"The Case for the 20,000 Dow" Revisited

Many investors are worried that stocks have run up too far, too fast. But our research indicates that today’s high earnings are sustainable, and valuations are fair. While the market may drop at times, we think investors should maintain their target exposure to stocks.

When we published “The Case for the 20,000 Dow” in July 2012, many people thought it was wildly optimistic. At the time, investor sentiment seemed to be terminally shaken by the 2008 financial crisis and stock market collapse. The Dow Jones Industrial Average’s big bounce from its bottom in March 2009 hadn’t restored market confidence.

Some pundits even argued that the “new normal” was for bond returns to exceed stock returns. Investors bought into the bond story—literally—with aggregate net flows of nearly $350 billion into fixed income mutual funds in 2012 alone. Since then, the Dow has exceeded our expectations (and almost everyone else’s). The wiggly black line in Display 1 represents the Dow’s actual path; it is well above the blue line representing our median forecast back in mid-2012. But the Dow’s performance was well within the blue-shaded area, which represents our initial forecast of the full spectrum of potential outcomes from very poor to very good markets.¹

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¹Technically, our estimate for very poor markets is the 90th percentile outcome (we forecast stocks have a 90% chance of doing better), and our estimate for very good markets is the 10th percentile outcome (stocks have only a 10% chance of doing better).
With the Dow around 17,000, our 20,000 target now looks less ambitious than it did two years ago. Yet many investors—including some who have stayed on the sidelines for the last two years—worry that the stock market has entered bubble territory and is vulnerable to a sharp drop. What should investors do?

We recognize that there are risks in the stock market. There always are. But we remain relatively sanguine about the outlook for US stocks. Our median forecast of nearly 7% annualized returns for US stocks over the next five years is higher than many fearful investors expect—and much higher than our median forecast for bond returns.

But our median forecast calls for far more modest returns than investors have recently enjoyed (Display 2). It is lower than the 16.4% annualized return from June 2009 through June 2012, which was powered by a swift earnings recovery from the nadir of the credit crisis. It is far below the nearly 21% annualized return driven by valuation expansion from July 2012 through June 2014.

Our median forecast is also lower than our forecast two years ago because it assumes slower earnings growth over the next five years and a slight contraction in valuations from current levels, as Display 2 also shows.

In this paper, we explain our fundamental analysis of the outlook for US earnings, and then assess valuations: how the market is pricing those earnings.

We also consider the downside risks: What would it take for market returns to come in at the low end of our forecast range, and how does that compare to the downside two years ago? Finally, we address the implications for prudent investors trying to build a well-balanced investment strategy.

Display 2

### US Stock Returns Will Be Good, but Not Great

Composition of S&P 500 Returns

<table>
<thead>
<tr>
<th>Composition of S&amp;P 500 Returns</th>
<th>Total</th>
<th>Dividends</th>
<th>Earnings Growth</th>
<th>Valuation Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2009–June 2012</td>
<td>18.7%</td>
<td>2.0%</td>
<td>16.4%</td>
<td>(4.3)%</td>
</tr>
<tr>
<td>July 2012–June 2014</td>
<td>20.9%</td>
<td>2.0%</td>
<td>7.0%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Median Forecast July 2014–June 2019</td>
<td>6.8%</td>
<td>2.2%</td>
<td>5.2%</td>
<td>(0.6)%</td>
</tr>
</tbody>
</table>

As of June 30, 2014

Columns may not sum due to rounding. See Notes on Bernstein Capital Markets Engine at the end of this paper. **Neither past nor forecast performance is a guarantee of future results.**

Source: Bloomberg, FactSet, Standard & Poor’s, and Bernstein

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As in our earlier paper, we focus our analysis on the S&P 500 Index, rather than the Dow, because the S&P 500 is a better representation of US large-capitalization stocks.
**Margins: High but Sustainable**

S&P 500 earnings per share have rebounded from their unprecedented collapse in 2008 to reach all-time highs, even after adjusting for inflation (Display 3). As a result, many investors fear that inflation-adjusted earnings must fall from here. After all, good times never last forever.

So let’s look closely at two key drivers of earnings growth: the profit margin on each dollar of sales, and sales growth.

Our research indicates that earnings growth could be sustained for years, thanks to faster sales growth or wider profit margins—or both.

So far, most of the earnings recovery in this cycle has come from the rebound in profit margins from their recession-induced bottom in 2008 to all-time highs. We expect sales growth to be more important going forward, as the economy gains strength.

