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

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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 forthcoming publication, *Sustainable Investing: A Path to a New Horizon* edited by Herman Bril, Georg Kell, Andreas Rasche.
Introduction
For decades, we have 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 this chapter, we will 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:

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-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 that 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 the pages that follow, we describe each of these steps in more detail. We hope 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 illustrated in this chapter can be applied to any set of financial and ESG impact goals that investors might choose.

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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.

³ See above.
Setting Clear Goals for the Portfolio
The crucial first step in building any portfolio is for investors to clearly lay out their goals so they can design an asset allocation that best achieves them.

Having worked with investors for decades to design investment portfolios, we believe most investors’ financial goals can be best summed up as follows: build a portfolio that will reliably meet required returns, with minimal likelihood of unacceptable outcomes. This means the portfolio must generate positive, consistent returns (high return-to-risk ratio) across a range of economic environments. In recent years, institutional investors have become increasingly focused on incorporating ESG-related issues into the investment process to help them achieve those financial goals—i.e. to reduce their risk or increase their returns. As part of our own investment research process, for example, we have found it critical to study a broad range of topics relating to economic inequality, populism, and issues relating to the transition from fossil fuel to greener types of energy because they are pertinent to how economies and markets work.

Increasingly, however, we see some investors adding an explicit ESG impact dimension to their investment goals in addition to this traditional financial dimension. These investors seek to create ESG impact (particularly social and environmental impact) through their asset allocation by directing capital toward issuers that further their ESG impact goals (and away from those who do not). These investors, in other words, face the challenge of optimizing across two types of investment goals—financial and ESG impact. The challenge we set for ourselves in this chapter was to build a strategic asset allocation that could achieve financial investment goals while also directing capital at scale toward entities aligned to investors’ ESG impact goals.

In this chapter, we will build a diversified portfolio designed to achieve a set of financial and ESG impact goals we think are shared by many investors:

**ESG Impact Goal:** Further the UN Sustainable Development Goals by systematically directing capital toward issuers that are aligned to the SDGs.

**Financial Goal:** Generate positive, consistent returns (high return-to-risk ratio) across a range of economic environments.

Finally, we want to make sure investors can apply large amounts of capital toward achieving both of these goals. In order to do this, we will build the portfolio using assets that are liquid enough to be held at institutional sizes.

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4 Some investors also seek to have environmental and social impact via active ownership, but that is not the focus of this chapter.

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II
Selecting Assets Aligned with the Portfolio’s Goals
Once we’ve specified the goals of the portfolio, our next step is to define a diverse universe of assets that will allow us to achieve them. In the case of the goals described above, this involves starting with a universe of global assets and systematically selecting assets that:

A. Further the SDGs
B. Can be held at scale

The net of this approach is that the assets in the portfolio are systematically selected based on their alignment with the UN SDGs and their ability to be held at institutional sizes. We discuss both dimensions below:

A. Selecting Assets That Further the UN SDGs

The UN SDGs represent a broad global framework for social and environmental impact. Although not explicitly designed for investors, the SDGs are emerging as a widely agreed-upon framework for governments and increasingly for asset owners and asset managers. The SDGs are expansive (e.g., “end poverty in all its forms everywhere”) and contain specific and measurable indicators defined by the UN (roughly 200) that help investors and researchers to assess whether a given entity is helping to achieve them.
Determining asset alignment with the SDGs is an imperfect exercise. There is not one optimal methodology, the SDGs differ in how measurable and relevant they are depending on the asset class or entity, and precisely quantifying the SDG alignment or measuring the impact of a given asset is difficult. Global assessments require large-scale, multi-variable analysis, the data quality and availability required for such analysis is imperfect, and no single viewpoint can provide a complete picture of an issuer’s SDG alignment. We therefore approach this challenge humbly.

