSP 9.32	PEY 2.55
RPG -8.47	SPY -12.83	RPV -20.12	SPHQ 25.35	SPHQ 11.39	SPHQ 0.20	PDP 7.58	SPLV -2.16	PDP -46.35	SPLV 15.52	PEY 15.82	SPY -0.20	SPHQ 12.05	SPY 29.69	PDP 12.03	PEY -1.11	SPLV 7.80	RPV 15.11	RSP -9.53	SPLV 25.06	SPLV -3.62	SPLV 22.05	SPY -19.48	RPG 5.26	RSP 11.05	PDP 8.17	SPHQ 1.19
SPY -10.68	PDP -17.21	SPY -22.80	PEY 20.54	PEY 10.87	SPLV -0.67	RPG 6.55	RPV -6.71	SPHQ -46.41	SPHQ 12.20	SPY 12.84	RSP -2.18	SPLV 6.75	PEY 25.93	SPY 11.29	RSP -4.26	RPG 3.56	SPLV 14.82	PEY -11.06	RPV 21.83	PEY -8.48	PEY 21.17	PDP -24.83	PEY 2.18	RPV 9.91	SPLV 2.03	RSP 1.00
PDP -18.13	RPG -17.92	RPG -32.12	SPLV 19.43	SPY 8.68	PEY -2.23	SPHQ 4.58	PEY -18.94	RPV -49.76	PEY -1.77	SPLV 9.79	RPV -2.73	PEY 1.73	SPLV 19.80	RPV 10.43	RPV -10.48	PDP 1.52	PEY 5.20	RPV -14.23	PEY 19.89	RPV -11.28	PDP 7.72	RPG -28.09	SPLV -1.94	PEY 0.57	PEY -4.11	SPY -3.01

If the length of time of performance streaks isn't a clear and obvious roadblock to trend following, many momentum naysayers may shift their focus to the apparent *magnitude* of out/underperformance on any given year. To evaluate this claim, we calculated performance for a narrower set of factors (Low Vol., Value, Growth, and Momentum) during our previously defined streak events, measured relative to our core benchmark. The intuition is simple: the wider a factor's average range of out- or underperformance during streaks, the more likely its return profile deviates from what many would consider a "normal" investment experience. While momentum's range of average out/underperformance during streaks is the widest in our dataset, it remains broadly comparable to other widely mainstay factors like value (20.09) & growth (17.31). All this to say, the momentum experience certainly experiences its share of streaks, but not at an abnormal frequency or magnitude than other factors.



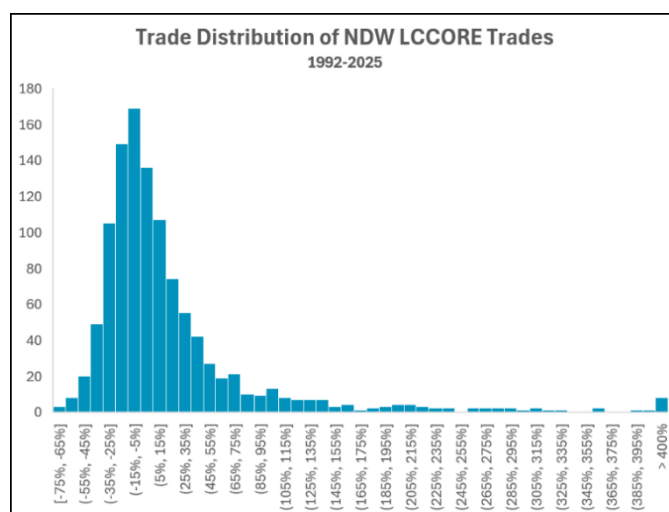
Buying High, Selling Higher?

Momentum typically doesn't adhere to the classic adage, "buy low, sell high". Instead, the factor targets securities that have already established strong relative strength, essentially aiming to "buy high, sell higher" based on attractive performance metrics. This methodology sits at odds with other widely followed factors- a stock can reasonably become "too expensive" for a value investor or produce an "insufficient growth trajectory" for a growth investor. Since a stock can almost never "outprice" itself to the upside for a

momentum strategy, a common critique is the factor’s perceived tendency to chase names that have already exhausted their upside, otherwise “buying high and selling low”.

To evaluate how significant this concern may be, we examined the trade distribution of the NDW Large Cap Core model, which seeks to hold high relative strength securities within the top 500 stocks by market cap over time. Since the start of 1992, the model has continuously rotated to RS winners, trading (if needed) on a monthly basis. Before proceeding, it is worth noting an important statistical caveat: equity returns are inherently non-normal. Upside returns are theoretically unbounded, while downside outcomes are limited to a maximum loss of 100%. Despite this asymmetry, a trade distribution remains useful for visualizing how frequently the model captures extreme positive outcomes.

