

# MONTHLY

VOLUME 5, ISSUE 7 JULY 2008

## THE BENEFIT OF DIVERSIFICATION

### Introduction

Almost everyone has heard that portfolio diversification is a good thing. In the current financial market environment especially, with equity and bond prices under pressure from a number of directions, many feel that diversification is even more important than ever.

But, why is diversification important? What is its effect on a portfolio's risk and return? We will use this *Monthly* to show, with simple examples, that diversification can improve the risk and return characteristics of a portfolio. This improvement is the main reason that

we are big supporters of diversified – i.e., balanced – portfolios for clients.

### Stocks & Bonds

Figure 1 contains information from one of the figures in last month's publication on stock and bond risk and return over the long term. You may recall that, in the June *Monthly*, we discussed financial market risk and its relationship to return – higher risk has been associated with higher returns. But this positive historical relationship has not held up over numerous shorter periods of time. The figure shows that risk in Treasury bonds has been around 5%,

with a return just above 8%. Risk in the stock market was almost triple that of bonds (at slightly above 15%), while the stock market's return was just under 11%.

### Balanced Portfolio

You might think that a 50/50 blend of stocks and bonds would have a return half way between the stock market return and the bond market return. Likewise, you might think that the risk of this 50/50 portfolio would equal 50% of the equity market's risk plus 50% of the bond market's risk – a simple weighted average.

*(Continued on page 2)*

### CURRENT TOPIC

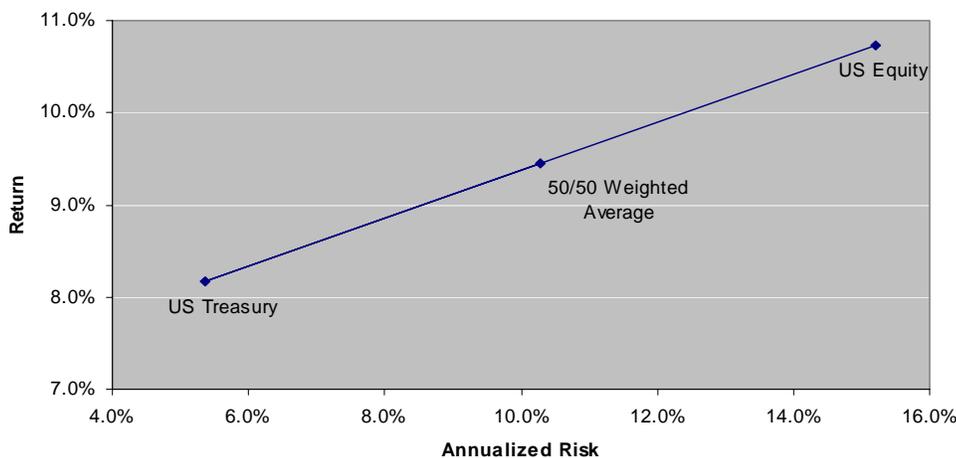
#### *The Benefit of Diversification*

- Introduction
- Stocks & Bonds
- Balanced Portfolio
- Diversification
- Poor Environments
- Summary

### STRATEGY

- We made no changes to strategy during the month of June
- Despite the sharp declines in June, equity indices remain above the levels of our last purchase/strategy change in March

**Figure 1: Historical Risk & Return in US Stocks & Bonds**



“THE STRAIGHT LINE SHOWS WHERE THE BALANCED PORTFOLIO WOULD LIE IF THERE WAS NO BENEFIT FROM DIVERSIFICATION”

## THE BENEFIT OF DIVERSIFICATION - CONT'D

(Continued from page 1)

By combining the risk and return numbers in this way, the 50/50 weighted-average point would end up on a straight line mid-way between the points for stocks and bonds (see the point labeled "50/50 Weighted Average" on Figure 1).

### Diversification

However, this is not what actually happens in the real world. If stocks and bonds aren't perfectly correlated, there will be times when (for example) the stock market is down but bonds hold up well. At other times, when bonds perform badly, the stock market will be strong.

Because correlation has been less than perfect, the actual portfolio will have performed better in risk-adjusted terms than the simple combination described above. Figure 2

takes Figure 1 and adds a point for the actual outcome of mixing stocks and bonds in the 50/50 proportions. This point, labeled "Actual Mix", is clearly an improvement, with the actual performance showing lower risk and slightly higher return. This improved performance, i.e. better risk-adjusted returns, is the benefit of diversification.

In effect, the straight line between stocks and bonds in Figures 1 and 2 shows where the balanced portfolio would lie *if there was no benefit from diversification* – in other words, if the two asset classes were perfectly correlated.

### Poor Environments

Last month, we showed that the longer-term tradeoff between risk and return didn't always hold. There have been periods when higher-risk asset classes have pro-

duced worse returns than have lower-risk asset classes. Does this happen to the diversification benefit in an analogous way? In other words, have there been times when diversification actually worsened the risk-adjusted return?

The short answer is: no. At worst, there will be no risk-reduction benefit from diversification if the assets are perfectly correlated.

