FDx ADVISOR NOTES

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Insights & Observations for Investment Advisors

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Rethinking Asset Allocation

Part II: Use Strategic Tilts to Manage Compensation-for-Risk

In *Rethinking Asset Allocation Part I*, we focused on improving asset class selection to design portfolios that better diversify macro risk factors. In *Part II,* we will focus on managing portfolios to better align with client risk tolerance *and* expected compensation-for-risk. What do we mean by "managing compensation-for-risk?" Let's start with what we don't mean:

1. ***Changing your equity exposure based on what you think the market will do over the next week, month, or quarter, is not managing compensation-for-risk. It is market timing.*** For most investors, market timing is a losing proposition over the long-term.

2. ***Selecting a target asset mix and allowable ranges*** based on very long-term expectations for return and risk, ***is not managing compensation-for-risk, it is setting long-term investment policy guidelines.*** This is an important step for investors to effectively manage their assets relative to their goals.

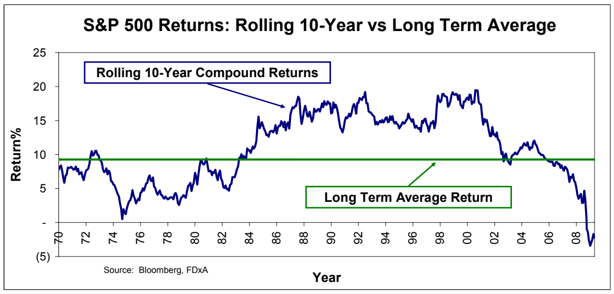
Somewhere between short-term market timing and very long-term investment policy guidelines is where compensation-for-risk is managed.

Unfortunately, too many people have bought into the concept of "buy-and-hold" based on long-term averages, without regard to valuation or expected compensation-for-risk**. Brand name opinions can be hard to resist. For example**:

- Jeremy Siegel – *Stocks for the Long Run* – 1994, 1998, 2002, 2008
  - 6-7% long-term real returns for stocks, 3-4% risk premium over bonds, 20+ year horizon
- Ibbotson/Chen – *The Supply of Capital Market Returns* – 2001
  - 4% estimated equity risk premium over bonds

So, near the 1999/2000 market peak, **when the P/E ratio was extraordinarily high, recognized opinion makers were publishing pieces that reinforced *buy-and-hope* (note a typo).** The message was, "if you hold it long enough, you will do fine." At one level this makes sense – if the market is overvalued by 30% when you buy, a 30% correction will only cost you 0.30% *on-average*, if you hold it for 100 years. If you hold it for 30 years, the cost is 1.0% *on-average*. In this case, instead of getting Jeremy Siegel's 6-7% real return, you get 5-6% - still a good number, still better than bonds.

But, what if you hold it for 10 years? Using my oversimplified math, the cost is now 3% a year. If the correction is 50% instead of 30%, the cost is a whopping 5% per year over 10 years - no premium over bonds in this case - and 10 years qualifies as "long-term" for most people. Here are 10-year rolling returns versus the long-term average:



As you can see, you rarely earned the long-term historical average of 9.3% as shown by the horizontal green line. You are either well above it, or well below it. **If 2008 taught us nothing else, the road to the poorhouse is paved with blind faith in the long-term average**.

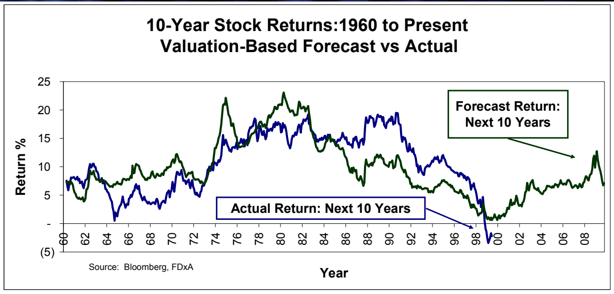
To be fair, 10 years ago, not all opinion makers were touting blind faith in the long-term historical average return. Robert Shiller, John Hussman and others argued that stocks were significantly overvalued based on various P/E metrics. Rob Arnott and Ron Ryan published an article in 2000, *The Death of the Equity Risk Premium*, where they "charitably" estimated the *forward-looking* equity risk premium over bonds to be a *minus* 0.9%.

