FUNDAMENTALS

research affiliates | January 2015

Chris Brightman, CFA

> *"It is tempting to extrapolate past returns."*

KEY POINTS

1. U.S. stocks and bonds have produced high returns over the very long term and, despite the slow economic recovery, respectable returns over the past decade.
2. Using a simple model that assumes starting yields determine subsequent returns, we expect U.S. stocks and bonds to produce substantially lower returns in the future.
3. Prospective returns are not very high anywhere, but we expect other asset classes (notably including emerging market stocks and bonds) to outperform mainstream U.S. investments in the coming 10-year timeframe.
4. We encourage readers to visit Research Affiliates' asset allocation website,[10] where we employ a more sophisticated approach to determining expected returns.

Yesterday's Gone: Year-End Capital Markets Commentary and Expectations

Chris Brightman, CFA, and James Masturzo, CFA

> *"Don't stop thinking about tomorrow... Yesterday's gone, yesterday's gone"*
>
> — Fleetwood Mac

Bill Clinton followed this anthem into the White House 20-plus years ago, at the start of an era that brought us commercialization of the World Wide Web, rapid productivity growth, and a historic bull market.[1] The song also seems fitting as we kick off another new year, contemplate another Clinton presidential campaign, and develop our capital market return expectations following another long bull market.

We present here the first quarterly update of our 10-year expectations for asset class returns. Notice we say expectations and not forecasts. We put a "flux capacitor"[2] on our Christmas list, but Santa failed to deliver, again. Without the ability to visit the future, we are left with our expectations based on economic theory and empirical evidence. Before we examine these expectations, let's start by taking a look at the history of asset class returns.

Yesterday's Returns

One hundred years ago the global capital markets looked much different than they do today. Many of the asset classes we now consider to be staples in our portfolios were either non-existent or just too difficult to trade. From a look-back perspective, the data on these markets is questionable at best and non-existent at worst. Therefore, for the purpose of examining long-term historical returns, we limit our analysis to U.S. stocks and bonds and the simple 60/40 portfolio of the two.[3]

Figure 1 shows that an investor in 1915, investing in the 60/40 portfolio, and reinvesting all cash flows for the next century, earned an annual nominal return of 8.4%, composed of 10.3% from equities and 5.6% from bonds. Not too shabby!

In fact, **Table 1** shows that investing in the 60/40 portfolio over more recent periods, the last 50 or even 25 years, resulted in even better annualized nominal returns, with U.S. bonds picking up some of the slack from a slightly lower U.S. equity market return.

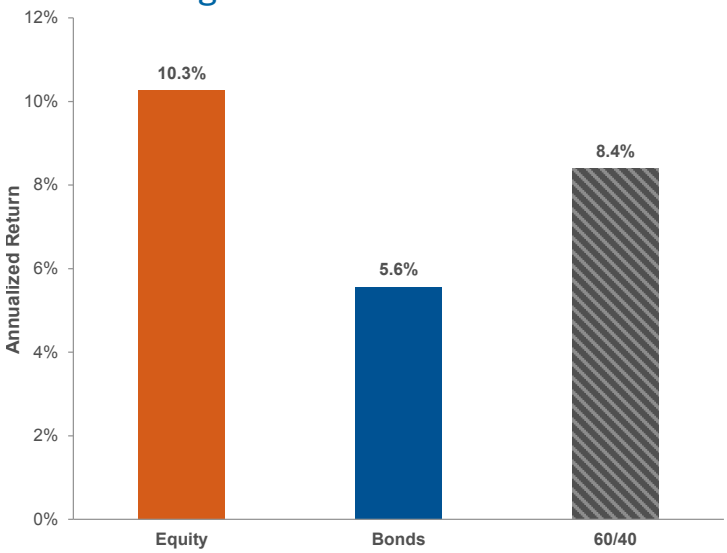
Initial Conditions

With such consistency over these long time horizons, it is tempting to extrapolate past returns into future expectations. Before doing so, however, we should compare the conditions of the past century, which provided strong tailwinds for financial markets, with today's environment. **Table 2** shows valuation metrics for U.S. stocks and bonds at the outset of each of these investment periods. In both the long (100-year) and short (25-year) periods, P/E ratios were low and yields were moderate to high.

Media Contact

Hewes Communications
+ 1 (212) 207-9450
hewesteam@hewescomm.com

Figure 1. 100-Year Returns



Source: Research Affiliates based on data from Robert Shiller and Bloomberg.