Across the full dataset, eight trades produced returns in excess of 400% before exiting the model- effectively placing them more than three standard deviations above the average trade outcome. As of August 2025, these eight observations represent 0.73% of the 1,090 total trades executed since 1992. Under a normally distributed framework, only 0.135% of observations would be expected to fall beyond three standard deviations above the mean. Put



routine turnover as the model systematically removes positions that fail to demonstrate sustained leadership.

All this to say, this evidence suggests that constant rotation of “buying high” is not necessarily a liability for momentum strategies, but rather the defining feature that drives long-term results. To realize a return on the order of ~2,800%, a security would almost certainly have violated the selection criteria of even the most flexible value or growth frameworks along the way. While trend following may involve periods of whipsaw as it searches for these comparatively exceptional winners, its systematic ability to remain invested in “golden ticket” securities longer than other approaches is ultimately the hallmark of the factor over time.

Turnover and its Effect on Tax Efficiency

While the previous two sections highlight why it is so important for momentum strategies to rotate to new strength, the discussion thus far has omitted one major player: Uncle Sam. In the real world, trading out of one security and into another generally creates a taxable event depending on the performance of the security. As momentum-focused strategies tend to trade more frequently than many other factors, it is easy to assume that any excess returns generated through favorable asset rotation may quickly be offset by a higher tax bill, particularly when compared to other factors which see less overall rotation. We do know, however, that not all taxes are treated the same- investors generally prefer the lower rates associated with long-term gains (LTG), which occur when an asset has been held for over a year. Meanwhile, investors want to avoid the higher tax rate associated with short-term gains (STG), which occur when we hold profitable positions for under one year. Given the universal preference for minimizing tax liability, this raises an important question: do tactical strategies inherently lead to unfavorable tax outcomes?

To test this theory, we can take a look back at our Large Cap Core model discussed in the previous sections. This time, because holding period directly influences the favorability of tax treatment, we include holding period as an observable data point, pictured below. If momentum strategies generally lead to unfavorable tax outcomes, we would expect to see a clear pattern emerge: a larger share of total gains coming from short-term gains rather than long-term gains.



Observing all 1,447 trades in aggregate via the “cumulative trade efficiency” section of the graph above, some interesting trade tendencies emerge. First, and most importantly, long-term gain generating trades actually occur more frequently than short-term gain trades (28.7% vs. 22.7%, respectively), running counter to what many would typically assume for a tactical strategy. Secondly, short-term losses represent the most common trade outcome, accounting for roughly 44% of total trades in the dataset. At first glance this seems less than ideal- a potential “death by 1,000 cuts” scenario. However, at its core, this is the systematic nature of trend following at work. By consistently cutting small losers short, the magnitude of downside left-tail events is reduced (a result that aligns with the Q-Q plot discussed earlier). In doing so, momentum can unemotionally move on from a losing position in an effort to find a new possible right-tail winner.

While trade frequency provides useful context, the more relevant consideration for long-run tax efficiency is the magnitude of gains realized within each tax classification. It is for this reason that NDW developed a “tax efficiency score” which calculates the percentage of total gains generated over a given timeframe that would have been tagged at the more favorable LTG tax rate. The score is calculated as the proportion of gains realized at long-term rates relative to total realized gains (both short- and long-term). To put it simply, a more tax efficient model has a score closer to 100, meaning that most (or all) of captured gains would have been taxed at a lower rate. In this case, our model earns a score of nearly 77%, suggesting that just over three-quarters of realized gains were taxed favorably- a result far more efficient than many might expect from a strategy that continuously rotates into new market leadership.

Trade Efficiency Score

76.21

There is no question that momentum comes with its fair share of roadblocks a prospective investor would need to be cautious of before considering including the factor within their portfolio. That said, many of the risks commonly associated with momentum appear to be overstated, most notably those centered on trading frequency and its perceived impacts on apparent “streakiness” of yearly returns or overall tax efficiency. While it is true that the frequency of security rotation is steeper than other factors, momentum’s systematic approach to security selection sidesteps several other issues present in other factors, particularly those based around human emotions. Overall, the ability for trend followers to largely remove human biases creates a factor-unique return distribution focused on right tail events, while still largely protecting the integrity of the yearly return profile and tax efficiency over time. Taken together, these characteristics suggest that many of momentum’s perceived drawbacks are better understood as features of a disciplined, rules-based process rather than inherent flaws in the strategy itself.

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