



Index Research and Design | Equities

Moving from measuring markets to measuring the real economy: The FTSE All-World GDP Adjusted Index

May 2026

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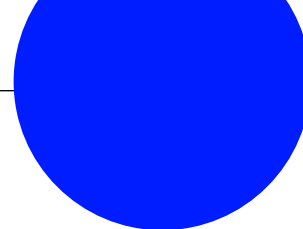
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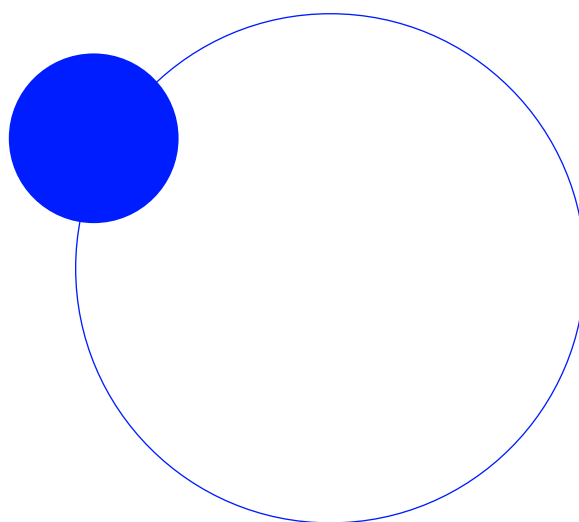
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Executive summary

Global equity benchmarks are typically market-capitalisation weighted, and there are many good reasons for that. However, they are also driven by the marginal investor¹, and as a result, can drift into concentration and valuation chasing. This can be especially true when a single country, sector, or style dominates global equity markets as is the case today. This paper introduces an alternative weighting scheme in which countries are weighted in proportion with their economic output (paired with market cap weighting within each country). The most recently published IMF GDP data anchors country weights to the real economy, introduces a systematic rebalancing discipline, and mitigates extremes that have historically occurred in cap-weighted indices.



¹ Marginal investor is the investor whose buy or sell order sets the price at which the last trade of the day occurs. Because the closing price determines a company's market value (market cap = closing price × free float shares outstanding), this investor effectively defines the company's weight in market-capitalisation-weighted indices.

Contents

| | |
|--|----|
| Introducing GDP adjusted equity indices | 4 |
| Market-cap weighting | 4 |
| GDP weighting | 4 |
| Four arguments for GDP weighting | 5 |
| Recognising underrepresented economies (country re-weighting)..... | 5 |
| Balanced sector mix..... | 6 |
| Performance..... | 7 |
| Reduced concentration and broader breadth | 9 |
| Countering counter arguments | 11 |
| GDP weighting ignores market prices | 11 |
| GDP weighting can create large over/underweights | 11 |
| GDP weighting is illiquid and has higher turnover | 12 |
| GDP numbers are biased | 14 |
| Why not use forward looking GDP estimates? | 14 |
| Conclusion..... | 14 |

Introducing GDP adjusted equity indices

A global equity benchmark is often treated as a neutral reference portfolio. In practice, market-cap weighting makes a strong statement: a country's weight in the benchmark should equal the market value of its listed equities (free-float adjusted), which reflects investor preferences, liquidity, and the cumulative outcome of past capital allocation.

Yet the "market portfolio" is not a static representation of global economic opportunity. It is a pricing-weighted snapshot that can be heavily influenced by countries and industries' preferred ways of raising capital (U.S. vs. Germany, Tech vs. Infrastructure and Utilities), and how richly those equities are valued. This matters because many investors use broad indices not just to mirror today's market, but to achieve durable diversification across global sources of growth and cash flows.

This paper introduces a different anchor: global economic footprint. We propose weighting countries by their share of world GDP using the IMF World Economic Outlook (WEO) GDP series data² while holding diversified, investible equity portfolios within each country. The IMF WEO dataset is widely used, transparent, and regularly updated, making it a practical backbone for a rules-based benchmark.

Core claim: A GDP adjusted country allocation can be a more economically grounded and risk-aware, "neutral" benchmark than a cap-weighted index, because it (a) reduces valuation-driven concentration, (b) improves exposure balance across regions and sectors, and (c) embeds a disciplined rebalancing mechanism that counteracts the procyclicality of market cap weights.