Today, many people worry that if sales growth accelerates, it will be at the expense of lower profit margins. We disagree: Our base-case forecast assumes that profit margins will remain roughly stable for the next five years.

Profit margins for nonfinancial companies in the S&P 500 have been trending upward for more than 20 years, more than doubling from 4% at the end of 1991 to 9.2% in mid-2014, with significant fluctuations along the way (Display 4).

Much of the improvement reflects lower interest expense. The rest came from lower depreciation and amortization of...
capital investments, lower taxes, and more efficient operations. Although margins cannot expand forever, we expect these benefits to persist for several more years.

Consider, for example, the decline in interest expense for nonfinancial US companies, which has fallen from nearly 4% of sales in 1990 (when the great boom in leveraged buyouts came to an end) to 1.6% today (Display 5). Why? Companies have deleveraged their balance sheets and refinanced their remaining debt at very low interest rates.

As interest rates rise, companies will have to roll over maturing debt at higher rates—but this won’t have a material impact on most companies’ interest expense for many years. Just as homeowners have refinanced their mortgages to lock in low rates, corporate America has refinanced its debt at longer maturities. Long-term debt as a percent of total debt for nonfinancial S&P 500 companies has risen to about 85% of total debt from 72% in 1990.

Enhanced Efficiency

Operational improvements have also contributed to higher margins, particularly for manufacturers. Back in the early 1990s, US manufacturing was in the doghouse, losing market share to Japanese firms producing higher-quality goods more efficiently. US manufacturers were forced to improve the quality of their goods and their operational efficiency—and they did. As a result, margins for the 173 manufacturing firms in the S&P 500 more than tripled from 4% to nearly 13%.

**Earnings Growth Could Be Sustained for Many Years.**

How? Just look at what two holdings in our Strategic Equities portfolios—Boeing and Danaher—have done.

Numerous consistent process improvements have made it possible for Boeing to increase delivery of its 737 narrow-body aircraft from 200 in 2004 to the nearly 500 expected in 2014, using the same operating footprint. As a result, Boeing’s commercial aircraft division has nearly tripled its operating margins from 4% in 2004 to about 11% this year, despite the margin dilution from the delayed rollout of the 787 Dreamliner.

Danaher is the master of continuous process improvement, which lowers its capital intensity and reduces waste. It applies this approach to both suppliers and itself, using it to turn around operations at firms that it acquires. In 1998, when Danaher bought Fluke, a maker of precision gauges, Fluke’s operating margin was 7%. Today, Fluke is the cornerstone of Danaher’s testing and measurement division, which had an operating margin of nearly 20% in its 2013 fiscal year.

Danaher has also moved some of its factories to low-cost regions, such as China. Globalizing production has been a significant driver of margin growth for many US companies over the past 20 years. It’s possible that globalization won’t continue to deliver strong margin growth in the future. After all, wages have more than tripled in China over the last 10 years. Eventually, Chinese suppliers will have to raise prices rather than absorb higher costs. An upward revaluation of China’s currency could also make shifting production to China less profitable.

But we see no reason to expect the benefits of globalization to reverse, which would cause margins to contract. Similarly, enhancing operational efficiency may not add to margins if everyone does it and pricing falls, but it is unlikely to lead to margin contraction.
**Higher Sales to Lift Earnings**

That’s not to say corporate earnings and margins will never fall. Displays 3 and 4 show that both have fluctuated around the long-term trend, typically in line with sales and the economy. Even if nothing else goes wrong, at some point there will be another recession.

But we think a recession is unlikely to occur soon. Although the current economic, earnings, and market recoveries have lasted for more than five years, recoveries after financial crises are typically prolonged. Indeed, we think economic growth is only now beginning to pick up from its sluggish post-crisis pace.

We forecast 3.9% real GDP growth in 2015 (versus 2.5% in 2014), because the two biggest headwinds to growth, in our analysis, are finally subsiding. They are the unprecedented, sustained consumer deleveraging from the dangerously high levels reached in 2007, and federal government spending cutbacks after 2009. Let’s look at each of these two headwinds, starting with the impact of consumer deleveraging.

The volume of US household debt outstanding declined in 2009, 2010, and 2011 and was flat in 2012, because banks were unwilling to lend and consumers were unwilling to borrow. By reducing home buying and consumer spending, falling consumer credit deepened the recession and slowed the pace of the economic recovery.

