

Index Research and Design | Index Ideas

## The FTSE Developed Target Diversification 400 Index

Restoring balance to global equities

June 2025



AUTHOR

Sebastian Lancetti Head of Index Research and Design, Americas sebastian.lancetti@lseg.com

# Executive summary: The FTSE Developed Target Diversification 400 Index

The FTSE Developed Target Diversification 400 Index addresses a fundamental problem: Concentration risk. Since 2007, the concentration level of the top 10 holdings on the FTSE Developed Index increased dramatically, expanding from 9% to 26%. The US weight increased by 25.3 percentage points to 70.8%, and the technology weight nearly quadrupled.

The FTSE Developed Target Diversification 400 Index leverages our proprietary Target Diversification methodology to deliver a more balanced exposure while maintaining the essential characteristics of market representation. At its core, the approach employs two key innovations: the FTSE Russell Diversification Factor, which quantifies diversification in intuitive terms, and the Target Diversification Algorithm, which applies a non-linear transformation to index weights to achieve precise diversification targets.

Our comprehensive analysis (2007- April 2025) demonstrates compelling performance characteristics. The FTSE Developed Target Diversification 400 Index has delivered comparable returns to its parent cap-weighted index (7.26% vs. 7.43% annualised) with slightly lower volatility, while achieving a considerable improvement in diversification (30% more diversified on average). Crucially, it maintained minimal tracking error (just 1.40% annually), making it suitable for benchmark-aware mandates.

Our analysis showed that the Target Diversification strategy, if used from the end of 2007 to April 2025 would also have produced industry and country allocations that more closely reflected economic fundamentals during the period. The FTSE Developed Target Diversification 400 Index has lower active share, relative to long-term historical weights (7.7% vs. 12.4% for the cap-weighted index), and GDP weightings (18.6% vs. 25.7%).

Beyond historical performance, the index is potentially well-positioned for future outperformance if markets exhibit mean reversion. With a more moderate P/E ratio (18.8) compared to the cap-weighted index (20.3), the FTSE Developed Target Diversification 400 Index systematically reduces exposure to potentially overvalued segments while increasing allocations to historically underweighted regions. This better addresses the proposition put forth by some institutional investors, to rebalance portfolios away from US equities toward European and Japanese markets, and achieves the rebalancing systematically without requiring market timing decisions.

For institutional investors seeking to address today's concentration challenges while maintaining broad market exposure, the FTSE Developed Target Diversification 400 Index offers a tractable, rules-based, and efficient solution that resolves the longstanding tension between diversification and market representation.

A distinctive attribute of the methodology is its calibration flexibility. The framework allows investors to select specific diversification targets along a continuum, from minimal adjustments with tracking error below 1.1%, to moderate enhancements balancing diversification and tracking error, to achieve a more extensive diversification.

Addressing the Global Equity Market concentration issue

Target Diversification delivers a more balanced exposure

Compelling characteristics

Enhanced Economic Representation

Strategic Mean Reversion Positioning

Target Diversification is a tractable, rulesbased, and efficient solution

The Power of Choice

### The great concentration challenge

Since 2007, the FTSE Developed Index has exhibited a marked increase in concentration, largely attributable to the outsized performance of US equities. This shift has materially altered the profile of what is often viewed as a core global equity allocation, as reflected in several key market indicators discussed below.

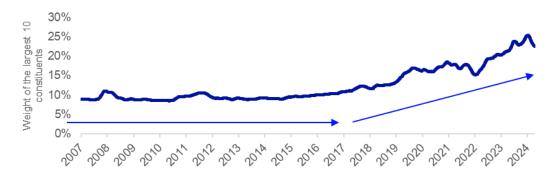
#### Single name concentration

Beginning in 2007, the cumulative weight of the top 10 constituents expanded significantly, rising from approximately 9% in 2007 to 26% by January 2025. This substantial increase in concentration represents a notable departure from historical norms and introduces heightened idiosyncratic risk exposure within what traditionally functioned as a highly diversified index. This evolution towards mega-cap dominance occurred gradually but persistently, accelerating particularly in the last three years.