Few investors heeded the warnings. Why? Was it because their analysis was too simple? Not mysterious enough? All Shiller and Hussman did was point out that the market was overvalued on their preferred metric. Arnott and Ryan just added up two key components of stock returns – dividend yield and dividend growth – then compared it to bond yields. The minus 0.9% estimate was charitable because it ignored the over valuation.

Valuation matters. Valuation goes to the "compensation" part of compensation-for-risk. The chart to the right shows 10-year historical returns versus the midpoint of four forecasts using different valuation metrics:

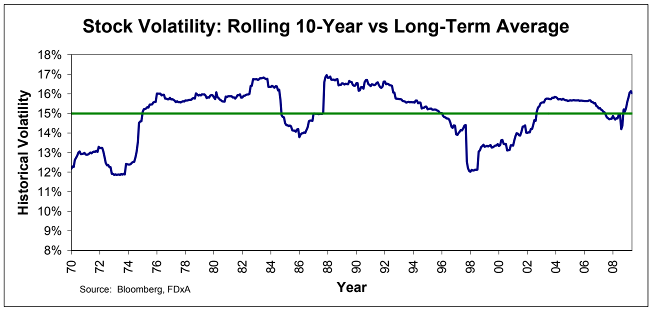
- Shiller's price to 10-year average earnings
- Hussman's price to peak earnings
- Price to trailing 12-month earnings
- Earnings yield – bond yield spread (Fed Model)

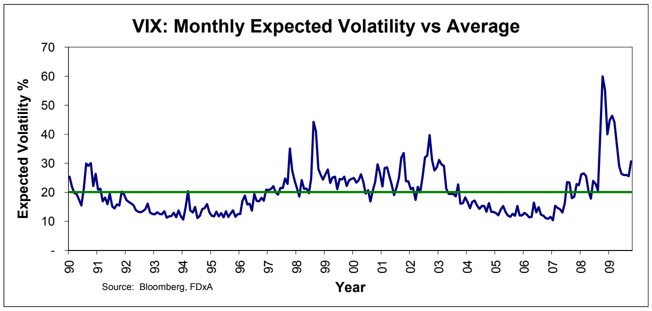
The forecast method is straightforward. Total returns are simply the combination of the components of return – dividend yield, dividend growth, and valuation change – compounded over 10 years. Dividend growth is tied to long-term economic growth. The valuation change component assumes that any over or under valuation is corrected within the 10 year time frame. A simple model with useful results.



As you can see, the midpoint valuation-based forecast tracks the pattern of actual 10-year stock returns reasonably well. The correlation of the forecast with subsequent 10-year returns is almost 70%. The valuation-based expected return peaked in the first quarter at more than 12%. It has declined to just over 7% with the market rally since March.

Valuation is not enough. We all know an expensive market can get more expensive and a cheap market can get cheaper, particularly over time frames shorter than the 10 year horizon used in the above forecasts. However, we do not want to get drawn into forecasting market momentum for shorter time frames at this stage. **We will use the valuation-based, forward-looking, long-term return forecasts for the "compensation" part of compensation-for-risk. Next, we need to address the "risk" portion of compensation-for-risk, and it is prudent to avoid the common practice of overreliance on the long-term average for risk.** Like return, risk spends precious little time at its long-term mean as shown in the charts below:

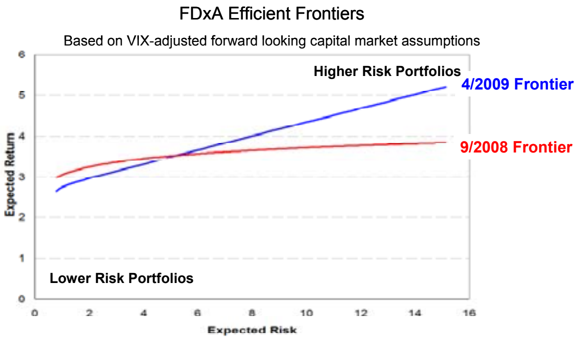




The chart above left shows rolling 10-year risk measured as standard deviation of historical returns. This is a backward-looking measure. Fortunately, **we have a forward-looking measure of risk, the VIX,** which is shown in the chart above right. The VIX is the Chicago Board Options Exchange (CBOE) Market Volatility Index. The VIX is an index like the S&P 500 except that the S&P 500 measures price and the VIX measures expected volatility. To be more precise, it measures implied volatility from options that trade on the S&P 500. Implied volatility is a forward-looking measure of risk, and is used as an input to the cost of hedging equity risk.

Notice in the above chart how the VIX tends to be low during stable economic times and spikes during periods of instability. Also take note of the 1998 to 2002 period that captures the peak of the tech bubble. Historical volatility was well below average while the forward-looking VIX was well above average, correctly signaling a riskier equity market environment. The VIX provided better insight into risk than did the historical average.

With a valuation-based 10-year return forecast and a forward-looking cost of risk, we can produce forward-looking efficient frontiers that capture the evolving compensation-for-risk offered by the markets as shown below:



The efficient frontier helps us identify portfolios that offer the highest compensation for a given level of risk. However, **we still must determine which portfolio is most appropriate for a given client**, and the typical process used with a risk tolerance questionnaire can be improved**.** Given a set of questionnaire responses, you get the same result whether the responses were provided in September of 1998, 2003, 2008 or any other date you to pick:

Month-End	Questionnaire Result	Target Asset Mix	Market Conditions
September 1998	Moderate Risk Tolerance	50% Stocks 50% Bonds	4.4% Earnings Yield 4.4% Govt Bond Yield 4.4% Short Term Yield 41.0% VIX
September 2003	Moderate Risk Tolerance	50% Stocks 50% Bonds	5.2% Earnings Yield 3.9% Govt Bond Yield 0.9% Short Term Yield 22.7% VIX
September 2008	Moderate Risk Tolerance	50% Stocks 50% Bonds	6.3% Earnings Yield 3.8% Govt Bond Yield 0.9% Short Term Yield 39.4% VIX

When the questionnaire results are put on a table like the one above, it looks a bit silly. Typical questionnaire-based allocation recommendations don't change much despite large changes in relative valuations among stocks, bonds and cash, or large changes in the VIX.

The reason is that the typical questionnaire process treats risk tolerance as a risk objective. The questionnaire result gets mapped directly to an asset allocation target (risk objective) rather than to an investor risk tolerance factor. This direct mapping of risk tolerance to risk objective relies on the assumption the investor will experience the very long-term historical average for risk and return. It ignores the evolving compensation-for-risk. We have already seen that there can be very long periods of time when return is well below the very long-term average and risk is well above it.

The result? The questionnaire helps identify how much pain the client can take (risk tolerance), and the questionnaire-based recommendation sets a target asset mix (risk objective) to inflict precisely that amount of pain, without regard to market conditions. We can do better for our clients.

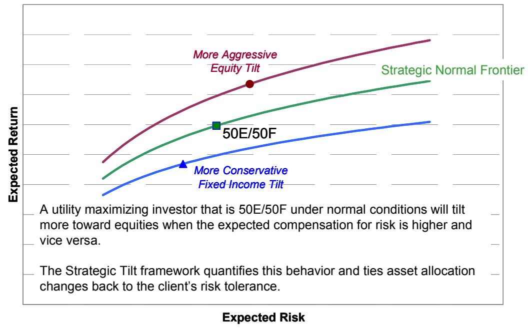
There are two primary solutions for varying the asset mix based on changing market conditions:

- Product-based: A tactical asset allocation product is used for a portion of the portfolio. The size of the portion and magnitude of the tactical shifts determine the degree to which overall asset mix is changed.