But in 2013, household debt finally began to grow again. A Federal Reserve survey of senior lending officers shows that loan growth resumed because banks began to ease the exceptionally strict underwriting standards they adopted five years ago. And with commercial lending also on the rise, more small businesses now say they plan to raise compensation. After years of stagnation, wages are likely to grow, which should also boost consumer spending.

The second headwind to economic growth has been a sustained dip

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**Display 5**

**Falling Interest Costs Have Boosted Margins**

Interest Expense as Percent of Sales

Through March 31, 2014  
For US large-cap stocks, excluding financials  
Source: Sanford C. Bernstein

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3 Sales and the economy typically move together, for logical reasons. The S&P 500’s aggregate sales have ranged from 50% to 64% of US GDP over the past 15 years.
in government spending, which usually grows, especially during economic downturns. Over the last 50 years, government spending growth has accelerated in most recessions to stimulate a recovery. For example, it rose sharply in the recession after the tech bubble burst in 2000.

But total government spending has been stagnant in recent years (Display 6). While the federal government did launch a large stimulus program in 2009, gridlock in Washington led to steep cuts in spending thereafter, while state and local governments cut spending as their tax revenues plunged. As a result, the public sector remained a drag on the recovery long after private sector growth resumed.

But federal government spending is now falling less, and state and local government spending is growing. California alone, which slashed its budget by nearly 6% in 2012, will increase its spending by 7% in the next 12 months. Meanwhile, corporate capital spending, which also fell in the recession, is nearing its 2007 rate.

These trends point to faster economic and sales growth ahead that could support earnings growth, even if margins are flat—particularly for cyclical firms and financials that survived the downturn in good shape. For example, Wells Fargo, among the best capitalized of the largest US banks, is charging off the lowest share of its loans in decades.

We think that positions it to capture the increase in consumer borrowing we foresee.

What Could Go Wrong?

Ironically, when we lay out these reasons for optimism about the economy, some investors fret that the US economy will then be too strong and overheat. What if demand rises faster than supply, pushing up wages and prices, perhaps to the point that the Fed needs to raise interest rates sharply?

We think it’s unlikely that the US economy will boil over in the next few years. While US capacity utilization has risen, contributing to booming corporate profits and declining unemployment rates, it remains well below the last two peaks. And with ample unused capacity in Europe and Asia, capacity constraints are unlikely to drive up prices anytime soon, at least for goods with global markets.

Eventually, another form of overheating might occur if companies overinvest and their efforts to capture greater sales drive down prices to the point that earnings fall. That’s the typical last stage of a business cycle. But we see no evidence of systematic overinvestment today. Indeed, companies have reaped higher profits on incremental sales during

Display 6

US Public Spending Is Recovering from Hitting an Air Pocket

Through June 30, 2014
Source: Bureau of Economic Analysis and AB

Bernstein.com
the past four quarters, suggesting that operating leverage is now allowing both sales growth and margin expansion to contribute to earnings growth.

Of course, even with a Goldilocks economy (not too hot and not too cold), it’s pretty much certain that interest rates will ultimately rise. The Federal Reserve has said it will “lift off” from the zero-rate level gradually, as and when it becomes confident that the economy is strong enough to withstand higher rates. Interest rates will eventually rise to the point that consumers and companies rein in their spending.

However, rising interest rates need not be a disaster. An increase in rates from today’s extremely low levels is likely to raise incomes and spending near term, because consumers and companies now have more cash and short-term investments than short-term debt.

Furthermore, consumers have refinanced their mortgages and companies have refinanced their debt at low, fixed interest rates, so rising long-term rates won’t drive up interest expense and slow spending for quite some time.

Of course, there are risks to this relatively rosy scenario. Weak growth in Europe and elsewhere is likely to be a drag on the US economy. A Europe-wide recession—or worse, the breakup of the euro—would be even more detrimental for the US.

Unexpectedly robust economic growth could also prompt the Fed to raise rates sooner and faster than expected. There could also be a geopolitical shock, although historically, few geopolitical shocks have had a sustained negative impact on the economy.

Any of these downside risks (and others we don’t foresee) could shock the markets. And even if big shocks are unlikely to occur, they have the potential to disrupt investment plans, a point we’ll return to below. Hence, we take these risks very seriously, and we include some very adverse scenarios in our forecasts for corporate earnings and other drivers of market returns.

