Buy High, Sell Higher

Evaluating proximity to the 52-week high as a momentum signal

How important is price *level* in momentum investing? In this study, we evaluate the relationship between different measures of a stock's proximity to its 52-week high and traditional price momentum. We assess whether these proximity-based signals (i) generate return predictability on a standalone basis, (ii) subsume the informational content of conventional momentum strategies, and (iii) improve portfolio outcomes when combined with traditional price momentum. Using a broad set of global equity universes and consistent portfolio construction, we find that proximity to the 52-week high delivers performance comparable to traditional price momentum and captures a substantial portion of the momentum effect. Moreover, combining proximity-based 52-week high signals with conventional momentum improves risk-adjusted performance and downside capture. These findings support the view that momentum is closely linked to price levels relative to key reference points, consistent with behavioral anchoring mechanisms.

Key Findings

- Signals based on proximity to the 52-week high perform competitively with traditional price momentum.
- Proximity to the 52-week high captures a substantial portion of the momentum effect.
- Combining proximity-based 52-week high signals with traditional price momentum can improve portfolio outcomes beyond either signal alone.

Introduction

Momentum is one of the most robust and widely documented anomalies in asset pricing. The standard implementation—ranking stocks by their cumulative returns over the prior twelve months excluding the most recent month (12–1)—has been shown to generate persistent excess returns across markets and time periods.

Despite its empirical success, the economic mechanism underlying momentum remains a subject of ongoing debate. In particular, it is unclear whether momentum is fundamentally driven by the magnitude of past returns or by the informational content embedded in price levels relative to salient benchmarks.

One such benchmark is the 52-week high. Investors frequently evaluate securities relative to recent extrema, and the 52-week high serves as a natural reference point in this process. A stock trading near its recent peak may reflect gradual incorporation of positive information, while a stock trading far below its high may indicate incomplete adjustment to new information.

This study investigates whether proximity to the 52-week high captures return predictability within global equity markets and examines its relationship to traditional price momentum. Specifically, we assess different measures of a stock's proximity to its 52-week high to assess whether these may serve as substitutes for, or complements to, conventional momentum signals.

Background:

Before examining the relationship between 52-week high and momentum, it is important to note that the 52-week high has predictive power on its own, irrespective of momentum (or any other style). The table below presents summary statistics for the proximity-to-52-week-high signal across a broad set of global equity universes, providing initial evidence on its standalone predictive power*. The factor delivers consistently positive information coefficients (ICs) in every region and capitalization segment, with particularly strong magnitudes in small cap universes, where ICs reach approximately 0.10–0.11 accompanied by highly significant t-statistics in the range of 5 to 6. Even in less inefficient markets, including large cap benchmarks, the signal remains positive and statistically reliable, albeit at lower magnitudes.

The uniformity of these results across geographies and market segments underscores the robustness of the effect and suggests that proximity to the 52-week high captures a pervasive feature of return dynamics. Taken together, the evidence establishes the signal as economically meaningful and statistically well-supported in its own right, motivating further investigation into its underlying drivers and its relation to other known return predictors.

*ICs are computed using a monthly rebalance with 6-month forward returns, where each observation reflects the cross-sectional rank correlation between the signal and subsequent returns. The evaluation period spans June 1988 to December 2025 for US equities and June 2006 – December 2025 for non-US and global equities, subject to data availability. Reported ICs represent the time-series average of these monthly values. Corresponding t-statistics are calculated using Newey–West (HAC) adjustments to account for the overlap in forward return windows, which induces serial correlation in the IC time series. This adjustment provides a more conservative and reliable measure of statistical significance relative to standard (naïve) t-statistics.

Information Coefficients of the 52-Week High Signal

		Price-to-high (po52wh)
MSCI ACWI Small Cap	Mean IC	0.10
	T-Stat	**4.78**
MSCI ACWI ex-US Small Cap	Mean IC	0.11
	T-Stat	**5.28**
MSCI Emerging Markets Small Cap	Mean IC	0.11
	T-Stat	**5.98**
US Small Cap (Russell 2000 proxy)	Mean IC	0.08
	T-Stat	**5.50**
MSCI ACWI	Mean IC	0.06
	T-Stat	**2.81**
MSCI ACWI ex-US	Mean IC	0.06
	T-Stat	**2.77**
MSCI Emerging Markets	Mean IC	0.06
	T-Stat	**2.94**
US Large Cap (Russell 1000 proxy)	Mean IC	0.04
	T-Stat	**2.15**
US Mid Cap (Russell MidCap proxy)	Mean IC	0.04
	T-Stat	**2.35**

Literature Review:

George and Hwang (2004) introduce the 52-week high ratio as an alternative to traditional momentum measures, ranking stocks by the ratio of current price to the highest price observed over the prior year. They document that this measure predicts future returns and, in many specifications, subsumes the explanatory power of conventional momentum strategies.

They attribute this result to behavioral anchoring: investors evaluate new information relative to well-defined reference points, such as prior highs, leading to gradual price adjustment. Stocks near their highs may therefore reflect underreaction to positive information, producing return continuation.

Subsequent work reinforces this interpretation. Gray and Vogel (2016) demonstrate that the predictive power of the 52-week high signal strengthens over intermediate horizons, particularly at three- and six-month holding periods, consistent with gradual information diffusion.

More recently, Baltussen et al. (2025) decompose momentum into components related to price extremes, distinguishing between price-to-high (PTH) and high-to-price (HTP) measures. They find that a substantial portion of momentum profits is driven by the HTP component, suggesting that price dynamics relative to historical extrema play a central role in the momentum effect.

Collectively, this literature suggests that proximity to the 52-week high is not merely a simplified momentum proxy but rather reflects an underlying behavioral mechanism that contributes to return persistence.

Data and Methodology:

We evaluate three ratios to evaluate the 52-week high signal:

Signals Evaluated:

Price-to-high (po52wh):
Current price divided by the highest price over the prior 52 weeks (George and Hwang 2004):

Current Price / 52-week High Price

High-to-price (htp):
Highest price over the prior 52 weeks divided by the price at the start of the 52-week period (1-year ago):

52-week High Price / Price 1-Year Ago

Range position (range_52wk):
The position of the current price within the 52-week high-low range:

(Current Price – 52-week Low Price) / (52-week High Price – 52-week Low Price) *

These signals are compared with a conventional 12-1 momentum measure.

