BRIDGEWATER

Building a Balanced and Scalable Strategic Asset Allocation to Meet Financial and ESG Impact Goals

With investors increasingly focused on ESG and sustainability considerations, we have been examining how best to achieve both financial and sustainability goals in large, liquid, multi-asset portfolios. The below introduces our approach to building a strategic asset allocation with a high expected return-to-risk ratio across economic environments, using assets aligned to the United Nations Sustainable Development Goals.

This research is featured as a chapter within the publication, *Sustainable Investing: A Path to a New Horizon* edited by Herman Bril, Georg Kell, Andreas Rasche.

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For decades, Bridgewater has engineered scalable portfolios to help institutional investors achieve their goals. In the past, these goals have typically been financial (e.g., return and risk targets), but now many investors are also seeking to achieve environmental, social, and governance (ESG) impacts through their portfolios. We believe the best way to achieve both financial investment goals and ESG impact goals is through portfolio engineering that incorporates these objectives holistically, beginning with crisply defining an investor's goals, systematically looking across a variety of asset classes to find assets that are aligned to these goals, and then combining those assets to create a portfolio that is designed to achieve the highest possible ratio of return to risk.

In our research paper, we demonstrate how we would use this approach to build a scalable strategic portfolio that is designed to produce higher risk-adjusted returns over time than traditional strategic asset allocations using assets that further the UN Sustainable Development Goals (SDGs). We have chosen to focus on building a strategic (beta) portfolio because ~90% of the risk in typical institutional portfolios is in the strategic asset allocation, so engineering a quality strategic asset allocation represents a crucial foundation for investors' financial and impact goals.[1] From an impact perspective, we systematically select assets that are aligned to the UN SDGs at the beginning of the portfolio construction process, leading to a portfolio more aligned to the SDGs than market indices. From a financial perspective, we utilize Bridgewater's time-tested and stress-tested All Weather portfolio construction process to collect market risk premiums efficiently (a roughly 0.6 expected return-to-risk ratio at 10% expected volatility). This approach results in a portfolio that we expect will achieve over 2% higher annualized returns above cash through time than a global 60/40 portfolio, with comparable risk.[2] We break our approach to building this portfolio into three key steps on the next page:

1. **Setting clear goals for the portfolio.** To illustrate our approach, we have chosen a representative set of financial and ESG impact goals for our strategic portfolio: the financial goal is to generate positive, consistent returns across a range of economic environments, and the ESG impact goal is to further the UN Sustainable Development Goals. The SDGs are a collection of 17 global goals set by the United Nations General Assembly for the year 2030 that have been ratified by 193 countries. While investors can have many ESG impact goals, we have selected the SDGs because of their wide acceptance by governments and asset owners, their orientation toward positive environmental and social impact, and because the UN has defined indicators that can be used to measure the activities of asset issuers. Because we want to create an allocation that can achieve both financial and ESG impact goals at scale, we will also build the portfolio so that it can be held at institutional sizes.

2. **Selecting assets aligned with the portfolio's goals.** Once we have clearly defined the portfolio's goals, we look across the universe of global assets and systematically select those that are aligned to the UN SDGs and can be held at institutional scale. By systematically selecting assets at the start of the portfolio construction process, we can ensure the assets in the portfolio meet the goals we have set out. It also allows us to re-evaluate which assets meet the portfolio's goals over time as existing markets evolve and new markets become available.

3. **Using assets aligned with the portfolio's goals to build the most efficient strategic portfolio possible.** Having defined a universe of assets that are aligned to our goals, we apply Bridgewater's All Weather portfolio construction framework using these assets. The All Weather framework is based on balancing the macroeconomic drivers of asset returns (i.e., growth and inflation) to create a strategic asset allocation with the highest possible return-

[1] We believe it is important for investors to separate strategic exposure (beta) from active views (alpha). Please see Appendix A for a discussion of ESG integration as a potential source of alpha.

[2] There is no guarantee that expected performance will be achieved. Return expectations do not include any applicable management fees. 60/40 portfolio refers to 60% capital weight in world equities and 40% capital weight in world government bonds.

to-risk ratio. We've used this framework as an asset manager for over two decades and stress tested it over 100 years and across many countries. By applying this framework to SDG-aligned assets, we can build a portfolio we expect will achieve a 0.6 return-to-risk ratio through time (compared to a 0.4 expected ratio for a 60/40 portfolio).[3] Importantly, the strong expected performance of this portfolio relative to a 60/40 portfolio is a result of this beta portfolio construction approach, not from our use of SDG-aligned assets (which we do not expect would materially affect the portfolio's performance given our approach).

In our research paper, we describe each of these steps in more detail. Our hope is that this example of building a scalable portfolio that is designed to achieve a high risk-adjusted return and further the UN SDGs will be applicable to a wide range of investors. However, we believe the three-step portfolio construction approach can be applied to any set of financial and ESG impact goals that investors might choose.

[3] There is no guarantee that expected performance will be achieved. Return expectations do not include any applicable management fees. 60/40 portfolio refers to 60% capital weight in world equities and 40% capital weight in world government bonds.

