COMPLETION PORTFOLIOS

PRECISELY ALIGNING YOUR PORTFOLIO WITH YOUR STRATEGIC BELIEFS

RESEARCH

Completion portfolios

Precisely aligning your portfolio with your strategic beliefs

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As an institutional investor, there may be nothing more important than establishing your investment strategy, maximizing the efficiency of your exposures and defining strategic beliefs. But if your portfolio is not aligned with your strategic positioning, then all of those efforts may be compromised in achieving overall investment objectives.

The best-designed multi-manager portfolio can move out of alignment from your preferred positioning. Even a small misalignment, over time, can result in unintended risks, and a significant diversion from the path of your strategic investment beliefs.

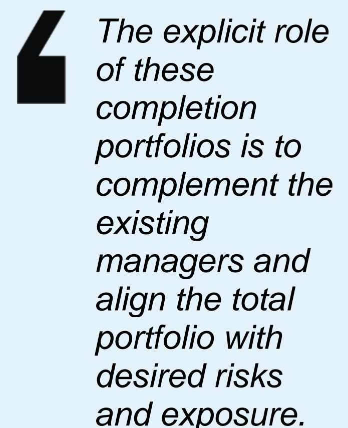
Russell Investments' completion portfolio toolkit is comprehensive and enables our clients to access custom exposures. This approach is designed to keep your investments precisely aligned with your investment beliefs. It takes the power of a multi-manager approach to the next level.

Challenge: Unintended exposure gaps and risks

As soon as an asset owner allocates capital to more than one manager, an *interaction effect* exists which will impact the investor's overall portfolio outcome. What unintended risks result from the combination? What desired exposures are not covered? How does an investor manage these gaps and overlaps? These are all important questions to be addressed when managing for a total-portfolio outcome. Unfortunately, for the asset owner, the individual managers are not able to do this on their own.

Why? By design, money managers are not privy to each other's holdings. They are focused on delivering excess returns from their specific area of investment expertise. Because of this, their unique investment insights are reflected in their respective sleeves. But there's a drawback: the so-called *agency problem*: Unintended risks may emerge in the overall portfolio, due to the *interaction effect* between managers. Simply put, the combined positions of all managers may result in a bias toward a particular risk overall, related to sectors, regions or factors. These risks may not be fully aligned with the investor's preferred positioning, based on long- and short-term investment opportunities and desired risk allocations.

So, what's the investor to do? How can these unintended risks and biases be removed so that the overall portfolio is aligned the way the investor wants it to be?



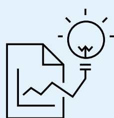
Solution: Completion portfolios

Completion portfolios are a powerful tool for an investor allocating to multiple manager strategies. The explicit role of these completion portfolios is to *complement* the existing managers and align the total portfolio with desired risks and exposure. The completion portfolio can manage that *interaction effect*.

WHAT ARE COMPLETION PORTFOLIOS?		
1	**2**	**3**
Customized exposures used in combination with third party active managers	Enable multi-managers to achieve **preferred positioning**, expressing strategic beliefs.	**Removing unwanted portfolio biases**, without swamping stock selection.

Three benefits from completion portfolios

WHY INCORPORATE COMPLETION PORTFOLIOS WITHIN MULTI-MANAGER FUNDS?

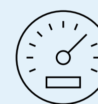


1. IMPROVED CONTROL OF EXPOSURES

Ensure your aggregate portfolio is aligned with your strategic beliefs, and not being driven by unintended risks.

2. IMPROVED RISK ADJUSTED RETURNS

By ensuring risks are effectively controlled.



3. REDUCED COST OF PRODUCTION

In many cases, including a Completion Portfolio will reduce total cost expenditure on managers.

1. Improved control of exposures

Completion portfolio strategies can provide a systematic way to solve for misalignment in portfolio exposures. They can help align the total portfolio with preferred positioning. And they can improve the overall risk and return outcomes of an investor's portfolio. Our clients use completion strategies to make deliberate decisions on which exposures are intended and unintended and to be able to manage the total plan's exposure. They also incorporate exclusions or ESG preferences into a completion portfolio.