Sample Universes

The analysis is conducted across nine equity universes, including US large-, mid-, and small-cap segments, as well as non-US, global and emerging market indices. The sample period spans June 1988 to December 2025 for US equities and June 2006 to December 2025 for non-US and global markets, subject to data availability.

For a full description of universes and methodology, please see Appendix A.

* This formula may be viewed as (Current Price – 52-week Low Price)/ (Price Volatility) as the range itself is a measure of volatility. Range position then becomes similar to a z-score, in that we divide by the volatility of the stock price: (Δ Price)/σ_P. Consider two stocks that are the same distance from their 52-week low, then the less volatile of the two (i.e. smaller 52-week-price-range) will be preferred, as we divide by a smaller number. This means that this measure induces a low volatility tilt by construction.

Portfolio Construction

Portfolios are constructed as follows:

- Long-only portfolios comprising the top quintile of stocks ranked by each signal
- Market-capitalization weighting
- Six-month holding period with staggered portfolio formation

Specifically, six overlapping portfolios are formed, each initiated one month apart and held for six months. Monthly returns are computed as the average across these overlapping portfolios, following the methodology of Jegadeesh and Titman (1993) and George and Hwang (2004). More explicitly, in any given month the strategies hold a series of portfolios that are selected in the current month as well as in the previous 5 months. In each month t, the strategy buys the portfolio and holds this position for 6 months. In addition, the strategy closes out the position initiated in month t - 6. Hence, we revise 1/6 of the securities in the entire portfolio in any given month and carry over the rest from the previous month. This approach mitigates timing effects and approximates continuous portfolio implementation.

Findings:

1. Standalone performance of proximity signals is competitive with standard momentum.

Across almost all universes, proximity-based signals generate economically meaningful excess returns above t12m1 and the universe (market returns).

Among the signals considered, the **range_52wk** measure delivers the strongest risk-adjusted performance across most universes, while **po52wh** also performs strongly across markets. The **htp** signal often produces strong absolute returns but exhibits higher volatility, reducing its overall risk-adjusted attractiveness.

These findings indicate that proximity to the 52-week high contains substantial predictive information independent of traditional momentum measures.

po52wh - Top Quintile of (current price ÷ 52-week intraday high price)

range_52wk – Top Quintile of (Current Price - 52W Low Price) / (52W High Price - 52W Low Price)

htp – Top Quintile of (52-week intraday high price ÷ price 1-year ago)

t12m1 - Top Quintile of Trailing 12-month return, excluding the most recent month

univ – universe holdings, market-capitalization weighted

MSCI ACWI Small Cap, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	9.28%	1.92%	5.53%	15.33%	0.51	0.35	0.90	0.78
range_52wk	9.65%	2.29%	5.14%	16.61%	0.49	0.44	0.96	0.85
htp	7.96%	0.59%	6.08%	21.27%	0.31	0.10	1.13	1.13
t12m1	7.83%	0.47%	6.27%	19.03%	0.33	0.07	1.03	1.01
univ	7.37%	0.00%	0.00%	18.15%	0.33		1.00	1.00

MSCI ACWI ex-US Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	9.38%	3.17%	5.50%	16.00%	0.50	0.58	0.95	0.80
range_52wk	9.75%	3.54%	5.14%	17.32%	0.48	0.69	1.01	0.86
htp	7.26%	1.05%	6.02%	21.89%	0.27	0.17	1.14	1.11
t12m1	7.60%	1.38%	6.36%	19.35%	0.32	0.22	1.05	1.00
univ	6.21%	0.00%	0.00%	18.47%	0.26		1.00	1.00

MSCI Emerging Markets Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	12.90%	5.87%	5.63%	19.44%	0.59	1.04	1.02	0.80
range_52wk	12.81%	5.78%	5.54%	20.86%	0.54	1.04	1.07	0.87
htp	8.05%	1.02%	5.77%	24.37%	0.27	0.18	1.13	1.11
t12m1	9.16%	2.14%	6.35%	22.21%	0.35	0.34	1.07	1.00
univ	7.03%	0.00%	0.00%	21.58%	0.26		1.00	1.00

US Small Cap (Russell 2000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	13.31%	1.78%	6.43%	15.36%	0.68	0.28	0.86	0.72
range_52wk	14.29%	2.77%	6.21%	17.54%	0.65	0.45	0.97	0.83
htp	12.27%	0.75%	10.18%	24.66%	0.38	0.07	1.23	1.29
t12m1	12.72%	1.20%	8.48%	21.80%	0.45	0.14	1.12	1.11
univ	11.52%	0.00%	0.00%	18.67%	0.46		1.00	1.00

MSCI ACWI, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	8.22%	0.71%	5.40%	13.90%	0.49	0.13	0.88	0.81
range_52wk	8.65%	1.14%	5.24%	15.22%	0.47	0.22	0.95	0.87
htp	8.95%	1.44%	7.23%	19.85%	0.38	0.20	1.17	1.14
t12m1	7.78%	0.27%	7.05%	17.90%	0.35	0.04	1.04	1.03
univ	7.51%	0.00%	0.00%	15.99%	0.38		1.00	1.00

MSCI ACWI ex-US, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	6.42%	1.41%	5.68%	15.13%	0.33	0.25	0.90	0.81
range_52wk	6.54%	1.52%	5.58%	16.37%	0.31	0.27	0.96	0.87
htp	6.19%	1.17%	7.15%	20.60%	0.23	0.16	1.13	1.09
t12m1	5.06%	0.05%	7.12%	18.64%	0.19	0.01	1.01	1.00
univ	5.01%	0.00%	0.00%	17.16%	0.21		1.00	1.00

MSCI Emerging Markets, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	7.38%	2.13%	6.93%	18.38%	0.32	0.31	0.94	0.84
range_52wk	7.06%	1.81%	6.93%	19.73%	0.28	0.26	0.99	0.91
htp	6.11%	0.86%	7.69%	23.47%	0.20	0.11	1.14	1.12
t12m1	5.33%	0.08%	8.06%	21.53%	0.18	0.01	1.04	1.03
univ	5.25%	0.00%	0.00%	20.06%	0.19		1.00	1.00

