

The All Weather Strategy

4Q09

Executive Summary

The biggest problem with most institutional portfolios is the near-complete lack of diversification, and the result is inefficient portfolios that deliver far too little return relative to the risk that they bear. Most institutional portfolios have equity and equity-like risk that represents more than 75% of the total risk of the portfolio, and often the concentration is well above 80%. Since equity and equity-like investments are so highly correlated, the well-being of institutional portfolios is almost completely a function of the ups and downs of the global equity market (for example, the typical institutional portfolio is more than 90% correlated to the equity market).

Though investors are aware of the benefits of diversification across asset classes, there are two big reasons for how we got to this point. One is that investors tend to focus on allocating capital rather than risk. Because equities tend to carry so much more risk than other asset classes, a portfolio that has 60% of the capital invested in equities actually has more like 80% of its risk allocated to equities. The other reason we got to this point is that investors have allocated more and more of their portfolios to equities over the last several decades in order to raise returns. In other words, investors have made the de facto decision to give up diversification in order to raise returns. As we will show, this was an unnecessary trade-off that resulted in inefficient portfolios.

This single issue dwarfs all others that investors face—by giving up diversification, investors are taking too much risk and are literally leaving hundreds of basis points of return on the table.

The All Weather strategy was designed to solve this problem by taking full advantage of the powers of diversification. It is a risk-balanced portfolio of asset classes structured to provide equity-like returns with far less risk. Additionally, the strategy provides more consistent returns across a wide range of economic environments. Since its inception in 1996, the All Weather strategy has produced annualized returns of approximately 8.4% with roughly 11% volatility, and a 0.43 Sharpe (return-to-risk) ratio (gross of fees).

In this paper, we will explain how we construct the All Weather portfolio. To summarize the key points:

- Asset classes are priced to have long-term expected returns above cash and their return above cash is proportional to their risk (i.e. they have similar Sharpe ratios). This is the reason why equities have higher expected returns than fixed income, but a similar expected Sharpe ratio.
- Since asset classes have similar expected Sharpe ratios, they can be made competitive through the use of leverage or leverage-like techniques (extending duration, using futures, etc). For example, using these techniques, nominal bonds can be made to have similar expected returns as equities.
- By using leverage to adjust the risks and returns of asset classes, investors can build more diversified portfolios and thus achieve far more consistent performance. In other words, <u>because</u> <u>assets can be adjusted to have comparable returns and risks, the primary determinant in</u> <u>portfolio construction is how well the assets diversify each other.</u>
- The All Weather strategy is built upon these principles. It is a diversified portfolio of risk-adjusted asset classes designed to achieve higher and more consistent returns. All Weather's diversification is based on Bridgewater's understanding of the structural relationship of asset classes to different economic environments, which is more robust than the traditional methods of portfolio construction (i.e., historical optimization). This logic has been confirmed in All Weather's 10+ year performance history as well as in longer-term stress-testing of the strategy.

The Conventional Asset Allocation

The returns of the conventional asset allocation (\sim 60% equity/ \sim 40% non-equity) are almost entirely driven by the return on equities -- i.e. the conventional portfolio is about 95% correlated to the equity market. As the chart below shows, both the equity market and the conventional portfolio experience significant (and sometimes extended) drawdowns¹ at the same time. In other words, the conventional asset allocation is really just a bet on the stock market.



Past results are not necessarily indicative of future results.*

These results may be surprising given that most investors think they are considerably more diversified. But while the dollar allocation tells you where money is parked, it doesn't give a very good sense of which assets will drive the return. The conventional portfolio is roughly balanced in dollar terms (~60% equities), but the existence of nominal bonds and other assets do very little to truly balance the portfolio because they make up such a small amount of risk. This translation (from dollars invested to actual risk exposure) is shown below. The pie chart on the left shows a conventional asset allocation in terms of the dollars invested. The pie on the right shows how much risk each asset class contributes (accounting for the volatility and cross-correlation of each asset). In risk terms, equities contribute ~90% of the portfolio's exposure.



¹ "Drawdown" refers to a drop in the value of an investment relative to the maximum achieved in the past.

^{*} HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

Investors know that diversifying exposures significantly increases return and reduces risk. If investors know this, then why aren't they fully utilizing the power of diversification in their asset allocation?