Table 1. Annualized Nominal Returns

	100 Years	50 Years	25 Years
U.S. Equities	10.3%	9.9%	9.7%
U.S. Bonds	5.6%	7.7%	7.6%
60/40 Portfolio	8.4%	9.0%	8.9%

Source: Research Affiliates using data from Robert Shiller and Bloomberg.

Table 2. Starting Valuation Metrics

	100 Years	50 Years	25 Years
Dividend Yield	5.5%	2.9%	3.1%
P/E Ratio	14.5	18.3	14.6
10-Year Bond Yields	3.7%	4.2%	7.9%

Source: Research Affiliates based on data from Robert Shiller and Bloomberg.

Notice that the 50-year period appears as an outlier. The equity P/E ratio was high, in the 18s, while the dividend yield was moderate to low, just below 3%, and bond yields were also moderate, just above 4%. Even starting from these conditions, the 60/40 portfolio returned 9% over the next 50 years. If 60/40 can flourish despite starting with a high equity multiple and a moderate bond yield, this mainstream portfolio must be a stalwart in all market environments, right?

Not so fast. Consider the first decade (1965–1974) after the start of the 50-year period, shown in **Figure 2**. Over this period, the 60/40 portfolio returned a measly 2.3% in nominal terms and a negative 2.8% in real terms. For that decade, equities and bonds returned 1% and 3.7%, respectively, while inflation averaged 5.2%. So, although the portfolio subsequently rebounded, the high multiple coupled with the low yield resulted in awful returns for the first decade. Today, multiples are even higher and yields even lower. We'll come back to this point later.

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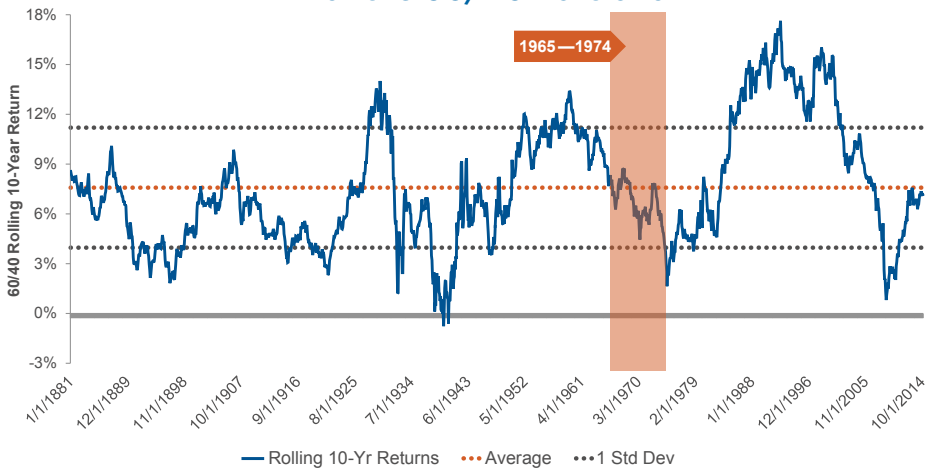
Let's also take a moment to reminisce about some of the changes to the business environment that have occurred over the last century. Henry Ford installed the first moving assembly line, indoor plumbing and home electrification became standard, women joined the work force, infant mortality rates declined dramatically in many parts of the world.... We could go on and on, but instead we leave it to you to take a few moments to reflect.

This is not to say that technological, social, and health-related advancements will not continue to occur over the next century.[4] However, it is fair to pose a question about the marginal importance of future advancement relative to the past. Asked in a practical way, if you had to make a choice between indoor plumbing (from a hundred years ago) or your smart phone (from a decade ago), which one would you choose? Which had a larger impact on society as a whole? Can we expect the same financial tailwinds from future advancements? Only time will tell.

The Past Decade: 2005–2014

Moving to more recent times, the past decade has seen ultra-low interest rates, a housing bubble, the Global Financial Crisis, the Great Recession,

Figure 2. Rolling 10-Year Nominal Returns for the 60/40 Portfolio



Source: Research Affiliates based on data from Robert Shiller and Bloomberg.

global unemployment at levels not seen in decades, and now a slow and geographically uneven global economic expansion. With all that turmoil, surely the 60/40 portfolio suffered mightily during this time! Well, actually, no. The 60/40 portfolio earned a respectable annual nominal return of 7.2%, or 5% real, over the past decade.