Addressing the Global Equity Market concentration issue

Fewer names account for an increasingly larger proportion of the Index

**USA** Dominance



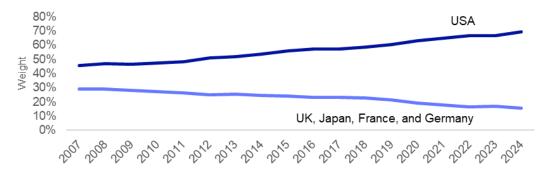
#### Exhibit 1: The cumulative weight of the 10 largest constituents (FTSE Developed)

Source: FTSE Russell. 2007 to April 2025.

#### Geographic imbalance

Our examination of geographic distribution revealed pronounced regional concentration. The United States gained +25.3 percentage points in index weight (increasing from 45.5% to 70.8%), with corresponding proportional declines observed across several major developed markets, including the United Kingdom (-6.4%), France (-2.9%), Japan (-2.6%), and Germany (-1.9%). Denmark represents a minor exception, experiencing a modest weight increase (from 0.4% to 0.6%).

#### Exhibit 2: US Index dominance: Weight of USA and UK, Japan, France and Germany



Source: FTSE Russell. 2007 to the end 2024

This extreme geographic skew prompted institutional investors to consider tactical rebalancing away from the United States toward European and Japanese markets, a challenging market-timing decision that requires active management and introduces potential implementation risks. The Target Diversification methodology addresses this issue systematically without requiring explicit action.

#### Industry concentration

From a sectoral perspective, Technology has manifested the most significant concentration effect, nearly quadrupling its index weight since 2007 to approximately 28% of the FTSE Developed Index. This substantial increase occurred at the expense of traditional industries, notably Financials, Energy, Basic Materials, and Utilities, which have collectively declined from representing 43% to 25% of the index weight.

### Exhibit 3: The Rise of Tech: Weight of Technology and Financials, Energy, Basic Materials, and Utilities



Source: FTSE Russell. 2007 to the end of 2024.

These shifts create industrial and geographical biases that extend to implicit factor exposures that may not align with investors' strategic allocation objectives, and present a critical challenge for asset managers.

The FTSE Russell's Target Diversification methodology was developed to enable institutional investors to address these concentration challenges while maintaining the benefits of broad market exposure. In the next pages we briefly introduce this new methodology and show how a more diversified FTSE Developed Index would have performed using the methodology and how it differs from its parent index in April 2025.

Misalignment And challenges

The FTSE Russell Target Diversification Methodology

Target Diversification does not require explicit timing decisions

The rise of Technology and the underperformance of the Infrastructure and Capital Industries

### **Introducing Target Diversification**

FTSE Russell's Target Diversification framework provides institutional investors with a precision tool to mitigate concentration risk while preserving the essential characteristics of market-cap exposure. At its core, this innovative solution comprises two key elements:

- 1. **The FTSE Russell Diversification Factor** An intuitive metric that quantifies diversification in terms of equivalent equally weighted stocks. For example, a FTSE Russell Diversification Factor of 400 represents an index with the same diversification characteristics as 400 equally weighted stocks. This measure provides a mathematically rigorous assessment of concentration that is both theoretically sound and intuitive.
- 2. **The Target Diversification Algorithm** A straightforward methodology that applies a non-linear transformation to index weights, and maintains market representation while achieving the desired diversification level. Unlike factor-based approaches that require complex risk models. Our algorithm operates directly on constituent weights through a function that has been derived by extensive empirical research to minimise distortions.

Strategic management of concentration risk

The Diversification Factors

The Diversification Algorithm

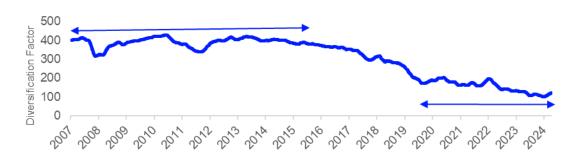
#### Exhibit 4: FTSE Russell Target Diversification



Investors can restore portfolio balance by targeting a FTSE Russell Diversification Factor of 400, the historical diversification score of the FTSE Developed Index before concentration started rising rapidly.

The right solution for institutional investors

#### Exhibit 5: The Diversification Factor of the FTSE Developed Index



Source: FTSE Russell. 2007 to April 2025.