All Weather Portfolio Part I: Basic Principles

In order to understand how investors ended up with the conventional asset allocation, it is important to understand the characteristics of betas, or asset classes, in general. Over time, asset classes will outperform cash, and the level of expected return above cash will be proportional to the expected risk. If assets weren't priced to outperform cash, investors wouldn't buy them, and if higher-risk asset classes weren't priced to outperform lower-risk asset classes, investors wouldn't buy them either.

The following chart shows expected return and risk assumptions for various asset classes, as provided to us by a consultant. Although the relationship is by no means precise, you can see that asset class returns increase proportionally as their risk increases.



Please see Note 1 for relevant disclosures.

Faced with only the choices in the chart above, an investor with an 8%+ return target would naturally be forced to concentrate their portfolio in equity and equity-like assets. Significant allocations to asset classes in the lower left portion of this chart lower the portfolio return too much and put their target out of reach. However, this picture simply shows the return and risk characteristics of assets in their "prepackaged" form. Investors need not accept this.

It is possible to make these "packaging" issues irrelevant—to set the riskiness of each asset at whatever level you choose—through the use of leverage or leverage-like techniques. You can increase an asset's share of total portfolio risk (i.e. risk share) by borrowing cash and using it to buy more of the asset (levering); you can decrease an asset's risk share by reallocating money from that asset to cash (delevering). Repackaging low risk assets to higher return levels can also be accomplished by extending duration and through the use of derivatives, such as futures.

Leverage should not be viewed as exotic since it is already present in all traditional portfolios that own equity stakes in companies (public or private) that issue debt. In fact, higher risk asset classes,

such as equities, private equity, and real estate have higher risk because of their embedded leverage. For example, the average debt to equity ratio of companies in the S&P 500 is about 1:1 (i.e. they are levered 2-to-1), which raises their returns and risks. And just as purchasing stock in a levered company isn't considered using leverage in an accounting sense, you can repackage low risk asset classes without incurring accounting leverage by doing it within a fund structure.

To illustrate how you can use leverage to transform an asset's return and risk characteristics, take an investment from which you expect a 2% excess return and 8% volatility. Using leverage, you can scale it up to a 3% excess return and 12% volatility, or 4% excess return and 16% volatility. It no longer matters how the asset is packaged; what is more relevant is its Sharpe ratio (0.25 in this case), which tells you how much return corresponds to any given level of risk.

As a practical example, the following charts compare the historical returns of the S&P 500, the US 10 year bond, and the US 10 year bond at 2:1 leverage (which brings it to approximately the same volatility as stocks). As you can see, bonds as they are traditionally packaged are lower returning and less risky than stocks. But apply leverage, and they become comparable in terms of risk and return, though they perform well in different environments (and are thus useful for diversification).



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Expanding on this idea, the chart on the following page shows the same asset classes from the earlier chart but repackaged (i.e. levered or delevered) to the same risk level as the S&P 500. Putting all asset classes on the same footing dramatically expands the number of choices you have to build an asset allocation that will achieve your return target. Presented with this opportunity set, would you still want to put 90% of your risk in one asset class?



Please see Note 1 for relevant disclosures.

With no substantial return difference between equities and other asset classes, investors don't need to tie asset allocation decisions to the goal of hitting your return target. Instead, they are free to choose asset classes based on their diversification characteristics.

As you know, there is a huge difference in the diversification achieved between combining things that are lowly correlated (different asset classes, i.e. stocks vs. nominal bonds) and things that are highly correlated (variants of the same asset class, i.e. domestic vs. international stocks). Combining lowly correlated assets is the key to creating a more consistent portfolio, i.e. higher return per unit risk. The chart below illustrates the reduction in risk and improvement in the Sharpe ratio achieved by increasing the number of return streams in a portfolio, with each line representing a difference between a portfolio dominated by one asset class (essentially the conventional portfolio) and a portfolio with five uncorrelated asset classes is significant (i.e., up to 5 times).



With an opportunity set of risk-equalized asset classes, simply assembling a portfolio that balances the risk evenly across all assets produces a Sharpe ratio superior to that of the conventional portfolio. By applying a fundamental understanding of relative asset class performance, investors can do even better.

Part II: The All Weather Approach

If you had several assets with similar return and risk, how would you combine them to create the best portfolio? Investors often try to do this by feeding a matrix of correlation assumptions into an optimizer. This doesn't make any sense to us. The output of an optimizer is very sensitive to the inputs, and asset class correlations are inherently unstable. For example, the correlation between stocks and nominal bonds has fluctuated significantly over the past 20 years (as illustrated below).