Of course 60/40 equities and bonds is not the only choice for investors these days. What happens if we expand the opportunity set? From **Figure 3** we can see that, on a real return basis, the 60/40 portfolio outperformed 9 of 16 core asset classes, many of which also enjoyed relatively strong performance. (Note that when we combine assets classes into a single graph, as we do here in Figure 3 and later in Figure 6, we choose to display real returns because investors' objectives are more often real than nominal.)

Surely if most global asset classes can perform this well in light of the events of the last 10 years, the future must be bright!

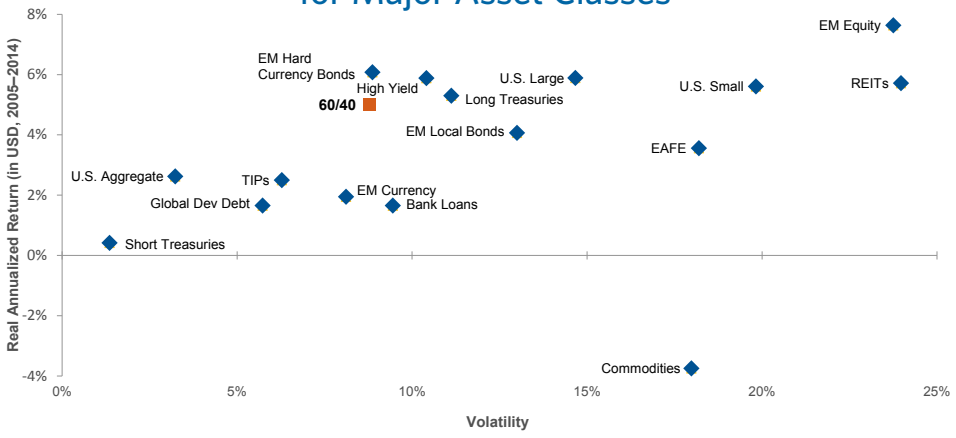
Looking Ahead Through a Simple Lens

When forming expectations, we focus on a 10-year investment horizon because returns over shorter horizons, say in any particular year, are essentially random. As far as we can tell, humankind hasn't figured out a way to reliably and consistently predict next year's returns. But noise dissipates as the horizon lengthens.

Let's consider a simple model assuming that returns are a function of starting yields. More specifically, we model each asset class with the following premises:

- Sovereign bond returns are equal to the starting nominal yield, thus assuming changes in interest rates are offset by changes in the reinvestment rate.
- Credit returns are equal to the starting nominal yield minus credit losses.
- Equity returns are the average of the starting dividend yield and the starting earnings yield (Garland, 2004), higher than dividend yield to account for reinvestment of retained earnings but lower than earnings yield to account for dilution (Bernstein and Arnott, 2003).
- REIT returns are equal to the starting dividend yield.[5]
- Commodity prices, proxied by short-term collateralized futures, change with inflation and therefore the return is set equal to expected inflation.

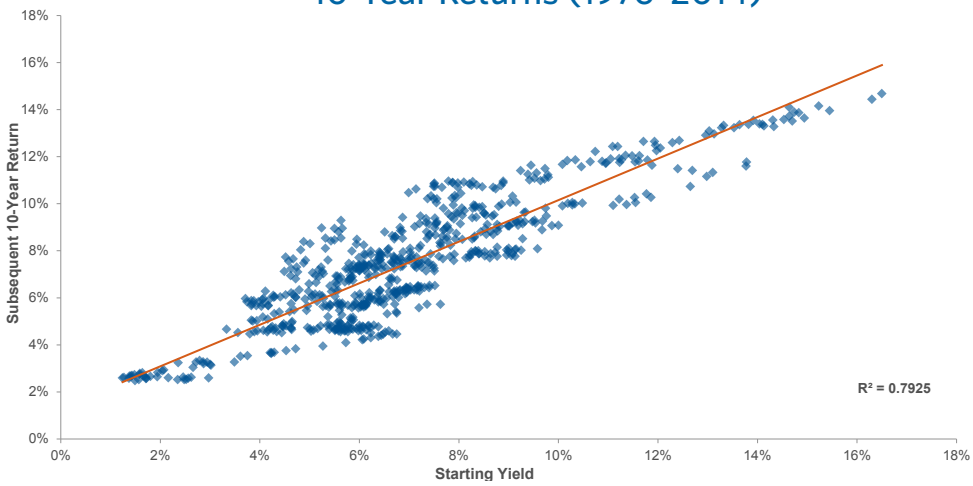
Figure 3. Annualized Real Returns (2005–2014) for Major Asset Classes*



*Inflation measured using U.S. CPI, non-seasonally adjusted.
Source: Research Affiliates based on data from Robert Shiller and Bloomberg, and FactSet.