US Large Cap (Russell 1000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	11.44%	-0.01%	5.74%	13.03%	0.66	0.00	0.88	0.81
range_52wk	12.54%	1.09%	6.08%	14.45%	0.67	0.18	0.97	0.88
htp	13.03%	1.58%	10.57%	20.88%	0.49	0.15	1.23	1.25
t12m1	13.24%	1.79%	8.88%	18.24%	0.57	0.20	1.12	1.07
univ	11.45%	0.00%	0.00%	14.74%	0.58		1.00	1.00

US Mid Cap (Russell MidCap proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	12.44%	0.58%	6.24%	14.04%	0.68	0.09	0.87	0.76
range_52wk	13.59%	1.72%	6.87%	15.89%	0.68	0.25	0.96	0.84
htp	12.78%	0.91%	10.58%	22.23%	0.45	0.09	1.21	1.25
t12m1	13.14%	1.27%	9.35%	19.87%	0.52	0.14	1.11	1.09
univ	11.87%	0.00%	0.00%	16.14%	0.56		1.00	1.00

Because **range_52wk** consistently delivers the strongest risk-adjusted performance among the proximity metrics evaluated, the remainder of the analysis focuses on this signal as the primary implementation of the 52-week high proximity effect.

2. Proximity to the 52-week high captures a substantial portion of the momentum effect.

An important question is whether the momentum strategy has explanatory power conditional on the rankings implied by the 52-week high strategy, and vice versa. To evaluate this, we examine results from sequential double sorts—first on momentum followed by the 52-week high signal, and then in the reverse order[1].

We first obtain the top momentum quintile stocks. Then we partition this group into the top 50% of 52-week high and the bottom 50% of 52W-week high. If the resulting return spread between the top and bottom 52-week high (within the top quintile momentum) is positive and economically significant, then the second sort is useful, and the 52-week high signal provides incremental information beyond that of momentum. Conversely, if the secondary sorting produces a spread that is negative or close to zero, that implies that the second sorting information is redundant relative to the first sort.

When stocks are first sorted by 12–1 momentum and subsequently by proximity (range_52wk), the resulting return spreads remain positive and economically significant. This suggests that proximity provides incremental information beyond momentum.

However, when the sorting order is reversed—first by proximity and then by momentum—the incremental spreads are substantially weaker and lack significance. This pattern indicates that once proximity is accounted for, momentum contributes limited additional explanatory power. Put another way, there is little to no incremental information in momentum after you've already accounted for proximity to the 52-week high.

These results are consistent across most universes and align closely with the findings of George and Hwang (2004), supporting the interpretation that proximity to the 52-week high captures a substantial component of the momentum effect.

The tables below show the underlying portfolio construction behind these results. Consider the MSCI ACWI Small Cap table: Within Panel A, the third row shows the 52-week high spread conditional on the top quintile momentum membership[2] is 27bps per month (t-stat 2.55). This means that utilizing 52-week high rankings after restricting to the top quintile of momentum is beneficial – the 52-week high profits are preserved.

[1] We also perform spanning tests within the U.S. in Appendix D to test explanatory power.

[2] This comparison is akin to testing if the conditional expectation of the 52-week high spread given top quintile 12-1 momentum is positive: E[52-week high Return Spread |Top Q Momentum]>0.

Conversely, the third row of Panel B shows a -1bps per month (-0.10) momentum spread. This implies that the 52-week high top quintile restriction is not improved upon by utilizing the momentum rankings within this top quintile 52-week high. The second sort is thus redundant, and the positive momentum spread has disappeared.

These results indicate that extremes of the distribution of the 52-week high measure are better than standard 12-1 momentum at predicting future returns.

MSCI ACWI Small Cap, Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.90%	
	Bottom 50%	0.63%	
	Top 50% - Bottom 50%	0.27%	2.55

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.89%	
	Bottom 50%	0.90%	
	Top 50% - Bottom 50%	-0.01%	-0.10

Panel A above shows the results for the MSCI ACWI Small Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.27% per month, with a T-stat above 2, indicating the spread is statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a much weaker result. The Top 50% - Bottom 50% spread is -0.01% per month with a T-stat of -0.10, indicating no statistical significance.

Taken together, these results suggest that proximity to the 52-week high retains incremental information even among high-momentum stocks, while momentum adds little to no additional signal once proximity has already been accounted for.

MSCI ACWI ex-US Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.94%	
	Bottom 50%	0.56%	
	Top 50% - Bottom 50%	0.37%	3.61

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.91%	
	Bottom 50%	0.92%	
	Top 50% - Bottom 50%	-0.01%	-0.05

Panel A above shows the results for the MSCI ACWI ex-US Small Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.37% per month, with a T-stat above 2, indicating the spread is statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a much weaker result. The Top 50% - Bottom 50% spread is -0.01% per month with a T-stat of -0.05, indicating no statistical significance.

Taken together, these results suggest that proximity to the 52-week high retains incremental information even among high-momentum stocks, while momentum adds little to no additional signal once proximity has already been accounted for.

MSCI Emerging Markets Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.20%	
	Bottom 50%	0.63%	
	Top 50% - Bottom 50%	0.57%	3.98

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.21%	
	Bottom 50%	1.20%	
	Top 50% - Bottom 50%	0.00%	0.03

Panel A above shows the results for the MSCI Emerging Markets Small Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.57% per month, with a T-stat of nearly 4, indicating the spread is statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a much weaker result. The Top 50% - Bottom 50% spread is 0.00% per month with a T-stat of 0.03, indicating no statistical significance.

Taken together, these results suggest that proximity to the 52-week high retains incremental information even among high-momentum stocks, while momentum adds little to no additional signal once proximity has already been accounted for.

US Small Cap (Russell 2000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.30%	
	Bottom 50%	1.07%	
	Top 50% - Bottom 50%	0.23%	2.20

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.34%	
	Bottom 50%	1.15%	
	Top 50% - Bottom 50%	0.19%	1.54

Panel A above shows the results for the US Small Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.23% per month, with a T-stat above 2, indicating the spread is statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a much weaker result. The Top 50% - Bottom 50% spread is 0.19% per month with a T-stat of 1.54, indicating no statistical significance.

Taken together, these results suggest that proximity to the 52-week high retains incremental information even among high-momentum stocks, while momentum adds little to no additional signal once proximity has already been accounted for.