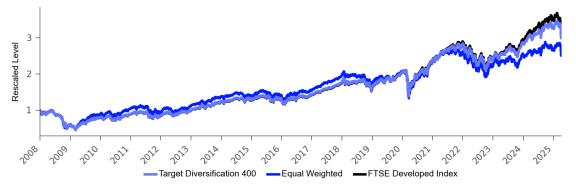
The diversification is maintained at a constant level through time. This disciplined and systematic approach allows portfolio managers to maintain exposure to market growth drivers while significantly reducing idiosyncratic risk when concentration becomes excessive.

### The Target Diversification advantage

The FTSE Developed Target Diversification Factor 400 would have delivered compelling performance characteristics compared to both cap-weighted and equal weighted alternatives.

The FTSE Developed Target Diversification 400 Index

#### Exhibit 6: The FTSE Developed Target Diversification 400 Index



Source: FTSE Russell. End of 2007 to April 2025. The data includes backtest, hypothetical performance. Please see the end for important legal disclosures.

The statistics, in Exhibit 7 below, suggest that the Target Diversification Index would have offered comparable returns (7.26% vs 7.43%) with slightly lower volatility (16.82% vs. 17.13%).

Target Diversification achieved comparable returns while being more diversified

#### Exhibit 7: Performance summary (End of 2007 - April 2025)

	Target Diversification 400	Equal Weighted	FTSE Developed Index
Cumulative Return	236.78%	185.44%	246.15%
Annualized Return	7.26%	6.24%	7.43%
Annualized Volatility	16.82%	15.83%	17.13%
Risk Adj Return	0.43	0.39	0.43
Sortino Ratio	0.59	0.54	0.60
Max Drawdown	-54.98%	-55.02%	-55.06%
Tracking Error	1.40%	7.21%	
Information Ratio	-0.12	-0.16	
Annualized Alpha	-0.03%	0.07%	
Beta	0.98	0.84	

Source: FTSE Russell. End of 2007 to April 2025. The data includes backtest, hypothetical performance. Please see the end for important legal disclosures.

Importantly, it would have achieved a considerable improvement in diversification (30% more diversified, on average) while maintaining minimal tracking error to the parent index (just 1.40% annually), making it suitable for investors with benchmark-aware mandates seeking a more balanced and diversified equity allocation.

This combination of similar return profile with enhanced diversification and contained tracking error demonstrates the methodology's potential efficacy in institutional portfolios.

In comparison, an equal weighted version of the FTSE Developed Index would have underperformed by 119 basis points per year, with an average annualised tracking error of more than 7% and a market beta of just 0.84.

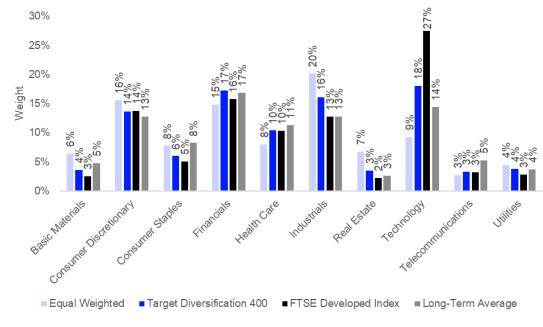
Comparing the two approaches to diversification, we can also see that the Target Diversification version would have delivered better risk-adjusted performance than the equal weighted one (0.43 vs. 0.39).

Implementation costs would have remained manageable, with annual (two-way) turnover of 14.27%, substantially lower than the 50.32% required by an equal weighted approach.

Over the same period, the FTSE Developed Target Diversification 400 Index had less extreme active industry exposures that align more closely to the economic importance of each sector. For example, as of April 2025 Technology composed 27% of the FTSE Developed Index, compared to 18% for FTSE Developed Target Diversification 400, and just 9% for the equal weighted alternative. This moderation in industry exposures helps mitigate the risks associated with bubbles while still maintaining sufficient exposure to growth drivers.

Equal weighting is not the right solution for most investors

More balanced and representative industry exposures



#### Exhibit 8: Industry weights (April 2025)

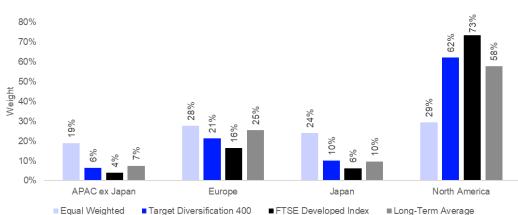
Source: FTSE Russell. Long-term average computed between the end of 2007 and April 2025.