Do we have convincing evidence that starting yields determine subsequent returns? Yes. **Figure 4** shows the relationship between nominal returns for U.S. fixed income indices versus their starting bond yields.[6] As we suggested previously, the lower the starting yield, the lower the subsequent 10-year return of the index. We can't look at this plot of returns and starting yields and, knowing that we start today with 2% bond yields, expect bonds to provide over the next 10 years the 8% return they provided over the past 50 years. We know that 2% bond yields means 2% bond returns.

Figure 4. Bond Valuations vs. Subsequent Nominal 10-Year Returns (1976–2014)*



*Barclays U.S. Aggregate for 1976–2014 and Barclays U.S. Treasury Index for 1990–2014.
Source: Research Affiliates based on data from Bloomberg.

Turning our attention to stocks, we find the same relationship: starting yields determine future returns. **Figure 5** displays the relationship between real global 10-year equity returns[7] (represented by the S&P 500, MSCI EAFE, and MSCI Emerging Market indices) and the average of the starting dividend and trailing 12-month earnings yields. To be sure, the relationship between yields and returns is fuzzier for stocks than bonds. Yet we cannot look at this plot and fail to discern a relationship.

Now, we have heard the arguments claiming this time is different. The forces of globalization may continue to propel corporate profits to an ever-greater share of economic output for a few more years (Brightman, 2014). Quantitative easing may continue to expand corporate cash flow beyond profitable reinvestment opportunities, facilitating financially engineered growth in earnings per share through an unprecedented quantity of stock buybacks. But these trends cannot continue indefinitely and seem more likely to reverse than continue over a 10-year horizon.

Figure 5. Equity Yields vs. Subsequent Real 10-Year Returns*

*1915–2014 for the United States, 1969–2014 for Global Developed Markets, 1994–2014 for Emerging Markets.
Source: Research Affiliates based on data from Robert Shiller and Bloomberg.

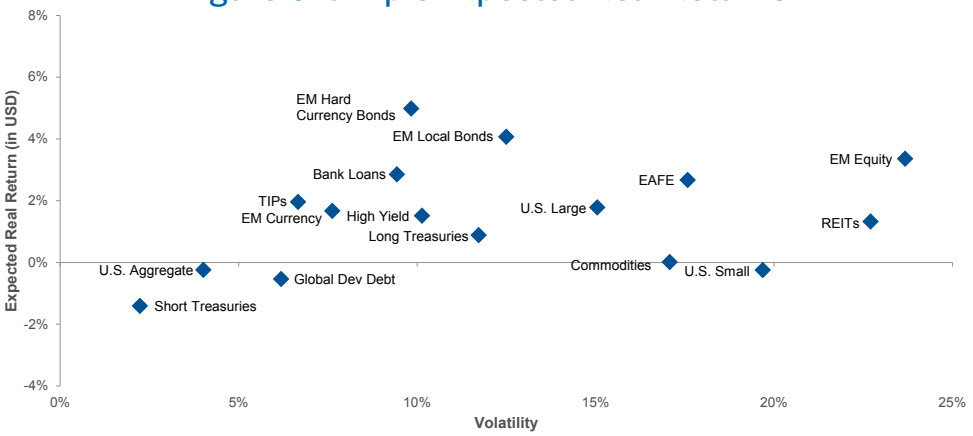
Let's take a look at the expected real returns for a range of asset classes using the simple and reliable model assuming that starting yields predict future returns. **Figure 6** shows the real expected return for our 16 asset classes using this approach.[8]

Another way to view these returns is based on representative portfolios used by investors. **Table 3** presents three common portfolios: the 60/40 portfolio discussed earlier, an equal-weight portfolio of all 16 asset classes, and a mainstream institutional portfolio.[9]

Looking Ahead with More Sophisticated Models

Visitors to our asset allocation website will notice that we employ a more sophisticated approach to determining expected returns for each asset class. This more formal methodology takes into account various additional considerations beyond the basic valuation metrics. Nonetheless, the results are similar.

Figure 6. Simple Expected Real Returns



Source: Research Affiliates based on data from Robert Shiller, Bloomberg, and FactSet.

Table 3. Expected Real Returns (Simplified Approach)

Portfolio	Expected Real Return
60/40	1.2%
Equal Weight	1.6%
Institutional	1.8%

Source: Research Affiliates based on data from Robert Shiller, Bloomberg, and FactSet.