MSCI ACWI, Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.82%	
	Bottom 50%	0.67%	
	Top 50% - Bottom 50%	0.15%	1.28

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.83%	
	Bottom 50%	0.77%	
	Top 50% - Bottom 50%	0.05%	0.36

Panel A shows the results for the MSCI ACWI universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.15% per month, with a T-stat of 1.28, indicating the spread is not statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a smaller spread of 0.05% per month with a T-stat of 0.36, also not statistically significant.

Taken together, neither sorting produces statistically significant results. However, the larger spread and higher T-stat in Panel A are directionally consistent with the broader findings, where proximity to the 52-week high tends to carry more of the signal than momentum.

MSCI ACWI ex-US, Median Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.61%	
	Bottom 50%	0.52%	
	Top 50% - Bottom 50%	0.09%	0.71

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.62%	
	Bottom 50%	0.69%	
	Top 50% - Bottom 50%	-0.07%	-0.51

Panel A shows the results for the MSCI ACWI ex-US universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.09% per month, with a T-stat of 0.71, indicating the spread is not statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a smaller spread of -0.07% per month with a T-stat of -0.51, also not statistically significant.

Taken together, neither sorting produces statistically significant results. However, the larger spread and higher T-stat in Panel A are directionally consistent with the broader findings, where proximity to the 52-week high tends to carry more of the signal than momentum.

MSCI Emerging Markets, Median Performance & Risk Metrics

June 2006 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.65%	
	Bottom 50%	0.59%	
	Top 50% - Bottom 50%	0.07%	0.41

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.65%	
	Bottom 50%	0.86%	
	Top 50% - Bottom 50%	-0.21%	-1.26

Panel A shows the results for the MSCI Emerging Markets universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.07% per month, with a T-stat of 0.41, indicating the spread is not statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a smaller spread of -0.21% per month with a T-stat of -1.26, also not statistically significant.

Taken together, neither sorting produces statistically significant results. However, the larger spread and higher T-stat in Panel A are directionally consistent with the broader findings, where proximity to the 52-week high tends to carry more of the signal than momentum.

US Large Cap (Russell 1000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.26%	
	Bottom 50%	1.07%	
	Top 50% - Bottom 50%	0.19%	1.96

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.28%	
	Bottom 50%	0.90%	
	Top 50% - Bottom 50%	0.38%	2.71

Panel A shows the results for the US Large Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.19% per month, with a T-stat of 1.96, indicating the result is marginal and just below conventional levels of statistical significance.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a larger spread of 0.38% per month with a T-stat of 2.71, indicating statistical significance.

Taken together, these results suggest that momentum provides incremental information even after accounting for proximity to the 52-week high and does so more strongly than the reverse in this universe. This contrasts with the pattern observed in most other universes.

US Mid Cap (Russell MidCap proxy), Median Performance & Risk Metrics

June 1988 – December 2025

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.28%	
	Bottom 50%	1.12%	
	Top 50% - Bottom 50%	0.16%	1.61

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.30%	
	Bottom 50%	1.03%	
	Top 50% - Bottom 50%	0.27%	1.90

Panel A shows the results for the US Mid Cap universe when we first sort on momentum. Within the top quintile of 12–1 momentum stocks, further sorting by proximity to the 52-week high produces a Top 50% - Bottom 50% spread of 0.16% per month, with a T-stat of 1.61, indicating the result is not statistically significant.

Panel B shows the reverse sorting within the same universe. Within the top quintile of stocks closest to their 52-week highs, further sorting on momentum produces a larger spread of 0.27% per month with a T-stat of 1.90, indicating a marginal result just below conventional levels of statistical significance.

Taken together, neither sorting produces statistically significant results. However, Panel B shows a larger spread and higher T-stat, suggesting that momentum may provide somewhat more incremental information than proximity in this universe. This contrasts with the pattern observed in most other universes.

It is also worth noting that the US Mid Cap universe has substantial overlap with the US Large Cap universe—roughly 800 of the US Large Cap's 1,000 names are shared—which likely contributes to the similarity in results across the two.

3. Combining standard 12-1 momentum with proximity to the 52-week high improves portfolio outcomes compared to standard momentum and preserves upside capture compared to proximity signals alone.

While proximity-based signals perform well independently, they exhibit different risk characteristics than traditional momentum.

Momentum strategies tend to exhibit strong upside participation but also higher downside exposure during market reversals. In contrast, proximity-based signals—particularly range_52wk—exhibit more favorable downside characteristics but relatively lower upside capture.

Combining the two signals yields improved portfolio outcomes versus standard momentum alone. A composite signal formed from standardized 12–1 momentum and range_52wk scores produces:

- Higher excess returns
- Improved information ratios
- Reduced downside capture
- Comparable volatility and tracking error

These results indicate that proximity-based measures complement traditional momentum by improving the balance between return generation and risk exposure.

t12m1 - Top Quintile of Trailing 12-month return, excluding the most recent month

range_52wk – Top Quintile of (Current Price – 52-week Low Price) / (52-week High Price – 52-week Low Price)

comp_t12m1_rng52wk – Top Quintile of the equal-weight composite of the z-scored 12–1 momentum and range_52wk signals

univ – universe holdings, market-capitalization weighted

MSCI ACWI Small Cap, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	7.83%	0.47%	6.27%	19.03%	0.33	0.07	1.03	1.01
range_52wk	9.65%	2.29%	5.14%	16.61%	0.49	0.44	0.96	0.85
comp_t12m1_rng52wk	9.10%	1.73%	5.81%	17.76%	0.43	0.30	1.00	0.92
univ	7.37%	0.00%	0.00%	18.15%	0.33		1.00	1.00

MSCI ACWI ex-US Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	7.60%	1.38%	6.36%	19.35%	0.32	0.22	1.05	1.00
range_52wk	9.75%	3.54%	5.14%	17.32%	0.48	0.69	1.01	0.86
comp_t12m1_rng52wk	9.03%	2.82%	5.88%	18.28%	0.41	0.48	1.04	0.92
univ	6.21%	0.00%	0.00%	18.47%	0.26		1.00	1.00

MSCI Emerging Markets Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	9.16%	2.14%	6.35%	22.21%	0.35	0.34	1.07	1.00
range_52wk	12.81%	5.78%	5.54%	20.86%	0.54	1.04	1.07	0.87
comp_t12m1_rng52wk	11.29%	4.27%	6.15%	21.63%	0.45	0.69	1.08	0.94
univ	7.03%	0.00%	0.00%	21.58%	0.26		1.00	1.00