More on *Sustainable Investing: A Path to a New Horizon*

This book tells the story of how the convergence between corporate sustainability and sustainable investing is now becoming a major force driving systemic market changes. The idea and practice of corporate sustainability is no longer a niche movement. Investors are increasingly paying attention to sustainability factors in their analysis and decision-making, thus reinforcing market transformation.

In this book, high-level practitioners and academic thought leaders, including contributions from John Ruggie, Fiona Reynolds, Johan Rockström, and Paul Polman, explain the forces behind these developments. The contributors highlight (a) that systemic market change is influenced by various contextual factors that impact how sustainable investing is perceived and practiced; (b) that the integration of ESG factors in investment decisions is impacting markets on a large scale and hence changes practices of major market players (e.g. pension funds); and (c) that technology and the increasing datafication of sustainability act as further accelerators of such change.

The book goes beyond standard economic theory approaches to sustainable investing and emphasizes that capitalism founded on more real-world (complex) economics and cooperation can strengthen ESG integration. Aimed at both investment professionals and academics, this book gives the reader access to more practitioner-relevant information and it also discusses implementation issues. The reader will gain insights into how "mainstream" financial actors relate to sustainable investing.

Visit the Routledge website for more details.

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Balanced SDG-Aligned Portfolio Simulation Disclosure

The Balanced SDG-Aligned Portfolio is not a simulation of an ESG All Weather strategy product and is not being offered for investment. This is an example of the investment profile of an All Weather strategy simulation that does not include corporate credit, emerging market debt, or fossil fuels (oil, natural gas).

Where shown, all performance of the Balanced SDG-Aligned Portfolio Simulation is based on simulated, hypothetical performance and not the returns of any Bridgewater strategy. Bridgewater's investment selection and trading strategies are systematic and rules-based. However, they are not fully automated and they do include human input. As a result, back-tested returns are designed based on assumptions about how Bridgewater would have implemented such a strategy if one existed at the time. These assumptions are intended to approximate such implementation, but are inherently speculative.

The simulated performance for Balanced SDG-Aligned Portfolio Simulation was derived by applying Bridgewater's current investment systems and portfolio construction logic to historical market returns across the markets selected for the Balanced SDG-Aligned Portfolio Simulation. A list of the markets used appears below. We use actual market returns when available as an input for our hypothetical returns and otherwise use Bridgewater Associates' proprietary estimates, based on other available data and our fundamental understanding of asset classes. In certain cases, market data for an exposure which otherwise would exist in the simulation may be omitted if the relevant data is unavailable, deemed unreliable, immaterial, or accounted for using proxies. Proxies are assets that existed and for which data is available, which Bridgewater believes would approximate returns for an asset that did not exist or for which reliable data is not available. Examples of omitted markets or markets accounted for using proxies include, but are not limited to, certain commodity markets. The mix and weightings of markets traded for Balanced SDG-Aligned Portfolio Simulation are subject to change in the future.

The Balanced SDG-Aligned Portfolio Simulation includes periodic adjustments that are made to the Balanced SDG-Aligned Portfolio Simulation's desired strategic asset allocation and level of risk pursuant to Bridgewater's systematic strategic management process. Such strategic management is based on a systematic process that assesses whether the assumptions underlying the Balanced SDG-Aligned Portfolio (that assets will outperform cash, and that assets can be reasonably balanced against each other) are under threat, and systematically adjusts or reduces exposures accordingly. When applicable, the returns of the Balanced SDG-Aligned Portfolio Simulation reflect adjustments based on this systematic strategic management process.

Simulated asset returns are subject to considerable uncertainty and potential error, as a great deal cannot be known about how assets would have performed in the absence of actual returns. The Balanced SDG-Aligned Portfolio Simulation is an approximation of what we believe an implementation process would be but not an exact replication and may have differences including but not limited to the precise mix of markets used and the weights applied to those markets. It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology (including the addition/removal of asset classes) and the underlying market data. There is no guarantee that previous results would not be materially different. Future strategy changes could materially change previous simulated returns in order to reflect the changes accurately across time.

Transaction and maintenance costs are accounted for and are estimates themselves based on historical measured costs and/or modeled costs. Returns are shown gross of fees as Bridgewater has not yet devised a fee schedule for the Balanced SDG-Aligned Portfolio Simulation. Investment advisory fees are described in Bridgewater's ADV Part 2A. Gross of fees performance (i) excludes the deduction of management fees, and other operating expenses (the "fees and expenses") and (ii) includes the reinvestment of interest, gains, and losses. Including the fees and expenses would lower performance. There is no guarantee regarding Balanced SDG-Aligned Portfolio strategy's ability to perform in absolute returns or relative to any market in the future, during market events not represented, or during market events occurring in the future. Market conditions and events vary considerably, are unpredictable, and can have unforeseen impacts resulting in materially adverse results.

Markets Included In The Balanced SDG-Aligned Portfolio Simulation

The Balanced SDG-Aligned Portfolio Simulation includes returns from the following markets: global nominal interest rates, global inflation linked bonds, commodities, and developed and emerging market equities that have been selected based on their alignment with the UN Sustainable Development Goals.