That said, the general process of identifying a “signal” amid the “noise” is a conceptual and analytical challenge that is at the core of Bridgewater’s decades of experience doing systematic financial and economic research. We believe we have developed an initial process to define a set of assets that further the SDGs in which we can have confidence. As with any other systematic process we build, we would want to continually improve this process over time as we learn more and better data becomes available. This process is shown in the diagram below and works as follows:

- **We selected high quality research partners who have developed different methodologies to assess assets based on their alignment to the SDGs.** Because we are not experts on SDG-assessment, we have partnered with a number of high-quality research organizations with expertise in this field. Different research organizations have different approaches: for example, in the case of equities, some methodologies assess a company by examining the alignment of its products and services with the SDGs (e.g. an oil company vs a solar energy company) while others look at the sustainability of its business model (e.g. its supply chains or management of human capital). Some processes are fully systematic while others rely on analyst discretion. We deeply studied the different approaches and methodologies of different organizations and selected the ones we thought best captured an issuer’s SDG alignment. As the SDG data ecosystem expands and improves, we will continue to assess new and existing data and research and update our process accordingly.

- **We created a systematic selection methodology to combine multiple SDG assessments into one holistic assessment.** As mentioned, there are multiple ways to assess asset issuers against the SDGs and different processes lead to different results. Since no single process can be fully comprehensive, we have built a system that processes the data from the research providers we have chosen and combines the various data elements into a holistic assessment that we believe is more accurate. This assessment separates securities into five categories based on their alignment with the SDGs: highly positive, positive, marginal, adverse, and highly adverse.

- **Once we have assessed the universe of eligible securities, we selected only those that we are confident are aligned to the SDGs.** Our confidence in a quality assessment of SDG alignment is highest when we have a lot of good data that points in the same direction (i.e. a triangulated assessment). We select securities with a positive or highly positive alignment with the SDGs for inclusion in the portfolio.

### How Our Systematic Selection Process Works

<table>
<thead>
<tr>
<th>Defined Goal</th>
<th>Different Organizations &amp; Processes</th>
<th>Different Outputs</th>
<th>Selection Methodology</th>
<th>Triangulated Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate and rank securities on alignment with UN SDGs</td>
<td>SDG Research Organization #1</td>
<td>F</td>
<td>Set of securities with triangulated read on SDG alignment</td>
<td>Highly Positive</td>
</tr>
<tr>
<td></td>
<td>SDG Research Organization #2</td>
<td>0</td>
<td>Positive</td>
<td></td>
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<tr>
<td></td>
<td>SDG Research Organization #3</td>
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<td>100</td>
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<td>1</td>
<td>Highly Adverse</td>
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</table>

Because no two asset classes are exactly alike, this systematic selection process can work differently depending on the asset class to which it is applied. However, the broad principles of deep research and triangulation apply across all of the assets we assess. By following this triangulation process across a variety of asset classes, we are able to create a universe of assets that are likely to advance the achievement of the UN SDGs. Below, we show how this triangulation process is applied across some of the major asset classes.

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Diagram of systematic selection process is illustrative and is not meant to reflect actual security selection.

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**Equities:** Through our systematic selection process, we assess over 5,000 of the largest publicly traded companies globally representing over $60 trillion in market capitalization for their alignment with the SDGs. We then select the companies that are promoting the SDGs through their activities. These companies exist across sectors and geographies which allows us to construct a diversified global index of SDG-aligned equities with similar performance characteristics to a traditional global equity portfolio.

**Government Bonds:** Through our systematic selection process, we assess over 150 countries for their alignment with the SDGs. While most countries are not aligned to the SDGs at this time, the largest government bond issuers tend to also be those most aligned to the SDGs. This allows us to build a diversified and highly liquid SDG-aligned bond allocation with similar performance characteristics to a traditional global bond allocation.

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6 SDG-aligned equities are selected based on proprietary Bridgewater analysis.
7 Chart shows estimate of world bonds outstanding at 10-year duration. Dev world bond performance is based on 7.5-year constant duration bonds. SDG-aligned government bonds are selected based on proprietary Bridgewater analysis.