Rolling 3-Year Correlation of Stocks and Nominal Bonds

If you can't rely on asset correlations, what should you use to build the best portfolio? We allocate risk based on our understanding of the relationship between asset classes and economic environments. While the correlation between asset classes is inherently unstable, the relationship of asset classes to economic environments is consistent over time. At their root level, asset prices represent expectations about future conditions and asset returns are driven by how conditions evolve relative to expectations and how expectations change. This explains the unstable correlation between stocks and nominal bonds (shown in the chart above). They are positively correlated when changes in inflation expectations are driving markets, since both asset classes stand to benefit from a decline in inflation. They are negatively correlated when changes in growth expectations dominate market returns, since falling growth benefits nominal bonds but hurts stocks (and vice versa).

While asset classes incorporate expectations about a wide number of economic factors, growth and inflation are the two most important determinants of asset class pricing (both because of their direct impact and the fact that they encompass expectations about most other relevant factors). Asset class returns are largely the result of whether growth and inflation end up being higher or lower than expected, and how these expectations change. We balance risk evenly to rising and falling, because these environments are relative to what markets are pricing-in, and market pricing has no tendency to systematically over/under discount what transpires.

Using this understanding, we balance asset classes across environments such that the underperformance of a given asset class (e.g. nominal bonds) in a given environment (e.g. high inflation) will be naturally offset by the performance of another asset class which we know is biased to perform well in that environment (e.g. commodities). To be clear, this does not mean the total return is zero; All Weather is designed to produce consistent positive return in each economic environment by collecting the risk premiums inherent in each asset class.

The table below illustrates our view of how different macro environments (i.e. rising growth, falling growth, rising inflation, and falling inflation) benefit different asset classes. By balancing risk equally across the four environments, we can consistently earn asset class risk premiums while minimizing the portfolio's susceptibility to any one environment.

	GROWTH	INFLATION
	25% of Risk	25% of Risk
RISING	 Equities Corporate Spreads Commodities EM Debt Spreads 	 Inflation-Linked Bonds Commodities EM Debt Spreads
FALLING	 25% of Risk Nominal Bonds Inflation-Linked Bonds 	25% of Risk • Nominal Bonds • Equities

Please see Note 3 for relevant disclosures.

In addition to balancing the All Weather portfolio's risk <u>across</u> different environments, we also maximize diversification <u>within</u> each environment. For each environment we hold a mix of asset classes, and each asset class is globally diversified. In total the portfolio invests in more than 40 markets. The result is a portfolio that is more balanced than the conventional portfolio both across and within asset classes



Please see Note 4 for relevant disclosures.

The strategy has been rigorously tested across countries and time periods to ensure that the balance of asset classes does indeed protect the portfolio across changing economic environments. Each asset class performs better in certain periods than in others depending on its environmental biases, but because these biases naturally diversify one another, the portfolio delivers consistent performance across environments.

Part III: Results

The product of this approach to asset allocation is a significant improvement in the efficiency and consistency of the portfolio. This is illustrated by the historical Sharpe ratio of the All Weather portfolio (both in real-time and the simulation), which has been approximately 0.67, compared with 0.35 for the conventional portfolio. This means that at the same level of expected risk, you can earn over 330 bps of additional return per year, or you can have the same expected return with roughly 500 bps less volatility per year. Additionally, because of All Weather's greater diversification (across environments, asset classes and countries), the strategy will have less vulnerability to a large move in any one market/region (i.e. lower fat tail risk).

Below, we show the longer-term stress testing of the All Weather strategy. As described, investors can use the strategy in two ways. First, they can maintain their current return target while significantly reducing their expected risk. The following charts show the simulated performance of All Weather from 1970 to 1996, the inception of the strategy, and the scaled strategy thereafter, calibrated to the same return level as the conventional portfolio. While both portfolios achieve the same return over time, the All Weather portfolio does so without the sizable fluctuations of the conventional portfolio. This is especially evident in the second chart below that shows All Weather's smaller and less frequent drawdowns.



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Alternatively, if an investor is comfortable with their current level of risk they can use All Weather's higher Sharpe ratio to run a portfolio at the same risk level as their current portfolio but with a much

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higher expected return. While the portfolios experience similar degrees of fluctuation over time, the All Weather portfolio is able to achieve a significantly higher level of return. Additionally, because of All Weather's greater diversification (across environments, asset classes and countries), the strategy will have less vulnerability to a large move in any one market/region (i.e. lower fat tail risk).



