

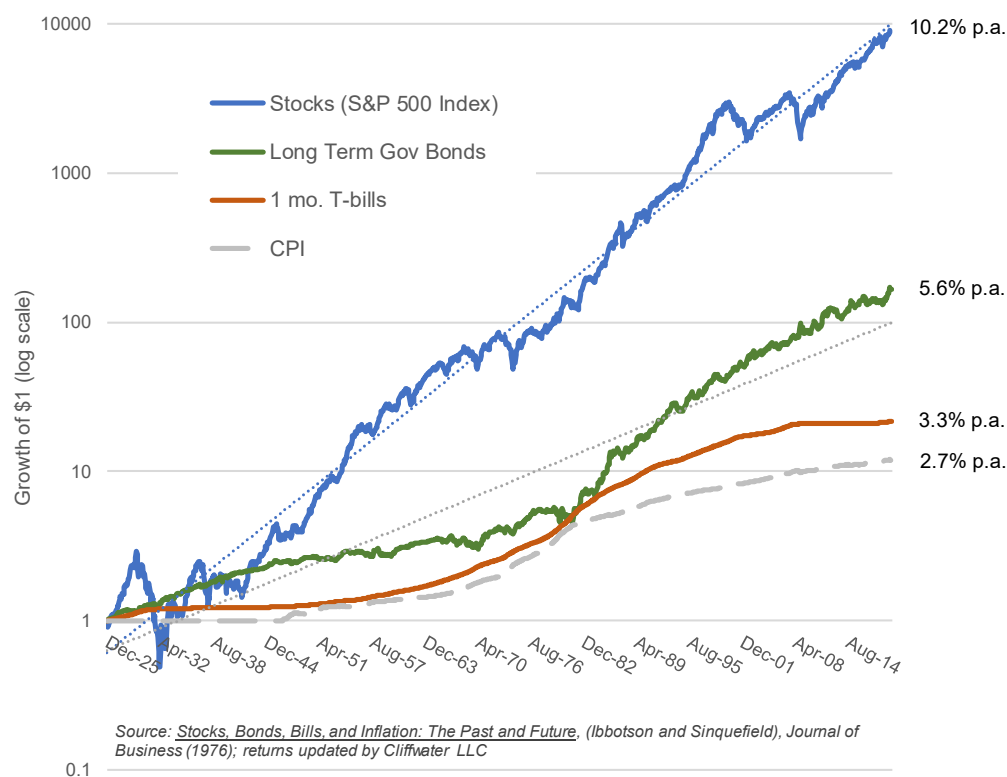
Asset Allocation: Back to Basics

January 1, 2020

Asset allocation is a first quarter agenda for most institutional investors, a ritual that is increasingly characterized by complexity as allocators slice and dice asset classes into a puzzle of “factors” that perhaps distract from a few simple market propositions learned decades ago.

Stocks, Bonds, and Bills

Exhibit 1: Long-Term Returns on Stocks, Bonds, and T-Bills: Dec 1926 to Dec 2019¹



Few illustrations have been as durable and meaningful to the practice of asset allocation as the one reproduced and updated in Exhibit 1 above. Published in 1976 by Roger Ibbotson and Rex Sinquefeld, “*Stocks, Bonds, Bills, and Inflation: The Past and Future*” presented for the first time a monthly history of returns for equity, bonds, and T-bills and provided projections based upon past returns.² It was the inaugural asset allocation study.

¹ Stocks are represented by the S&P 500 Index. Long-term government bonds represented by the Bloomberg Barclays Long-Term Government Bond Index and its antecedents.

² “*Stocks, Bonds, Bills, and Inflation: The Past and Future*”, Roger Ibbotson and Rex Sinquefeld, *Journal of Business* (1976).