2. Improved risk-adjusted returns

For investors to achieve their desired long-term outcomes, portfolios must be managed to benefit *from long-term return sources*, but with the ability to respond to *short-term market risks and opportunities*. At the same time, risks must be managed appropriately throughout evolving markets. Russell Investments completion portfolios help investors achieve these outcomes. And clients can leverage Russell Investments' analytic engine and tools to see risks and exposures in real time, at the total-plan level.

3. Reduced cost of production

In many cases, including a completion strategy can help reduce the total cost expenditure on aggregate manager fees. It may also minimize turnover, trading and required transition costs.

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Four ways our clients use completion portfolios

Investors use high-conviction active managers because they expect them to be a primary driver of excess returns through security selection insights. But these manager activities also generate many risks that need to be considered. Completion portfolios—which use security and derivative investments that target specific factors, sectors, regions and currency exposures—help investors ensure risks are being managed and exposure gaps are being reduced, while still allowing manager security selection to be the primary driver of overall performance.

1. Better management of factor and portfolio risks

Completion portfolios can ensure exposures to factor risks in the total portfolio are aligned with targets. This can mean reducing unintended exposure to volatility risk, or targeting specific levels to other strategy factors, such as value, momentum, quality or others. In addition, the amount of active sector or regional risks are managed.

2. Gaining efficient access to desirable risk premia

Completion portfolios are designed to fill gaps where high-conviction managers don't exist. Examples include deep or defensive value exposure, quality income and intelligent credit or currency factors.

3. Unshackling PMs to focus on opportunities for alpha

By creating risk management at the total-portfolio level, portfolio-manager decisions are freed up to focus on high-conviction alpha opportunities. In recent years, this allowed PMs to focus on growth managers, while the completion portfolio provided value and low-vol exposure to balance risk.

4. Opportunistic allocations

When shorter-term opportunities arise in the market, client can reposition risk in the portfolio in a nimble, precise, cost-effective manner.

A brief history of completion portfolios at Russell Investments

Experience matters. We've been building and managing completion portfolios for institutional clients since 2008. During this time, our completion portfolio platform has expanded to approximately 150 individual separate accounts, with more than $18bn in AUM. This includes completion portfolios used directly by institutional clients, as well as those used within Russell Investments' multi-asset solutions.

Why 2008? Because the Global Financial Crisis revealed that investors needed more targeted and sophisticated factor, sector and region exposure management, all within a holistic portfolio view. In response, we introduced completion portfolios by using in-house passive and active completion strategies to fill in the gaps at the total-portfolio level, empowering portfolio managers to better manage overall risks and achieve clients' desired outcomes.

Case Study 1: Controlling unintended equity factor risk

Problem: The combination of active equity managers was overweight to volatility

One common challenge faced by many of our clients is controlling exposure to high volatility. This risk bias is common among active managers, with over 75% of active managers having this risk exposure in many periods. This creates a compounding effect: If a vast majority of managers have exposure to the same risk, it is very difficult for multi-manager investors to diversify that risk away. Over time, high-volatility risk has been a persistent headwind to performance, with negative return contributions.

> *If a vast majority of managers have exposure to the same risk, it is very difficult for multi-manager investors to diversify that risk away.*

Solution: A completion portfolio that helps the investor help manage unintended volatility risk.

In this real-world case study, the completion portfolio is currently being used by the investor to address this challenge. The investor's goals at the total portfolio are to:

- Ensure portfolio is neutral to underweight volatility
- Modest defensive positioning with beta under 1.0
- Maintain overweight to value and quality

Result: High-conviction manager exposure with reduced volatility risk

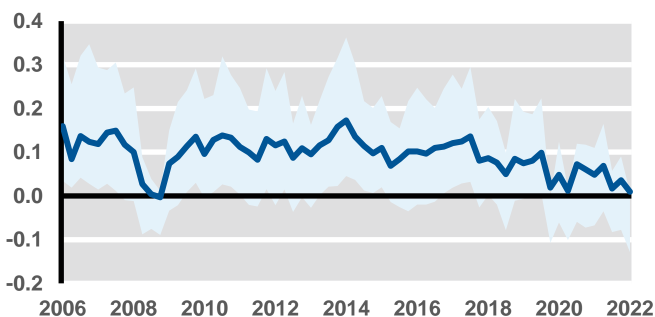
By incorporating the completion portfolio, the investor is now able to maintain allocations to high-conviction managers, while ensuring the total portfolio is aligned with these targeted exposures. Risk from an overweight to volatility was eliminated.

