Janus Henderson INVESTORS

OPTIMIZING RISK-ADJUSTED CONVICTION

How portfolio construction using Implied Alpha enhances security selection in an equity portfolio

Why integrating risk-adjusted conviction as measured by Implied Alpha into portfolio construction serves as a complement to bottom-up stock selection.

With the goal of generating consistent excess returns, actively managing an equity portfolio requires establishing sound methodologies and repeatable processes. We think a process based on fundamental security-level analysis can lead to superior risk-adjusted returns. Academic literature indicates *bottom-up* stock-selection strategies tend to generate excess returns over the entirety of the business cycle more effectively than *top-down* or even sector-rotation strategies. But identifying securities capable of generating returns greater than those of the broader equity universe is insufficient. Robust portfolio construction matters.

Among the numerous approaches to constructing an equity portfolio, one gaining popularity in recent years is prioritizing active share, or the degree to which a portfolio's weightings diverge from the benchmark. How much a particular stock is overweighted or underweighted is determined by the manager's level of conviction, which is, in turn, the result of in-depth security-oriented research. While a step in the right direction, a complement to active share is integrating the concept of Implied Alpha in portfolio construction.

Implied Alpha is best viewed as a measure of a manager's risk-adjusted conviction in a security. It is risk-adjusted as it incorporates not only the return potential of an individual security but also how inclusion of that security impacts the volatility of returns of the aggregate portfolio. The additional level of volatility assumed when increasing active risk – or tracking error – can be considered a cost. For this cost to be justified, managers should optimize their underlying skill in security selection. The result should be the positions with the highest level of risk-adjusted conviction being among the largest contributors to the portfolio's active risk.

Key takeaways

- A key objective for equity portfolio managers is to minimize the systemic risk inherent in financial markets with the aim of amplifying their skill in security selection.
- Implied Alpha, which is a measure of risk-adjusted conviction in a stock, is a powerful complement to bottom-up portfolio construction.
- Portfolio managers benefit from gauging whether their risk-adjusted conviction in a stock aligns with its position size in a portfolio.

Disaggregating risk

To more fully understand the risks and opportunities associated with increasing tracking error, risk needs to be deconstructed into its component parts: (1) systemic – or non-diversifiable – risk and (2) idiosyncratic – or company-specific – risk. To optimize their expertise in security selection, portfolio managers should minimize the former and maximize the latter. This is easier said than done. The reason is systemic risk is inherent in investing. Factors such as broad economic growth, energy prices and credit conditions all influence the trajectory of financial markets. Portfolio managers must first recognize how systemic factors potentially affect their portfolios before taking steps to minimize their contribution to overall active risk.

Complicating matters is the impact systemic risk can have on a portfolio in unforeseen ways. Managers who construct portfolios solely based on ranked conviction may inadvertently increase exposure to systemic factors at the expense of security selection. For example, **Exhibit 1** illustrates a hypothetical equity portfolio based solely on ranked conviction. The result is only 29% of total active risk is attributable to security selection. The remaining majority of active risk results from systemic exposures. Given the notorious difficultly of predicting macro trends such as employment, inflation, currency fluctuations, etc., the portfolio manager incurred a level of active risk they cannot control, meaning it cannot contribute to excess returns in any repeatable fashion.

Exhibit 1: Risk attribution of a high conviction equity portfolio

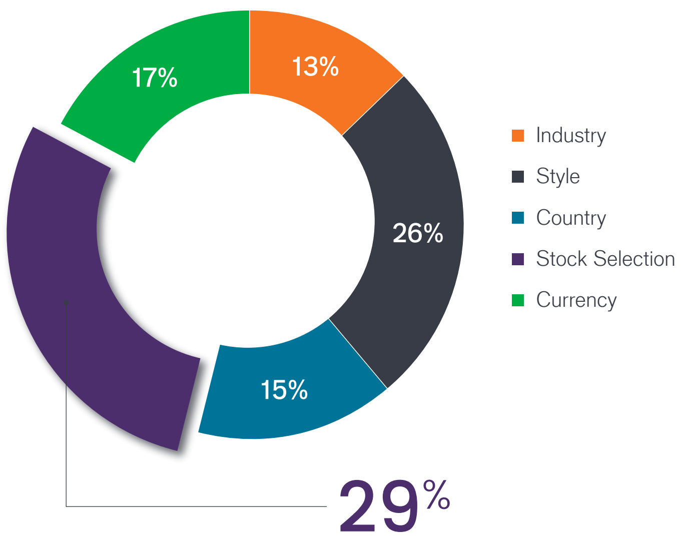
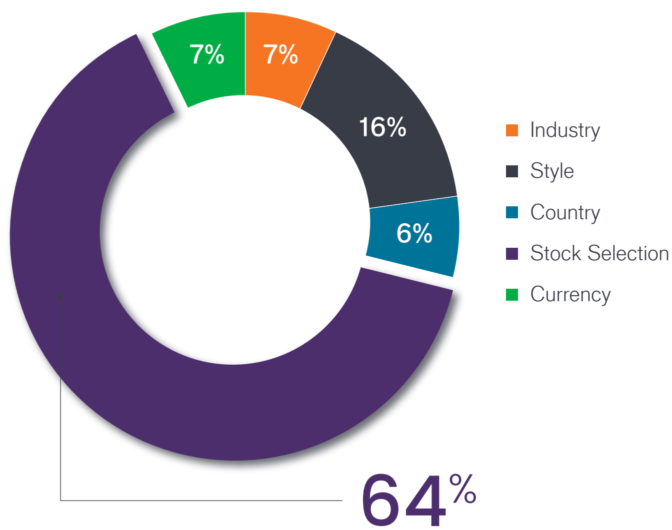