- Client-based: The overall asset allocation is strategically tilted, within the investment policy guidelines, based on the *interaction* of changing market conditions with the client's risk tolerance.

We will focus on the client-based, strategic tilt approach.

How much risk an investor should take depends on the investor's risk tolerance *and* the expected compensation-for-risk. The good news is that we can use the existing questionnaire process to identify a client's risk tolerance and apply that risk tolerance to forward-looking efficient frontiers. This process allows us to strategically tilt the asset mix according to the client's risk tolerance. This strategic tilt framework is illustrated in the chart below:



The "strategic normal" frontier assumes "normal market conditions" – meaning asset classes are fairly valued and risk levels are average. The forward-looking frontiers capture valuations and expected risk as described previously. We apply the investor risk tolerance factor from the strategic normal frontier to the forward looking frontier to determine the strategic tilt.

Essentially, **the strategic tilt process addresses the question, what asset allocation should an investor hold under current conditions, given what they would hold under normal conditions?**

For an investor that normally holds 50% of their portfolio in equities, here is what the strategic tilt model has recommended from October of last year to October of this year:

Month	Normal Equity Weight %	Recommended Equity Weight%	Strategic Equity Tilt %	S&P 500 Return%	Equity Tilt Gain/Loss%
Oct-08	50.0	35.0	(15.0)	(16.8)	2.5
Nov-08	50.0	35.0	(15.0)	(7.2)	1.1
Dec-08	50.0	35.0	(15.0)	1.1	(0.2)
Jan-09	50.0	36.0	(14.0)	(8.4)	1.2
Feb-09	50.0	36.0	(14.0)	(10.6)	1.5
Mar-09	50.0	48.0	(2.0)	8.7	(0.2)
Apr-09	50.0	36.0	(14.0)	9.6	(1.3)
May-09	50.0	38.0	(12.0)	5.6	(0.7)
Jun-09	50.0	65.0	15.0	0.2	0.0
Jul-09	50.0	65.0	15.0	7.6	1.1
Aug-09	50.0	65.0	15.0	3.6	0.5
Sep-09	50.0	45.0	(5.0)	3.7	(0.2)
Oct-09	50.0	41.0	(9.0)	(1.9)	0.2

Maximum over/underweight of 15%

For November, the model is underweight equities by 15%, as the VIX has risen. The equity tilts are shown below with the P/E ratio and the VIX.

Month	Strategic Equity Tilt %	VIX	P/E Ratio
Oct-08	(15.0)	39.4	15.8
Nov-08	(15.0)	59.9	13.3
Dec-08	(15.0)	55.3	12.4
Jan-09	(14.0)	40.0	14.8
Feb-09	(14.0)	44.8	12.2
Mar-09	(2.0)	46.4	10.9
Apr-09	(14.0)	44.1	12.8
May-09	(12.0)	36.5	14.1
Jun-09	15.0	28.9	14.9
Jul-09	15.0	26.4	15.8
Aug-09	15.0	25.9	17.0
Sep-09	(5.0)	26.0	18.9
Oct-09	(9.0)	25.6	21.1
Nov-09	(15.0)	30.7	21.0

The historical average for the VIX is about 20, so its levels over the past year have been very high.