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Since the strategy's inception in June 1996, it has produced roughly 8.4% annualized return (gross of fees) with annualized volatility of roughly 11% and has outperformed both equities and a U.S. conventional portfolio.

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The real-time performance of the All Weather portfolio has the same characteristics of the long-term simulation shown below (i.e. produces a considerably higher Sharpe ratio than the conventional portfolio or equities).



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The consistency exhibited above by the All Weather performance is a product of the diversification of the strategy that balances risk across economic environments. By balancing risk in this way, the strategy is not as susceptible to the environmentally driven drawdowns that less diversified portfolios suffer. The table below illustrates All Weather's performance during down quarters for the S&P 500,

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the U.S. Lehman Aggregate, the Citi Hedged World Government Bond Index, and the MSCI EAFE Unhedged Index. As you can see, the strategy tends to have positive returns in these periods because other assets within the portfolio are balancing the poor individual asset class performance.

	S&P 500	Lehman Agg	Citi WGBI Hedged	MSCI EAFE Unhedged	
Average Return During Negative Quarters of Market	-7.9%	-0.7%	-0.8%	-6.9%	
All Weather's Average Return Over Same Quarters	0.2%	-0.5%	0.6%	1.1%	
All Weather Had Positive Return In:	11 / 19 Dow n Quarters	6 / 13 Dow n Quarters	6 / 11 Dow n Quarters	14 / 24 Dow n Quarters	

ALL WEATHER PERFORMANCE GROSS OF FEES TOTAL RETURNS DURING QUARTERS OF NEGATIVE MARKET RETURNS

(3Q96 through 4Q09)

Data shown is net of fees total return. Past results are not necessarily indicative of future results.

Part IV: All Weather During Extreme Depression Environments

As discussed above, Bridgewater has tested the All Weather principles through a wide variety of environments, including depressions, such as Japan in the 1990s and the 1930s US Depression (and many others).

The All Weather mix has out performed the typical Conventional Portfolio across all periods, including those rare depression environments that adversely affect all asset class returns. That said, because of the severity of those environments (especially in the early years), Bridgewater has developed a safeguard, which is described in further detail below.

Bridgewater's Depression Gauge

Depressions are rare and are characterized by an "unmanaged" deleveraging. They are almost always preceded by periods of massive debt accumulation such that there is not enough room to cut interest rates (since they can only go to zero) to bring debt servicing burdens to manageable levels. Leveraged entities are forced to sell assets in order to pay down debt, reducing the value of those assets and increasing the need to delever even further. As a result, severe credit and liquidity problems arise and the financial and economic system ceases to function normally. These conditions are often self-reinforcing, creating the possibility of severe and prolonged underperformance of asset classes with equity or credit related risks. Because depressions are caused by a debt overhang, they usually only end when there is a restructuring of debt through some combination of a) bankruptcies, b) actual restructuring of debt contracts, and/or c) inflation (which implicitly changes the terms between debtors and creditors).

Our research team has long been concerned with the buildup of leverage in the global economy and financial system, particularly in the United States. Recognizing that the high leverage levels and low level of interest rates could result in unacceptable losses for even a balanced asset mix like All Weather, we built a "depression gauge" in the late 1990s to help us monitor the relationship between monetary stimulus and borrowing/asset class performance that would indicate if a cycle was acting "normally." The gauge became a part of our systems, and we understood that if the gauge hit certain levels, we would want to shift the asset allocation of All Weather to a portfolio mix that would be able to preserve wealth in such an environment.

Transitioning to the Safe Portfolio in a Depressionary Environment

Our research on depressionary environments and their impact on asset class returns led to the design of what we call the "Safe Portfolio." Designed to preserve capital in a depression environment, the Safe

portfolio is the portfolio that we believe is best able to maintain its buying power regardless of what happens—it is the portfolio we designed to be essentially immune to credit risks, deflations, inflations, depressions and booms. While the All Weather asset mix is based on the existence of a "functioning" capitalist system (i.e., one in which there is normal capital formation and returns for taking risk) and structured to deliver the best risk-adjusted returns in a normal environment, the Safe portfolio mix is not dependent on these conditions. Most importantly, the Safe portfolio is designed to preserve wealth even during a financial and economic meltdown (as distinct from T-bills, which can have significantly negative real returns). To best meet that objective, we want to reduce market risk, minimize credit risk, minimize counterparty risk, eliminate leverage, and be neutral to inflation and deflation. The Safe portfolio is comprised of a balanced mix of hedged global government nominal bonds, hedged global government inflation-indexed bonds, government bills, and gold. In a deflationary outcome, government nominal bonds and bills will do well. If the outcome is inflationary, we expect that inflation-indexed bonds will do well as actual inflation would be passed through, and that gold will provide protection in the event of a broad devaluation in paper currency.

