

# FTSE RAFI INDEX SERIES METHODOLOGY OVERVIEW

The FTSE RAFI Index Series is another member of FTSE’s range of non-market capitalisation weighted indexes. Using the fundamental indexation™ methodology developed by Research Affiliates LLC of Pasadena, California, the index breaks with the traditional price-based market cap weighted design, and instead derives its constituent weights from company fundamentals.

The methodology uses the audited dollar values of cash flow, book value, total sales and gross dividend to derive each constituent index weight. Prices, which can be prone to speculation, are not a component of the weights. As the fundamental weightings are regularly reviewed at the index review, the constituent weights are less affected by market bubbles that can over-expose an investor to individual companies, sectors or countries.

**Fundamental Factors**

- **Sales** = company sales averaged over the prior five years.
- **Cash Flow** = company cash flow averaged over the prior five years, defined as Operating Income plus Depreciation.
- **Book Value** = company book value at the review date.
- **Dividend** = total dividend distributions averaged over the last five years, including both special and regular dividends paid in cash.

## INDEX CONSTRUCTION OVERVIEW

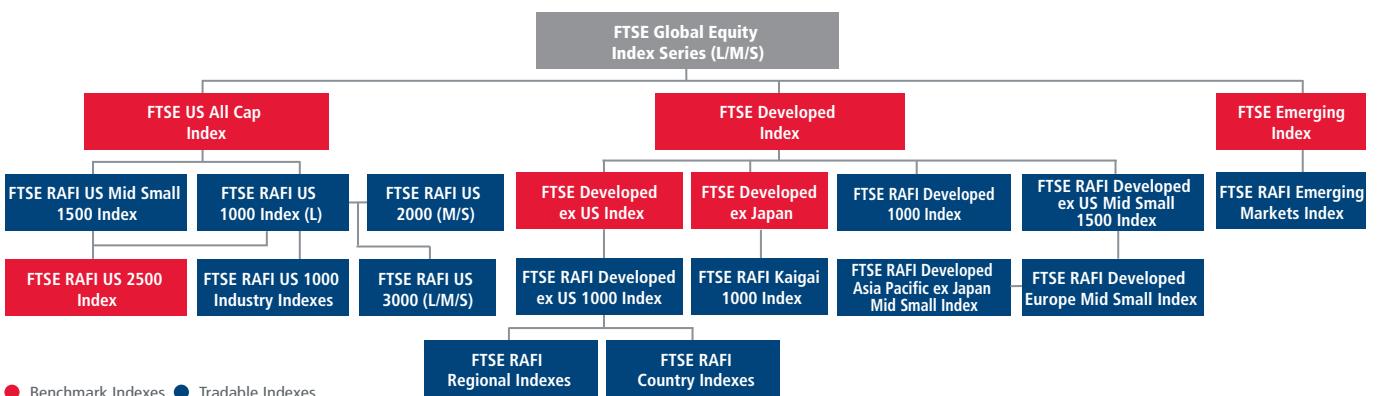
The headline FTSE RAFI US 1000 Index and FTSE RAFI Developed ex US 1000 Index are comprised of the 1000 companies with the largest fundamental value (defined overleaf) from the FTSE US All Cap Index and the FTSE Global All Cap Index ex US respectively. Country and regional indexes come out of the RAFI Developed ex US Index.

The FTSE RAFI Index Series is reviewed annually based on data as at the close of business on the last trading day of February, taking into account any additions and deletions planned in the underlying indexes. Changes arising from the annual review are implemented after the close of the index calculation on the third Friday of March each year.

## FEATURES

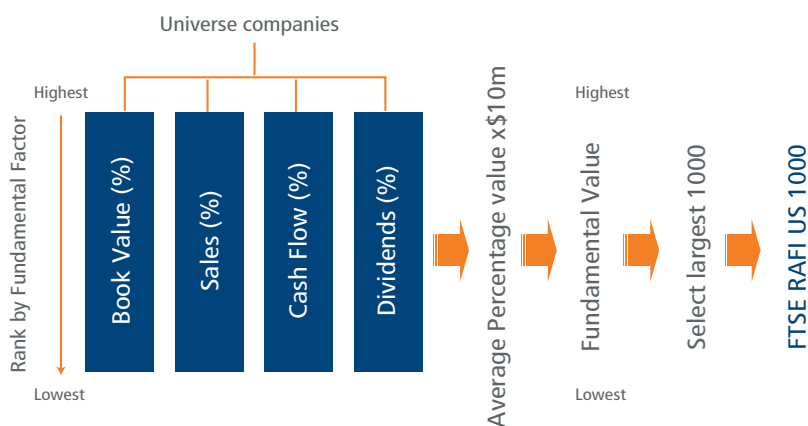
- FTSE RAFI Index-linked products offer the advantages of a quantitative active management strategy with the highlights of passive investment: lower turnover costs and transparent rules-based selection, whilst retaining high investment capacity
- By using fundamental factors rather than prices to weight stocks, reviews of the FTSE RAFI Indexes take advantage of price movements by reducing the index’s holdings in constituents whose prices have risen relative to other constituents, and increasing holdings in companies whose prices have fallen behind. This is effectively a buy-low, sell-high strategy
- Fundamentals weighting does not increase exposure to high P/E stocks during episodes of unsustainable P/E expansion. It therefore avoids over-exposure to the more overvalued stocks
- Similar liquidity and capacity to market cap-weighted indexes
- Superior mean-variance portfolio construction
- The universe of eligible constituents is the FTSE Global Equity Index Series (GEIS)

## FAMILY TREE



1. **The process starts with the selection of the company universes.** For the FTSE RAFI US 1000 Index, the constituents of the FTSE US All Cap Index are used, and for the FTSE RAFI Developed ex US 1000 Index the constituents of the FTSE Developed ex US Index are used. The only difference between the two universes is that the FTSE US All Cap Index includes large, medium and small cap companies whereas the FTSE Developed ex US Index consists of only large and mid cap companies. Country indexes fall out of the FTSE RAFI Developed ex US 1000 Index.
2. **The universe companies are each ranked by each of the following four fundamental measures of company size: book value, cash flow, sales, and dividends.** The percentage weight that each company represents of the total value of each fundamental measure is calculated. Trailing five-year averaged data is used to minimise the substantial volatility in the index factors that would result from using year-to-year data. The five-year averaging also reduces index rebalancing turnover.
3. **A composite fundamental value is given to each company by taking the average weighting of each fundamental measure.** If a company has a zero dividend percentage the average of the other three metrics are taken. The company's RAFI fundamental value is defined as 10,000,000 times the composite weight.
4. **The companies are then ranked in descending order of their RAFI fundamental values.** The top 1000 companies derived from the FTSE US All Cap Index then form the constituents of the FTSE RAFI US 1000 Index. Similarly, the top 1000 companies derived from the FTSE Developed ex US Index then form the constituents of the FTSE RAFI Developed ex US Index.
5. **The weights in the indexes are then set proportional to their fundamental values.** The weighting factor used in the index calculation is derived by dividing the investable RAFI fundamental value of each company by its free-float adjusted market capitalisation. If there are fewer than five years of data available, the average of the years of data that are available are taken. It can be shown that although the results are not materially different from those of their trailing five-year counterparts, portfolio turnover is higher.
6. When converting from company level to stock level factors, the fundamental value is calculated at a company rather than a stock level. If a company has two or more lines of stocks in the relevant index, the company's fundamental value is allocated between these lines of stock in proportion to the free-float adjusted market capitalisations at the date of the rebalancing.

Example: The FTSE RAFI US 1000 Index Construction



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