US Small Cap (Russell 2000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	12.72%	1.20%	8.48%	21.80%	0.45	0.14	1.12	1.11
range_52wk	14.29%	2.77%	6.21%	17.54%	0.65	0.45	0.97	0.83
comp_t12m1_rng52wk	13.90%	2.37%	7.41%	19.62%	0.56	0.32	1.05	0.96
univ	11.52%	0.00%	0.00%	18.67%	0.46		1.00	1.00

MSCI ACWI, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	7.78%	0.27%	7.05%	17.90%	0.35	0.04	1.04	1.03
range_52wk	8.65%	1.14%	5.24%	15.22%	0.47	0.22	0.95	0.87
comp_t12m1_rng52wk	8.44%	0.93%	6.39%	16.70%	0.42	0.15	1.00	0.95
univ	7.51%	0.00%	0.00%	15.99%	0.38		1.00	1.00

MSCI ACWI ex-US, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	5.06%	0.05%	7.12%	18.64%	0.19	0.01	1.01	1.00
range_52wk	6.54%	1.52%	5.58%	16.37%	0.31	0.27	0.96	0.87
comp_t12m1_rng52wk	5.93%	0.92%	6.65%	17.71%	0.25	0.14	0.99	0.93
univ	5.01%	0.00%	0.00%	17.16%	0.21		1.00	1.00

MSCI Emerging Markets, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	5.33%	0.08%	8.06%	21.53%	0.18	0.01	1.04	1.03
range_52wk	7.06%	1.81%	6.93%	19.73%	0.28	0.26	0.99	0.91
comp_t12m1_rng52wk	6.06%	0.81%	7.86%	20.78%	0.22	0.10	1.01	0.98
univ	5.25%	0.00%	0.00%	20.06%	0.19		1.00	1.00

US Large Cap (Russell 1000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	13.24%	1.79%	8.88%	18.24%	0.57	0.20	1.12	1.07
range_52wk	12.54%	1.09%	6.08%	14.45%	0.67	0.18	0.97	0.88
comp_t12m1_rng52wk	13.24%	1.79%	7.51%	16.59%	0.63	0.24	1.06	0.99
univ	11.45%	0.00%	0.00%	14.74%	0.58		1.00	1.00

US Mid Cap (Russell MidCap proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
t12m1	13.14%	1.27%	9.35%	19.87%	0.52	0.14	1.11	1.09
range_52wk	13.59%	1.72%	6.87%	15.89%	0.68	0.25	0.96	0.84
comp_t12m1_rng52wk	13.50%	1.64%	8.36%	18.29%	0.58	0.20	1.06	0.99
univ	11.87%	0.00%	0.00%	16.14%	0.56		1.00	1.00

Discussion

Our empirical findings are broadly consistent with the behavioral interpretation of momentum as arising from anchoring to salient reference points. The 52-week high appears to serve as a focal benchmark through which investors process new information, leading to gradual price adjustment and return continuation.

Among the proximity measures examined, the range-based specification provides a particularly stable implementation, suggesting that relative position within the full price range may better capture the underlying behavioral mechanism than reliance on the high alone.

However, one limitation of the analysis is the use of a six-month holding period for all signals, including traditional momentum. Since momentum strategies are often implemented with more frequent rebalancing, the relative performance of the 12–1 strategy may be understated in this framework. Regardless, the data presented in this paper, as well as, from our literature review provide robust evidence as to the importance of the 52-week high signal in momentum strategies.

Conclusion

This study provides evidence that proximity to the 52-week high is a robust predictor of future returns and captures a substantial portion of the momentum effect.

Proximity-based signals:

- Perform competitively with traditional momentum
- Subsume much of the information contained in return-based momentum measures
- Enhance portfolio outcomes when combined with conventional momentum

These findings suggest that momentum may be more fundamentally related to price levels relative to recent extrema than to past returns per se. More broadly, they support the view that behavioral anchoring plays a central role in the persistence of asset returns.

Appendix A

For the US, we constructed proxy universes to approximate the Russell 1000, Russell Midcap, and Russell 2000 indices, using monthly data from June 1988 through December 2025. These proxies consisted of publicly traded US companies with prices above $2, excluding ADRs and secondary listings. The Russell 1000 proxy (large-cap) comprised the top 1,000 companies by market capitalization, while the Russell Midcap proxy (mid-cap) comprised the 800 smallest companies by market capitalization within the Russell 1000 proxy. The Russell 2000 proxy (small-cap) included companies ranked 1,001–3,000. For non-US markets, we used the MSCI ACWI, MSCI ACWI Small Cap, MSCI ACWI ex USA, MSCI ACWI ex USA Small Cap, MSCI EM, and MSCI EM Small Cap indices, with monthly data from June 2006 through December 2025. All universes were market-capitalization-weighted to maintain consistency with index methodology.

Appendix B

Below are the risk and return statistics for the US subsamples aligned with the time periods of the MSCI datasets (June 2006 – December 2025). Restricting the sample to match the MSCI universes does not materially change the results presented earlier in the paper. Proximity to 52-week high measures continue to exhibit standalone return predictability and enhance portfolio outcomes when combined with traditional return-based momentum. It is also worth noting that, in the 20-year subsample, the upside and downside capture of 12–1 momentum is more muted and broadly in line with those observed for the MSCI universes.

Consistent with prior findings, the US Large and Mid Cap universes do not support the notion that proximity measures subsume the informational content of 12-1 momentum. The US Small Cap universe similarly reflects this pattern within the restricted sample.