The result is that our forecast spans a wide range of earnings scenarios, as Display 7 shows. If conditions turn out to be very poor, we forecast that earnings could shrink at a 7.6% annual rate. As explained above, we deem such a weak result unlikely.

We think that earnings growth close to our 5.2% median forecast is much more likely—and rather modest, given its 7% long-term average. Earnings growth might also be higher, as Display 7 also shows.

As of June 30, 2014
Very good conditions are the 10th percentile forecast; very poor conditions are the 90th percentile forecast. Forecasts derived from Bernstein Capital Markets Engine forecasts of return on equity and book growth. See Notes on Bernstein Capital Markets Engine at the end of this paper. Forecasts do not guarantee future results or a range of future results.
Source: Bernstein
Valuations Are Fair

Investor anxiety doesn’t only revolve around earnings growth; market valuations are also a concern. Many investors are nervous because the S&P 500’s price-to-forward-earnings ratio (P/E) was 15.4 at the end of June 2014, above its 13.0 average since 1970. In our view, current valuations are reasonable, given today’s strong corporate balance sheets and unusually low bond yields.

Display 8 shows the strong relationship between the S&P 500’s P/E multiple and the 10-year Treasury yield since 1970. The curved trend line shows the average P/E for a given level of interest rates. In general, stock market valuations have been high when interest rates were low—and low when interest rates were high. That’s logical, since low interest rates are good for current earnings, as explained above.

Low interest rates also boost the P/E multiple because a key driver of equity valuations is the discount rate applied to future earnings. Corporate managements apply a similar present value calculation when assessing how to price potential corporate investments. Exceedingly low prevailing bond yields also make stocks look great by comparison.

Valuations have risen since we published our forecast for the 20,000 Dow in 2012, but they remain far below trend. This implies that valuations currently reflect expectations that earnings will decline or interest rates will rise—or both.

In any event, history suggests that market valuations tell us little about near-term market direction. The left side of Display 9 shows one-year returns for the S&P 500, arrayed by the price-to-forward earnings at the beginning of each period. After previous periods when the market was close to its current valuation (indicated by the boxed area), subsequent annual

Display 8

Stock Market Multiples Tend to Rise as Bond Yields Fall
Recent Years Have Been Exceptional

*S P/E is one-year trailing
**Trend line is for 1970–2007
Source: Federal Reserve Board, Haver Analytics, Standard & Poor’s, and Bernstein
returns were sometimes bad and sometimes great. The range of one-year returns was also wide when valuations were lower or higher than they have been in recent years.

Basically, stocks can be very volatile in the short run. The market could rise or fall significantly over the next year, regardless of its valuation.

If you extend your time frame, however, the behavior of the market looks much more predictable. The right side of Display 9 shows that over the subsequent five years, market returns have been more predictable, reflecting initial valuation levels. In particular, when the P/E ratio was above 20, the subsequent five-year S&P 500 return was almost always low or negative. The good news is that valuations are well below that danger zone today.

In sum, we think that current stock market valuations are not a clear signal of what will happen in the next year or two. Stocks could drop, and if they did, we'd likely see it as a buying opportunity. Or the market could soar, possibly to a point where we would recommend paring back. But investors should focus on what's likely to happen over longer time horizons, which are more predictable.

Our Market Forecast

Given the possible paths for economic growth, interest rates, corporate earnings, and other key variables, we've updated our Dow projections in Display 10 (next page). We added a dark purple area showing how things look from today's vantage point to the blue area showing our forecast range back in 2012. The gray area is where our two forecast ranges overlap.

The circle near the middle shows that our median forecast now calls for the Dow to reach 20,000 by early 2018. That's several years sooner than we expected a couple of years ago, because

Display 9

Time Frame Matters

As of June 30, 2014
Left side of display shows rolling four-quarter returns from September 1975 to June 2014. Right side shows rolling 20-quarter returns from September 1979 to June 2014. Source: FactSet, Haver Analytics, Standard & Poor’s, and Bernstein
(thus far) we have experienced a better-than-average path for the economy and the capital markets. Our forecasts back in 2012 and our forecasts today reflect the fact that the future is uncertain. Like life, markets can’t be predicted with precision: Too many things can happen. That’s why we think it makes sense to forecast the range of potential outcomes, by running thousands of scenarios, and taking into account both today’s actual conditions and the potential for random shocks.