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Other Bond Issuers: There are many bond issuers who use the money they raise in bond markets to promote sustainable development. For example, there is a large market cap available to investors of bonds issued by multilateral institutions such as the World Bank and the Inter-American Development Bank. These organizations explicitly pursue sustainable development through lending their capital and incorporating it into their mandates. Additionally, there is a growing market for “green” bonds, which raise capital for the purposes of sustainable projects.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>European Investment Bank</td>
<td>577</td>
</tr>
<tr>
<td>Kreditanstalt für Wiederaufbau</td>
<td>487</td>
</tr>
<tr>
<td>World Bank</td>
<td>185</td>
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<tr>
<td>Asian Development Bank</td>
<td>96</td>
</tr>
<tr>
<td>Inter-American Development Bank</td>
<td>92</td>
</tr>
<tr>
<td>European Bank for Reconst. &amp; Dev.</td>
<td>37</td>
</tr>
<tr>
<td>African Development Bank</td>
<td>30</td>
</tr>
<tr>
<td>Council of Europe Development Bank</td>
<td>28</td>
</tr>
<tr>
<td>Corp. Andina de Fomento</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,553</strong></td>
</tr>
</tbody>
</table>

Commodities: For investors, commodity futures can be an important part of a portfolio because they provide valuable diversification during times of higher than expected inflation (as we explain in more detail in Section 3). This therefore raises the question of how investing in commodity futures relates to the SDGs. In general, we believe the participation of investors is necessary for commodity futures markets to function well, and this participation benefits investors, producers, and end-consumers alike. Investors play two essential roles: 1) by taking the other side of producers’ trades, they allow producers to hedge their risks, and 2) their active trading helps set accurate expectations for future prices while also providing liquidity to the market. These activities encourage producers to make upfront investments and to expand production when prices are high, resulting in lower, more stable prices for end-consumers. As a result, we see well-functioning commodity markets as consistent with sustainable development and we would therefore include commodity futures such as agriculture (SDG #2 Zero Hunger) and industrial metals (SDG #9 Industry, Innovation and Infrastructure). Additionally, reducing fossil fuel dependency is consistent with the SDGs (SDG #7 Affordable and Clean Energy; SDG #13 Climate Action) and therefore fossil fuel futures are excluded from this portfolio. Beyond commodity futures, we recognize that many commodity production companies’ operations are not sustainable. Importantly, commodity futures are not linked to any individual commodity producer and our systematic selection of equities in this portfolio is designed to exclude equities issued by unsustainable companies.

B. Selecting Assets That Can Be Held at Institutional Scale

In order to design a portfolio that can achieve the financial and ESG impact goals we’ve outlined at institutional sizes, we need to further systematically filter our asset universe to include only assets that can be held at scale. To do this, we must make sure the assets we select for the portfolio have large market caps, low trading costs, and transparent pricing.

Based on our systematic selection process, we believe this is achievable in public markets. The market cap of public assets that contribute to the UN SDGs is large (over $40 trillion). For example, based on our estimates, the market cap of SDG-aligned equities and sovereign bonds is approximately $17 trillion and $22 trillion respectively. As a result, it is now possible for investors to build an SDG-aligned portfolio at institutional scale.

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8 Data as of Nov. 2019.
9 Green bond data through 2019.

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Below, we show a simplified example of how we would systematically select assets that meet our scalability criteria (large market caps, low trading costs, transparent pricing) and further the SDGs. To choose which government bonds to hold, we start with the universe of all sovereign bonds and sort those bonds across two dimensions: 1) a measure of each sovereign’s SDG alignment, and 2) the size of each sovereign’s bond market cap. We select only the securities that further the SDGs (moving to the right on the chart) and are accessible at institutional sizes (moving up on the chart).

We believe that including institutional scalability as an explicit factor in our systematic selection process not only makes the portfolio we are designing accessible to institutional investors, but also gives investors the ability to incorporate additional assets into their portfolio over time as markets develop. For example, green bonds are an asset class that meets many investors’ ESG impact goals and is experiencing rapid growth. In the early 2010s, the green bond market was not developed enough (i.e., relatively small, illiquid, and difficult to trade) for most institutional investors to access. But this market is rapidly evolving, and it is now increasingly investable at institutional sizes. By continuing to assess the universe of global assets using the systematic selection criteria we have outlined, investors can continue to evolve their portfolios to include additional assets as those assets become accessible.
III
Use Assets Aligned with the Portfolio’s Goals to Design the Most Efficient Strategic Portfolio Possible
Having established a sample set of assets that further the SDGs and can be held at scale, the next step is to combine these assets into a portfolio that is designed to achieve the most consistent returns possible from a strategic asset allocation.