To provide a sense for how bad a depression environment can be for a portfolio of asset classes, in the following chart we show the returns of a conventional (equity-heavy) asset mix, All Weather, and the Safe Portfolio during the Great Depression. While the All Weather mix did much better than the equity-heavy conventional portfolio, it still experienced materially negative returns. However, the Safe Portfolio remained relatively well insulated during this period.



Sources: Global Financial Data and Bridgewater estimates. Gray shaded region indicates peak-to-trough period in All Weather's performance. Data shown is gross of fees total return. WHERE SHOWN, HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

Through the use of the depression gauge, we can systematically assess the pressures indicating the onset of a depressionary environment and make a partial or complete shift to the Safe portfolio. Similarly, once holding the Safe portfolio mix, the decision to shift back to the All Weather portfolio mix is done through a continual systematic assessment of the relevant economic and market conditions to determine whether the credit intermediation system is beginning to function normally.

The Current Environment

We are currently in a unique environment, with the financial markets and global economy experiencing a deleveraging/depression process. From the summer of 2007 through the first half of 2008, the depression gauge was moving higher as conditions became more extreme but the gauge was not yet at a

level that would justify material changes to the All Weather mix. That all changed when the U.S. government allowed Lehman Brothers to fail. The net effect of that decision was a shattering of global credit markets and a massive tightening of conditions. At this juncture, our depression gauge hit critical levels and we believed that there was a 70%-80% chance that a depression would result. Because a) the early stages of depressions are the most damaging to asset prices and b) we did not know how far the Fed would go and the effects of its actions, we decided to go into the "hurricane shelter" of the Safe portfolio until the storm passed.

Over the final months of 2008 and into 2009, it became clear that the credit intermediation system was not functioning normally and without the credit system, there would be no sustainable economic or market recovery. A key question for us was the degree to which the government would move to counteract the deleveraging and how effective its efforts would be.

As we moved into May 2009, it became clear to us that the Federal Reserve both has the ability and the determination to create and spend enough money to offset the deflationary depression, and that the reflationary policy that it has been pursuing is having beneficial effects. Based on our understanding of the linkages between money and credit growth and economic growth, there is not much doubt that the Fed can cause nominal GDP to grow by about the amounts it targets via the Fed a) buying financial assets in the appropriate quantities and b) financing the government to buy goods and services in appropriate quantities. To be clear, we believe that this will not produce a normal economy because a) it will not create the normal credit worthiness and b) it will not sufficiently increase the lending capacity of credit intermediaries, so that lenders and borrowers can create credit in the volumes required to produce normal growth. There will remain a large segment of the economy that is essentially dead financially -- i.e., not viable for capital formation -- that will eventually be restructured. So, what the Federal Reserve is essentially doing is the equivalent of a bypass to produce enough money and credit growth to go around this blockage in order to yield the desired level of nominal GDP growth. This is the modern day version of a depression. We saw a bit of it in Japan and we are seeing a more forceful version of it in the U.S. now.

As a result of these developments, in early May 2009, most of our indicators that are used to shut off our depression gauge kicked in, and we gradually shifted our 100% Safe portfolio to essentially a 60% All Weather/40% Safe mix. This shift to a 60% AW/40% Safe portfolio reflects the degree of normality that we believe now exists. Going forward, we expect to remain in this roughly 60/40 mix until a) there is evidence of sustainable private credit creation (which would cause us to move fully to All Weather) or b) the government withdraws from its bypass operations without a material debt restructuring (which would likely cause us to shift back to the Safe mix).

Appendix:

Please read the following notes and disclosures as they provide important information and context for the research and performance presented herein. Additional information is available upon request except where the proprietary nature of the information precludes its dissemination.