Market-cap weighting

Market cap weighting is operationally elegant: it is self-rebalancing and has low turnover because winners grow in weight without forcing trades. The flip side is that it is procyclical: as a country's equity market becomes more expensive (whether due to fundamentals or exuberance), its weight rises mechanically. Over time, this can create regimes where "global diversification" is dominated by a narrow slice of the world's economic base as has been the case numerous times throughout history.

A historical reminder: Japan's equity boom pushed it to roughly 44% of the MSCI World Index at its peak in the late 1980s, an allocation far larger than Japan's share of global GDP. More recently, global benchmarks have again exhibited elevated concentration in their largest constituents, underscoring the structural tendency of market cap-weighted indices to load into what has already become large.

GDP weighting

GDP weighting asserts that a country's role in a global benchmark should reflect the scale of its economy. We use IMF WEO GDP data in U.S. dollars for three pragmatic reasons:

- Economic relevance: GDP captures the scale of production and income generation in an economy
- Comparability: USD provides a consistent unit for cross-country aggregation
- Repeatability: The WEO series is standardised and periodically updated, enabling a transparent, rules-based index methodology

² [World Economic Outlook Databases](#)

The index construction at a high level is very simple:

- We allocate to countries in proportion to their GDP
- Within each country, we hold a market cap weighted portfolio of stock
- We rebalance country weights on a semi-annual basis in-line with the underlying universe

Four arguments for GDP weighting

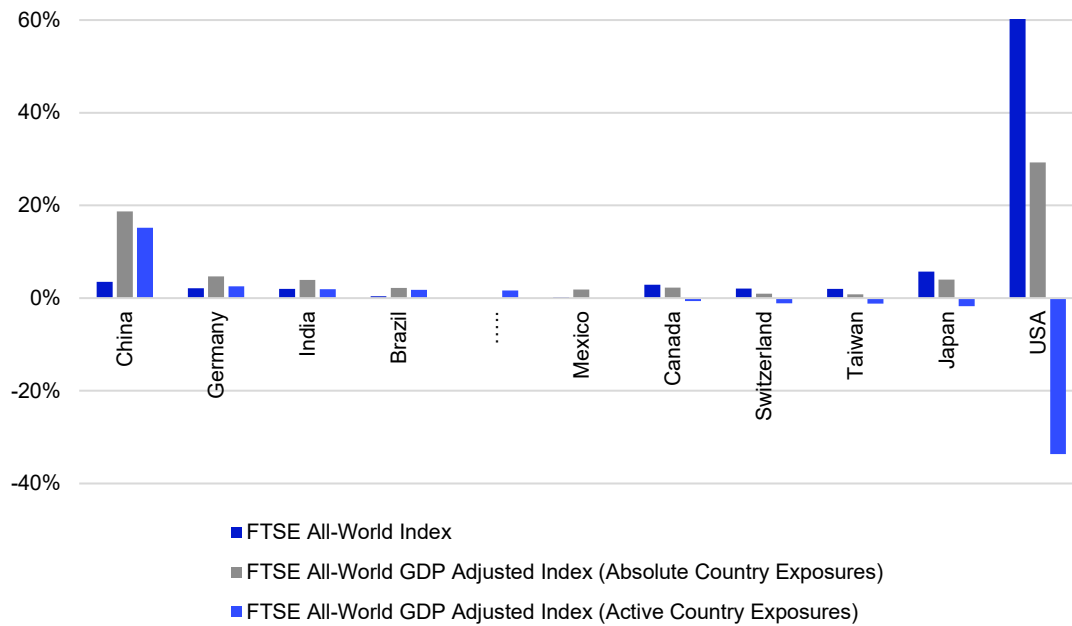
This section details why we believe GDP weighting is a good idea.

Recognising underrepresented economies (country re-weighting)

Many large economies have equity markets that represent a limited share of actual domestic activity due to ownership structures, banking reliance, state enterprise mixes, or listing cultures. As a result, market cap weighting designs can structurally under-allocate to these economies, even when their long-term growth contribution is sizeable. The GDP Adjusted Index anchors exposure to economic scale, which raises EM weights in the index design and lowers weights to markets whose listed equity is oversized relative to their economies.

As Figure 1 illustrates, China's weight rises to 18.7% in the GDP Adjusted Index versus 3.5% in the FTSE All-World Index (+15.2%), while the United States falls to 29.3% versus 62.9% (-33.7%). This pattern reflects alignment to economic size; country weights are set by each economy's share of world GDP. The approach shifts weight away from markets whose free float equity footprint is large relative to their share of world GDP and towards those where it is smaller.