Figures 3 & 4 show the same two 5-year periods that we used last month (5 years ending December 31, 1977 and December 31, 2005). These were environments in which the higher-risk asset classes did not deliver higher returns. While the relationship between risk and return was reversed, it is clear that the actual results for a 50/50 portfolio were still an improvement over what would

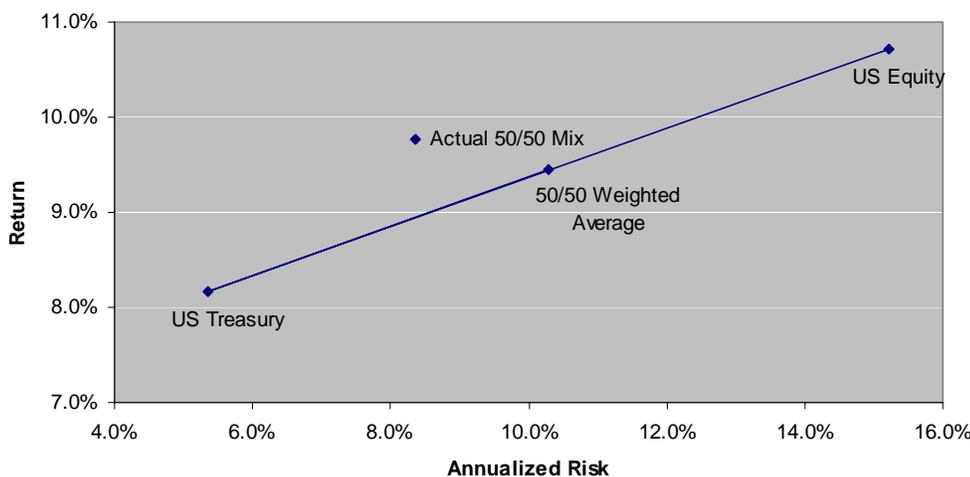
have resulted from a simple weighted average of the equity market's and bond market's risks and returns.

Note though, that the risk reduction from diversification for the period ending in 2005 is much greater than the improvement experienced in the earlier period; the Actual performance point shifts further left in Figure 4 than in Figure 3. This occurred because the correlation between stocks and bonds has been much lower more recently than it was in the 1970s and early 1980s. In the worst case, when stocks and bonds are perfectly correlated, there will be no diversification benefit and the actual portfolio performance will be on the weighted average point.

The two oil shocks and Fed monetary policy in the 1970s

(Continued on page 3)

**Figure 2: Historical Risk & Return in US Stocks & Bonds**



“THE ACTUAL MIX IS CLEARLY AN IMPROVEMENT, WITH THE ACTUAL PERFORMANCE SHOWING LOWER RISK AND SLIGHTLY HIGHER RETURN”

## About Stairway Partners, LLC

Stairway Partners was formed to provide our clients (starting with ourselves) with an effective and comprehensive solution for managing their wealth. Our disciplined and rigorous approach comes from our collective knowledge in serving large institutional clients over many years.

Our core investment belief is that asset allocation is the single most important determinant of success in any investment plan. The dominant amount of risk and return comes not from your choice of individual investments but from your asset class mix. Stairway Partners focuses our resources on risk management and asset allocation. This includes building your custom blue-print (investment policy and benchmark) and aligning your portfolio with our investment strategy utilizing the global capital markets.

caused inflation to rise sharply until the early 1980s, when disinflation and a strong economy took over. These macroeconomic factors caused stock and bond

returns to be poor in the '70s and strong in the '80s – so correlation was high. Toward the end of the '90s, equity market performance was very strong, while the

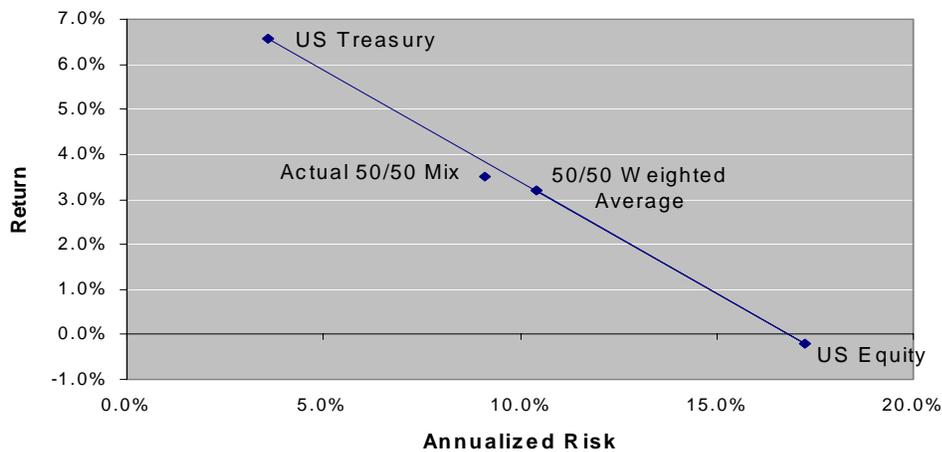
bond market languished. After the bursting of the stock market bubble, bonds did very well while stocks suffered several years of bad returns. Because the asset

classes moved in opposite directions, correlation actually became negative.