The views expressed herein are the view of Cliffwater LLC (“Cliffwater”) only through the date of this report and are subject to change based on market or other conditions. All information has been obtained from sources believed to be reliable but its accuracy is not guaranteed. Cliffwater has not conducted an independent verification of the information. No representation, warranty, or undertaking, express or implied, is given as to the accuracy or completeness of the information or opinions contained in this report. This report is not an advertisement, is being distributed for informational purposes only and should not be considered investment advice, nor shall it be construed as an offer or solicitation of an offer for the purchase or sale of any security. The information we provide does not take into account any investor’s particular investment objectives, strategies, tax status or investment horizon. Cliffwater shall not be responsible for investment decisions, damages, or other losses resulting from the use of the information. Past performance does not guarantee future performance.

Stocks

While short-term stock market returns follow a random walk with high variability, long-term stock returns reveal a central tendency consistent with what Ibbotson & Sinquefeld originally found in 1976. Exhibit 1 quantifies the hypothesis of a large and enduring equity risk premium³. Now measured over almost a century from Dec 31, 1925 to Dec 31, 2019, the equity risk premium has equaled 7.5%, the difference between a cumulative annualized 10.2% stock return and a 2.7% CPI inflation rate.

While the equity risk premium has shown to be significant in Exhibit 1, performance was interrupted by three subperiods – the Great Depression in the 1930's, Stagflation in the 1970's, and Dual Recessions in the 2000's. Stocks earned an annualized 0% real return in the 1930's, a -1% real return in the 1970's, and a -3% real return in the 2000's. Few investors would have had the staying power to withstand these losses if their portfolios consisted primarily of stocks. For example, endowments and foundations with 5% annual payout ratios would be the first to seek diversification to lower risk strategies after seeing the real value of their stock portfolios drop 50% at a time when their payouts are probably most needed.⁴

Bonds

The “time value of money” risk premium is the added return received for lending long-term with repayment of principal a certainty. In Exhibit 1, the time value risk premium is measured as the difference between long term government bond returns and the CPI inflation rate. That difference equals 2.9% (5.6% minus 2.7%) over the entire 95-year history, or slightly more than one-third of the 7.5% equity risk premium.

A lower long-term return on bonds is well understood and accepted given their lower short-term volatility and perception as a “risk-off” asset that should perform well when stock prices fall. This is generally but not always true, as the data shows. Bonds performed well during the 1930's and 2000's as stocks fell. The annualized real return on bonds equaled a positive 5% during both the 1930's and 2000's, compared to stock returns of 0% and -3%, respectively. However, during the 1970's, when inflation was rampant, the annualized real return on bonds equaled -2%, which turned out to be lower than the -1% real return on stocks. Investor fear of inflation is warranted, continues to this day, and underpins interest in real assets such as TIPS and other alternative strategies.

Cash and Inflation

T-bills produced a modest but positive 0.6% real return (3.3% minus 2.7%) over the entire 95-year history. However, like bonds, T-bills succumbed to a negative -1% real return during the 1970's though with positive real returns during the 1930's and 2000's of less than 1%. The reliance on government bonds and bills as a mainstay of “risk mitigation” portfolios would have worked in two out of the three bear market decades.⁵

Post-Publication Developments

Publication of “*Stocks, Bonds, Bills, and Inflation...*” in 1976 proved seminal for asset allocation practitioners. It established the notion of an asset class by offering expectations for return and risk through rigorous empirical analysis. And its basic findings on risk premiums have changed little after 40 years.

³ Industry convention uses the term “risk premium” to mean the added return above inflation (aka real return) earned for investing in an asset with short-term return risk. The terms “stocks” and “equity” are used interchangeably herein.

⁴ With no real return from stocks, an endowment's 5% annual payout would impair assets by 50% after 10 years.

⁵ Treasury bonds are currently a favorite within institutional risk mitigation and risk parity allocations.

Efforts to identify additional risk premiums started almost immediately after the 1976 “*Stocks, Bonds, Bills...*” publication. Many of these efforts focused on potential premiums within the stock market. The first was the “size effect” that small stocks earn a return premium over large stocks, and which was given credibility in a 1981 academic paper by Rolf Banz at the University of Chicago⁶. Unfortunately, like so many studies of similar vein that followed, investors failed to capture the hypothesized premium either because it no longer existed in the market post-publication or implementation costs eliminated the risk premiums when put into practice.