We also noted that as of April 2025, the industry weights in the Target Diversification 400 Index remained more closely aligned with what was observed over the long-term. This is

Stable country and region allocations

reflected by active shares calculated relative to the long-term weights of just 7.7% for the Target Diversification 400 Index, compared to 12.4% for the FTSE Developed Index and 15.1% for the Equal weighted Index.

The same is true when we look at relative country weights. Exhibit 9, below, shows the weights of each region as of April 2025.<sup>1</sup> Using Target Diversification would have resulted in more balanced country weights that diverged less from their long-term average (the active shares in this case are 5.7% for the Target Diversification 400 Index, compared to 16.7% for the FTSE Developed Index and 32% for the Equal weighted Index).



#### Exhibit 9: Regional weights (April 2025)

Source: FTSE Russell. Long-term average computed between the end of 2007 and April 2025.

Rebalancing toward more historically normal geographic exposures, with increased weights to Europe and Japan and decreased weight to the United States, aligns with concerns about relative valuations and expectations of regional performance rotation. However, unlike tactical approaches that require specific timing decisions and potentially costly portfolio transitions, Target Diversification achieves the rebalancing systematically through its rules-based framework (more details can be found on page 10).

Interestingly, we also found that the country weights, when using Target Diversification, were more aligned with relative GDP weights.<sup>2</sup>

Country allocations aligned with GDP figures

Rule based systematic rebalancings

<sup>&</sup>lt;sup>1</sup> Regional weights presented for visual clarity. Country-level detail would render the chart illegible. Long-term average computed between the end of 2007 and April 2025.

<sup>&</sup>lt;sup>2</sup> The country active shares are computed based on 2024 GDP data in USD sourced from the IMF. The same remains true when using purchasepower-parity (PPP) figures. The GDP data is available in https://www.imf.org/en/Publications/WEO/weo-database/2024/October/download-entiredatabase.



#### Exhibit 10: Regional Weights compared to GDP in USD (April 2025)

Source: FTSE Russell. GDP data for 2024 sourced from the IMF, see footnote 2 above.

The active shares when considering GDP figures are 18.6% for the Target Diversification 400 Index, compared to 25.7% for the FTSE Developed Index and 32.8% for the Equal weighted Index.

This alignment with GDP suggests that the Target Diversification methodology produces portfolios that may more accurately reflect the true economic importance of each country instead of capturing cyclical market pricing inefficiencies.

Beyond performance metrics and country and industry allocation considerations, the valuation characteristics of these approaches reveal another important advantage. An analysis of Price-to-Earnings (P/E) ratios from 2007 to 2025 demonstrates how Target Diversification provides a more balanced valuation profile.

Target Diversification provides a more sustainable valuation foundation for future performance

	Equal Weighted	Target Diversification 400	FTSE Developed Index
12/31/2007	16.9	15.7	15.7
12/31/2010	22.5	17.7	17.8
12/31/2013	22.6	17.8	17.8
12/31/2016	19.0	19.9	19.9
12/31/2019	15.2	17.8	18.2
12/31/2022	11.8	14.4	15.0
Latest	16.7	18.8	20.3

Exhibit 11: P/E Ratios comparison (select years, 2007 - April 2025)

Source: FTSE Russell. 2007 to April 2025. The data includes backtest, hypothetical performance. Please see the end for important legal disclosures.

While the cap weighted FTSE Developed Index currently exhibits an elevated P/E ratio of 20.3, reflecting its concentration in higher-valued companies, the Target Diversification 400 approach maintains a more moderate P/E ratio of 18.8. This balanced valuation profile stands in contrast to both alternatives, avoiding the potential valuation risk of the cap weighted index while maintaining sufficient exposure to growth drivers unlike the equal weighted approach (P/E of 16.7).

This valuation advantage complements the performance characteristics discussed above, offering investors not only comparable historical returns with lower volatility and better representativeness, but also a more sustainable valuation foundation for future performance. This point is explored further in a separate section below.

