

# The Value of Well-Designed Factor Portfolios

Fall 2022

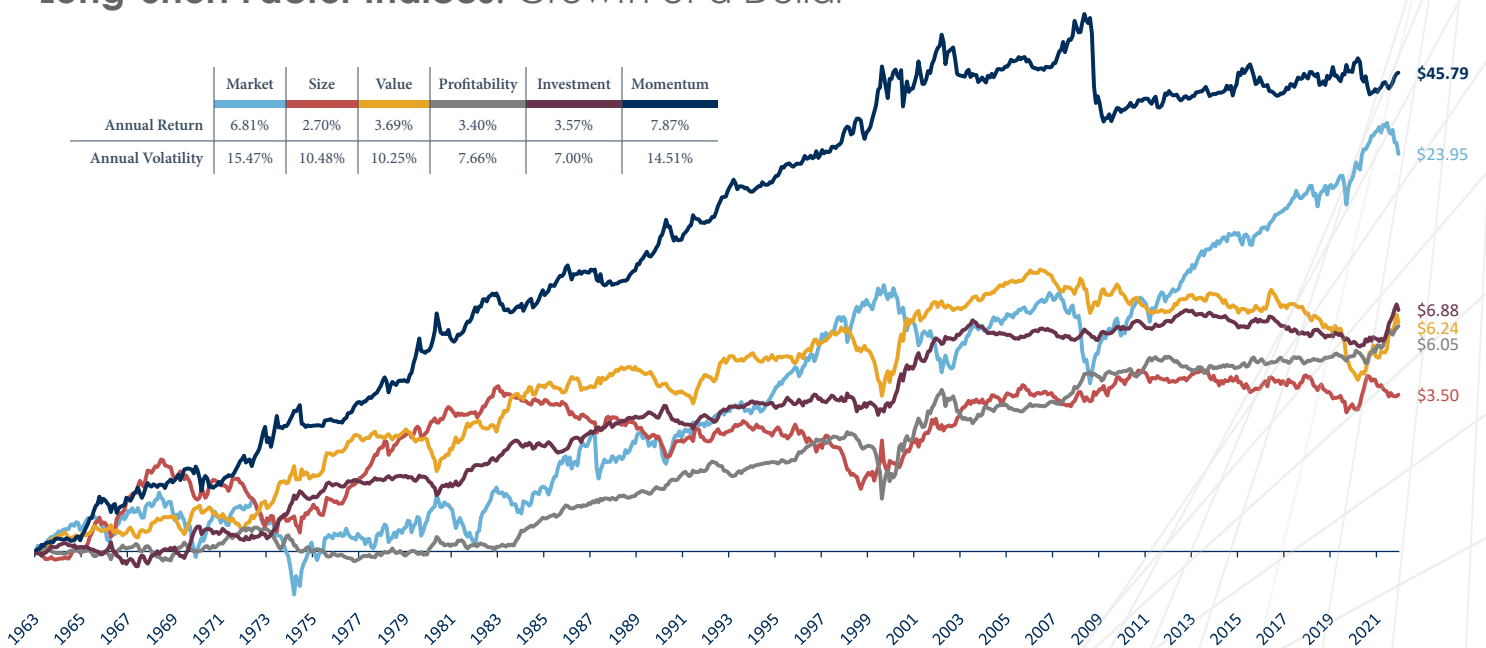
Acclivity's investment strategies continuously seek to capture factor premiums, while balancing trade-offs between premium, diversification, and costs. This is accomplished by leveraging empirical research into portfolio design and taking a flexible approach to implementation allowing us to trade stocks with higher or lower premiums when it is cost-effective to do so.