Much of this research also focused on geography as a source of potential risk premiums within equities. From benchmark inceptions in 1970 for non-US developed stock markets and 1988 for emerging market stocks, neither non-US benchmark has outperformed the US stock market.⁷ Global diversification has reduced portfolio risk but there is yet no long-term empirical evidence that higher risk premiums exist in non-US stock markets compared to the US stock market.

More successful have been the identification of meaningful risk premiums in the credit and private markets, both of which emerged as significant investment opportunities after 1976, and into which Cliffwater has conducted extensive research. In “*Credit as a Separate Asset Class*” (2017) we argued that credit should be treated as its own asset class, separate from fixed income, and found a 3.1% risk premium for publicly traded credit, measured over 18 years. In “*An Examination of Private Equity Performance among State Pensions*” (2018) we documented a 4.0% risk premium for private equity (in excess of the public stock risk premium) covering the last 18 years and in “*Risk Premiums in US Middle Market Lending*” (2016) we identified a 4.0% risk premium for private credit (in excess of the public credit risk premium).

Conclusion

The investment industry might today be viewed as factor-crazed with little actual empirical evidence of persistent risk premiums associated with them. For long-term asset allocation we recommend a five-factor asset allocation model featuring stocks, bonds, and cash that Ibbotson and Sinquefeld first defined as asset classes, together with credit and private assets that emerged institutionally in the 1980's and for which return premiums can be empirically authenticated. These five risk premiums incorporate fully the spectrum of investments that have demonstrated historical records of positive risk premiums. All other factors can be diversified away without impairment of long-term return for asset allocation purposes. Some asset allocation studies will incorporate “alpha” driven asset classes, such as hedge funds, but excess returns derived from them should not be confused with risk premiums offered by market exposures.

Stephen L. Nesbitt
CIO

⁶ The highly regarded Dimensional Fund Advisors was founded in 1982 to commercialize the small stock premium. Despite small stocks trailing large stocks for the 10 years following its launch and small stocks realizing no premium for the 38 years following the original Banz publication, DFA has found success by marketing its academic approach to investing.

⁷ Benchmarks are the MSCI EAFE Index for non-US developed equity and MSCI Emerging Markets Index for emerging market equity.

General Disclosures

The views expressed herein are the views of Cliffwater LLC ("Cliffwater") only through the date of this report and are subject to change based on market or other conditions. All third party information has been obtained from sources believed to be reliable but its accuracy is not guaranteed. The information herein may include inaccuracies or typographical errors. Due to various factors, including the inherent possibility of human or mechanical error, the accuracy, completeness, timeliness and correct sequencing of such information and the results obtained from its use are not guaranteed by Cliffwater. No representation, warranty, or undertaking, express or implied, is given as to the accuracy or completeness of the information or opinions contained in this report. Cliffwater shall not be responsible for investment decisions, damages, or other losses resulting from the use of the information herein.

There can be no assurance that any expected rate of return, risk, or yield will be achieved. Rate of return, risk, and yield expectations are subjective determinations based on a variety of factors, including, among other things, investment strategy, prior performance of similar strategies, and market conditions. Expected rate of return, risk, and yield may be based upon assumptions regarding future events and conditions that prove to be inaccurate. Expected rate of return, risk, and yield should not be relied upon as an indication of future performance and should not form the primary basis for an investment decision. No representation or assurance is made that the expected rate of return, risk, or yield will be achieved.

Nothing contained in this presentation is, or shall be relied upon as, a representation as to past or future performance, and no assurance, promise, or representation can be made as to actual returns. Past performance is not indicative of future returns, which may vary. Future returns are not guaranteed.

The MSCI EAFE Index is an equity index which captures large and mid cap representation across developed markets countries around the world, excluding the United States and Canada. With over 900 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI Emerging Markets Index captures large and mid cap representation across 23 emerging markets countries. With over 800 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.