While our analysis focused on the FTSE Developed Target Diversification 400 Index, a level of diversification that we consider ideal for most long-term allocations, one of the methodology's most powerful features is its ability to provide solutions tailored to specific objectives, constraints, and active risk tolerances. In the next section, we provide an analysis of how different Diversification Factor targets would have affected performance and risk characteristics in the FTSE Developed universe.

Selecting the diversification that matches specific objectives

### **Customising the Diversification Factor**

One of the key advantages of the Target Diversification methodology is its flexibility. It allows investors to select the specific level of diversification that best aligns with their investment objectives and constraints.

The FTSE Russell Target Diversification methodology enables a continuum of solutions ranging from minimal adjustments to market cap weights to more substantial diversification enhancements. The comprehensive analysis below demonstrates how different Diversification Factor targets affect key performance and risk characteristics.

Performance Statistics												
	Target Diversification 100	Target Diversification 200	Target Diversification 300	Target Diversification 400	Target Diversification 500	Target Diversification 600	Target Diversification 700	Target Diversification 800	Target Diversification 900		Equal Weighted	FTSE Developed Index
Return Metr	rics											
Cumulative Return	280.81%	255.53%	244.01%	236.78%	231.55%	227.44%	224.01%	221.06%	218.44%	216.06%	185.44%	246.15%
Annualized Return	8.02%	7.59%	7.39%	7.26%	7.16%	7.08%	7.02%	6.96%	6.91%	6.87%	6.24%	7.43%
Annualized Volatility	17.39%	17.08%	16.93%	16.82%	16.74%	16.67%	16.60%	16.55%	16.49%	16.44%	15.83%	17.13%
Risk-Adjust	ed Metrics											
Risk Adj Return	0.46	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.39	0.43
Sortino Ratio	0.64	0.61	0.60	0.59	0.59	0.59	0.58	0.58	0.58	0.57	0.54	0.60
Drawdown I	Metrics											
Max Drawdown	-53.72%	-54.44%	-54.78%	-54.98%	-55.10%	-55.19%	-55.26%	-55.31%	-55.34%	-55.36%	-55.02%	-55.06%
Benchmark	-Relative											
Tracking Error	2.12%	1.02%	1.05%	1.40%	1.77%	2.10%	2.41%	2.70%	2.97%	3.23%	7.21%	
Information Ratio	0.28	0.16	-0.04	-0.12	-0.15	-0.16	-0.17	-0.17	-0.17	-0.17	-0.16	
Annualized Alpha	0.53%	0.18%	0.05%	-0.03%	-0.07%	-0.10%	-0.12%	-0.14%	-0.14%	-0.15%	0.07%	
Beta	1.01	1.00	0.99	0.98	0.97	0.97	0.96	0.95	0.95	0.94	0.84	
Downside Capture	99.72	99.09	98.53	98.02	97.54	97.08	96.64	96.20	95.77	95.34	86.51	
Upside Capture	100.38	99.33	98.59	97.98	97.43	96.92	96.45	95.98	95.53	95.09	86.34	

Exhibit 12: Performance statistics by Diversification Factor Target (End of 2007 - April 2025)

Source: FTSE Russell. End of 2007 to April 2025. The data includes backtest, hypothetical performance. Please see the end for important legal disclosures.

The performance statistics reveal important patterns across the diversification spectrum:

#### **Return-diversification trade-off**

As the Diversification Factor increased from 100 to 1000, annualised returns gradually decreased from 8.02% to 6.87%, compared to 7.43% for the cap-weighted index. This pattern illustrates the modest performance trade-off that would have come with increased diversification. Notably, even at elevated levels of diversification, returns remained significantly higher than the Equal weighted approach (6.24%).

#### **Risk reduction**

While returns showed a gradual decline as the Diversification Factors increased, volatility also decreased, from 17.39% at DF=100 to 16.44% at DF=1000. This demonstrates that enhanced diversification effectively reduced portfolio risk.

#### **Risk-adjusted performance**

The highest risk-adjusted returns would have been achieved at lower Diversification Factors (0.46 at DF=100 versus 0.42 at DF=1000). However, the difference is modest compared to the cap-weighted index (0.43), suggesting that investors can increase diversification without triggering significant deterioration in risk-adjusted performance.

