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iSHARES INVESTIGATES: MARKET INDEXES AND INDEX INVESTING

Part 2 | Equity index rebalances

Introduction

Market indexes are designed to represent and measure the performance of securities in a specific market, asset class, sector, or investment strategy. Indexes are financial calculations, based on a grouping of financial instruments, and therefore are not directly investible. Rather, investors seeking exposure to an index often invest through index-tracking mutual funds and exchange traded funds (ETFs), which are generally designed to track the performance of a specified index as closely as possible.

Index providers are responsible for ensuring that the composition of an index adequately reflects its stated methodology. This is done partially through regular updates, or "rebalances," which are changes to an index's holdings and holding weights. Importantly, index fund managers must reconfigure portfolio holdings to match the rebalanced index in order to continue to achieve their index-tracking objective.

This article examines the rebalancing of equity indexes and offers insights into the BlackRock process for managing these index events. The takeaway: Thousands of skillful and thoughtful decisions are made behind the scenes in order to achieve the precision that our investors expect.

For more information on the role of index providers, see iShares Investigates: Market indexes and index investing | Part 1: The role of index providers.

An overview of equity index rebalances

Index providers, such as FTSE Russell and MSCI, are responsible for building and maintaining a wide variety of indexes. This includes determinations about how frequently indexes are reviewed and updated.

Most index providers rebalance their indexes regularly, adding or removing securities or changing the weights of existing index constituents. Indexes typically rebalance on a consistent schedule, but the timing can vary by provider. For example, S&P Dow Jones Indices typically rebalances indexes on the third Friday at the end of each calendar quarter, while rebalances in MSCI indexes occur on the last business day of February, May, August and November.

Importantly, index rebalances are publicized events and the dates are typically known in advance. For example, on March 3, 2020, FTSE Russell announced the schedule for its annual reconstitution of the Russell US Indexes, which occurred on June 26, 2020.[1]

Index fund managers can receive change notifications from index providers daily. These notifications contain information about upcoming rebalances, methodological changes, and details on how mergers and acquisitions, additions, deletions, spin-offs or any corporate actions may change a security or security weighting in an index.

1 See Press Release, "FTSE Russell announces 2020 Russell US Indexes Reconstitution schedule", *available at*: https://content.ftserussell.com/sites/default/files/2020_russell_reconstitution_schedule_announce_march_2020_final_1.pdf?_ga=2.183821734.1824909419.1593191591-320413137.1593191591

SIDEBAR

Fixed income vs. equity index rebalances: What's the difference?

Equity and fixed income indexes are both used as benchmarks and tracking indexes by a variety of investors, but there are notable differences between the two. These differences can impact how investors manage rebalances in index-tracking portfolios.

For example, while the timing of equity index rebalances can vary by index provider, fixed income indexes are typically rebalanced monthly to account for new bond issuance, rating changes (upgrades and downgrades), coupon payments, principal paydowns, and bonds with maturities that no longer fall within a benchmark's specified range. Because fixed income indexes tend to rebalance more frequently than equity indexes, the magnitude of the rebalances also tends to be smaller. This can result in lower trading volumes on the rebalance date.

To offset the potential transaction costs and market impacts of trading fixed income index rebalances, BlackRock portfolio managers can acquire bonds that are likely to be added to the index prior to the rebalance date (by participating in new issues, for instance).

Despite these operational differences, there is one thing that remains the same: Both fixed income and equity index funds are managed by professionals who use human expertise and technology to intelligently pursue a fund's objectives.

Index fund management is anything but "passive"

Although index investing is frequently referred to as "passive" investing, index fund management is a hands-on process. BlackRock Portfolio Engineers (PEs) leverage their deep portfolio expertise and investment skills to consistently seek fund performance outcomes that align with index performance.

Some key elements of the index fund management process include:

- **Benchmark knowledge.** PEs maintain detailed knowledge of index methodologies, predict and project index changes, provide feedback and insights to index providers, and continuously research index events.
- **Portfolio construction.** PEs make investment decisions around portfolio structure (e.g., whether to fully replicate an index or hold a representative sample of index securities) consistent with the fund's stated investment strategy, as well as around cash equitization and corporate actions in index securities.
- **Efficient trading.** PEs build smart trading strategies to access optimal liquidity.
- **Performance and oversight.** PEs review the cumulative effect of investment decisions to help identify factors that contribute to or detract from portfolio performance.

What is a "Portfolio Engineer"?

At BlackRock, index Portfolio Engineers (PEs) sit at the intersection of portfolio construction, index methodology, trading and capital markets, operational and investment risk, and technology. As such, their role involves much more than what is traditionally referred to as "portfolio management." Functionally, PEs are akin to engineers who understand the importance of design, technology, and market dynamics in the ongoing management of an investment portfolio.