One important refinement is the expectation of slower global growth going forward than we've experienced historically. We won't go into too much detail here because our thoughts on GDP growth are summarized in other articles which can be found on our website (Masturzo and Mazzoleni, 2015). But we will say that we expect global growth to be greatly influenced by two factors: the productivity impact of an aging population and the need to deleverage the enormous debts that nations around the world have accumulated.

A further consideration is changes in valuations. Our expectations of valuation changes affect all asset classes, but are especially noticeable in U.S. equities. **Figure 7** shows that on a Shiller P/E basis—the real price of the index divided by the average real EPS over the previous 10 years—U.S. equities are trading at very high levels compared to history and compared to other countries. (The horizontal axis labels specify the start date for each country.) We expect P/E multiples of U.S. stocks to contract, leading to an expected return even lower than the simple model predicted. We expect the reverse in other markets that are trading at relatively low Shiller P/E multiples.

Please visit our asset allocation website[10] to see our current expected returns across a wide range of investible asset classes.

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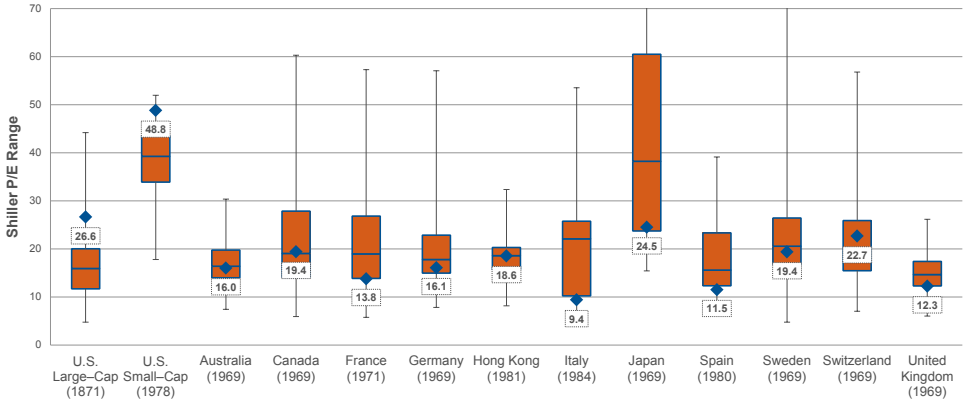
About Tomorrow

History is our guide for the future, but we interpret the historical record in light of the starting conditions. With that in mind, let us go back to where we opened in this piece, with Fleetwood Mac, and remind ourselves, "Don't stop thinking about tomorrow." We do not share the song's confidence that "it'll be better than before." But, certainly, "yesterday's gone, yesterday's gone."

Figure 7. Shiller P/E for Developed Equity Markets vs. Historical Ranges (Start Dates to 2014)



Source: Research Affiliates based on data from Robert Shiller and MSCI.

Endnotes

1. We leave it up to you to decide if there is any causation between Mr. Clinton's election as president (or, indeed, Al Gore's as vice president) and the subsequent Internet revolution.
2. Fans of the "Back to the Future" movies will recall the "flux capacitor" as the piece of technology that makes time travel possible.
3. In this case the 60/40 portfolio contains 60% S&P 500 Index (total return) and 40% 10-year constant maturity U.S. Treasuries because the more commonly used Barclays U.S. Aggregate Index did not exist until the 1970s.
4. Although we hold out hope that in the next 50 years someone figures out how to upload human consciousness or discovers the Fountain of Youth, we're not holding our breath.
5. A slightly more complicated model could include an average of dividend yield and Adjusted Funds from Operations (AFFO), but let's keep things basic for now.
6. The scatter plot we display for bonds is nominal because bonds provide nominal returns: Nominal bond yields correspond to nominal returns.
7. The scatter plot we show for equities is real because equities are real assets: Equity yields correspond to real returns.
8. Expected inflation is based on the U.S. 10-year break-even inflation rate as of November 2014. Foreign exchange returns are assumed to be zero, a parsimonious approach indeed.
9. The institutional portfolio is 30% U.S. Large Cap Equity, 24% EAFE Equity, 6% EM Equity, 5% Commodities, 5% TIPS, 4% High Yield, 3% Bank Loans, 3% EM Local Bonds, 10% U.S. Core Bonds, 5% Long Treasuries, and 5% Foreign Developed Debt.
10. www.researchaffiliates.com/AssetAllocation.

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Bernstein, William J., and Robert D. Arnott. 2003. "Earnings Growth: The Two Percent Dilution," *Financial Analysts Journal*, vol. 59, no. 5 (September/October):47–55.

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Disclosures