US Small Cap (Russell 2000 proxy), Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	9.00%	0.05%	6.35%	16.51%	0.46	0.01	0.82	0.77
range_52wk	9.76%	0.81%	5.72%	17.89%	0.46	0.14	0.89	0.83
htp	9.96%	1.02%	8.20%	23.51%	0.36	0.12	1.12	1.10
comp_t12m1_rng52wk	9.91%	0.96%	6.36%	19.00%	0.44	0.15	0.94	0.88
t12m1	9.48%	0.53%	6.97%	20.95%	0.38	0.08	1.01	0.98
univ	8.95%	0.00%	0.00%	20.16%	0.37		1.00	1.00

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.97%	
	Bottom 50%	0.90%	
	Top 50% - Bottom 50%	0.08%	0.56

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.97%	
	Bottom 50%	0.85%	
	Top 50% - Bottom 50%	0.11%	0.92

US Large Cap (Russell 1000 proxy), Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	9.75%	-1.09%	5.52%	13.58%	0.61	-0.20	0.86	0.84
range_52wk	10.57%	-0.27%	5.42%	14.83%	0.61	-0.05	0.93	0.91
htp	12.12%	1.29%	8.42%	19.90%	0.54	0.15	1.14	1.13
comp_t12m1_rng52wk	11.27%	0.44%	6.60%	16.48%	0.60	0.07	1.00	0.96
t12m1	11.65%	0.81%	7.34%	17.61%	0.58	0.11	1.04	1.01
univ	10.83%	0.00%	0.00%	15.55%	0.60		1.00	1.00

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.09%	
	Bottom 50%	0.97%	
	Top 50% - Bottom 50%	0.12%	0.90

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	1.07%	
	Bottom 50%	0.81%	
	Top 50% - Bottom 50%	0.26%	1.73

US Mid Cap (Russell MidCap proxy), Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
po52wh	9.51%	-0.04%	6.25%	14.87%	0.54	-0.01	0.86	0.79
range_52wk	9.89%	0.35%	6.08%	16.10%	0.52	0.06	0.91	0.85
htp	10.33%	0.79%	7.73%	20.94%	0.42	0.10	1.10	1.08
comp_t12m1_rng52wk	9.73%	0.19%	7.01%	17.90%	0.46	0.03	0.97	0.94
t12m1	9.54%	0.00%	7.37%	19.05%	0.42	0.00	1.00	0.99
univ	9.54%	0.00%	0.00%	17.55%	0.46		1.00	1.00

Panel A

Portfolios Classified by 12-1 Momentum	Portfolios Classified by range_52wk	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.95%	
	Bottom 50%	0.89%	
	Top 50% - Bottom 50%	0.06%	0.50

Panel B

Portfolios Classified by range_52wk	Portfolios Classified by 12-1 Momentum	Average Monthly Return	T-Stat
Top Quintile	Top 50%	0.92%	
	Bottom 50%	0.89%	
	Top 50% - Bottom 50%	0.02%	0.19

Appendix C

Below, we extend the analysis by examining the performance of a Recency-Weighted Lookback momentum signal (**RW_LB**) in place of the standard 12–1 momentum signal. The RW_LB signal ranks stocks based on a weighted average of their trailing 3-, 6-, 9-, and 12-month returns, with weights of 40%, 20%, 20%, and 20%, respectively.

Findings:

- Recency-Weighted Lookback (**RW_LB**) outperforms standard 12–1 momentum (**t12m1**) across all nine universes analyzed under the 6-month rebalance, monthly-staggered overlapping portfolio framework (see original paper for full methodology).
- Combining Recency-Weighted Lookback with the 52-week high signal further improves outcomes. A composite (**comp_RW_LB_rng52wk**) of Recency Weighted Lookback (**RW_LB**) and 52-week high (**range_52wk**) reduces volatility while enhancing risk-adjusted returns and downside capture relative to IMC RS alone.
- Across all universes except US Large Cap, this composite (**comp_RW_LB_rng52wk**) also outperforms the equivalent combination using standard momentum (**comp_t12m1_rng52wk**) on both an absolute and risk-adjusted basis.

The composite signal is constructed by independently z-scoring Recency-Weighted Lookback and 52-week high, then combining them as:

$$0.5 \times z(\textbf{RW\_LB}) + 0.5 \times z(\textbf{range\_52wk})$$

Securities are then ranked on this composite score, with the top quintile selected for portfolio inclusion.

Recency-Weighted Lookback (**RW_LB**) and the composite signal (**comp_RW_LB_rng52wk**) are highlighted in yellow in the tables below.

range_52wk – Top Quintile of (Current Price – 52-week Low Price) / (52-week High Price – 52-week Low Price)

t12m1 - Top Quintile of Trailing 12-month return, excluding the most recent month

comp_t12m1_rng52wk – Top Quintile of the equal-weight composite of the z-scored 12–1 momentum and range_52wk signals

RW_LB – Top Quintile of Recency-Weighted Lookback

comp_RW_LB_rng52wk – Top Quintile of the equal-weight composite of the z-scored RW_LB and range_52wk signals

univ – universe holdings, market-capitalization weighted

MSCI ACWI Small Cap, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	9.65%	2.29%	5.14%	16.61%	0.49	0.44	0.96	0.85
t12m1	7.83%	0.47%	6.27%	19.03%	0.33	0.07	1.03	1.01
comp_t12m1_rng52wk	9.10%	1.73%	5.81%	17.76%	0.43	0.30	1.00	0.92
RW_LB	9.11%	1.75%	5.98%	18.58%	0.41	0.29	1.05	0.98
comp_RW_LB_rng52wk	9.47%	2.10%	5.58%	17.66%	0.45	0.38	1.01	0.91
univ	7.37%	0.00%	0.00%	18.15%	0.33		1.00	1.00

MSCI ACWI ex-US Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	9.75%	3.54%	5.14%	17.32%	0.48	0.69	1.01	0.86
t12m1	7.60%	1.38%	6.36%	19.35%	0.32	0.22	1.05	1.00
comp_t12m1_rng52wk	9.03%	2.82%	5.88%	18.28%	0.41	0.48	1.04	0.92
RW_LB	9.35%	3.14%	5.96%	18.82%	0.42	0.53	1.07	0.94
comp_RW_LB_rng52wk	9.70%	3.49%	5.63%	18.15%	0.45	0.62	1.05	0.90
univ	6.21%	0.00%	0.00%	18.47%	0.26		1.00	1.00

MSCI Emerging Markets Small Cap, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	12.81%	5.78%	5.54%	20.86%	0.54	1.04	1.07	0.87
t12m1	9.16%	2.14%	6.35%	22.21%	0.35	0.34	1.07	1.00
comp_t12m1_rng52wk	11.29%	4.27%	6.15%	21.63%	0.45	0.69	1.08	0.94
RW_LB	11.03%	4.00%	6.24%	22.25%	0.43	0.64	1.11	0.97
comp_RW_LB_rng52wk	12.01%	4.98%	6.02%	21.73%	0.49	0.83	1.10	0.93
univ	7.03%	0.00%	0.00%	21.58%	0.26		1.00	1.00