Using a completion portfolio to control volatility

THE PROBLEM

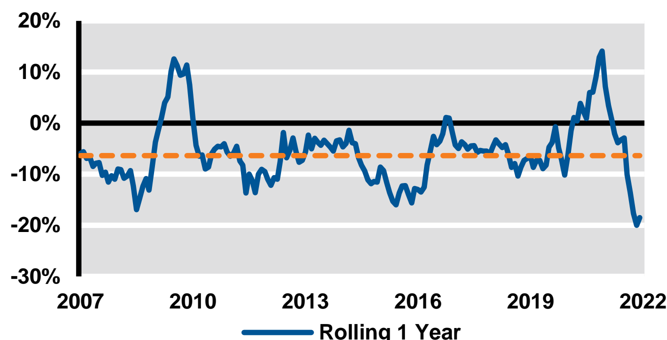
- **Active managers** exhibit a persistent overweight to volatility.
- Volatility can overwhelm **stock selection** in a multi-manager fund, if unmanaged.
- **Volatility bias** is problematic given it's historically been a headwind to performance and increased risk.

Exhibit 1: Average global equity manager volatility



Source: Russell Investments research database, to end June 30, 2022 (+300 strategies).

Exhibit 2: Volatility risk factor



Source: Axioma Fundamental Risk Model, March 31, 2022.

THE SOLUTION

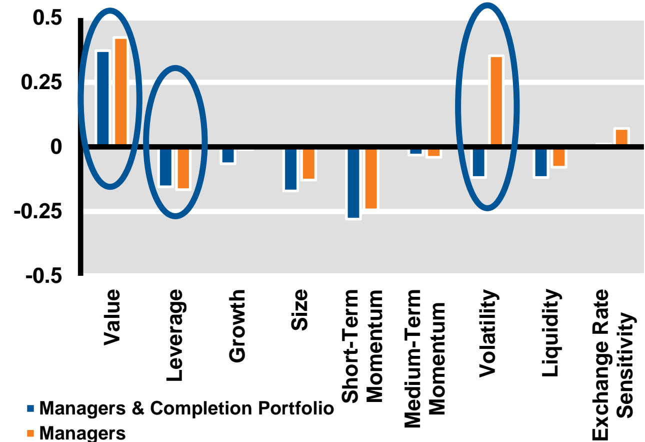
- Total portfolio is underweight volatility risk
- Overweight to Value & Quality (negative exposure to Leverage) is maintained, and portfolio is moderately defensive (beta < 1.0)
- Adding the custom Completion Portfolio helped the Portfolio Manager align with preferred positioning and remove unintended risks.

Exhibit 3: Global completion portfolio examples

SUMMARY	MANAGERS	MANAGERS + COMPLETION PORTFOLIOS
Active risk	2.16%	1.78%
Forecast beta	1.00	0.98

Benchmark: MSCI World Index, as of March 31, 2022.

Exhibit 4: Active Vol. ADJ. Style exposure



Source: Russell Investments. For illustrative purposes only.

Case Study 2: Supplementing missing equity exposure

Problem: An exposure gap in the U.S. value defensive sector

It makes sense that portfolio managers prefer to use regional or style specialists—those unique managers highly skilled in security selection. After all, outperforming managers can equal better performance. But constructing multi-manager allocations with such specialists can create exposure gaps. In this case study, the portfolio manager is using a combination of global and regional activity managers in a portfolio benchmarked to the MSCI World index. Within this structure of specialists, a portfolio exposure gap has formed in the more defensive segment of U.S. value.