## Our Edges

- » Strategies rooted in academic research
- » Nimble implementation
- » Continuous risk management

## Long-Short Factor Indices: Growth of a Dollar

|                   | Market | Size   | Value  | Profitability | Investment | Momentum |
|-------------------|--------|--------|--------|---------------|------------|----------|
| Annual Return     | 6.81%  | 2.70%  | 3.69%  | 3.40%         | 3.57%      | 7.87%    |
| Annual Volatility | 15.47% | 10.48% | 10.25% | 7.66%         | 7.00%      | 14.51%   |



Innealta uses monthly data between July 1963 and June 2022 from Kenneth R. French Data Library. **Graph** line-values are logarithmic base 10, end-values are not. Factor Portfolio returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Actual returns might be lower. **Summary table** values show returns gross of fees and annualized. Past Performance is no guarantee of future returns. Please refer to disclosures for further information.

Academic research and empirical data show that investors may achieve long-term outperformance by targeting size, value, profitability, investment, and momentum premiums. However, factor investing can require discipline and thoughtful implementation to reap the benefits. In the following analysis, we cover:

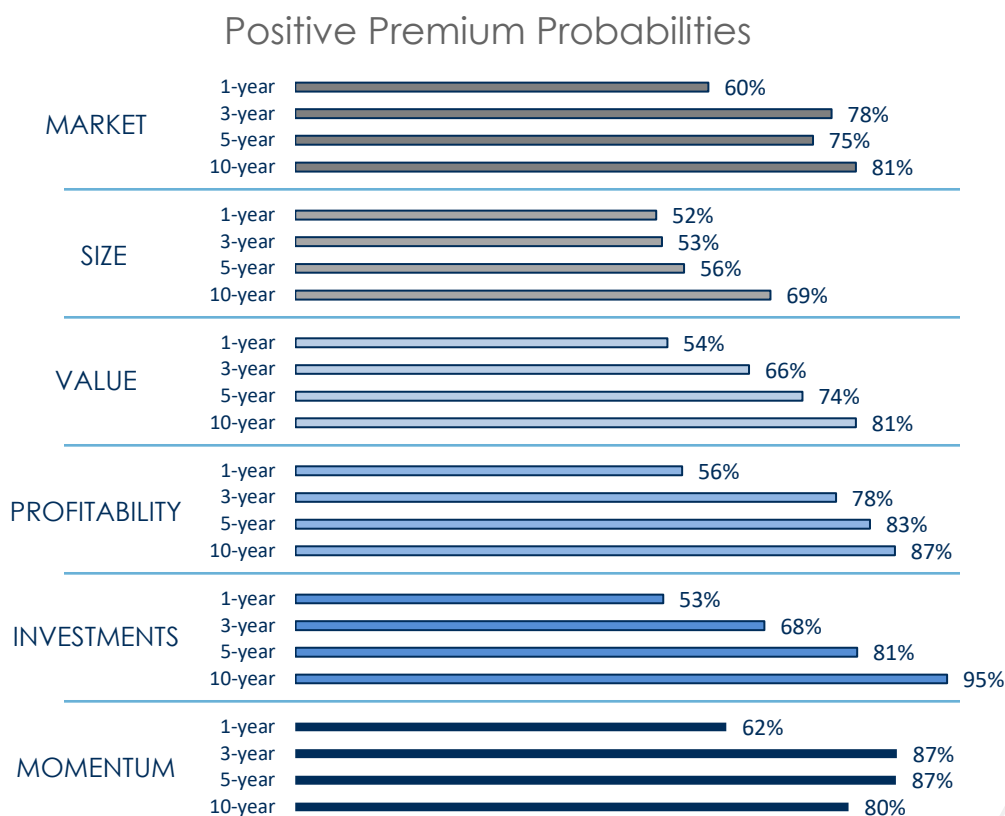
- » The probability of observing these premiums increases over longer time horizons
- » How investors may benefit from diversifying across multiple premiums
- » Acclivity's systematic approach to capturing factor premiums

# How to capture Factor Premium?



## Long-Term Horizon: *Patience is rewarded*

Factor premiums are notoriously noisy and volatile over short-term periods. While we expect premiums to be positive every single day, in reality, this is not the case. Successfully capturing these premiums requires a longer investment horizon. In fact, as investors extend their investment horizons, their probability of capturing these premiums increases substantially.