Figure 1: Absolute and relative country exposures as of September 2025



Source: FTSE Russell. September 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Balanced sector mix

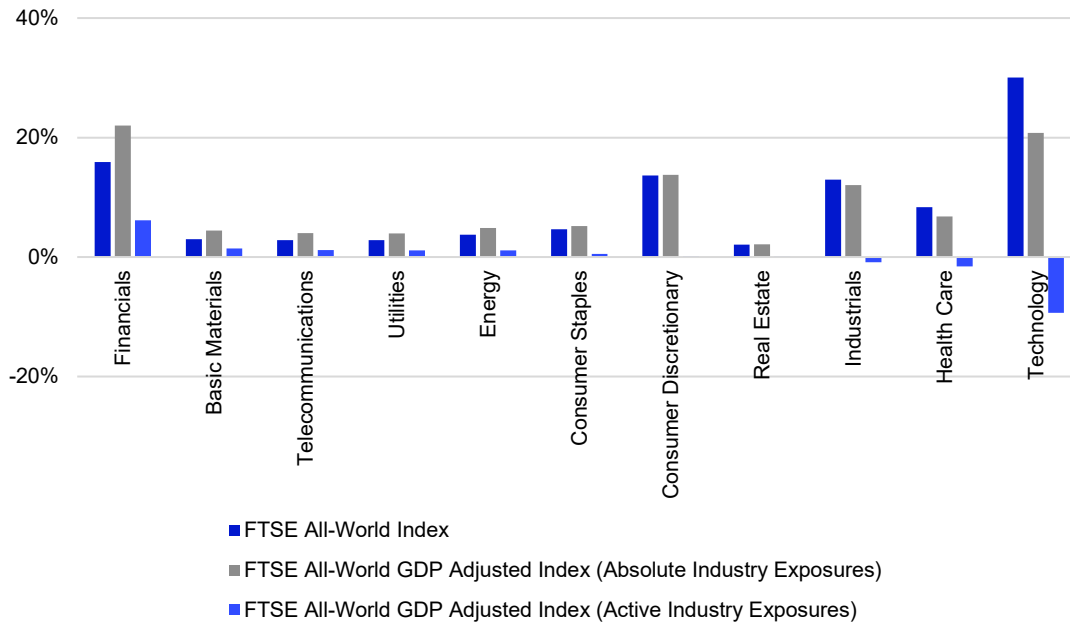
Country tilts drive Industry tilts because economies tend to specialise. In a market cap weighted world, dominance by the most richly valued markets translates into structural sector skews, most recently demonstrated in the bias toward U.S. technology. The GDP-weighted index anchors country weights to economic size, which reduces single-market dominance and dampens the sector skews that cap-weighting amplifies. In practice, this shows up as an overweight to Financials (22.0% vs 15.9%) and an underweight to Technology (20.8% vs 30.1%), shown in Figure 2.

Emerging-market economies often have larger listed financial sectors, reflecting the role of bank-based finance in channelling savings into investment. Studies show that better functioning financial systems facilitate (rather than cause) growth by mobilising savings, allocating capital, and managing risk, especially in bank-centric EMs. For example, research across 22 emerging markets found a strong link between financial development and GDP growth, as financial sectors deepen, economic growth is reinforced, which drives further financial market expansion³.

This suggests the overweight in financials in the GDP Adjusted Index is not only a sector effect but also represents alignment with economic growth levers in emerging markets. Access to credit, capital allocation, and financial deepening support the macroeconomic expansion that the GDP adjusted index seeks to capture.

³ [Does financial development matter for economic growth in the emerging markets? – ScienceDirect](#)

Figure 2: Absolute and active industry exposures as of September 2025



Source: FTSE Russell. September 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