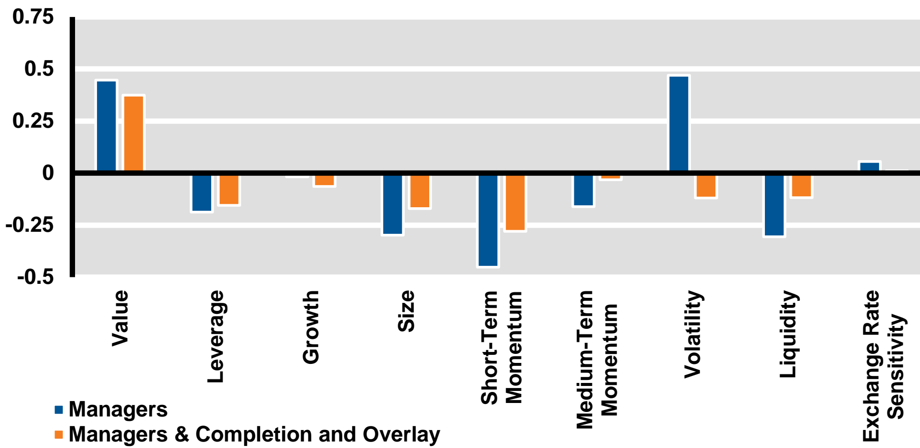
Solution: A completion portfolio that includes overlays

In this case study, a completion portfolio was designed primarily with value and low volatility exposure, providing an effective solution at gaining access to the missing market segment. This completion portfolio included futures overlays, which helped to ensure total-portfolio country exposure in line with the investor’s target positioning. In addition, the portfolio manager utilized futures and currency forwards to minimize the unintended country and currency risk that can arise from using regional specialists.

The completion portfolio and futures overlays gave the portfolio manager the ability to align total portfolio exposures with preferred positioning. In this case, an overweight to value & underweight to volatility were desired. Regionally, small active region weights were desired with a slight preference to overweight emerging markets and underweight U.S.

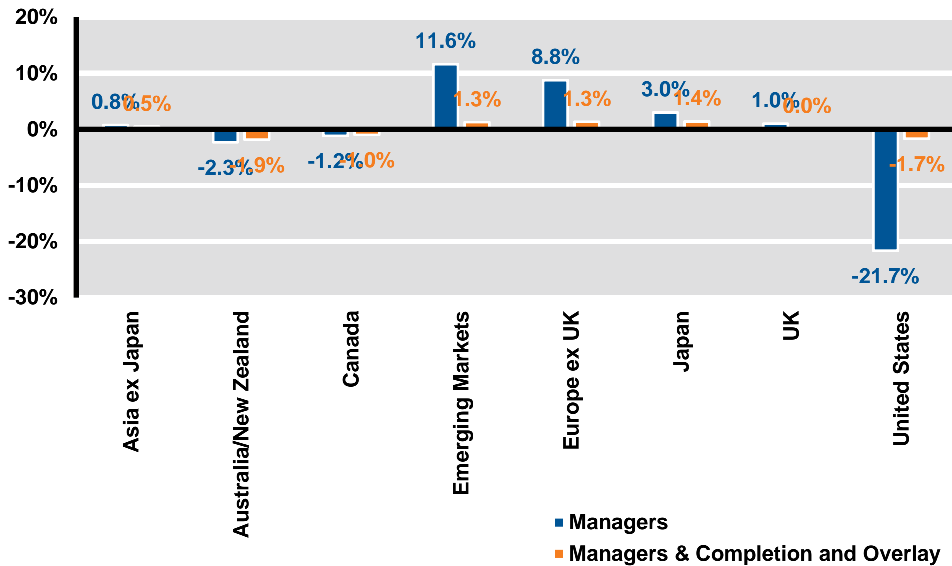
“In this case study, a completion portfolio was designed primarily with value and low volatility exposure, providing an effective solution at gaining access to the missing market segment.