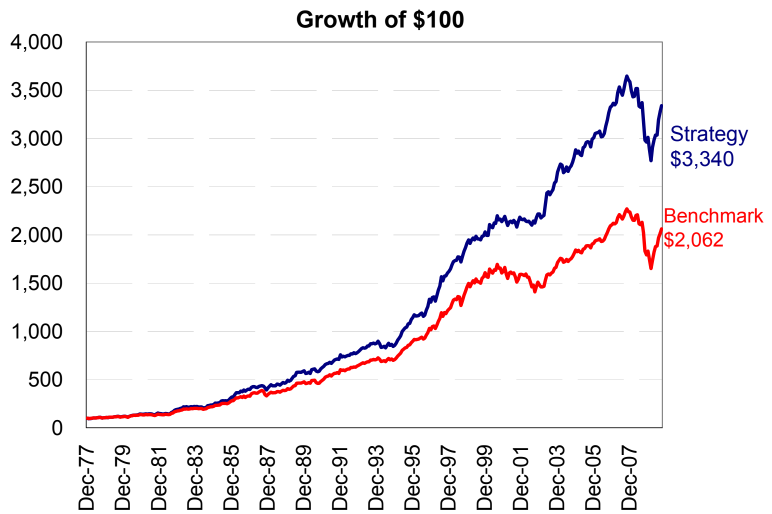
Very high levels of risk implied by the VIX will lead the tilt model to significantly underweight equities *for a moderate risk tolerance*, unless valuations are very low to compensate the investor for the excess risk.

Note that when the P/E was very low in March, the underweight was small even though the VIX was very high. The only equity overweights during the last year occurred when the VIX was below 30 and the P/E was 17 or below.

The levels referenced above may provide you some assistance in conversations with clients but they are not intended as trading rules. While they are key inputs to the model that affect the equity weight of the portfolio, other factors that help determine the equity weight include the relative attractiveness of and correlation with other asset classes, and the risk tolerance factor.

Currently the model finds Treasury Bonds unattractive as well. Don't be fooled by the negative year-over-year headline inflation rate. Core inflation is running at 1.5% year-over-year and during the first nine months of this year, headline consumer prices have risen by 2%. On current trends, the headline inflation rate is on pace to hit 2.5% by year-end. Given debt levels and risks in the system, policymakers would be happy with this level of inflation.

While understanding how the strategic tilt model has behaved during the extremely difficult and volatile past year is important, it is also important to understand its behavior over longer time frames. Below we provide simulated results for the balanced model going back to 1978.



Performance Statistics

	Portfolio	Benchmark
Reward Measures		
Annualized Return(%)	11.7	10.0
Excess Return (%)	1.7	-
Risk Measures		
Standard Deviation (%)	9.2	8.8
Beta	1	-
Tracking Error (%)	2.9	-
Compensation-for-Risk		
Sharpe Ratio	0.6	0.4
Information Ratio	0.6	-
Experience Measures		
Upside Capture (%)	106.6	-
Downside Capture (%)	93.9	-
Best Quarter (%)	26.1	24.6
Worst Quarter (%)	-12.2	-15.8

Time Period: January 1978-September 2009

Benchmark: 50% S&P 500, 45% BarCap Aggregate, 5% Cash

For those interested in learning more about our strategic tilt model and asset allocation services, please contact your relationship manager or reach us directly at advisor.notes@foliodx.com.

Important Information and Disclosures

This material represents an assessment of the market environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. The information contained herein is believed to by accurate but has not been independently verified.

Asset allocation analysis may assist you in determining if you have the right mix of investments for a given set of objectives and risk tolerance. Asset allocation does not ensure a profit or protect against losses in a declining market.

Diversification may help to reduce the effects of investment risks when gains in one investment class help offset losses in another. There is no certainty that any investment or strategy will be profitable or successful in achieving your specific investment objectives.

This report provides hypothetical information using historical data and rates of return. Depicted rates of return are not representative of the actual rate of return that you will experience with any particular investment product.

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Costs associated with an investment are not reflected in the illustrations [e.g., mutual fund sales charges, management fees, administrative fees, taxes, other maintenance fees or mortality fees]. If included, these costs would lower returns. Note that costs differ depending on the investment. Assuming two investments have identical returns, the investment with lower costs would provide a higher overall projected value.

Sources of information for this report include The Wall Street Journal, Bloomberg, Standard & Poor's, MPI Stylus, The CFA Institute and FDx Advisors.