#### Tracking error management

Tracking error exhibited a non-linear relationship with the Diversification Factor. The minimum, of approximately 1.02%, was attained at DF=200. Beyond this point, tracking error increased gradually as the portfolio moved further from the cap-weighted structure. Even at DF=1000, tracking error remained substantially lower than for Equal-Weighting (3.23% vs. 7.21%), making all Target Diversification options viable for benchmark-aware mandates.

#### **Market participation**

Both upside and downside capture rates declined gradually as the Diversification Factor increased, with relatively balanced capture ratios across the spectrum. This indicates that Target Diversification maintains consistent market participation in both rising and falling markets.

#### **Balancing beta exposure**

Beta to the parent index gradually decreased from 1.01 at a DF=100 to 0.94 at DF=1000. This modest reduction in market sensitivity would have helped mitigate drawdowns during market stress while maintaining sufficient market exposure to participate in broader rallies, a sharp contrast to the equal weighted approach's significantly lower beta of 0.84.

#### Selecting the optimal Diversification Factor

The comprehensive performance statistics enable institutional investors to select a Diversification Factor that best aligns with their specific requirements.

- Benchmark-Sensitive Mandates (DF=200-300): Minimal tracking error with modest diversification improvements
- Balanced Approach (DF=400-600): The sweet spot balancing enhanced diversification with controlled tracking error
- Higher Diversification (DF=700-1000): Greatest concentration risk reduction for investors prioritising diversification over benchmark alignment

This flexibility represents a significant advantage over traditional indexing approaches, and allows investors to precisely calibrate their exposures based on their unique investment objectives, risk tolerances, and tracking error constraints.

In our opinion, a Diversification Factor of 400, the level observed in the FTSE Developed Index during the first 10 years of our study, is an ideal value to achieve higher diversification while preserving market representativeness and keeping implementation costs under control.

### **Beyond historical performance: Positioning for future markets**

An important consideration for institutional investors is not just historical performance, but the potential for future outperformance. If we accept the premise that markets tend to exhibit mean reversion over long time horizons, the Target Diversification approach offers additional potential advantages.

Market concentration often reflects temporary imbalances driven by investor sentiment, momentum, or the short-term outperformance of certain industries or regions. Historical evidence suggests that such extreme concentrations eventually normalise as capital flows adjust and valuations return to long-term averages. A portfolio anchored to more fundamental relationships, such as economic importance and historical weight distributions, may be better positioned to benefit from this mean-reverting behaviour.

The valuation differences between these approaches further illustrate the potential mean reversion opportunity. As previously mentioned, as of April 2025 the FTSE Developed Index carried a P/E multiple of 20.3, reflecting its concentration in higher-valued companies. In contrast, the Target Diversification 400 approach maintained a more moderate P/E ratio of 18.8, while the Equal weighted approach showed a lower multiple of 16.7. This balanced valuation profile positions Target Diversification to potentially benefit from any rotation toward more reasonably valued market segments without sacrificing appropriate exposure to growth drivers. Historical P/E data from 2007-2025 (see

Exhibit *11* on page 9) confirmed this consistent pattern, with Target Diversification typically maintaining a more sustainable valuation profile than the cap-weighted index.

This principle applies particularly to the current geographic imbalance. Currently, many institutional investors are actively discussing strategic rebalancing away from US equities toward European and Japanese markets based on relative valuations and the cyclical nature of regional performance.

Looking ahead

Mean reversion

Valuations

Geographic and sectoral imbalances

Target Diversification systematically addresses this imbalance, reducing US exposure while increasing allocations to historically underweighted regions. Rather than attempting to time the market rotation manually, the Target Diversification methodology provides a disciplined framework for geographic diversification that aligns with these emerging institutional perspectives.

The Target Diversification approach systematically:

- Reduces exposure to potentially overvalued market segments that have experienced significant price appreciation
- Increases allocations to underrepresented areas that may be temporarily out of favour
- Maintains a consistent relationship with economic fundamentals through market cycle
- Provides a natural "buy low, sell high" mechanism through its regular low turnover rebalancing process

While future returns cannot be predicted, the balanced approach of Target Diversification, which anchors portfolios to historical and fundamental relationships rather than current market sentiment, may deliver improved risk-adjusted outcomes in scenarios where markets exhibit some degree of mean reversion.