Exhibit 5: Active Vol. ADJ. Style exposure



Source: Russell Investments. For illustrative purposes only.

Exhibit 6: Active region exposure



Source: Russell Investments. For illustrative purposes only.

Result: Exposure gaps filled, country and currency risk reduced

The active risk in the portfolio was reduced from 3.48% to 1.78%. The risk summary compares the total-portfolio risk profile of the managers fund with the overall exposure profile of the fund after including the completion portfolios and futures overlays.

Exhibit 7: Global completion portfolio example

SUMMARY	MANAGERS	MANAGERS + COMPLETION AND OVERLAY
Active risk	3.48%	1.78%
Forecast beta	0.97	0.98

Benchmark: MSCI World Index, as of March 31, 2022.

Exhibit 8: Percent contribution to active risk

SUMMARY	MANAGERS	MANAGERS + COMPLETION AND OVERLAY
Factor	67.66%	29.31%
Market	0.51%	2.17%
Style	2.11%	5.18%
Local	0.00%	-0.37%
Industry	5.89%	5.70%
Country	50.92%	12.57%
Currency	8.22%	4.07%
Specific	32.34%	70.69%

Benchmark: MSCI World Index, as of March 31, 2022.

Case study 3: Improving fixed income risk-adjusted returns

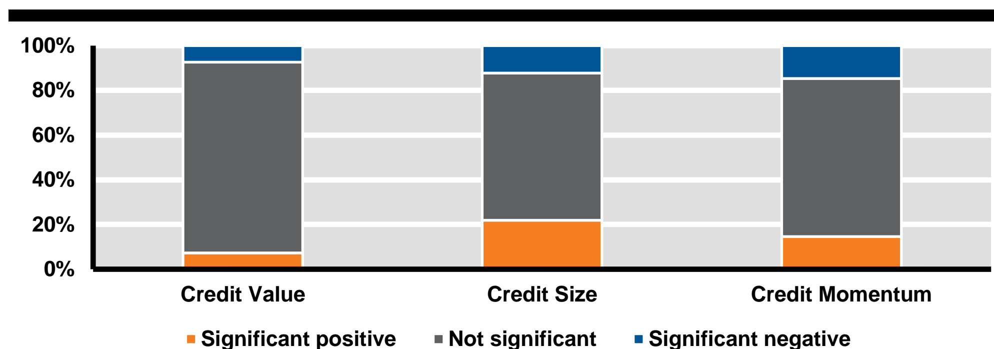
Problem: Fixed income active manager universes are underexposed to excess-return factors

Fixed income managers know how to use core factor betas efficiently. The core factors are *term*, which is a compensation for interest-rate risk, and *credit/quality*, which together reflect default or downgrade risk. These core factors are known to be the primary drivers of excess returns in bond markets. However, there are also credit-security-selection factors with observed persistent sources of excess return, outside of the core fixed income risk premia. We studied several fixed income active management universes, and the managers are generally underexposed to those security selection factors.

> *We studied several fixed income active management universes, and the managers are generally underexposed to those security selection factors.*

Exhibit 9: Percentage of manager products with positive, negative and zero exposures to the credit-security-selection factors

Global Core Plus universe (2007-2020)



Source: Russell Investments, eVestment

Solution: Targeted factor premia (credit value example)