*Innealta uses rolling monthly return differentials between Jan 1964 and Dec 2021 from Kenneth R. French Data Library. The chart has a total sample size for all rolling one-, three-, five-, and ten-year periods of 685, 661, 637, and 577, respectively. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Actual returns might be lower. Past Performance is no guarantee of future returns. Please refer to disclosures for further information.*

## Rules-Based Implementation: *Consistent factor exposure*

Awareness of the existence of long-term factor premiums is one thing, but, in our opinion, in order to successfully capture the expected long-term outperformance relies on disciplined, careful implementation. For example, the historical size premium has been around 2 bps per day – something that can be easily washed away through sub-optimal trading. Individuals utilizing ad hoc, intuition-based portfolio construction strategies are susceptible to the myriad of behavioral biases that have been documented over the past several decades, which lead to sub-optimal decision making. We believe the most effective technique to mitigating the negative impact of these cognitive errors is by following a rules-based, quantitatively driven investment framework. We believe that employing a rules-based approach ensures discipline in the portfolio construction process that forces the portfolio holdings to align with the goal of capturing the long-term factor premiums. Additionally, adhering closely to pre-designed rules enables the portfolio to maintain consistent factor exposures and avoid style drift.

# Factor Integration



## Investors may benefit from diversifying across multiple premiums

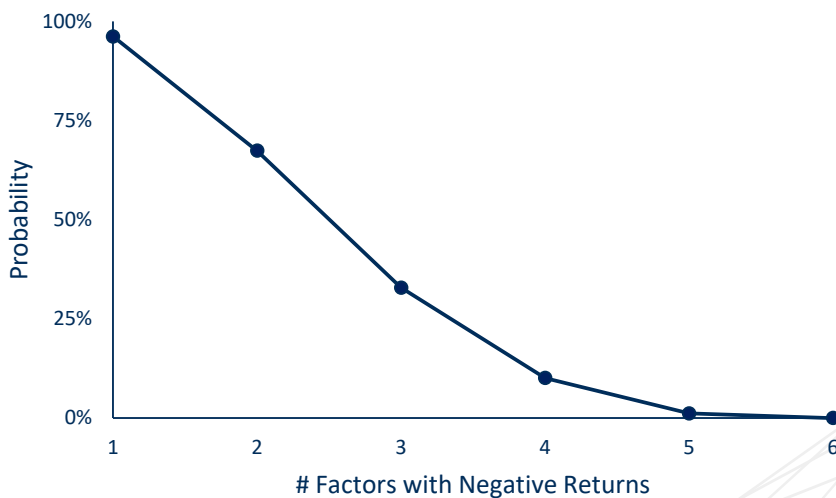
### Factor Correlation

Most investment professionals agree that idiosyncratic (stock specific) risk can be mitigated through diversification. By investing in vehicles that would react differently to the same market event, investors are able to mitigate the probability any one holding determine's their investment fate. It is our view that the same philosophy also applies to factor investing. The empirical data shows that the co-movement, as measured by correlation, remains low and persistent throughout history, which allows investors to capture multiple premiums simultaneously, while mitigating risks associated with concentrating on a single factor.

|               | Market | Size   | Value  | Profitability | Investment | Momentum |
|---------------|--------|--------|--------|---------------|------------|----------|
| Market        | 1.00   | 0.28   | (0.22) | (0.20)        | (0.37)     | (0.16)   |
| Size          | 0.28   | 1.00   | (0.03) | (0.35)        | (0.10)     | (0.06)   |
| Value         | (0.22) | (0.03) | 1.00   | 0.09          | 0.68       | (0.21)   |
| Profitability | (0.20) | (0.35) | 0.09   | 1.00          | (0.02)     | 0.09     |
| Investment    | (0.37) | (0.10) | 0.68   | (0.02)        | 1.00       | (0.03)   |
| Momentum      | (0.16) | (0.06) | (0.21) | 0.09          | (0.03)     | 1.00     |

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### Power of Factor Integrations



As the graph on the left shows, the probability of having one or more negative factor premiums over the 12-month window is more than 90%. But this probability decreases sharply when multiple factors are integrated. For example, it's extremely rare to see all factor premiums being negative, which also explains the benefits of factor diversification.