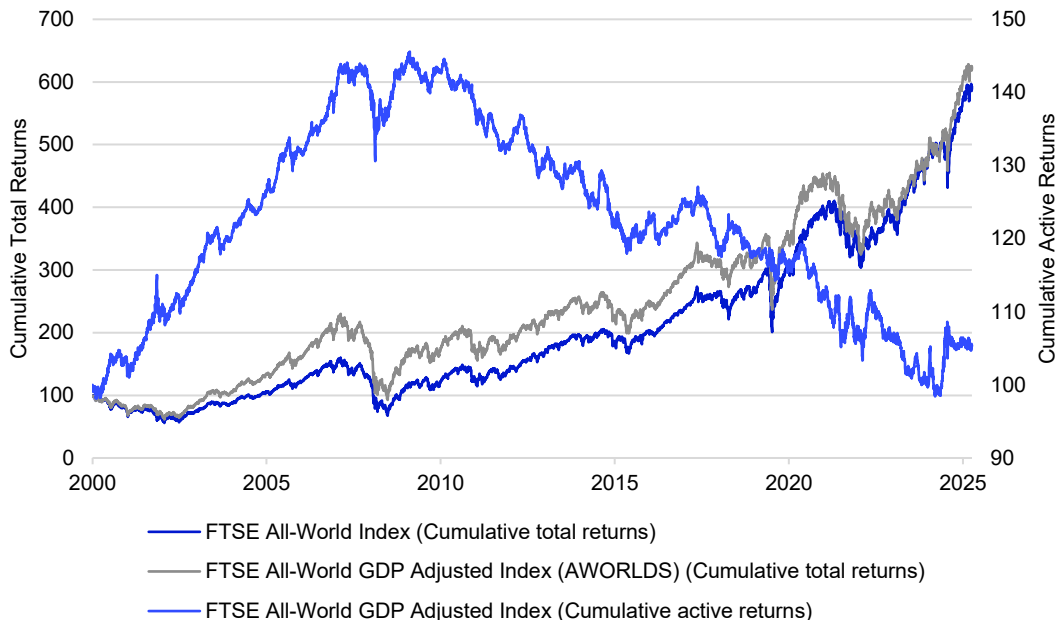
Performance

Market cap weighted indices allocate more to assets after they have risen (and less after they have fallen). The GDP Adjusted Index does the opposite: it tends to trim markets that have become large relative to their economies and add to those that are small relative to their economic footprint. This aligns with the broader literature on “fundamental” indexation, which argues that benchmarks anchored to non-price fundamentals can reduce the impact of mispricing embedded in cap weights.

Figure 3 shows the historical and relative performance of the market capitalisation weighted benchmark, FTSE All-World Index and the GDP adjusted version of that index. The GDP Adjusted Index pulled ahead as markets around the world moved into the global financial crisis (GFC). A drawdown followed during the US tech-led decade. The outperformance from early to mid-2000s can be explained by the emerging market (EM) led phase, China’s integration into the World Trade Organisation, a strong commodity cycle, and faster emerging market growth supported EM equities over their developed market counterparts. The GDP Adjusted Index allocated more to faster growing economies and participated more fully in their outperformance. The subsequent underperformance after 2008 reflects financial headwinds after the GFC, persistent China/EM weakness, US mega cap technology leadership and periods of U.S. dollar strength.

Figure 3 and Table 1 track index performance over two economic cycles: the EM led period pre-2008 and U.S./Tech led period post 2008. The GDP Adjusted Index outperformed slightly over both periods with a similar level of volatility.

Figure 3: Cumulative total and active returns of the FTSE All-World GDP Adjusted Index, and cumulative total return of the FTSE All-World Index



Source: FTSE Russell. September 2000 to December 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

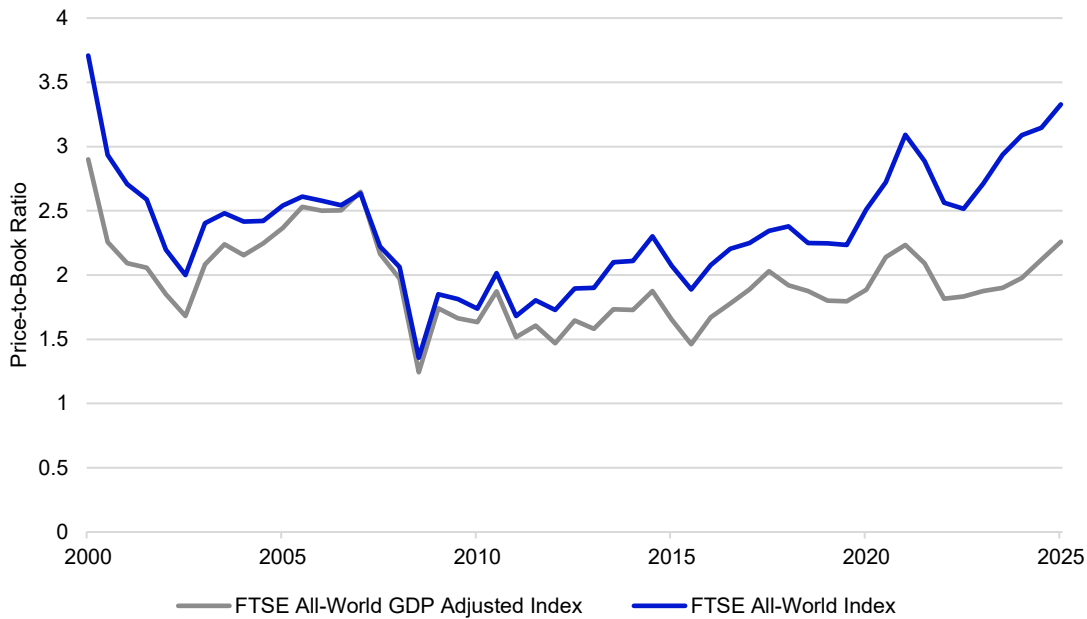
Table 1: Comparative performance of GDP Adjusted Index to the benchmark