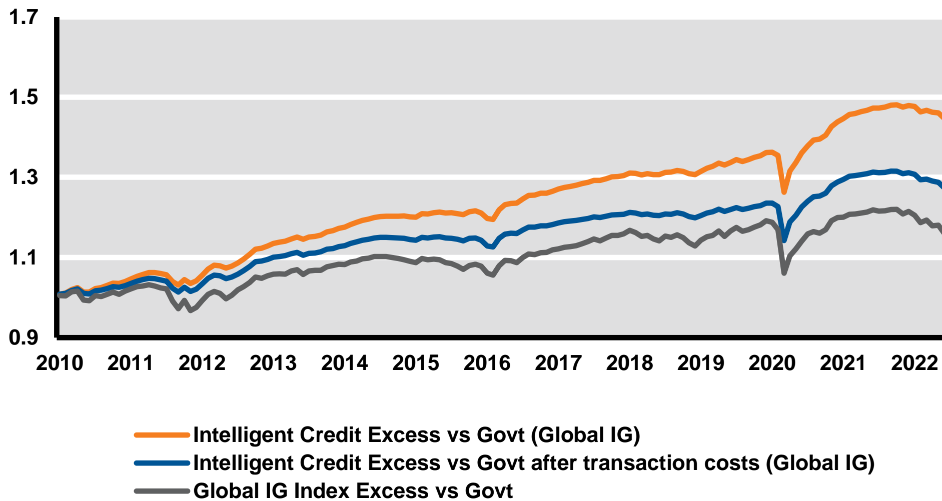
One of the factors underexploited by fixed income managers security selection is *credit value*. This factor produces positive excess return in the long run and is a great source of diversification. The intrinsic value for this factor is normally estimated by credit analysts looking at balance sheets and comparing various financial metrics across similar companies. We believe the intrinsic fair value can be more systematically observed with quantitative methods that allow more efficient comparison of *expectations of default* across sectors.

With this thinking in mind, our internal systematic strategy (which we call *Intelligent Credit*) applies a value factor model to a chosen universe of bonds. Intelligent Credit constructs a portfolio optimized around the 20% more-attractive securities identified, based on value scoring. This strategy is also low-turnover, so the expected premium continues to stay positive *even after transaction costs*.

There's a diversification benefit as well. Corporate bond managers generate excess returns by buying credits that are lower quality than the benchmark, which results in active strategies having biases to low-quality bonds and being more sensitive to risk. We've observed in research—and in our experience running strategies that focus on value—that value credits outperform during periods when the credit-risk premium is under stress (such as the COVID-19 crisis in 2020). This makes value credit an excellent diversification tool to the excess returns provided by the typical active manager.

> *This makes value credit an excellent diversification tool to the excess returns provided by the typical active manager.*

Exhibit 10: Cumulative excess vs Government performance of credit value



Source: Russell Investments, ICE BofA

Result: Better risk-adjusted returns and cost efficiency

We added our global investment-grade credit-value (Intelligent Credit) strategy to a two-manager global-credit portfolio. We reduced historical active risk by 0.75%, while keeping returns at the same level. And we were able to reduce total volatility from 6.0% to 4.9% and maximum drawdown over the period from -16% to -13%. We found that including a fixed income completion strategy can also help reduce the total cost expenditure on aggregate manager fees.

Exhibit 11: Credit value example

SUMMARY (2012-2022)	2 MANAGERS	2 MANAGERS + INTELLIGENT CREDIT
Return after transaction costs	2.5%	2.5%
Volatility	6.0%	4.9%
Maximum drawdown	-16%	-13%
Active risk	2.6%	1.8%

Source: Russell Investments. For illustrative purposes only.

Completion portfolios are designed to precisely align your portfolio with your investment beliefs, and then dynamically maintain that precision throughout turbulent, fast-moving market cycles.

Factor capabilities: The power behind completion portfolios

Completion portfolios are designed to precisely align your portfolio with your investment beliefs, and then dynamically maintain that precision throughout turbulent, fast-moving market cycles. This precision goes far beyond asset-class definitions, to multi-dimensional factors, including Value, Momentum, Quality, Growth and Low Volatility. We can build equity and fixed-income factor portfolios for each of these categories, across multiple universes.

As part of our robust suite of factor capabilities, we can implement either third-party strategies or Russell Investments' factor models. We create customized factor definitions and weighting schemes, which can be implemented either within factor completion strategies or as stand-alone single or multi-factor portfolios. We also offer quant input and additional overlay strategies, such as a decarbonization overlay. A robust security master with 60 thousand live securities, over 250 characteristics and all the major benchmarks daily across multiple providers underpins this quant platform.