Bridgewater All Weather USD Strategy Performance, Net of Fees

All Weather Otheregy renormance (Net of rees)		
	All Weather	
	Total Return in USD	
Last 1 Year	9.4%	
Last 3 Years	-0.8%	
Last 5 Years	2.7%	
Last 10 Years	6.0%	

All Weather Strategy Performance (Net of Fees)

Annualized Returns (Jun-96 through Dec-09)

Net Since Inception Jun-96 through Dec-09

Annualized Return	7.9%
Standard Deviation	11.3%
Sharpe Ratio	0.38

NOTES & DISCLOSURES

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Note 1: Based on return and risk expectations from an independent study by Rocaton, a third party consultant.

Note 2: For illustrative purposes only. The example does not necessarily indicate the actual historical or current implementation of Bridgewater's strategies. The statistics shown are calculated using Bridgewater's assumption of 4.5% for the annual return on cash, and the historical monthly excess returns of the US 10-year note and the S&P 500 index.

Note 3: For illustrative purposes only. The example does not necessarily indicate the actual historical or current implementation of Bridgewater's strategies.

Note 4: For illustrative purposes only. The example does not necessarily indicate the actual historical or current implementation of Bridgewater's strategies. Markets listed may or may not be currently traded and list is subject to change without notice.

Bridgewater All Weather Strategy Gross Performance Disclosure:

For the period June 1996 (the inception of the strategy) through August 2001 the performance is based on the total return of the Bridgewater All Weather strategy as implemented for Bridgewater's principals and their affiliates and was not fully hedged to the US Dollar. The All Weather strategy currently is fully hedged, and the performance reflected after August 2001 includes these hedging transactions. For the period of August 2001 through present the performance shown is the actual total returns of the longest running fully funded All Weather account. For the entire history excess returns are calculated by subtracting the cash return of the US repo rate from the total returns described above. Of note, the All Weather strategy is target leverage, volatility and return, as well as the asset mix varied from June 1996 to July 2005. From August 2005 through the present the strategy has targeted 10% volatility, albeit adjusting target leverage, volatility, return and the asset mix during extreme recessionary or depressionary economic environments. Bridgewater manages additional All Weather portfolios not included in this performance history.

The performance provided is gross of management fees and includes the reinvestment of all interest, gains, and losses. Returns will be reduced by the investment advisory fees and any other expenses that may be incurred in the management of the account. Investment advisory fees are described in Part II of Bridgewater's Form ADV. No representation is being made that any account will or is likely to achieve returns similar to those shown. Trading in futures is risky and can result in losses as well as profits. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

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For the period June 1996 (the inception of the strategy) through August 2001 the performance is based on the total return of the Bridgewater All Weather strategy as implemented for Bridgewater's principals and their affiliates and was not fully hedged to the US Dollar. The All Weather strategy currently is fully hedged, and the performance reflected after August 2001 includes these hedging transactions. For the period of August 2001 through present the performance shown is the actual total returns of the longest running fully funded All Weather account. For the entire history excess returns are calculated by subtracting the cash return of the US reported from the total returns described above. Of note, the All Weather strategy's target leverage, volatility and return, as well as the asset mix varied from June 1996 to July 2005. From August 2005 through the present the strategy has targeted 10% volatility, albeit adjusting target leverage, volatility, return and the asset mix during extreme recessionary or depressionary economic environments. Bridgewater manages additional All Weather portfolios not included in this performance history.

The performance provided is net of fees and includes the reinvestment of all interest, gains, and losses. The net of fees returns have been calculated using our standard fee schedule for a minimum size account, which are the highest fees we have or would currently charge an account. Investment advisory fees are described in Part II of Bridgewater's Form ADV. No representation is being made that any account will or is likely to achieve returns similar to those shown. Trading in futures is risky and can result in losses as well as profits. PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

Performance as of the current month is estimated and subject to change.

Individually Managed Accounts:

Individually managed account performance will vary based on constraints, funding levels and other factors.

Terminology:

Value added (or excess return) is calculated by subtracting the official returns of each account's specified benchmark from the total return experienced by the account over a given period.

Volatility of value added (or tracking error) refers to the standard deviation of monthly value added over a given time period. Standard deviation of monthly value added is one possible measurement of portfolio risk.

Past value added and past volatility are not necessarily indicative of future value added and future volatility. There can be no assurance that the future value added and future volatility actually reflected in accounts will be at historical levels or levels either specified in the investment objectives or suggested by our forecasts.

Target volatility (or target tracking error) is an indication of the long-term expected volatility of value added.