The slim dark purple area along the top right of Display 10 shows that our current forecast for what very good markets might deliver is a little higher than it was in our 2012 forecast (the upper edge of the gray area).

More important, the wider blue area along the bottom right shows that the bottom of our current forecast range is significantly less dismal than the very poor outcomes we thought possible back in 2012.

In a nutshell, the US economy and US companies have become stronger and more resilient over the last two years. That’s why the Dow has progressed faster toward the 20,000 mark than in our median forecast back in 2012—and also why we think the downside risk has diminished. This is good news and should be reassuring to nervous investors. But our model does offer some grounds for caution. Although it’s a bit harder to see in the display, the dark purple median line representing our current forecast has a flatter slope than the blue median line representing our forecast two years ago. That’s because our median return forecast has declined as valuations and earnings have risen. We also expect market volatility to continue its recent rise from its unusually low levels early this year.

Display 10
We Now Expect the 20,000 Dow by 2018—and Less Downside

Forecast Range
- June 2012
- June 2014
- Overlap

Actual DJIA Levels

Very Good Markets

Median Forecast: June 2014

Median Forecast: June 2012

Very Poor Markets

Forecast ranges from the 90th and 10th percentile forecast levels for the Dow Jones Industrial Average. Based on Bernstein Capital Markets Engine projections as of March 31, 2012, and June 30, 2014. See Notes on Bernstein Capital Markets Engine at the end of this paper. Data do not represent past performance and are not a promise of actual future results or a range of future results.

Source: Dow Jones and Bernstein
Prudent Planning

These points present serious challenges to investment planning over the next few years. Based on current conditions, our median five-year forecasts for the returns of most major asset classes are significantly below the average for the past 20 years (Display 11).

Given extremely low interest rates and the likelihood that interest rates will rise in the next few years, we expect particularly low returns on bonds.

Our median forecast for US equity returns is well below the very strong historical average. We expect emerging-market equities to perform in line with the past 20 years, in the median case.

Developed international equities have higher return potential in the median case than US equities, reflecting lower current valuations and slower progress in restoring economic and earnings growth in most of Europe and Japan.

Average annualized returns for developed international equities have been below returns for US equities for the last 20 years, because Japan has suffered from deflation, and Europe has been hit by the sovereign debt crisis and recession. But US and developed international equities have traded leadership many times. They are likely to do so again.

As we extend our horizon to 30 years, our median annualized forecasts call for higher returns for both stocks and bonds: 8.0% annualized returns for globally diversified stocks and 3.3% annualized returns for intermediate-term muni bonds, as shown on the left side of Display 12 (next page). These somewhat higher returns reflect our expectation that capital markets will normalize in the years after central banks end their post-crisis stimulus programs.

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**Display 11**

**Our Five-Year Return Outlook Is Below the Historical Average for Most Asset Classes**

<table>
<thead>
<tr>
<th>Past 20-Year Average</th>
<th>Median Five-Year Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Municipal Bonds</td>
<td>3.9%</td>
</tr>
<tr>
<td>US Investment-Grade Bonds</td>
<td>2.1%</td>
</tr>
<tr>
<td>Global High Yield Bonds</td>
<td>3.5%</td>
</tr>
<tr>
<td>US Equities</td>
<td>6.8%</td>
</tr>
<tr>
<td>Developed International Equities</td>
<td>7.7%</td>
</tr>
<tr>
<td>Emerging-Market Equities</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

As of June 30, 2014
Hedged annualized returns in US dollars. Markets are represented from left to right by the Lipper Short/Intermediate Blended Muni Fund Average, Barclays US Aggregate Index, Barclays Global High Yield Index, S&P 500 Index, MSCI EAFE Index, and MSCI Emerging Markets Index. See Notes on Bernstein Capital Markets Engine at the end of this paper. Neither past nor forecast performance is a guarantee of future results.

Source: Barclays, FactSet, Lipper, MSCI, Standard & Poor’s, and Bernstein
The higher expected returns from stocks come with greater investment risk: The middle of Display 12 shows that we estimate there’s a 91% chance that global stocks could lose 20% or more of their value from peak to trough during some period within the next 30 years, and that there’s less than a 2% risk of such a large loss from bonds.

We think most investors need an allocation to bonds to mute the impact of the potential big swings in stock returns. Given the low expected returns from bonds, the key is to have enough exposure to risk-mitigating bonds so that you can sleep at night—but no more.