We believe the best way to build a strategic portfolio with the highest possible return-to-risk ratio is by balancing the portfolio to the primary drivers of asset class risk: changes in discounted growth and inflation. We do this by applying our All Weather framework for building a balanced portfolio, which was pioneered by Bridgewater in 1996 and stress tested over 100+ years of market history. We believe this approach leads to more consistent returns, minimizing drawdowns and enabling a greater compounding of wealth over time.

Using the assets we systematically selected above, we can use the All Weather framework to create a balanced investment portfolio designed to achieve both our financial goals (a high ratio of return to risk) and our ESG impact goal (furthering the UN SDGs).

We explain our investment methodology in more detail below.

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10 Data through July 2020. Returns shown gross of any applicable management fees. Balanced SDG-Aligned Portfolio returns simulated using the Balanced SDG-Aligned Portfolio as described in the “Balanced SDG-Aligned Portfolio Simulation Disclosure.” The Balanced SDG-Aligned Portfolio does not represent a product or service that is available for purchase by any investor. It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

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A. The All Weather Framework

The All Weather framework is based on just two fundamental principles of asset pricing:

1. Assets outperform cash over time.
2. Assets have reliable biases to certain economic environments.

The first principle is based on the fact that assets are generally priced to offer a higher return than cash over time in order to incentivize investors to part with the liquidity and safety of their cash (this return above cash is referred to as a “risk premium”).

The second principle is based on the fact that any single asset class comes with exposure to economic conditions and, as a result, is biased to do well in some economic environments and poorly in others. These economic biases are a logical result of the nature of an asset’s cash flows and what markets are expecting those cash flows to be worth.

For example, stocks give you a claim on future earnings and are priced based on what the market expects those earnings to be through time, so stocks do well when earnings and the economy are stronger than expected. Bonds give you a fixed stream of payments and are priced based on the expected forward path of interest rates (which is used to determine what those payments are worth), so they do better when interest rates unexpectedly fall due to unforeseen economic weakness. On the other hand, bonds tend to do poorly when inflation rises more than expected because the value of their fixed payments is eroded by inflation and because central banks often increase interest rates in response to inflation surprises, which pushes up bond yields. Because the cash flows of assets are so closely tied to growth and inflation, the performance of asset classes is driven primarily by how growth and inflation come in relative to what markets were already expecting, and how expectations about future growth and inflation change.

The insight that what drives assets is how growth and inflation come in relative to what markets were already expecting (i.e., growth and inflation “surprises”) is critical, as it means that economic biases have no expected return and just add risk. Equities will outperform not if growth is high, but if growth comes in higher than what markets were already expecting. And markets are reasonably efficient at discounting future conditions over time, with no systematic bias to over- or under-discount future growth or inflation, so there is no expected return from being exposed to growth or inflation surprises.

Two Timeless Drivers of Any Beta Investment

Given these principles of asset pricing, the goal of a strategic portfolio becomes clearer: you want to capture the risk premiums that assets offer while minimizing economic biases as much as possible. We do this by balancing risk across assets with opposing economic biases. This way, a surprise in growth or inflation will cause some assets to underperform but will cause others to outperform, and if we’ve balanced the portfolio well, the overall effect of economic surprises on portfolio volatility should be minimized. What we literally do is construct four sub-portfolios—one designed to outperform in each growth/inflation environment—and spread risk equally across those sub-portfolios. We fill each sub-portfolio with assets biased to do particularly well in that economic environment. This leaves the risk premiums and discount rates across assets as the primary drivers of returns.
B. Applying the All Weather Framework to Assets Furthering the UN SDGs

As mentioned, we’ve been applying this approach to global assets in our All Weather strategy since its inception in 1996. While the asset mix we have designed in this chapter is not the same as what we hold in our global All Weather strategy, the way that these assets respond to economic fundamentals—i.e., their biases to certain economic environments—is the same. Below, we show the biases of global equities and bonds in terms of their historical performance in different growth and inflation environments, and compare those biases to the biases of equities and bonds that are systematically selected by our SDG criteria. As shown, assets that further the SDGs have the same biases you would logically expect. This makes sense to us because the most important driver of these biases is the fundamental nature of the asset class’ cash flows, not the particulars of the specific investment. Based on our research, most asset classes—including equities, nominal bonds, inflation-linked bonds, and commodities—have the same economic sensitivities when they are chosen through our systematic selection process.