| | FTSE All-World Index | FTSE All-World GDP Adjusted Index |
|---------------------------|----------------------|-----------------------------------|
| Geometric return p.a. (%) | 7.30 | 7.52 |
| Volatility p.a. (%) | 15.57 | 15.50 |
| Tracking error | - | 4.75 |

Source: FTSE Russell. September 2000 to December 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Figure 4 shows the GDP Adjusted Index overweight’s companies that trade at persistently lower Price-to-Book values (P/B) than the market cap weighted version of the FTSE All-World Index, with the gap widening during the post 2020 tech sector expansion and briefly converging during the global financial crisis. By design we have the same investable stock universe, but a different country exposure, which in turn produces a higher financials / lower technology exposure and therefore a lower portfolio P/B.

Figure 4: Price to book ratios of the GDP Adjusted Index to the benchmark



Source: FTSE Russell. September 2000 to December 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Reduced concentration and broader breadth

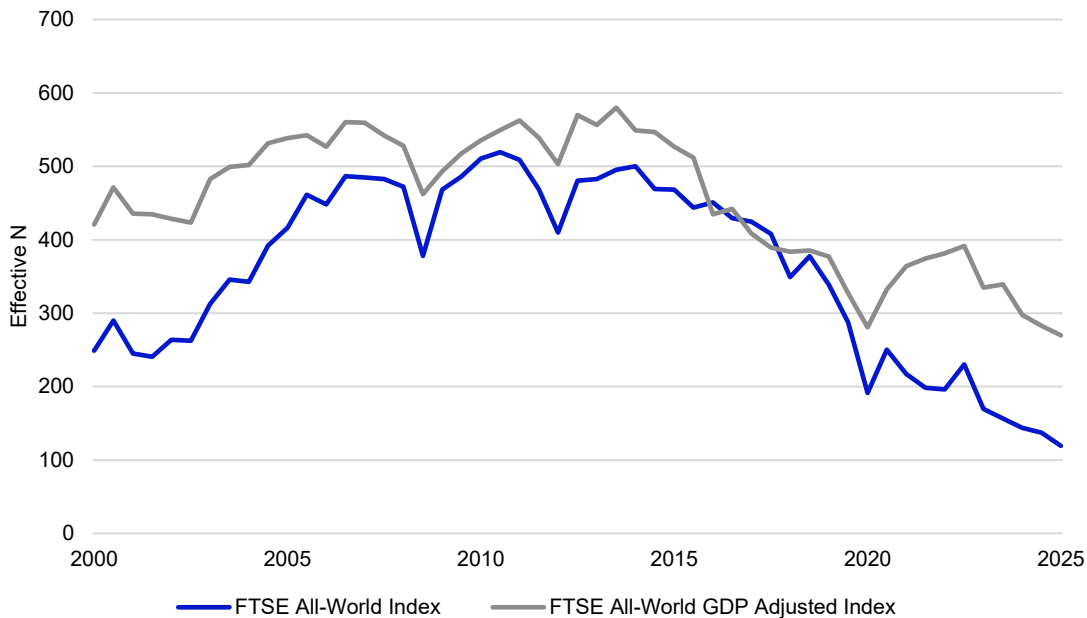
When a single market’s listed equities become an outsized share of global market cap, market cap weighted investors inherit a large implicit bet on that market’s valuation regime, sector composition, and currency. In our research paper on [Target Diversification](#) we highlighted how global indices have become highly concentrated in their largest stocks and, by extension, their dominant market exposures. Target Diversification is an elegant way of dealing with the increased concentration.