That’s because bonds pose another type of risk. We estimate that there’s a 41% chance that a 65-year-old couple spending $100,000 (adjusted for inflation) per year from a $3 million bond portfolio would deplete their capital within 30 years. That’s not what they would want, given the likelihood that at least one of them will live longer.

Lower expected returns make it critical to maintain enough exposure to return-seeking investments such as stocks, so that portfolios are likely to achieve their long-term growth objectives.

In this challenging environment,
diversifiers with uncorrelated returns—such as real assets and alternatives—have become more valuable than ever in helping investors to reach their goals.

We believe that investment plans should be designed to succeed even in very hostile environments, so our wealth planning for clients is based on their having enough capital even in very poor markets (the 90th percentile). Within that framework, investors can choose the balance of potential return and risk right for them.

Display 12 also shows three of the many potential asset mixes that take these principles into account.

A conservative investor might opt for the mix with only 4.9% return potential, in the median case, although it poses 17% depletion risk, in order to keep the odds of a 20% loss below 2%.

A growth-oriented investor might opt for a mix with 7.2% return potential and 8% depletion risk, if she could tolerate a 64% chance of losing 20% at some point.4

A moderate-risk investor could split the difference, opting for less depletion risk than the conservative investor and less risk of a 20% peak-to-trough loss than the growth investor.

**Update Your Plan Now**

Back in 2012, we recognized the possibility that bad things could happen, but we stressed the importance of establishing and maintaining the appropriate strategic allocation to stocks. That turned out to be very valuable advice. Most of our clients have stayed at their strategic target exposure to equities over the last few years, as we recommended. Their discipline in sticking with stocks led to exceptionally high returns.

If you worked with us to devise an investment plan several years ago, your portfolio’s value has probably grown more than your plan projected. Your Bernstein Advisor can help you to weigh the wonderful choices you may now have, such as increasing your spending, making larger gifts, or taking less risk.

Even if your portfolio is behind plan, now is an excellent time to revisit your goals and what it will take to achieve them. Chances are that your circumstances and objectives have changed over the last few years. Market conditions certainly have.

Your Bernstein Advisor can also show you the trade-offs for various potential asset allocations and spending plans, in order to help you make informed decisions.

The choices you face may be difficult. Two years ago, above-average return potential reduced the odds that a moderate or high growth portfolio would have a 20% peak-to-trough loss over some period within the next 30 years.

Today, the risks of a large peak-to-trough drop are higher than they were two years ago. But if you cut your exposure to stocks to avoid such losses, you increase the likelihood that you will run out of money.

Investors are right to be concerned that the market might drop. But that shouldn’t be a reason to give up on making—or sticking to—your investment plan.

So make a plan—and don’t count on median returns. By definition, median returns will give you only a 50% chance of success.

Your Bernstein Advisor will help you plan for a 90% chance of success by helping you identify how much capital you need to support your spending goals, and how to invest that capital and any other capital that you may have, given your risk tolerance and time horizon. ■

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4 Fortunately, our Dynamic Asset Allocation service is designed to reduce portfolio volatility, without detracting from long-term returns.
Notes on Bernstein Capital Markets Engine

Our proprietary model uses our research and historical data to create a vast range of market returns, taking into account the linkages within and among the capital markets, as well as their unpredictability, and creates a probability distribution of outcomes for each asset class.

Expected market returns on bonds are derived taking into account yield and other criteria. An important assumption is that stocks will, over time, outperform long bonds by a reasonable amount, although this is in no way a certainty. Moreover, actual future results may not meet Bernstein's estimates of the range of market returns, as these results are subject to a variety of economic, market, and other variables. Accordingly, the analysis should not be construed as a promise of actual future results, the actual range of future results, or the actual probability that these results will be realized.

Notes on Wealth Forecasting System

1. Purpose and Description of Wealth Forecasting System
Bernstein's Wealth Forecasting System℠ is designed to assist investors in making long-term investment decisions regarding their allocation of investments among categories of financial assets. Our planning tool consists of a four-step process: 1) Client Profile Input: the client's asset allocation, income, expenses, cash withdrawals, tax rate, risk-tolerance level, goals, and other factors; 2) Client Scenarios: in effect, questions the client would like our guidance on, which may touch on issues such as when to retire, what his/her cash-flow stream is likely to be, whether his/her portfolio can beat inflation long term, and how different asset allocations might impact his/her long-term security; 3) The Capital Markets Engine (see note above); and 4) A Probability Distribution of Outcomes: Based on the assets invested pursuant to the stated asset allocation, 90% of the estimated ranges of returns and asset values the client could expect to experience are represented within the range established by the 5th and 95th percentiles on “box and whiskers” graphs. However, outcomes outside this range are expected to occur 10% of the time; thus, the range does not establish the boundaries for all outcomes.