US Small Cap (Russell 2000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	14.29%	2.77%	6.21%	17.54%	0.65	0.45	0.97	0.83
t12m1	12.72%	1.20%	8.48%	21.80%	0.45	0.14	1.12	1.11
comp_t12m1_rng52wk	13.90%	2.37%	7.41%	19.62%	0.56	0.32	1.05	0.96
RW_LB	13.63%	2.10%	8.47%	21.89%	0.49	0.25	1.14	1.10
comp_RW_LB_rng52wk	13.99%	2.47%	7.37%	19.81%	0.56	0.34	1.06	0.97
univ	11.52%	0.00%	0.00%	18.67%	0.46		1.00	1.00

MSCI ACWI, Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	8.65%	1.14%	5.24%	15.22%	0.47	0.22	0.95	0.87
t12m1	7.78%	0.27%	7.05%	17.90%	0.35	0.04	1.04	1.03
comp_t12m1_rng52wk	8.44%	0.93%	6.39%	16.70%	0.42	0.15	1.00	0.95
RW_LB	8.33%	0.83%	6.69%	17.25%	0.40	0.12	1.03	0.99
comp_RW_LB_rng52wk	8.61%	1.10%	6.09%	16.42%	0.44	0.18	1.00	0.94
univ	7.51%	0.00%	0.00%	15.99%	0.38		1.00	1.00

MSCI ACWI ex-US, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	6.54%	1.52%	5.58%	16.37%	0.31	0.27	0.96	0.87
t12m1	5.06%	0.05%	7.12%	18.64%	0.19	0.01	1.01	1.00
comp_t12m1_rng52wk	5.93%	0.92%	6.65%	17.71%	0.25	0.14	0.99	0.93
RW_LB	5.89%	0.87%	6.95%	18.21%	0.24	0.13	1.02	0.97
comp_RW_LB_rng52wk	6.28%	1.27%	6.33%	17.38%	0.28	0.20	0.99	0.92
univ	5.01%	0.00%	0.00%	17.16%	0.21		1.00	1.00

MSCI Emerging Markets, Median Performance & Risk Metrics

June 2006 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	7.06%	1.81%	6.93%	19.73%	0.28	0.26	0.99	0.91
t12m1	5.33%	0.08%	8.06%	21.53%	0.18	0.01	1.04	1.03
comp_t12m1_rng52wk	6.06%	0.81%	7.86%	20.78%	0.22	0.10	1.01	0.98
RW_LB	6.31%	1.06%	7.85%	21.44%	0.23	0.13	1.06	1.02
comp_RW_LB_rng52wk	6.71%	1.46%	7.41%	20.68%	0.25	0.20	1.03	0.97
univ	5.25%	0.00%	0.00%	20.06%	0.19		1.00	1.00

US Large Cap (Russell 1000 proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	12.54%	1.09%	6.08%	14.45%	0.67	0.18	0.97	0.88
t12m1	13.24%	1.79%	8.88%	18.24%	0.57	0.20	1.12	1.07
comp_t12m1_rng52wk	13.24%	1.79%	7.51%	16.59%	0.63	0.24	1.06	0.99
RW_LB	13.25%	1.80%	8.36%	17.60%	0.59	0.22	1.11	1.06
comp_RW_LB_rng52wk	13.08%	1.63%	7.31%	16.22%	0.63	0.22	1.05	0.98
univ	11.45%	0.00%	0.00%	14.74%	0.58		1.00	1.00

US Mid Cap (Russell MidCap proxy), Median Performance & Risk Metrics

June 1988 – December 2025

	Annualized Return	Annualized Excess Return	Tracking Error	Standard Deviation	Sharpe Ratio	Information Ratio	Up Market Capture	Down Market Capture
range_52wk	13.59%	1.72%	6.87%	15.89%	0.68	0.25	0.96	0.84
t12m1	13.14%	1.27%	9.35%	19.87%	0.52	0.14	1.11	1.09
comp_t12m1_rng52wk	13.50%	1.64%	8.36%	18.29%	0.58	0.20	1.06	0.99
RW_LB	13.49%	1.62%	9.06%	19.41%	0.55	0.18	1.10	1.06
comp_RW_LB_rng52wk	13.58%	1.71%	8.13%	18.11%	0.59	0.21	1.05	0.98
univ	11.87%	0.00%	0.00%	16.14%	0.56		1.00	1.00

Appendix D

Factor Spanning Tests

We perform monthly time-series regressions of top quintile 12-1 Momentum (MOM) and top quintile 52-week high (52WH) portfolio returns[1] onto the Fama-French five-factor model. These factors are Market (MKT), Size (SMB), Value (HML), Operating Profitability (RMW), and Investment (CMA). If the five-factor model can span the momentum portfolio returns, then the intercept from the regression should be small and insignificant. If, however, the intercept is positive and significant then the five-factor model is unable to span the momentum portfolio returns completely and thus excess return is missed out on by a five-factor model investor.

Table A.D1 shows in equations (1) and (4) the average monthly return (above the risk-free rate) for both momentum and the 52-week high portfolios. Both are statistically significant with Momentum at 95 bps per month and 52-week high at 85 bps per month. Equations (2) and (4) show MOM and 52WH regressed against the five-factor model. The intercepts for MOM and 52WH are still significant at 24 bps per month for Momentum and the lesser 12 bps for the 52-week high. This shows that the Fama-French model is unable to completely span these portfolios.

To assess incremental explanatory power, we then augment the model by including either Momentum or 52-week high as an additional right-hand-side factor and compare the resulting intercepts (alphas). Equations (3) and (6) show these results. For momentum we still have a significant 12 bps per month of alpha above and beyond that of a [FF-5 factor + 52WH] investor and therefore the 52WH is unable to subsume the profits from Momentum. However, since the alpha shown in equation (6) is statistically indistinguishable from zero (0.0029%), the [FF-5 factor + MOM] model subsumes the profits of the 52WH strategy and therefore momentum contains incremental information not captured by the 52-week high effect within the Russell 3000[2].

[1] Top quintiles are based on the Russell 3000 universe with the 6-month holding period construction described in the paper. We subtract the risk-free rate from MKT, t12m1, and range_52wk in the regressions shown in table A.D1. We highlight in BOLD the significant t-statistics, which are displayed below each beta estimate.

[2] This result is consistent with the superior Information ratio for Momentum shown in the US Large Cap table results.