Factor capabilities for a greater portfolio precision

More than 40 years experience in factor investment

Extensive quant capability

Thoughtful and academically supported factor definitions

Consistent risk modeling

Robust portfolio construction techniques

Equities

Single and multi-factor solution:

- Value
- Momentum
- Quality
- Low volatility
- Growth

Completion portfolios

Systematic strategies, i.e., quality income

Fixed income / Currency

Rates factors (value / carry)

Intelligent credit (value):

- Investment grade
- High yield
- Fallen angels
- Global credit / government
- Quasi – Sovereign enhanced Beta

Currency: Value, Carry and Trend

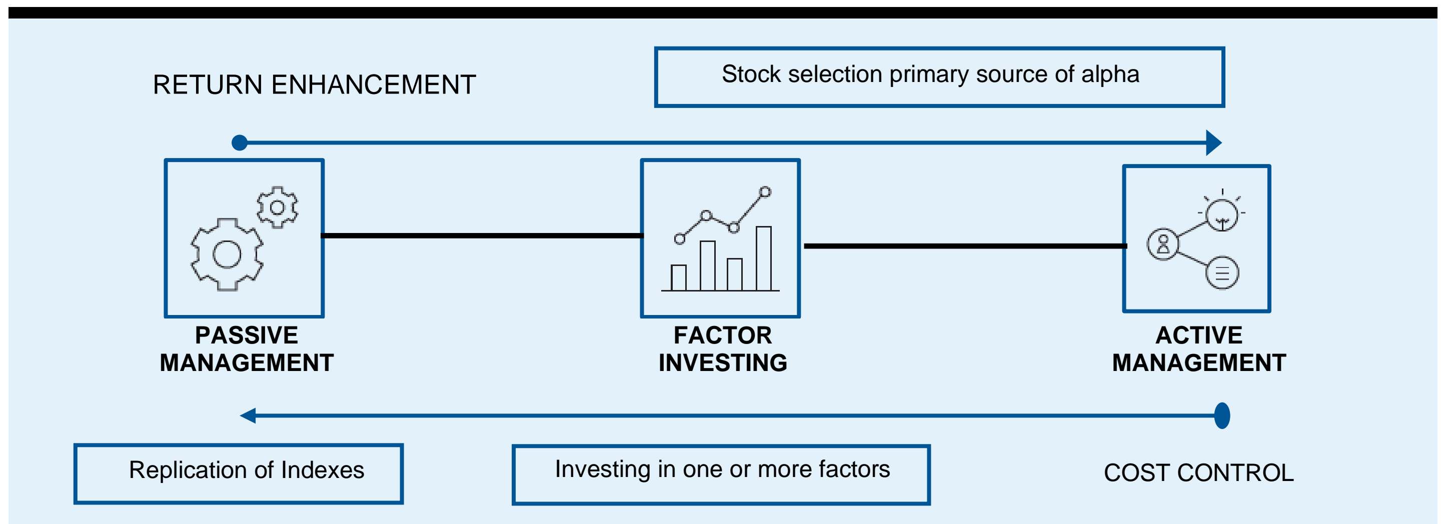
Passive / smart beta strategies versus external indices

LDI solutions

Enhanced cash

Factor investing has been one of Russell Investments' core capabilities for more than 40 years, since the launch of the Russell style indexes.
Our factor investing has continued to innovate and advance over time—from using factor exposures in our funds through our direct investing capabilities to having funds that are pure multi-factor funds. We use thoughtful and academically supported factor definitions, robust portfolio construction techniques and consistent risk models.

The goal? To keep your total portfolio not only precisely aligned to your beliefs, but also optimized to improve risk-adjusted performance and prevent unintended and uncompensated risk.



Russell Investments

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About Russell Investments

Russell Investments is a global asset manager with a unique set of capabilities that we believe is essential to managing your total portfolio and to meeting your desired outcome. At Russell Investments, we stand with you, whether you're an institutional investor, a financial adviser, or an individual guided by an advisor's personalized advice. We believe the best way to reach your desired outcomes is with a multi-asset approach that combines: asset allocation, capital markets insights, factor exposures, manager research and portfolio implementation.

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