*Innealta uses rolling monthly return differentials between Jan 1964 and Dec 2021 from Kenneth R. French Data Library. Negative factor return is measured by the rolling 12-month factor return. The chart has a total sample size for a rolling one-year period of 685. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Actual returns might be lower. Past Performance is no guarantee of future returns. Please refer to disclosures for further information.*

# The Acclivity Approach



Building and maintaining diversified portfolios in the real world requires expertise. In practice, there are multiple of trade-offs that we believe must be balanced when targeting the optimal portfolio: between competing factor premiums and diversification, desired portfolio characteristics and transaction costs, tracking error and potential tax impact, and adapting to changing market conditions versus staying consistent with the overarching investment philosophy. One of the primary advantages of hiring an asset manager is to enlist the resources and talent of a team that has dedicated its career to understanding and managing these trade-offs.

## Strong Roots in Academic Research

The financial market - being composed of human beings - is a complex, adaptive system that is constantly evolving. The dynamic nature of the market provides the opportunity for reward, but it also creates risk: new developments can expose the potential for not yet arbitrated premiums, but this comes with the danger of investors being drawn in by passing fads. To balance this risk/reward relationship of a dynamic market, Acclivity has partnered with leading financial academics who seek to ensure that our portfolio design is informed by cutting-edge research, yet tunes out the noise prevalent in financial markets.

## Nimble Size

Acclivity also benefits from its positioning in the sweet spot of total fund size, as measured by assets. Acclivity has the resources to utilize a sophisticated implementation infrastructure, aiming to avoid the typical pitfalls associated with larger funds. Academic research has shown that when funds increase in size, they often exhibit decreased performance due to a decline in trading agility and drifting style. This is because, after a certain tipping point, large funds can no longer trade smoothly into and out of positions efficiently because in general, most of the time they increasingly become restricted by increased transaction costs and market impact. For small-cap funds specifically, this effect can be particularly pernicious. The larger transaction costs associated with small-cap securities incentivize the fund to drift in style into larger-cap securities, effectively eliminating the premium the fund was originally tasked with capturing.

## Implementation Process

At its core, the practical implementation of our investment philosophy involves taking the entire universe of investable, U.S. equity securities, and whittling that universe down to a subset of companies that have attributes associated with a more favorable expected risk/reward profile than the passive index. We primarily examine company attributes through the lens of two broad categories:

- » **Fundamental Attributes:** financial statement metrics (earnings, relative price, profitability, dividends, market capitalization, share buybacks).
- » **Flow Characteristics:** recent security performance, trading volume, short interest.

The fundamental attributes allow us to target securities with strong, long-term prospects, while the flow attributes reveal securities that are signaling favorable short and medium-term excess return potential, which has been shown to play a vital role in tactical portfolio positioning.