GDP weighting is another method of dealing with concentration. It does not eliminate concentration, but it changes what drives it: economic scale rather than equity valuation scale. Producing what may be closer to what many investors mean by “global diversification.”

Figure 5 shows that GDP weighting exhibits a substantially lower concentration risk. By underweighting the U.S. and redistributing across a broader set of countries, the index avoids the extreme top heaviness of the market cap weighted benchmark index.

Although both indices include ~4000 stocks, the market cap weighted benchmark is effectively as diversified as 120 equally weighted stocks. The GDP Adjusted Index holds the same universe but is as effectively as diversified as 270 equally weighed stocks, i.e. more than twice as diversified as the benchmark. This implies lower single name dependence and a broader spread of risk across countries and sectors.

Figure 5: Effective number of constituents (Effective N) for the GDP Adjusted Index compared to the benchmark



Source: FTSE Russell. September 2000 to December 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Table 2 compares the Top 10 holdings of the GDP Adjusted Index, where the top 10 account for 14.7%, and the FTSE All-World Index, where the Top 10 represent 21.1%. The largest single constituent weight in the GDP Adjusted Index is 2.85% vs 4.52% in the market-cap weighted All-World. Clearly, GDP weighting results in a more balanced country and sector distribution and a higher level of diversification.

Table 2 further illustrates the core effect of GDP weighting; U.S. mega cap technology names (e.g., NVIDIA, Apple, Microsoft) carry materially smaller weights, while large emerging market platforms (e.g., Tencent, Alibaba) carry larger weights in the GDP Adjusted Index. In combination, these shifts compress concentration at the top and broaden risk across countries and sectors versus the market cap weighted index.

Table 2: Top 10 weights

| Name | Country | ICB Industry | Market Cap Weight | GDP Adjusted Weight | Difference |
|-----------|---------|--------------|-------------------|---------------------|------------|
| Tencent | CHINA | Technology | 0.5% | 2.8% | 2.3% |
| Nvidia | USA | Technology | 4.5% | 2.1% | -2.4% |
| Microsoft | USA | Technology | 4.2% | 2.0% | -2.3% |
| Alibaba | CHINA | Cons Disc | 0.3% | 1.8% | 1.5% |
| Apple | USA | Technology | 3.9% | 1.8% | -2.1% |
| Amazon | USA | Cons Disc | 2.5% | 1.1% | -1.3% |
| Meta | USA | Technology | 1.8% | 0.8% | -1.0% |
| Broadcom | USA | Technology | 1.6% | 0.7% | -0.8% |
| Xiaomi | CHINA | Telecom | 0.1% | 0.7% | 0.6% |
| Alphabet | USA | Technology | 1.5% | 0.7% | -0.8% |

Source: FTSE Russell. September 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Countering counter arguments

In this section we address a couple of well documented objections of GDP weighting.

GDP weighting ignores market prices

In our view, this is a feature, not a bug. The point is the selection of an anchor outside of market prices to avoid embedding market mis-valuation into the benchmark design. The intellectual precedent is similar to fundamental indexing: do not let price alone determine portfolio weight.

GDP weighting can create large over/underweights

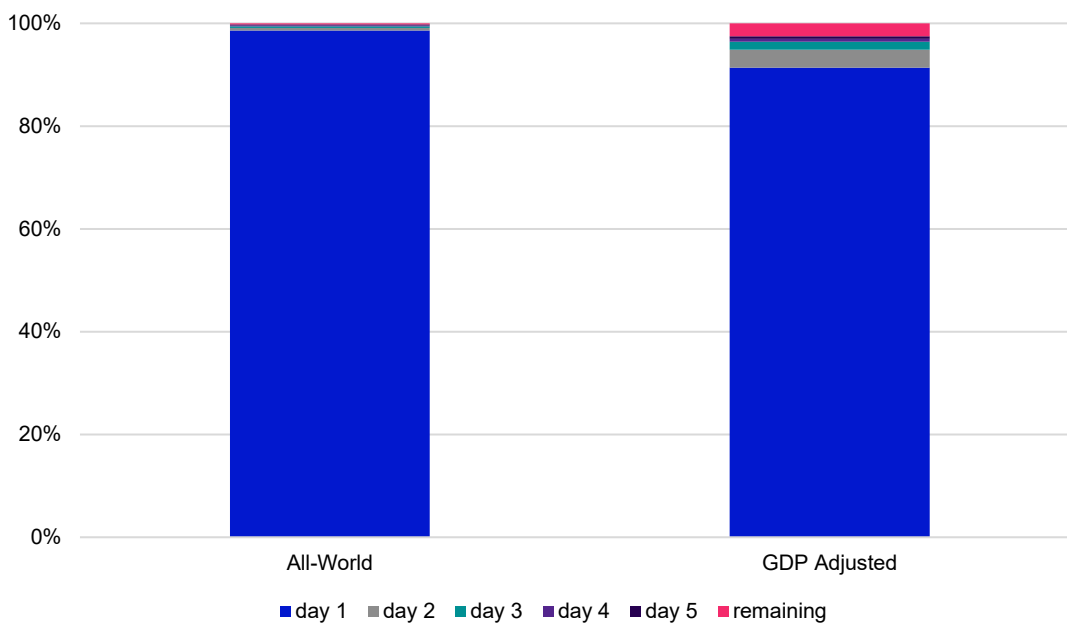
True. Critics argue GDP-based designs may cause “unwelcome” deviations and require more rebalancing than cap-weighted ones. But those deviations are precisely the mechanism by which GDP weighting seeks to improve benchmark quality: it forces diversification back toward the real economy and systematically sells what has become expensive relative to economic scale.