2. Rebalancing
Another important planning assumption is how the asset allocation varies over time. Cash flows and cash generated from portfolio turnover are used to maintain the selected asset allocation between cash, bonds, stocks, REITs, and hedge funds over the period of the analysis. Where this is not sufficient, assets are assumed to be sold to rebalance.

3. Expenses and Spending Plans (Withdrawals)
All results are generally shown after applicable taxes and anticipated withdrawals and/or additions, unless otherwise noted. Liquidations may result in realized gains or losses.

4. Modeled Asset Classes
The assets or indexes used in this analysis are listed under Capital Markets Engine Projections (Next 30 Years).

5. Volatility
Volatility is a measure of dispersion of expected returns around the average. The greater the volatility, the more likely it is that returns in any one period will be substantially above or below the expected result. The volatility for each asset class used in this analysis is listed in the Capital Markets Engine Projections section at the end of these Notes. In general, two-thirds of the returns will be within one standard deviation. For example, assuming that stocks are expected to return 8.0% on a compounded basis and the volatility of returns on stocks is 17.0%, in any one year it is likely that two-thirds of the projected returns will be between (8.9)% and 28.8%. With intermediate government bonds, if the expected compound return is assumed to be 5.0% and the volatility is assumed to be 6.0%, two-thirds of the outcomes will typically be between (1.1)% and 11.5%. Bernstein's forecast of volatility is based on historical data and incorporates Bernstein's judgment that the volatility of fixed income assets is different for different time periods.

6. Technical Assumptions
Bernstein's Wealth Forecasting System is based on a number of technical assumptions regarding the future behavior of financial markets. Bernstein's Capital Markets Engine is the module responsible for creating simulations of returns in the capital markets. These simulations are based on inputs that summarize the current condition of the capital markets as of June 30, 2014. Therefore, the first 12-month period of simulated returns represents the period from June 30, 2013, through June 30, 2014. A description of these technical assumptions is available on request.

7. Tax Implications
Before making asset allocation decisions, an investor should review with his/her tax advisor the tax liabilities incurred by the different investment alternatives presented herein, including any capital gains that would be incurred as a result of liquidating all or part of his/her portfolio, retirement-plan distributions, investments in municipal or taxable bonds, etc. Bernstein does not provide tax, legal, or accounting advice. In considering this material, you should discuss your individual circumstances with professionals in those areas before making any decisions.

8. Tax Rates
Bernstein's Wealth Forecasting System uses federal tax rates blended with applicable state tax rates by including, among other things, federal deductions for state income and capital gains taxes. The state tax rate generally represents Bernstein's estimate of the top marginal rate, if applicable.
9. Capital Markets Engine Projections (Next 30 Years)

<table>
<thead>
<tr>
<th></th>
<th>Median 30-Year Growth Rate (%)</th>
<th>Mean Annual Return (%)</th>
<th>Mean Annual Income (%)</th>
<th>One-Year Volatility (%)</th>
<th>30-Year Annual Equivalent Volatility (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Cash</td>
<td>2.2</td>
<td>2.4</td>
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<td>Intermediate-Term Diversified Municipal Bonds</td>
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<td>3.6</td>
<td>3.4</td>
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<td>Intermediate-Term Municipal Inflation Bonds</td>
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<td>3.0</td>
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<td>2.8</td>
<td>16.3</td>
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<td>US Small- and Mid-Cap Stocks</td>
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<td>2.5</td>
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<td>Emerging-Market Stocks</td>
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<td>27.7</td>
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<td>16.4</td>
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<td>15.6</td>
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<td>Inflation</td>
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<td>3.4</td>
<td>n/a</td>
<td>1.0</td>
<td>9.9</td>
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</table>

Based on 10,000 simulated trials each consisting of 30-year periods.
Reflects Bernstein’s estimates and the capital-market conditions of June 30, 2014.
Does not represent any past performance and is not a guarantee of any future specific risk levels or returns, or any specific range of risk levels or returns.

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