The BlackRock approach to equity index rebalances

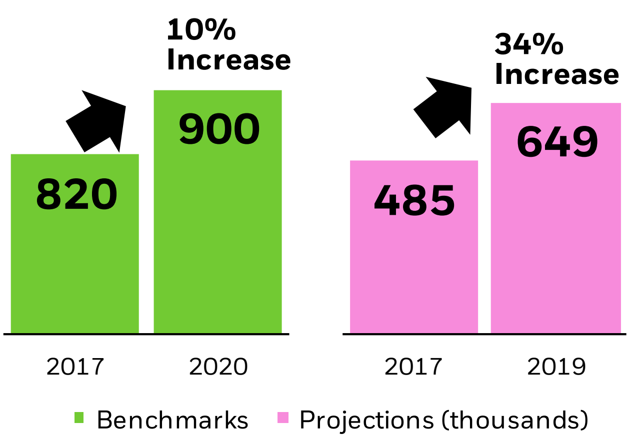
PEs have three primary objectives when trading in connection with index changes for index-tracking portfolios: maintain tight tracking relative to the benchmark index, minimize market impact around the index change event, and minimize transaction costs.

The Index Research Group (IRG) is a team of dedicated specialists who are experts in index methodologies. Ahead of every rebalance, this group creates "pro-forma" indexes, or projections of what an index will look like in the future based on announced index changes. Having a clear view of these pro-forma indexes is critical in order to position a portfolio such that it tightly matches the index at the precise moment it changes.

Creating pro-forma indexes is no small task. The IRG team managed over 155,000 projections for the May 2020 MSCI rebalance alone. In 2019, the team managed over 645,000 projections for the year **(Figure 1).**

Because there are many challenges associated with index rebalances, PEs also monitor funds for upcoming index activity. For example, not only do PEs need to understand the rationale behind index changes (e.g., if there is a corporate action, such as a tender offer, taking place), but in instances where they do not need to trade every index holding, PEs must also generate optimized portfolio rebalance orders in an effort to minimize tracking error and cost. Additionally, PEs need to develop cash-management strategies, especially for portfolios with multi-country exposure in which securities may have different settlement dates and market hours.

Figure 1: Growth in IRG benchmarks and projections[2]



A data-driven process

PEs view each index change as an opportunity to preserve value for portfolios (and investors) in a risk-managed fashion.

To build portfolio solutions for each rebalance, PEs leverage the projections from index providers and evaluate potential trades against a plethora of trading data. Because rebalances are typically announced in advance, there is generally time to complete extensive analysis and actively engage with traders.

In addition to examining portfolio-centric impacts, PEs and traders also consider the broader market ecosystem. For example, PEs headed into a rebalance need to be aware of upcoming macroeconomic events (such as a Fed announcement or a jobs report), corporate earnings releases or shifts in market sentiment that could affect stock prices. To help minimize costs and market impact, PEs must also anticipate the activity of speculative investors (i.e., those trying to "front run" the index) and evaluate the net flows iShares ETFs and other index portfolios will generate in the index securities.

Figure 2: BlackRock's global index equity platform by the numbers ($USD)[3]

2,000+	Index funds managed by BlackRock PEs
900+	Benchmarks tracked
$3.2T	Index equity assets under management

2 Source: BlackRock. Benchmarks as of June 30, 2020. Projections as of December 31, 2019. **3** Source: BlackRock, as of June 30, 2020

Developing and implementing a risk-managed trading strategy

Analyzing index changes is just one part of managing an index rebalance. PEs must also use this information to determine the most efficient trading strategy to meet their objectives.

This may involve trading during the continuous trading day (e.g., away from the close) on, in advance of, or after the rebalance effective date. When trading at the close, PEs may utilize limit-on-close (LOC) orders to aim for additional protection against adverse price movements.[4]

In certain circumstances, BlackRock, on behalf of the iShares ETFs, may seek to effect purchases and sales between BlackRock clients (including across iShares portfolios), known as "cross-trades," if BlackRock believes such transactions are appropriate based on each party's investment objectives and guidelines, subject to applicable law and regulation. For example, if a stock is being removed from Fund A and added to Fund B, those trades may be offset through an internal crossing mechanism, thus reducing overall trade size and resulting impact on the underlying market.

Importantly, on the implementation date of the rebalance, PEs closely monitor stock prices, bid-ask spreads and the cash needs of portfolios in seeking to achieve successful outcomes for funds and clients.

The bottom line

Index fund management is anything but "passive," especially when indexes are changing. Skilled PEs make a multitude of decisions leading up to and during index rebalances that seek to achieve optimal results. For this reason, BlackRock PEs take a disciplined, pragmatic and adaptable approach to managing index rebalances as they seek to deliver precise outcomes for investors in all market conditions.

4 A LOC order indicates an interest to buy or sell a specific number of shares, but only if the closing price is at or better than an indicated limit price.

Risks

Capital at risk. The value of investments and the income from them can fall as well as rise and are not guaranteed. Investors may not get back the amount originally invested.

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