Potential performance improvements

### Conclusion

The FTSE Russell Target Diversification Framework addresses the fundamental challenge of balancing market representation with adequate diversification in index construction. Market concentration in the FTSE Developed Index increased substantially since 2007. The top 10 constituents grew from 9% to 26% of the index weight, US market representation expanded to 70.8%, and technology sector allocation nearly quadrupled. These developments altered the key characteristics of conventional global equity allocations.

The FTSE Developed Target Diversification 400 Index stands as the flagship implementation of this methodology for global developed markets equity allocations. It is carefully calibrated to provide optimal diversification benefits while maintaining practical implementation parameters. With a Diversification Factor of 400, this index represents what FTSE Russell's research identified as the historical norm for the FTSE Developed Index prior to the recent concentration surge, making it an ideal core holding for institutional investors seeking to restore traditional diversification levels without sacrificing market participation.

The Target Diversification methodology offers several potential benefits for institutional investors, including:

- 1. **Reduced Implementation Costs** Annual turnover of 14.27% compares favorably to alternative approaches such as equal-weighting (50.32%), while maintaining tracking error of 1.40% to the parent index. This may improve after-cost performance relative to other diversification methods
- Structural Balance The approach produces industry and country allocations that demonstrate lower active share relative to long-term historical weights (7.7% vs. 12.4% for the cap-weighted index) and GDP weightings (18.6% vs. 25.7%)
- 3. Valuation Considerations The resulting portfolio exhibits a P/E ratio of 18.79 versus 20.33 for the cap-weighted index, potentially reducing exposure to overvalued market segments while maintaining participation in growth sectors
- Systematic Approach The rules-based methodology adjusts exposures systematically rather than requiring discretionary timing decisions to address regional or sector imbalances
- 5. Calibrated Diversification The framework allows investors to select specific diversification targets along a continuum, from minimal adjustments (DF=200-300) with tracking error below 1.1%, to moderate enhancements (DF=400-600) balancing diversification and tracking error, to more extensive diversification (DF=700-1000) while maintaining reasonable implementation parameters

The FTSE Developed Target Diversification 400 Index represents a practical approach for institutional investors seeking to address concentration risk while maintaining broad market exposure within reasonable implementation parameters.

#### **ABOUT FTSE RUSSELL**

FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 40 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

#### **CONTACT US**

To receive our research and insights email and Market Maps reports, directly to your inbox, subscribe here.

To learn more, visit lseg.com/ftse-russell; email info@ftserussell.com; or call your regional Client Service team office:

 EMEA +44 (0) 20 7866 1810
 Asia-Pacific

 North America +1 877 503 6437
 Hong Kong

 Tokyo +81 3
 Tokyo +81 3

Hong Kong +852 2164 3333 Tokyo +81 3 6441 1430 Sydney +61 (0) 2 7228 5659

#### Disclaimer

© 2025 London Stock Exchange Group plc and its applicable group undertakings ("LSEG"). LSEG includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. "FTSE Canada", (4) FTSE Fixed Income LLC ("FTSE FI"), (5) FTSE (Beijing) Consulting Limited ("WOFE"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, WOFE, and other LSEG entities providing LSEG Benchmark and Index services. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "Refinitiv", "Beyond Ratings®", "WMR™", "FR™" and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of LSEG or their respective licensors.

FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by LSEG, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical inaccuracy as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of LSEG nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or LSEG Products, or of results to be obtained from the use of LSEG products, including but not limited to indices, rates, data and analytics, or the fitness or suitability of the LSEG products for any particular purpose to which they might be put. The user of the information assumes the entire risk of any use it may make or permit to be made of the information.

No responsibility or liability can be accepted by any member of LSEG nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any inaccuracy (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of LSEG is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of LSEG nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of LSEG nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indices and rates cannot be invested in directly. Inclusion of an asset in an index or rate is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index or rate containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index and/or rate returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index or rate inception date is back-tested performance. Back-tested performance. Back-tested performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index or rate methodology with the benefit of hindsight, and the historic calculations of an index or rate may change from month to month based on revisions to the underlying economic data used in the calculation of the index or rate.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of LSEG nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of LSEG. Use and distribution of LSEG data requires a licence from LSEG and/or its licensors.

The information contained in this report should not be considered "research" as defined in recital 28 of the Commission Delegated Directive (EU) 2017/593 of 7 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council ("MiFID II") and is provided for no fee.