![Annual Excess Returns in Economic Environments (1970 - Present)](image)

11 Returns shown in excess of cash. Data through Mar. 2020. SDG-aligned asset returns simulated using Bridgewater analysis. A rising (falling) inflation month is defined as a month in which the current rate of inflation is greater (lower) than the 12-month moving average rate of inflation. A rising (falling) growth month is defined as a month in which the current rate of real GDP growth is greater (lower) than the 12-month moving average rate of real GDP growth. SDG-aligned assets are selected based on proprietary Bridgewater analysis.
C. Building a Balanced Portfolio That Meets Financial and ESG Impact Goals

Because assets systematically selected by SDG criteria have largely the same properties as global assets, our approach to building the most efficient portfolio using SDG-aligned assets is a straightforward application of the All Weather framework: we start with our systematically selected universe of assets and spread risk equally across assets that tend to do well in each of the four economic environments. We show the allocation of this balanced SDG-aligned portfolio below.

The result is a portfolio designed to meet both the financial and the ESG impact goals we set out to achieve. The assets in the portfolio have all been systematically selected for their alignment with the UN SDGs and have been combined in a way that is designed to generate a significantly more consistent return than any single asset class or concentrated allocation by minimizing the portfolio’s vulnerability to any one economic environment.

Below, we show the simulated historical investment returns of a balanced SDG-aligned portfolio compared to global equities, global bonds, and a global 60/40 portfolio. As you can see, a balanced SDG-aligned allocation would have generated 7% annualized returns in excess of cash at 10% risk since 1970 (slightly above the 0.6 ratio that we expect the strategy will achieve through time). This is a much higher ratio of return to risk than bonds, equities, or a 60/40 portfolio was able to achieve. Notably, a balanced SDG-aligned portfolio would have generated a higher return than global equities with less risk, minimizing drawdowns and allowing for a greater compounding of wealth through time.

| Balanced SDG-Aligned Portfolio vs Global 60/40 Cumulative Total Return (USD, In) |
|:--- |:--- |:--- |:--- |
| 1970 - Present | Global Equities | Global Govt Bonds | Global 60/40 | Balanced SDG-Aligned Portfolio (Simulated) |
| Total Return (Ann) | 8.9% | 7.2% | 8.5% | 12.1% |
| Excess Return (Ann) | 4.0% | 2.2% | 3.6% | 7.2% |
| Volatility (Ann) | 15.9% | 4.3% | 8.7% | 10.2% |
| Sharpe Ratio | 0.29 | 0.52 | 0.41 | 0.71 |

12 Data through July 2020. 60/40 refers to 60% capital in world equities and 40% capital in world govt bonds. Excess returns for investments shown above a US cash benchmark. Returns shown gross of any applicable management fees. “Balanced SDG-Aligned Portfolio” is simulated using the Balanced SDG-Aligned Portfolio Simulation as described in the “Balanced SDG-Aligned Portfolio Simulation Disclosure.” It is expected that the simulated performance will periodically change as a function of both refinements to our simulation methodology and the underlying market data. HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS, SOME OF WHICH ARE DESCRIBED BELOW. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. IN FACT, THERE ARE FREQUENTLY SHARP DIFFERENCES BETWEEN HYPOTHETICAL PERFORMANCE RESULTS AND THE ACTUAL RESULTS SUBSEQUENTLY ACHIEVED BY ANY PARTICULAR TRADING PROGRAM. ONE OF THE LIMITATIONS OF HYPOTHETICAL PERFORMANCE RESULTS IS THAT THEY ARE GENERALLY PREPARED WITH THE BENEFIT OF HINDSIGHT. IN ADDITION, HYPOTHETICAL TRADING DOES NOT INVOLVE FINANCIAL RISK, AND NO HYPOTHETICAL TRADING RECORD CAN COMPLETELY ACCOUNT FOR THE IMPACT OF FINANCIAL RISK IN ACTUAL TRADING. FOR EXAMPLE, THE ABILITY TO WITHSTAND LOSSES OR TO ADHERE TO A PARTICULAR TRADING PROGRAM IN SPITE OF TRADING LOSSES ARE MATERIAL POINTS WHICH CAN ALSO ADVERSELY AFFECT ACTUAL TRADING RESULTS. THERE ARE NUMEROUS OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC TRADING PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF HYPOTHETICAL PERFORMANCE RESULTS AND ALL OF WHICH CAN ADVERSELY AFFECT ACTUAL TRADING RESULTS.