Why GDP is a good anchor. We set country weights by each economy’s share of world GDP in the review year. GDP is the standard, globally reported measure of production, with consistent definitions and regular updates, which keeps the input transparent and comparable for a broad, rules-based benchmark. Alternatives such as Gross National Income (GNI, which adds income from abroad) or Gross Value Added (GVA, which relies on industry input-output frameworks) are less aligned to domestic production and not practical here. Our objective is country exposure by economic size,

GDP weighting is illiquid and has higher turnover

Not necessarily. The FTSE All-World GDP Adjusted Index does not introduce illiquid names. It re-weights the investable FTSE All-World universe, which is free float adjusted and liquidity screened for tradability. In the liquidity test (Figure 6), a \$10bn order at a 20% participation cap is largely completed on Day 1 for both portfolios, the GDP weighting version carries a small residual into Days 2–5. This can be further reduced by an optional liquidity filter.

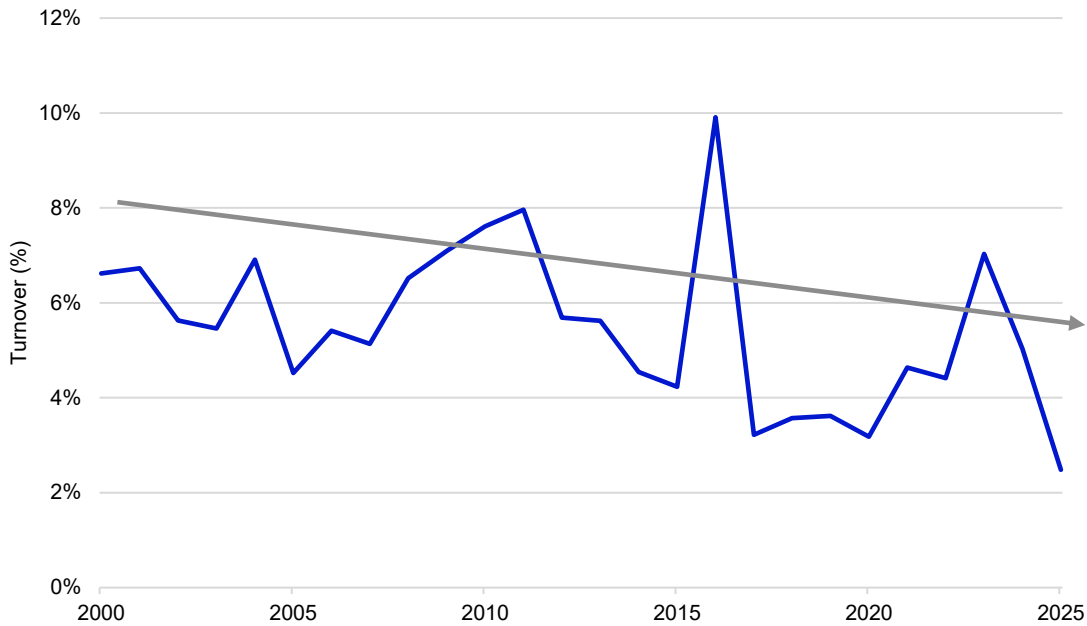
Figure 6: Liquidity of \$10 bn with 20% participation



Source: FTSE Russell. September 2000 to December 2025. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

Figure 7 shows the rate of change in the GDP data on the country level over time. The turnover is about 6% on average, fluctuates between 3% and 10% and appears to decline over the last 25 years.

