A Multi-Asset Investment Strategy for Individual Investors

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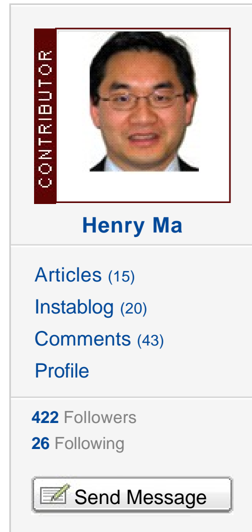

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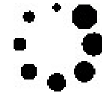

Modern finance theory has taught us two very useful lessons in investments. The first is that diversification improves risk/return profile. The second is that there are long-lasting trends in financial markets, either as a result of over-reaction or under-reaction to the changes of fundamentals by the market participants, or due to the cyclical behavior of business and economic conditions.

In this article, I will show you how to construct a multi-asset portfolio to achieve a better diversification as well as how to use some simple indicators to identify market trends and improve your market timing skills.

Multi-Asset Portfolio (MAP)

Traditionally, asset allocation has been focusing on stocks and bonds. This approach in general does not provide adequate diversification in an investor's portfolio. Statistically speaking, adding more asset classes can always improve the risk/return profile as long as correlations are not one. Here, I propose a ten-asset portfolio to match the allocation of traditional 60/40 equity/bond portfolio as follows:

- Risky assets (60%)
  - S&P 500 Index (SPY): 15%
  - MSCI EAFE Index (EFA): 10%
  - MSCI Emerging Market Index (EEM): 10%
  - IBOXX High Yield Bond Index (HYG): 5%
  - J.P Morgan Emerging Market Bond Index (EMB): 5%
  - Dow Jones UBS Commodity Index (DJP): 5%
  - Gold Index (GLD): 5%
  - Dow Jones US REIT (IYR): 5%
- Bonds (40%)
  - Barclays US Aggregate Bond Index (AGG): 35%
  - US 3-month Treasury Bill: 5%.

The major advantage of this multi-asset portfolio (MAP) is that it replaces the 60% equity allocation with more diversified risky asset classes such as international equities, emerging market equities, commodities, high yield bonds, emerging market bonds and real estate.

Historically, this portfolio has a much better risk/return profile than traditional 60/40 equity/bond benchmark as shown in Table 1. The 60/40 equity/bond benchmark is constructed with 60% in S&P 500 Index and 40% Barclays US Aggregate Bond Index.

During the last ten years, the multi-asset portfolio delivered a higher return with lower volatility and downside risk. Conventional wisdom says "diversification is the only free lunch in investments". It works here! As a word of caution, I don't expect we can always achieve a higher return, but I do expect diversification will reduce risk without dampening much of the return.

Another advantage is that this portfolio can be easily implemented with liquid exchange-trade funds (ETFs) in a cost-effective way. Rather than try to pick stocks or mutual funds, investors can focus more on asset allocation across a broad range of assets. As we all know, asset allocation is the most important factor in determining our portfolio return in the long run.

Table 1: Performance of MAP vs. 60/40 Equity/Bond Benchmark

*(1999-2010)***

Year	*MAP*	*60/40 Equity /Bond*	*Excess Return (MAP - 60/40 Equity/Bond)*
1999	*13.2%*	*12.0%*	*1.2%*
2000	*0.9%*	*-1.0%*	*1.9%*
2001	*-1.2%*	*-3.7%*	*2.5%*
2002	*0.4%*	*-9.8%*	*10.2%*
2003	*20.4%*	*18.5%*	*2.0%*
2004	*10.9%*	*8.3%*	*2.6%*
2005	*9.3%*	*4.0%*	*5.3%*
2006	*13.6%*	*11.1%*	*2.5%*
2007	*9.8%*	*6.2%*	*3.6%*
2008	*-20.8%*	*-22.1%*	*1.3%*
2009	*23.8%*	*18.4%*	*5.4%*
2010	*10.3%*	*8.5%*	*1.8%*
Annualized Average Return	*7.2%*	*4.0%*	*3.2%*
Annualized Standard Deviation	*8.6%*	*9.8%*	*4.3%*

Multi-Asset Timing Strategy (MATS)

There are numerous fundamental and technical indicators that people use to create market-timing strategy. Three simple indicators I have found most useful in identifying market trends and business cycles are ISM Manufacturing Index, yield curve and market trend.

ISM Manufacturing Index is an extremely important indicator for the markets as it provides a timely measure of manufacturing activities. It also called Purchasing Manager Index (PMI). The PMI has been issued since 1948 by the Institute for Supply Management. On a monthly basis, ISM collects data through a survey of 400 purchasing managers in the manufacturing sector on five different fields, i.e., production level, new orders from customers, speed of supplier deliveries, inventories and employment level. Participants report either better, same or worse conditions than previous months. A PMI number higher than 50 means expansion in manufacturing activities. A lower number means contraction. Normally, risky asset markets perform well in an expanding economy.

Yield Curve is a reliable indicator of market liquidity and monetary condition. The Fed manages monetary policy by adjusting short-term interest rates. When economy slows, the Fed tends to lower the short-term rate and the yield curve steepens. On the other hand, when economy peaks and inflation accelerates, the Fed tends to raise the interest rate and the yield curve flattens. In this article, I define yield curve as the spread between ten-year Treasury rate and three-month T-bill rate. When the yield curve is upward-sloping, i.e. the short-term interest rates are lower than the long-term interest rates, the monetary policy is relatively loose and liquidity is ample in the market. On the other hand, when the yield curve is flat or downward-sloping, the monetary policy is tight and liquidity is constrained. Other things being equal, investors will seek higher returns by purchasing risky assets when liquidity and cheap money are plenty.