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The strong financial performance of this portfolio relative to a 60/40 portfolio is a result of our beta portfolio construction approach, not from our use of SDG-aligned assets. We do not think that limiting the portfolio to SDG-aligned assets materially affects the portfolio’s performance because there are enough available assets to create a diversified portfolio balanced to economic environments. While there is no precision around expected returns and we prefer to be conservative with performance assumptions, we would expect a balanced SDG-aligned portfolio to have a return-to-risk ratio of about 0.6 through time. This is considerably more efficient than a global 60/40 portfolio, which we expect to have a return-to-risk ratio of roughly 0.4.13

As we’ve shown above, engineering a portfolio with these financial characteristics is possible using SDG-aligned assets. Below, we show a diagram illustrating that a balanced SDG-aligned portfolio has a higher return-to-risk ratio and greater alignment to the SDGs than a global 60/40 portfolio. This is a demonstration of one way that investors with both financial and ESG impact goals can engineer portfolio solutions to that meet their return, risk and impact targets.

Increasingly, investors are seeking to design strategic portfolios that achieve both financial goals and ESG impact goals. We believe the best way to do so is through the approach outlined in this chapter: using portfolio engineering to incorporate both financial and impact objectives holistically, beginning with a clear definition of investors’ goals, systematically selecting assets that are aligned with those goals, and combining those assets using high quality portfolio construction to create the best possible portfolio.

In this chapter, we have demonstrated how investors can build a scalable strategic portfolio that is designed to meet investors’ financial and ESG impact goals. From an impact perspective, the approach we have outlined systematically selects assets that are aligned to the UN SDGs at the beginning of the portfolio construction process to create an asset allocation that is more aligned to the SDGs than market indices. From a financial perspective, this approach uses Bridgewater’s time-tested and stress-tested All Weather portfolio construction process to design a portfolio that we expect will outperform traditional asset allocations over time and generate positive, consistent returns (high return-to-risk ratio) across a range of economic environments.15 This strategic asset allocation therefore can serve as a crucial foundation for investors with financial and ESG impact goals.

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13 There is no guarantee expected performance will be achieved. Return expectations do not include any applicable management fees. The Balanced SDG-Aligned Portfolio does not represent a product or service that is available for purchase by any investor.
14 Global 60/40 shown is based on market cap weighted portfolio of world large cap equities and world government bonds. Analysis is based on the systematic selection process described in this chapter. There is no guarantee expected performance will be achieved. Return expectations do not include any applicable management fees.
15 There is no guarantee expected performance will be achieved. Return expectations do not include any applicable management fees.
Appendix A
ESG as a Potential Source of Alpha
As mentioned, we have focused this chapter on building a beta portfolio because ~90% of the typical institutional portfolio’s risk is in its strategic asset allocation, meaning changes to that allocation can have the most impact along both financial and ESG impact dimensions. Importantly, our approach to building this strategic portfolio does not assume that achieving investors’ ESG impact goals will also help them achieve their financial goals. Rather, we have designed a beta portfolio using assets that further ESG impact goals that we think earns the market risk premium in the most efficient way possible.

However, we often hear investors discussing whether ESG-related criteria (e.g., the sustainability of certain companies) can be used to tactically modify a portfolio in a way that will help them achieve above market returns (increase return or reduce risk relative to a standard benchmark). In other words, these investors are asking whether ESG integration can be a source of alpha.

We believe that good, diversifying alpha of any kind is valuable if you can find it and that understanding any issue that impacts markets—including issues commonly associated with ESG—can be a potential source of alpha. In the research process behind our own alpha strategies, we have sought to deeply understand a wide range of issues that are often associated with ESG (e.g., the economic impact of the decline of coal, the rise of renewable energy, income inequality, and the drivers of sustainable long-term growth across countries and across time) and how they connect to asset markets, because these topics are important for understanding the key drivers of global markets and economies.