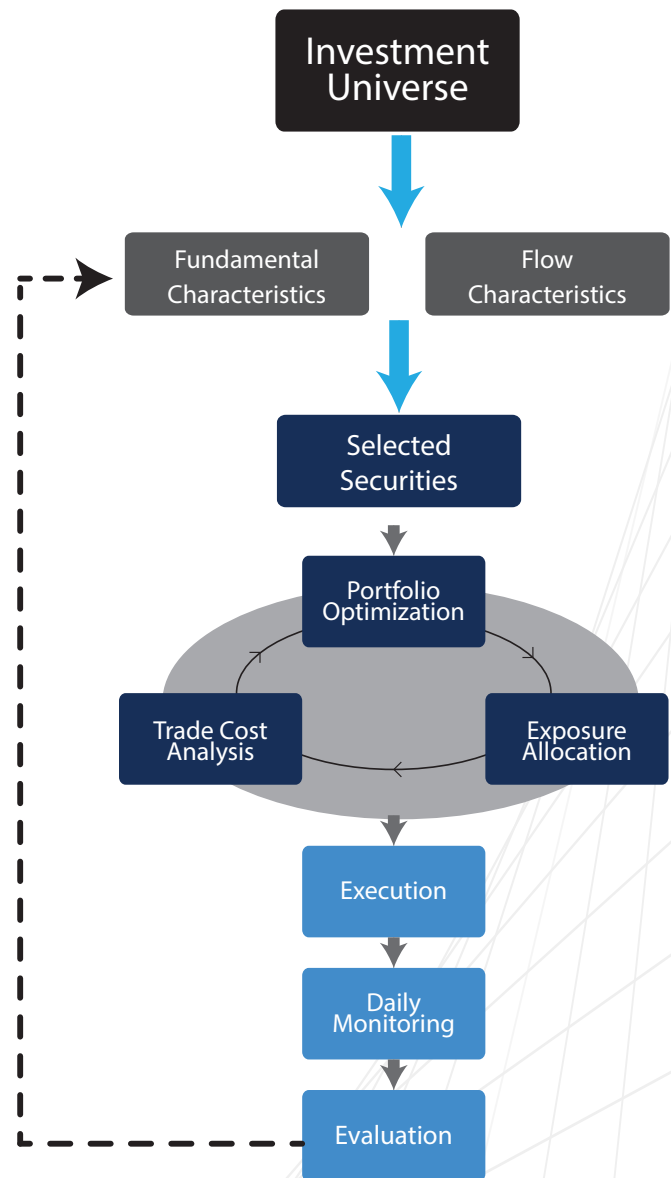
## Continual Management and Iterative Improvement

The entire investment process works on a tight feedback loop. Appropriate risk management necessitates continual portfolio monitoring and portfolios are adjusted as new data and information becomes available. The speed of this feedback loop is what provides our funds with ability to identify, validate, and incorporate new investment ideas in a rapid and efficient manner.

Once the security constituents are selected, the final step before investment is to combine the component securities into a single portfolio by selecting weights that balance the trade-off between optimal portfolio characteristics and implementation cost. Some of the key inputs to this optimization process are:

- » Short and long-term correlation between securities
- » Liquidity of securities
- » The relative strength of factor exposures e.g., tilting more heavily to companies with greater profitability.

In conclusion, we believe the Acclivity's disciplined approach to multi-factor investing, from design to implementation, provides advantages relative to its peers. These advantages described above can enable us to minimize the everyday frictions of factor investing and more effectively navigate the trade-offs between costs, competing premiums, and diversification.





**acclivity** noun

ac·cliv·i·ty | \ ə-ˈkli-və-tē

*plural* acclivities

**Definition:** an ascending slope

**Synonyms:** ascent, elevate, rise, upgrade

## Important Notes

Factor premiums are measured as follows:

**Market:** Market return over the risk-free rate. **Size:** Smaller market capitalization companies over larger market capitalization companies. **Value:** Lower relative price companies over higher relative price companies. **Profitability:** More profitable companies over less profitable companies. **Investment:** Conservative company investment over aggressive company investment. **Momentum:** Higher prior return companies over lower prior return companies

For more details on the factor indices and premiums represented on this brochure, please refer to the Kenneth R. French Data Library.

**Long-Short Factor Indices: Growth of a Dollar; Positive Premium Probabilities; Factor Correlation; & Power of Factor Integrations** - Analytics for and references to factor indices or other measures of relative market performance over a specified period of time are provided for informational purposes only. Factor Indices included are a general source of information and comparison to an index does not imply that any [Innealta/Acclivity] portfolio will be constructed in the same way as the index or achieve returns, volatility, or other results similar to the index. Historical performance results for investment indexes and/or categories generally do not reflect the deduction of transaction and/or custodial charges or the deduction of an investment management fee, the incurrence of which would have the effect of decreasing historical performance results. Please see disclosures page for more information regarding the use of factor indices performance in this presentation.

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3008-INN-10/31/2022

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