FTSE Market Based Allocation Index Series

Paving the way for a new generation of index solutions

Leveraging FTSE Russell’s global benchmark coverage and multi-asset capabilities, FTSE Market Based Allocation Index Series intends to fill a gap in the market.

The FTSE Market Based Allocation Indexes are designed to represent the performance of multi-asset investment portfolios across a wide range of objectively-defined risk tolerance profiles. The asset allocation weights for each of the five indexes in the series are determined using transparent, data-driven methodology.

Representative
The asset allocation levels for each index are derived using methodology that takes into account the average asset allocation levels of real-world multi-asset funds as reported in the Morningstar fund database.

The indexes include a broad and diversified range of asset classes including equities, fixed income, cash, and other investments.

Objective
The series includes indexes that objectively define and represent five risk tolerance profiles, ranging from conservative to aggressive.

Real-world asset allocation funds, regardless of stated objectives and/or fund names, are ranked by volatility and grouped into quintiles. The average asset allocation levels of each quintile are used to set the asset allocation levels for each of the five indexes.

Transparency and governance
The indexes are constructed according to a transparent, publicly available set of rules.

The indexes are overseen by FTSE Russell’s governance framework, which encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group’s three lines of defense risk management framework.

Replicable
Flagship FTSE Russell indexes are used as asset allocation building blocks.

The asset allocation levels of each index can easily be replicated by purchasing index-based investment products such as Exchange Traded Funds (ETFs).

FTSE Russell’s five risk tolerance categories:

1. FTSE US Market Based Allocation Conservative Index
2. FTSE US Market Based Allocation Moderately Conservative Index
3. FTSE US Market Based Allocation Moderate Index
4. FTSE US Market Based Allocation Moderately Aggressive Index
5. FTSE US Market Based Allocation Aggressive Index
Index construction method

The method of index construction is transparent, objective and takes into account the average asset allocation mixes of real-world multi-asset funds.

1. Capture US asset allocation funds
   - All asset allocation mutual funds from the Morningstar fund database are captured (US funds only, >1,000 as of Sept 2018)
   - Asset class weights for each fund are normalized to the following:
     - US Equities
     - Developed ex-US Equities
     - Emerging Market Equities
     - US Government/Agency Bonds
     - US Collateralized Bonds
     - US Corporate Bonds
     - Global ex-US Bonds
     - Cash
     - Other

2. Sort them into quintiles based on volatility
   - Each fund is ranked by 3-year volatility, from most volatile to least volatile.
   - Funds are assigned to one of five volatility quintiles, the most volatile in the aggressive quintile and the least volatile in the conservative quintile:
     - Conservative
     - Moderately Conservative
     - Moderate
     - Moderately Aggressive
     - Aggressive

3. Apply the average asset allocation mix
   - For each quintile, the average asset allocation mix of all funds is calculated, and the average mix is then applied to the respective FTSE Market Based Allocation Index.

Flagship FTSE Russell indexes

The equity and fixed income asset classes are represented by flagship FTSE Russell Indexes:

<table>
<thead>
<tr>
<th>Equity</th>
<th>Fixed Income</th>
<th>Cash</th>
<th>Other Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Equities</td>
<td>US Government/Agency Bonds</td>
<td>Fed Funds Rate</td>
<td>Fed Funds Rate</td>
</tr>
<tr>
<td>Developed ex US Equities</td>
<td>US Collateralized Bonds</td>
<td></td>
<td>(For calculating benchmark indexes, 2% will be added to this rate)</td>
</tr>
<tr>
<td>Emerging Market Equities</td>
<td>US Corporate Bonds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FTSE Developed All Cap ex US Index</td>
<td>FTSE USBIG® Collateralized Index</td>
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<tr>
<td>FTSE Emerging All Cap Index</td>
<td>FTSE USBIG® Corporate Index</td>
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<tr>
<td>FTSE Non-USD World Government Bond Index</td>
<td>FTSE USBIG® Treasury/Agency Index</td>
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</tbody>
</table>

Source: FTSE Russell
About FTSE Russell

FTSE Russell is a leading global index provider creating and managing a wide range of indexes, data and analytic solutions to meet client needs across asset classes, style and strategies. Covering 98% of the investable market, FTSE Russell indexes offer a true picture of global markets, combined with the specialist knowledge gained from developing local benchmarks around the world.

FTSE Russell index expertise and products are used extensively by institutional and retail investors globally. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create investment funds, ETFs, structured products and index-based derivatives. FTSE Russell indexes also provide clients with tools for asset allocation, investment strategy analysis and risk management.

A core set of universal principles guides FTSE Russell index design and management: a transparent rules-based methodology is informed by independent committees of leading market participants. FTSE Russell is focused on index innovation and customer partnership applying the highest industry standards and embracing the IOSCO Principles. FTSE Russell is wholly owned by London Stock Exchange Group.

For more information, visit ftserussell.com.

To learn more, visit ftserussell.com; email info@ftserussell.com; or call your regional FTSE fixed income indexes team office:

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