However, generating alpha is very difficult. It requires unique insight that is not yet reflected in markets, and there are many talented players constantly competing to find and exploit new alpha opportunities before everyone else. Due to these intense competitive pressures, it makes sense to us that alpha strategies that are based on simple, replicable rules and openly shared in the public domain should be viewed with skepticism. In particular, we would caution against two common mistakes that we see across all alpha styles—including alpha strategies based around ESG—that we think are important for investors to understand and avoid:

**Betting on a trend without considering whether that trend is already priced into markets:** For example, an investor might read a report noting the rising popularity of AI and then purchase shares in the leading AI companies. We would be cautious about making this bet based purely on such information. Markets are discounting machines, and for a given AI equity to outperform, it is not enough that AI companies earn higher profits in the coming years; they must do better than markets are already expecting and is already reflected in their price. This requires thoughtful analysis to assess how equity markets are discounting the future, and the discounting in equity markets changes constantly, requiring ongoing evaluation.

We sometimes see this misconception in the ESG space. We have often heard investors assert that an ESG equity allocation (e.g., an allocation that thematically invests in the most environmentally sustainable companies) will outperform a broad equity index or have higher risk-adjusted returns than a typical equity allocation. Just as in the example above, we would be careful about assuming that markets are not already pricing in the impact of better ESG policies on company profits. Pricing may also differ across ESG issues; for example, a shift to a low-carbon economy may be discounted in the stock prices of the relevant companies, while the falling profitability of companies that fail to meet adequate safety standards may not be discounted. Most importantly, we would reiterate that beating markets is extremely difficult, and we would apply high standards to evaluating potential alpha strategies (including ESG alpha strategies).

**Ascribing too much importance to any one pressure, when a range of many pressures drives markets:** For example, we see many equity strategies that buy equities primarily based on whether the valuation is attractive (i.e., the company has a lower-than-average P/E ratio, a higher-than-average dividend, and stable earnings). However, there are many, many pressures on market pricing at any given time, and no one pressure will exclusively drive the price of an asset over time. For example, an equity could indeed have an attractive valuation given existing fundamentals, but growth could fall, or interest rates could rise, or demand for that company’s products could drop—all of which could lead to negative returns. An alpha strategy based around just a few of those dynamics is unlikely to perform well through time. Our time-tested alpha systems have many indicators, and we expect to only get our bets right a little more than half the time.

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We have seen this misconception crop up in the ESG space as well. For example, we see some investors pursuing alpha strategies that are primarily based on a small number of ESG dynamics—e.g., selling companies that score poorly on certain ESG issues and buying companies that score well. While we believe that a deep understanding of issues associated with ESG could provide useful insight to generating alpha, we would again be cautious about taking views based on any one dynamic alone.

Because alpha is so difficult, we would hold a high bar for assessing any alpha strategy and would look deeply into its performance and process. The characteristics we would look at to determine if an alpha strategy is likely to be reliable include:

- **Is the source of alpha both logical and stress tested across time and countries?**
- **Biases and reliability:** In which environments does the alpha perform well? In which environments does it perform poorly? Has the true alpha been separated from what can be accessed cheaply as a passive investment (i.e., beta)?
- **Length and richness of track record:** Has this source of alpha been tested through a variety of challenging economic and market environments?
- **Plausibility:** A return stream that looks too good to be true may really be too good to be true.
- **Quality of thinking:** Favor alpha sources that reflect deep investment understanding and are likely to generate unique insights going forward.
- **Transparency and consistency of investment process.**

This is not to say that one should not look to issues associated with ESG as one potential source of alpha. We have been alpha practitioners for 35+ years and would be the first to highlight the beneficial role that alpha can play in a portfolio. And, as mentioned, we incorporate many topics that are associated with ESG in our investment research process. But as alpha practitioners ourselves, we also know firsthand how difficult it is and, as a result, how important it is to rigorously evaluate an alpha strategy before investing.
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Balanced SDG-Aligned Portfolio Simulation Disclosure

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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).

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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
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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. ACCORDINGLY, PLEASE REACH OUT TO YOUR CLIENT ADVISOR IF YOU HAVE ANY QUESTIONS ABOUT THIS SIMULATION.

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.