Table A.D1: Factor Spanning Tests

$$y_t = \alpha + \beta \cdot X_t + \varepsilon_t$$

A1.1 Dependent Variable Momentum				A1.2 Dependent Variable 52 Week High		
	(1)	(2)	(3)	(4)	(5)	(6)
α	0.95%	0.24%	0.12%	0.85%	**0.12%**	0.0029%
	3.78	**2.25**	**1.57**	**4.30**	**1.60**	0.05
β_{MKT-RF}		1.02	0.15		0.90	0.39
		39.08	**3.13**		**48.11**	**13.75**
β_{SMB}		0.10	0.07		0.04	-0.01
		2.70	**2.36**		1.44	-0.61
β_{HML}		-0.31	-0.18		-0.14	0.02
		-6.96	**-5.45**		**-4.25**	0.77
β_{RMW}		-0.12	-0.24		0.12	0.18
		-2.38	**-6.66**		**3.58**	**7.22**
β_{CMA}		0.03	-0.05		0.08	0.07
		0.40	-1.08		**1.70**	**1.98**
β_{MOM}						0.50
						20.22
β_{52WH}			0.97			
			20.22			
Adjusted R^2		84%	92%		86%	93%

Appendix E

This appendix provides a set of individual stock examples illustrating how **High-to-price (htp)** and **Range position (range_52wk)** can diverge depending on underlying price characteristics.

A key takeaway is that **Range position (range_52wk)** more effectively captures stocks exhibiting sustained momentum and is less susceptible to distortion from volatility. In contrast, **High-to-price (htp)** tends to identify stocks that have experienced large breakouts over the past 52 weeks, even when those gains have not persisted.

High-to-price (htp) - components are circled in **Red**

htp = C / A

Range position (range_52wk) - components are circled in **Green**

range_52wk = (B - D) / (C - D)

Where:

A *= Price 52 Weeks Prior*
B *= Current Price*
C *= 52-week High Price*
D *= 52-week Low Price*

Exhibit E1

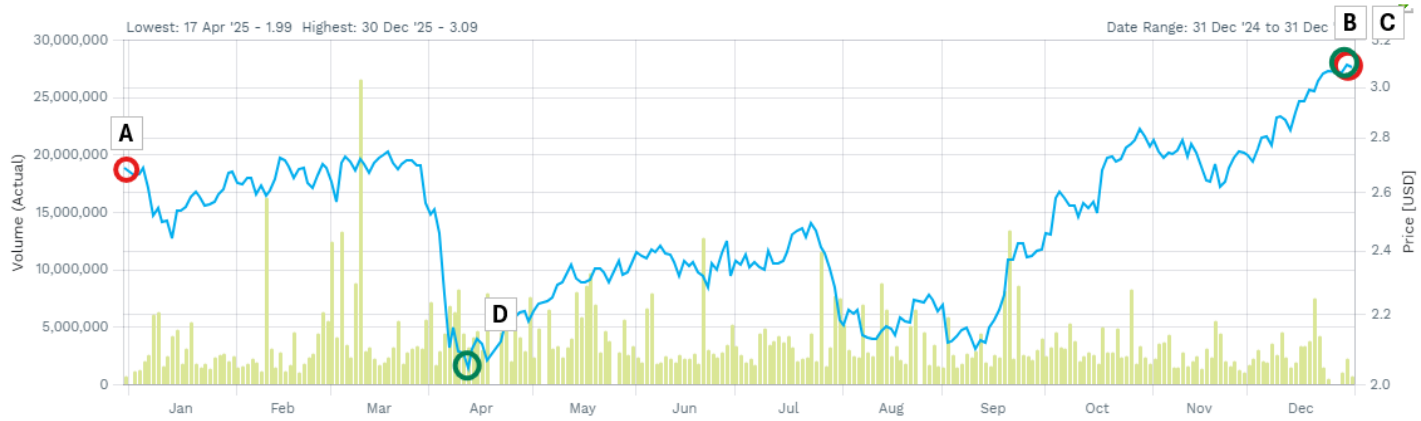
Strong **High-to-price (htp)**, strong **Range position (range_52wk)**

Exhibit E2

Strong **High-to-price (htp)**, weak **Range position (range_52wk)**

Exhibit E3

Weak **High-to-price (htp)**, strong **Range position (range_52wk)**



About IMC

IMC is solely focused on helping clients build better portfolios through our Informed Momentum investment approach. This approach has been applied consistently across all strategies since the inception of the firm in 2007. The daily application of our systematic process is designed to deliver consistent and predictable results. Since our entire company works for a single objective, it only makes sense to align the name of our brand with exactly what we do every day.

We are the **Informed Momentum Company.**

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References:

Baltussen, G., Dom, M. S., Van Vliet, B., & Vidojevic, M. (2025, October). Momentum factor investing: Evidence and evolution. Working paper.

George, T. J., & Hwang, C.-Y. (2004). The 52-week high and momentum investing. The Journal of Finance, 59(5), 2145–2176.

Gray, W., & Vogel, J. (2016). Quantitative momentum: A practitioner's guide to building a momentum-based stock selection system. Wiley.

Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. The Journal of Finance, 48(1), 65–91.

Important Disclosures:

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This research paper is a market analysis review that examines the historical relationship between proximity to the 52-week high and traditional price momentum. All performance statistics, information coefficients, portfolio returns, risk metrics, and double-sort results are derived solely by slicing and analyzing actual historical market data from the specified equity universes (Russell index proxies and MSCI indices). The results reflect the application of the disclosed ranking methodologies and portfolio construction rules (top-quintile, market-cap-weighted, six-month overlapping holdings) to real security prices and returns that existed during the sample periods (June 1988–December 2025 for U.S. equities and June 2006–December 2025 for non-U.S. and global equities). The analysis relies solely on actual, observable historical market data and does not incorporate simulated or model-generated returns, hypothetical portfolios, or any forward-looking assumptions. The results do not reflect actual trading and should not be interpreted as a guarantee of future performance.

Data and methodologies from third-party sources, including academic studies and index providers (MSCI, Russell), are obtained from sources believed to be reliable but are not guaranteed for accuracy, completeness, or reliability. Supporting documentation for claims or statistical analyses is available upon request.

Past performance is not indicative of future results, and no assurance is provided that the market exposures discussed will achieve similar outcomes in the future.