The Stan Clark Financial Team's

PERSPECTIVES

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Asset Allocation

Volatility is not the same as risk

By Michael Chu, Investment Advisor

A big part of investing is balancing risk and return. Returns are pretty self-explanatory. But what exactly is risk? Is it the same as volatility?

Let's examine both of them – and discuss why we think volatility is not the same as risk.

The stock market is definitely volatile. Then why don't we just put everything into bonds? As you'll see in the table below, the average return from bonds over the past 100 years is 4.3 percent, which works out to only 1.1 percent after inflation. Bonds, while less volatile, barely keep up with inflation.

What about the stock market? Stock returns averaged 11.5 percent, which works out to 8.3 percent after inflation. That's over seven times greater than bonds. But stocks appear to be riskier than bonds. It seems the tradeoff is that, if you want higher returns, they'll come with more risk.

However, in our opinion, volatility is not the same as risk if you look at longer time periods. *Volatility* is just the ups and downs, which, while uncomfortable, eventually cancel out. *Risk*, on the other hand, is a permanent loss. Permanent losses are the worst because you cannot recover from them, for example, if you are forced to sell your stocks at a low because you need your money. We want to avoid those situations – but we also want higher returns.

One way to evaluate risk is to look at the after-inflation, worst-case scenarios. As you can see on the chart, over one-year periods, stocks can lose a lot more than bonds. Worst case, stocks have lost almost half their value, where the worst year for bonds was only down 15 percent.

Interestingly, the chance of losing money in one-year periods between stocks and bonds is about the same. Thirty-five percent of the time you should expect losses with either.

But as we increase the number of years you are investing, the risks change. They become more in favour of stocks and less in favour of bonds.

At 10-year periods (see chart), the worst-case scenario for stocks and bonds is about the same, with each down about 30 percent. Compared to one-year periods, this is better for stocks and worse for bonds. The chance of losing money changes, too. Now stocks only lose five percent of the time, but bonds still lose about 35 percent of the time.

At 20 years, the worst case for stocks is actually a profit of about 80 percent. But for bonds, the worse case stays about the same, at a loss of 40 percent. Furthermore, the chance of losing with stocks becomes zero percent. In other words, stocks have never been unprofitable over 20-year periods. Bonds, supposedly the "safe" investment, still lose about 35 percent of the time.

Here are some explanations of why this happens.

Most of the short-term stock market volatility is caused by investor psychology. This cycle of investor optimism and pessimism tends to cancel out, resulting in less risk for stocks over time. The real source of stock market returns is company profits, which for the economy as a whole tend to be quite persistent. As company profits accumulate over time, this comes to dominate the numbers, resulting in positive long-term returns – even if the end point is in a down period.

In contrast, with bonds, the main risk is inflation eating away at low returns. When you lose to inflation, it's a permanent loss, so there's no recovery.

To summarize, in the short term, the risks and volatility appear to be higher for stocks and lower for bonds. If you need your money soon, we believe you should have it invested mostly in bonds to help minimize risk. But in the long term, it's the opposite: Risks and volatility appear to be lower for stocks and higher for bonds. If you don't need your money for a long time, then that money could go mostly in stocks to maximize returns. The bottom line is that *when* you need your money should determine *how* you allocate your investments between stocks and bonds.

Real growth of $100,000 (1915-2014)

		1 Year	5 Years	10 Years	15 Years	20 Years
RETURNS	**Highest returns**					
	Stocks	$111,509	$451,118	$372,364	$777,256	$1,402,791
	Bonds	$19,602	$63,725	$92,922	$149,844	$180,773
	Extra returns for stocks	+$91,907	+$387,393	+$279,442	+$627,412	+$1,222,018
	Average returns					
	Stocks	$8,290	$49,983	$123,708	$231,516	$414,965
	Bonds	$1,137	$6,867	$15,502	$23,570	$29,119
	Extra returns for stocks	+$7,153	+$43,115	+$108,206	+$207,946	+$385,846
RISKS	**Worst returns**					
	Stocks	-$45,464	-$54,591	-$31,881	-$8,641	$81,914
	Bonds	-$15,204	-$36,380	-$35,274	-$35,269	-$37,897
	Extra risks for stocks	$30,260	$18,211	-$3,392	-$26,628	-$119,811
	Chance of negative return					
	Stocks	33%	15%	5%	2%	0%
	Bonds	37%	36%	35%	29%	35%
	Extra risks for stocks	-4%	-22%	-30%	-27%	-35%
CONSISTENCY	**Percent of time stocks gave better returns**					
	Stocks gave better returns:	68%	79%	89%	97%	100%

Source: Siegel/CRSP

Michael Chu is a Portfolio Manager and Investment Advisor for the Stan Clark Financial Team at CIBC Wood Gundy. Michael is a specialist in investment research and information technology.

Phone: (604) 641-4361 Toll free: 1 (800) 661-9442 Fax: (604) 608-5211 Email: StanClarkFinancialTeam@cibc.ca www.stanclark.ca