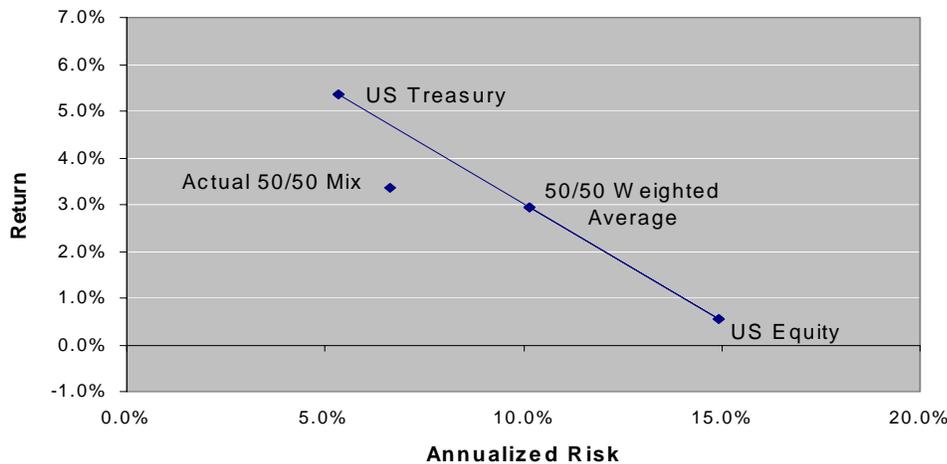
### Summary

Diversification helps to smooth out the variability of a portfolio's returns. When assets are less than perfectly correlated, the risk of a portfolio is lower than a simple weighted average (proportional combination) of the assets' risks. This means that over time an investor gets returns similar to the weighted average return, but at lower risk. This improvement in risk-adjusted returns is the benefit of diversification.

**Figure 3: 5-Yr Risk & Return Ending 12/31/77**



**Figure 4: 5-Yr Risk & Return Ending 12/31/05**



“HAVE THERE BEEN TIMES WHEN DIVERSIFICATION ACTUALLY WORSENERD THE RISK-ADJUSTED RETURN ? THE SHORT ANSWER IS: NO”

## Strategy

Asset Class	Expected Return	Hurdle Return	Strategy Exposure	Comment																				
<b>Equities</b>																								
US	11.5%	7.0%	small over	Exposure slightly above benchmark weight																				
Non-US Developed			small under	Asset class fairly priced as markets have fallen																				
Eurozone	13.8%	7.9%																						
Japan	1.3%	4.7%																						
UK	14.2%	8.7%																						
Emerging	-1.4%	11.7%	under	Asset class remains expensive																				
<b>Fixed Income</b>																								
US Treasury Bonds			neutral	Non-Treasury sectors more attractively priced																				
2-Year	2.5%	3.6%																						
5-Year	2.5%	4.1%																						
10-Year	2.5%	4.6%																						
30-Year	2.4%	5.0%																						
US Municipal Bonds			neutral	Sector overall is near fair value																				
2-Year	2.6%	3.0%																						
5-Year	3.2%	3.4%																						
10-Year	4.4%	3.9%																						
30-Year	8.5%	4.5%																						
US High Yield	9.3%	5.4%	neutral	Sector is pricing for deteriorating fundamentals																				
Non-US Government Bonds			under	Yields have been rising toward fair levels																				
Euro 10-Year	4.5%	4.9%																						
Japan 10-Year	0.5%	2.0%																						
UK 10-Year	4.8%	5.3%																						
Emerging Markets Debt	3.8%	5.7%	under	Spreads over US Treasuries remain too tight																				
Cash	3.5%	---	over	Allocation comes from overpriced asset classes																				
<table style="width: 100%; border: none;"> <tr> <td></td> <td></td> <td style="text-align: center;">Equity</td> <td style="text-align: center;">10-Year</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Expected</td> <td style="text-align: center;">Return with</td> <td style="text-align: center;">Bond Return</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">FX Change</td> <td style="text-align: center;">Currency</td> <td style="text-align: center;">with</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">Currency</td> <td></td> </tr> </table>							Equity	10-Year			Expected	Return with	Bond Return			FX Change	Currency	with					Currency	
		Equity	10-Year																					
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<b>Currencies</b>																								
Euro	-9.8%	4.0%	-5.3%	Euro is expensive																				
Japanese yen	2.4%	3.7%	2.9%	Yen is close to fair value																				
UK pound	-6.1%	8.0%	-1.3%	Pound is expensive																				

**Notes:**
**As of: June 30, 2008**

The expected return is our estimate of the annualized return likely to be generated over a 3-year horizon.

The expected returns are expressed in local currencies (e.g., Japanese equity return is stated in yen terms).

The hurdle rate represents the annualized return that an asset needs to generate in order to cover its risk.

Equity Return with Currency (in Currencies section) is the annual return we would expect a US dollar investor to earn from holding foreign equity markets.

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