Exhibit 2: Risk attribution where security selection is prioritized



Source: Janus Henderson, hypothetical portfolio.

In contrast, **Exhibit 2** highlights a portfolio where security selection is prioritized. By incorporating measures to minimize exposure to systemic risk, the contribution to overall tracking error owed to stock-specific factors climbs above 60%.

By mitigating systemic risk and emphasizing security selection, active managers play to their strengths. Understanding a specific business model and forecasting a stream of corporate cash flows requires factoring in far fewer variables and assumptions than predicting labor market or commodities price trends. Furthermore, long-term security performance is more closely aligned with company profitability than with macro trends (and less difficult to forecast).

The power of Implied Alpha

The reason systemic factors can leach into a portfolio putatively focused on stock selection is due to the interrelationship between the component securities within the strategy. Often these relationships are nuanced and are only evidenced after the portfolio is constructed.

To identify – and subsequently limit – systemic risk, a portfolio manager can turn to models typically used in portfolio construction. Inputs into such models include expected returns and volatility, correlations among holdings and systemic factors. These models generate recommended weights for each security based on their assessment of these factors. Multivariate models can uncover relationships among securities that may otherwise go unnoticed. A common occurrence is the discovery of many securities correlated to the same underlying systemic factors, and combining their weights can either increase or decrease exposure to a particular systemic risk.

A powerful tool in limiting systemic risk and increasing the impact of security selection is Implied Alpha. As mentioned, expected return is typically an input to a portfolio construction model ultimately yielding suggested position weights. Expected return, however, is a raw estimate of a security's performance and does not account for how the interrelationships with other factors within the portfolio may impact aggregate performance. By reversing the optimization model with position size now the input, the expected excess return – or alpha – implied by a security, after accounting for its relationship with other components in the portfolio, can be isolated. This metric – Implied Alpha – is best interpreted as a manager's risk-adjusted conviction in a security.

Exhibit 3 illustrates how Implied Alpha can be leveraged to assess a security's contribution to aggregate active risk and how position size can be calibrated to ensure risk-adjusted conviction aligns with ultimate position weighting. In this hypothetical 46-security portfolio, Novo Nordisk is the largest absolute and active weight. Notably, as indicated by its Implied Alpha, the company is actually the manager's highest-conviction position on a risk-adjusted basis, that is, when accounting for its impact on overall portfolio volatility. The fact that Novo Nordisk is the portfolio's largest absolute and active weight, and also the largest contributor to tracking error, indicates the portfolio manager thinks of the stock as their most attractive position. This view is best evidenced by noting the actual capital allocations result in Novo Nordisk being the highest Implied Alpha position in the portfolio, highlighting the alignment between intention and weighting.

Exhibit 3: Position weighting and contribution to tracking error in a hypothetical portfolio

Asset name	Weight (%)	Weight rank	Active weight (%)	Active Implied Alpha (%)	Implied Alpha rank	Contribution to total tracking error (%)	Contribution rank
Novo Nordisk A/S	4.81%	1	4.42%	0.6498%	1	12.01%	1
Berkshire Hathaway Inc	4.11%	2	3.40%	-0.0123%	427	1.68%	22
Microsoft Corp	4.00%	3	0.98%	0.1637%	58	1.06%	35
Housing Development Finance Corp	3.84%	4	3.74%	0.0494%	245	2.63%	12
Compass Group	3.61%	5	3.54%	0.2604%	11	4.99%	2
Thermo Fisher Scientific Inc	3.29%	6	2.91%	0.2173%	24	3.68%	6
Oracle Corp	3.29%	7	3.06%	0.2489%	15	4.19%	4
American Express Co	2.57%	12	2.40%	-0.0264%	486	1.08%	34
Dexcom Inc	1.98%	25	1.91%	0.4610%	2	3.97%	5
Auto Trader Group PLC	1.64%	35	1.63%	0.3277%	4	2.67%	11

Source: Janus Henderson Investors, hypothetical portfolio. The Implied Alpha rank is inclusive of all benchmark holdings and derived from the risk model's assessment of the predicted alpha contribution of the holding at that weight. It is an estimation of the conviction of the portfolio manager in that position, where a higher number rank represents lower conviction.