Sharpe ratio is calculated by dividing the excess return above cash over a given period by the volatility of the excess return during the same period.

Information Ratio is calculated by dividing the excess return above a given benchmark over a given period by the volatility of the excess return during the same period.

Alpha: The risk taken by active managers above and beyond their passive, benchmark-replicating positions.

Beta: The risk in a portfolio that arises from passively holding asset classes.

Portfolio VaR: A measure of the amount of a total portfolio's risk, taking into consideration correlations within and across asset classes.

Var Share: A measure of the portion of a total portfolio's risk allocated to a particular return stream when all of its return streams are assumed to be fully correlated to each other.

CoVar Share: A measure of the portion of a total portfolio's risk allocated to a particular return stream when the cross correlations of all of the return streams are taken into account.

Drawdowns: Where shown, drawdowns are from previous peak.

Portfolio Notes:

The Conventional Portfolio is simulated and does not take into account any costs or fees that may be associated with its implementation. The "Conventional Portfolio" capital allocation weights are estimates based upon Bridgewater Associates' understanding of standard asset allocation and may change without notice. The Conventional portfolio is constructed using the historical monthly returns of the S&P 500, Russell 2000, MSCI EAFE Unhedged in US\$, Lehman Brothers US Aggregate, Barclay's US IL adjusted to 10yr duration, Cash/AR and the Real Estate Investment Trust Index weighted 43%, 5%, 14%, 23%, 5%, 5% and 5% respectively. S&P 500, Russell 2000, and MSCI EAFE Unhedged returns are the official reported returns for the full history. Lehman Brothers US Aggregate returns are actual returns since January 1976 and Bridgewater estimates prior to then. US IL returns are actual returns since February 1997 adjusted to a 10 year duration and Bridgewater estimates prior to then. Real Estate Investment Trust Index returns are actual returns since February 1972 and Bridgewater estimates prior to then. Prior to 1970, the Conventional Portfolio capital allocation weights consist of U.S. Equities 65% and U.S. 10-year Bonds 35%. The allocation information for the historical simulation of the Safe Portfolio is as follows; Gold 10%, T-Bills 30%, IL Bonds 40%, T-Bonds 20%. Asset class returns from January 1920 to the present are actual market returns where available and otherwise a proxy index constructed based on Bridgewater Associates understanding of global financial markets. Information regarding specific indices and simulation methods used for proxies is available upon request (except where the proprietary nature of information precludes its dissemination). Weights stated above are estimates based either upon Bridgewater Associates' understanding of standard asset allocation (which may change without notice) or information provided by or publicly available from the recipient of this presentation. Results are hypothetical or simulated and gross of fees unless otherwise indicated. HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD. SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING OR THE COSTS OF MANAGING THE PORTFOLIO. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER OR OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. For a description of the US Cash rate used please read below.

All Weather Simulated Portfolio Note:

Prior to June 1996, All Weather is simulated and gross of all fees (including investment management fees). All Weather is constructed using a proprietary mix and weighting of assets. The returns used to construct All Weather are actual market returns where available and Bridgewater Associates' estimates otherwise. Bridgewater Associates' estimates for various market returns are based on Bridgewater Associates' understanding of global financial markets and may change without notice. The benchmark cash return is defined as the Repo rate since 1991 and prior to 1991 the lesser of the 3 month T-bill times 1.05 and the 3 month Euro rate. For a description of the limitations of simulated portfolios please see the "Simulated Performance Disclosure" below.

Expected Performance Disclosure:

Where shown, expected performance is based on Bridgewater analysis of market data, quantitative research of the underlying forces that influence asset classes and our active management policies. The performance is for informational and educational purposes only and should not be relied upon as a prediction of future market performance or Bridgewater management performance. Reasonable people may disagree with the assumptions used and expectations developed there from and there is no guarantee the expectations shown can be achieved. Expected performance is considered hypothetical and is subject inherent limitations such as the impact of concurrent economic or geo-political elements not addressed in the analysis and market factors, such as lack of liquidity. Bridgewater Associates is not obligated to provide recipients hereof with updates or changes to such data. Investment decisions should not be made based upon expected results alone. Bridgewater Associates employees may have long or short positions in and buy or sell securities or derivatives referred to in this research. Those responsible for preparing this research receive compensation based upon various factors, including, among other things, the quality of their work and firm revenues.

Simulated Performance Disclosure:

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