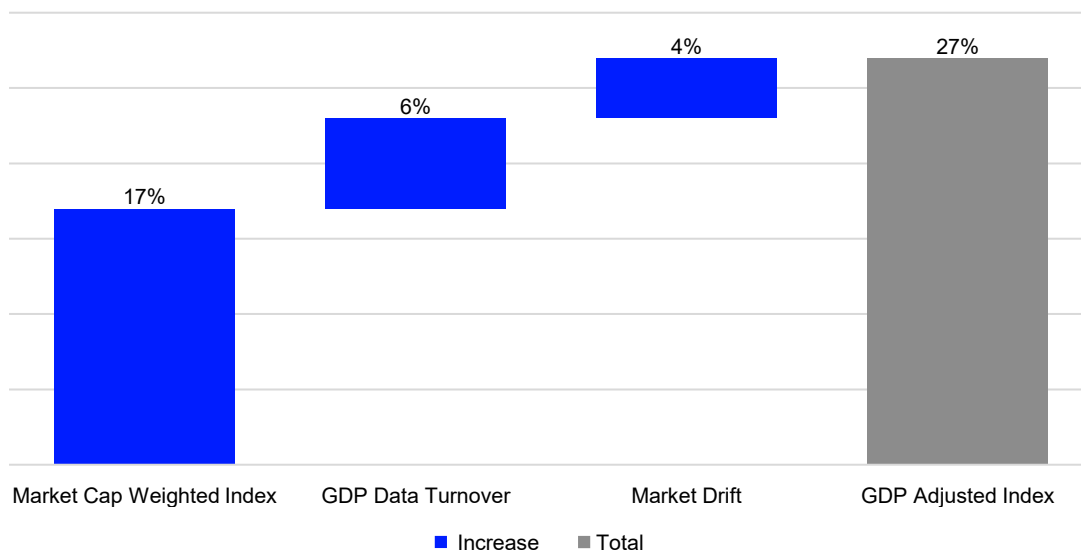
Figure 7: Turnover of underlying GDP data



Source: International Monetary Fund. *World Economic Outlook Database*. 2000 to 2025.

The changes in the underlying GDP data translate into turnover in the GDP Adjusted Index. Figure 8 shows that the turnover of 27% in the GDP Adjusted Index is comprised of 17% of the underlying turnover, 6% average turnover in the GDP numbers year-on-year, and 4% market drift.

Figure 8: Turnover attribution



Source: FTSE Russell. The data includes back test, hypothetical performance. Please see the end for important legal disclosures

GDP numbers are biased

Many analysts argue that China's GDP figures tend to be overstated because official numbers often align too neatly with the political growth targets and do not fully reflect deep structural weaknesses such as the property-sector downturn and declining local government investment. Recent analysis finds China's GDP volatility has increased and now aligns more closely with alternative economic indicators. This suggests that overstatement may no longer be as pronounced and that official data could reflect genuine supply-side resilience.

Why not use forward looking GDP estimates?

Our previous GDP weighted index used the 5-year GDP forecast as the basis for weighting. We moved away from using forecast data because GDP forecasts are highly uncertain, prone to systematic bias, and regularly revised, especially for countries with weaker statistical transparency or political incentive to overstate growth. These factors introduce costly turnover and push investments into markets that are forecasted to grow but are not yet set up to deal with the increased capital flows.

Conclusion

Market-cap weighting is a highly efficient way to hold the market, but it is not the only way and comes with its own set of problems. This is especially the case for investors whose objective is stable, economically grounded diversification rather than a continually shifting bet on the most richly valued equity markets.

Using IMF WEO GDP data to set country weights ties the benchmark to the real economy, reduces the risk that "global" becomes synonymous with a single market's valuation regime, and embeds a systematic rebalancing discipline that counteracts cap-weighting's procyclicality. History offers cautionary episodes that illustrate how cap-weighting can overshoot economic reality during valuation extremes.

A GDP adjusted benchmark will not track the cap-weighted market closely, and it will require explicit rebalancing. But for investors who want their global equity anchor to represent economic breadth rather than equity market depth and valuation, deviating from cap-weighting is not a speculative tilt.

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