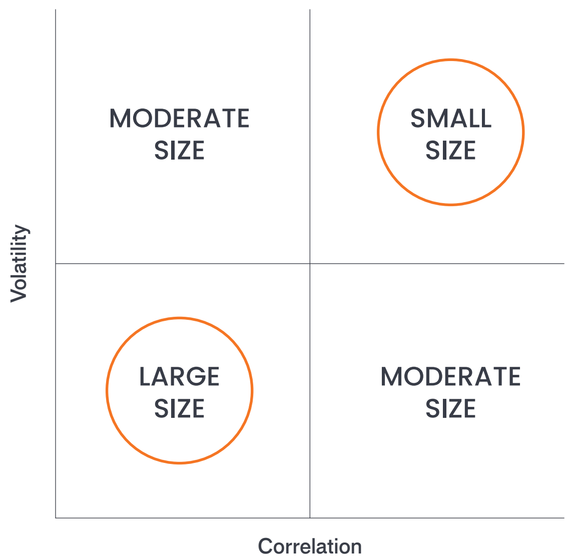
Conversely, other holdings within the hypothetical portfolio illustrate how Implied Alpha can provide insight with respect to the active risk contribution of each position. Berkshire Hathaway, for example, is the second largest holding in absolute weight and fourth largest active weight. However, its Implied Alpha rank is 427th. Consequently, the large absolute and active weights do not translate into Berkshire Hathaway being a top conviction position in the portfolio, as further evidenced by its position as being 22nd in its contribution to total tracking error. This is fine if the portfolio manager does not think Berkshire Hathaway is one of their most attractive holdings, but it highlights a misallocation of capital if the portfolio manager actually views the shares as a top idea. Here, the large absolute and active weights should not be used to simply infer the security's risk within the portfolio. Employing Implied Alpha allows for a much fuller understanding of actual risk-informed conviction positioning.

Another dimension

Using Implied Alpha as a reference point for calibrating position size leverages the valuable information imbedded in the variance-covariance matrices upon which many portfolio models are based. In this sense, we regard Implied Alpha as a lens enabling managers to view how a portfolio interacts three-dimensionally, accounting for a stock's volatility relative to the volatility of the other stocks in the portfolio and relative to the stock universe, including sector-level and systemic factors. By identifying how risk-adjusted conviction and position size align, Implied Alpha serves as a meaningful contributor to portfolio construction. In instances where ranked Implied Alpha and position size do not align, portfolio managers should inquire whether other criteria factored into the portfolio construction process merit the divergence.

Volatility and correlation play pivotal roles in determining position sizes. As illustrated in **Exhibit 4**, a volatile stock highly correlated to the rest of a portfolio requires only a small active weight to demonstrate conviction. On the other hand, a less volatile holding with a low correlation to the broader portfolio requires a larger active weight to make an impact. In both cases, position sizing is influenced by how the holding will ultimately impact overall portfolio risk due to covariances among component securities and potential exposure to hidden systemic factors.

Exhibit 4: Position size required to illustrate conviction and account for impact on broader portfolio



Source: Janus Henderson Investors.

Conclusion

Portfolio managers should be compensated for taking risks based on their skill in security selection. Given systemic risks are ubiquitous in the global economy and financial markets, imprudent managers could allow what should be diversifiable factors to contribute disproportionately to aggregate tracking error, thus overwhelming the manager's underlying expertise in security selection.

The complexities of multi-factor risk modelling can be intimidating but their ability to discern relationships between individual securities and the portfolio as a whole is invaluable when constructing a portfolio seeking to minimize systemic risk and maximize security-specific exposures. When adopting a process isolating Implied Alpha, a manager can more optimally allocate capital to account for an individual security's impact on overall portfolio volatility.

The upshot is minimizing unintended – and uncontrollable – systematic risk, with the result being a portfolio that resides closer to the efficient frontier. This is achieved by ensuring the securities in which the manager holds the highest level of risk-adjusted conviction are the largest contributors to tracking error at the expense of a greatly diminished contribution from systemic factors.

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