Market Trend is the most important concept in technical analysis. The markets are composed of alterations between upward trends (bull markets) and downward trends (bear markets). This phenomenon reflects the cyclical pattern of the underlying economy. Furthermore, investors' behavior biases extend the market trends both in the upside and in the downside. Trend-following strategy has proved to work in the past and will continue to work in the future as the underlying market pattern will not change. I use a proprietary indicator to define market trend, however, any investor can use 10-month simple moving average (SMA) as suggested by Mebane Faber*. When the current price is higher than 10-month SMA, the market is on an uptrend and vice versa. The market tends to continue to move in the direction of the existing trend. To make trend-following strategy work, investors have to be disciplined. Once the market trend reverses, investors need to shift their positions.

Table 2 summarizes how I use the three indicators to time the markets. The ideal time to invest in risky assets is when the market is in an up trend, economy is expanding, and liquidity is ample. As a rule of thumb,

among the three indicators, I over-weigh risky assets if two of them are positive and vice versa.

Table 3 shows the historical performance of the multi-asset timing strategy (MATS). The trading rule here is:

- Increase the allocation in the risky asset(s) by 5% in the multi-asset portfolio if the timing model indicates over-weight;
- Decrease the allocation in the risky asset(s) by 5% in the multi-asset portfolio if the timing model indicates under-weight;
- Residual allocation goes to bonds.

The results are impressive. MATS beats the 60/40 equity/bond benchmark by an average of 7.4% every year in the last ten years. The strategy also reduced the downside risk dramatically in the bear markets of 2002 and 2008. If an investor had followed the strategy, the "lost decade" might have been the time to celebrate.

Table 2: Multi-Asset Timing Strategy

Market Trend	*ISM Manufacturing Index*	*Yield Curve*	*Risky Asset Strategy*
UP	*>50*	*Upward-sloping*	*Over-weigh*
UP	*>50*	*Downward-sloping*	*Over-weigh*
UP	*<50*	*Upward-sloping*	*Over-weigh*
UP	*<50*	*Downward-sloping*	*Under-weigh*
DOWN	*>50*	*Upward-sloping*	*Over-weigh*
DOWN	*>50*	*Downward-sloping*	*Under-weigh*
DOWN	*<50*	*Upward-sloping*	*Under-weigh*
DOWN	*<50*	*Downward-sloping*	*Under-weigh*

Table 3: Performance of Multi-asset Timing Strategy

*(2000-2010)***

Date	*MATS*	*60/40 Equity /Bond*	*Excess Return (MATS - 60/40 Equity/Bond)*
2000	*3.8%*	*-1.0%*	*4.3%*
2001	*1.2%*	*-3.7%*	*4.3%*
2002	*-2.7%*	*-9.8%*	*7.6%*
2003	*28.6%*	*18.5%*	*8.6%*
2004	*15.3%*	*8.3%*	*6.6%*
2005	*13.7%*	*4.0%*	*9.5%*
2006	*17.4%*	*11.1%*	*5.7%*
2007	*12.8%*	*6.2%*	*6.3%*
2008	*-11.0%*	*-22.1%*	*12.9%*
2009	*33.0%*	*18.4%*	*11.7%*
2010	*12.5%*	*8.5%*	*4.0%*
Annualized Average Return	*10.7%*	*3.3%*	*7.4%*
Annualized Standard Deviation	*9.4%*	*9.9%*	*6.4%*

Portfolio Recommendation for December 2010

As individual investors have a limited amount of time to research or follow the markets, I will show you how to implement the strategy step by step in half an hour at the beginning of each month. The steps include the following:

- Determine your target multi-asset portfolio (MAP). If you are happy with 60/40 allocation, you can use my targets.
- Define the market trends. Go to yahoo.com and look for information on the ETFs listed above. Compare the current price with 200-day moving average.
- Get ISM Manufacturing Index data on the first business day of the month on the ISM website.
- Find yield curve data on Bloomberg.com.
- Use Table 2 to determine your weights and implement the allocations through ETFs.

In the meantime, to help individual investors, I plan to publish my recommendations at the beginning of every month on Seeking Alpha.

Rather than 10-month moving average, I will use a proprietary indicator to reduce the time lag of the moving average. In addition, I may override the model based on my view on economic cycle and market valuation from time to time. On December 1, the ISM Manufacturing Index was reported at 56.6. The spread between ten-year Treasury rate and 3-month T-Bill was at 2.80%, indicating a steep upward-sloping yield curve. All the risky assets are still in upward trends.

I believe the economy is in a recovery/expansion stage. Although the tensions in the Korean peninsula and European debt crisis pose risks in the financial markets, they will not derail the global economy recovery and reverse the market trends. I recommend over-weighting risky assets:

- Risky assets (100%)
  - S&P 500 Index (SPY): 20%
  - MSCI EAFE Index (EFA): 15%
  - MSCI Emerging Market Index (EEM): 15%
  - IBOXX High Yield Bond Index (HYG): 10%
  - J.P Morgan Emerging Market Bond Index (EMB): 10%
  - Dow Jones UBS Commodity Index (DJP): 10%
  - Gold Index (GLD): 10%
  - Dow Jones US REIT (IYR): 10%
- Bonds (0%)
  - Barclays US Aggregate Bond Index (AGG): 0%
  - US 3-month Treasury Bill: 0%.

Notes:

** Mebane Faber, "A Quantitative Approach to Tactical Asset Allocation", ssrn.com*

*** Data sources in this article are Bloomberg, Yahoo and ISM.*

**** The returns in the tables are gross returns. Return in 2010 is the return between 01/2010 and 10/2010.*

Disclosure: Author is long EEM, HYG, EFA, SPY

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