THE PROBLEM WITH MOVING TO AN ALL CASH PORTFOLIO

A natural tendency of investors is to move their portfolios to all cash when they perceive unstable political or economic events unfolding. For example, fears about war in the Middle East, or looming federal budget deficits, a slowing economy, or a falling stock market, can all cause investors to want to switch to cash.

The success of these switches depends upon the investor being able to successfully time market corrections. Is this a reasonable assumption? Probably not. According to modern investment theory, when there is maximum uncertainty about the future, securities are priced to offer investors higher returns. Otherwise, investors will not invest. When there is less uncertainty, securities are priced to offer investors lower returns because investors perceive there is less risk. The net effect is that when movements into cash are caused by feelings of uncertainty, and movements back into investments occur when the uncertainty has dissipated, the investor is "out of the market" when returns are most likely to be high, and "in the market" when returns are most likely to be low.

Just as important, in order to accurately time the market, the investor must make two consecutive correct decisions. First, the investor must correctly decide when to move into cash. However, even if the investor is correct about when to move into cash, it may not do the investor any good unless the investor also can correctly decide when to move back into investments. For example, if an investor moves into cash and avoids a 20% drop in value, but then does not move back into investments before there is a 25% increase in value, the investor has not realized any benefit.

This is analogous to the fact you are much less likely to flip a coin and have it come up heads twice in a row than you are to have it come up heads only once, yet that is what you must do.

Will you know when to get "back into the market"? Probably not if the basis of your decision is that times become more settled. By then it will be too late. You'll probably have to get back in when times are at their worst, yet that is exactly why you got out of the market in the first place.

Moreover, trying to time the market is not a free ride. If the investor's timing decisions turn out to be right only as often as they are wrong, the investor loses

substantially. In order to break even, the investor must be right significantly more often than wrong.

In other words, when an investor moves to an all cash position, the investor takes on an additional new risk, namely, the risk that the investor will earn a significantly lower return. The more often the investor switches to cash, the greater this risk becomes.

For example, assume an investor has a long-term investment portfolio based upon a 60% allocation to stocks and a 40% allocation to intermediate-term bonds. Assuming the investor has an equal chance of being right as wrong when switching to cash, how big a loss in return will the investor suffer on average if the periodic switches to cash result in the portfolio being invested in cash 25% of the time?

We can answer this question by running a series of probability analyses, called Monte Carlo simulations. We will represent stocks by the Standard & Poor's 500 Stock Index. We will represent intermediate-term bonds by a 50% allocation to the Lehman Brothers Government/Credit Index and a 50% allocation to the Lehman Brothers Intermediate Government/Credit Index. We will represent cash by the yield on three-month Treasury bills. We will base the Monte Carlo simulations on the quarterly returns for these indices over the thirty-three years from 1973-2005.

On average, the periodic switches to cash will cost the investor approximately 1.11% in annual return. The loss in return will be greater the longer the amount of time the investor is invested in cash, as set forth in the table below:

Percent of Time Period Invested in Cash	Loss in Annual Return
5%	0.23%
10%	0.46%
15%	0.69%
20%	0.93%
25%	1.11%
30%	1.31%
35%	1.54%

However, the above figures substantially understate the actual loss in return for most investors for two reasons. First, if investors are periodically moving into all cash positions, they lose the benefits of deferring capital gains. They also may incur a higher proportion of short-term capital gains. Active tax management of even

mutual fund portfolios can result in an increase in annual after-tax return of around 0.50%. The investor gives up this incremental return when the investor moves in and out of cash for reasons that ignore the tax consequences.

Second, moving in and out of cash substantially increases transaction costs. For example, if an investor moves in and out of cash only once every five years, it results in an additional 200% in portfolio turnover, or an average increase per year of 40% in turnover. For portfolios of individual securities, this could add 0.25% in additional costs annually. Even in mutual fund portfolios, where transaction costs are significantly lower, the additional transaction costs could be 0.10% or more.

If we add 0.50% in lost return due to the realization of capital gains, and 0.10% in increased transaction costs (for a total of 0.60%), the numbers change significantly:

Percent of Time Period Invested in Cash	Loss in Annual Return
5%	0.83%
10%	1.06%
15%	1.29%
20%	1.53%
25%	1.71%
30%	1.91%
35%	2.14%

Many investors may find these reductions in return acceptable if they believe that by moving into cash they are able to avoid a major market correction. The problem is that the effect is exactly the opposite. These reductions in return make it more likely that the investor will suffer the equivalent of a major market correction sometime during their investing lifetime.

To understand this we need to look at what are called terminal values. These represent the amount your investment portfolio would grow to over your investment horizon. For example, we know based upon historical returns for 1973 through 2005 that the 60% equity, 40% fixed income portfolio on average can be expected to earn an annual return of around 10.30% before taxes. If we assume an average annual effective tax rate of 20%, the after-tax return would be 8.24%. Over the course of thirty years, at an average annual after-tax return of 8.24%, $10,000 would grow to $107,556.

However, assume the investor periodically switches the portfolio into cash such that it is in cash about 25% of the time. If this results in an average loss in annual pre-tax return of 1.71%, it would equate to an annual loss in after-tax return of about 1.37%. This means the investor would earn an average annual after-tax return of only 6.87% instead of 8.24%. At this lower after-tax rate of return, over the course of thirty years $10,000 would grow to only $73,438, which is approximately a 32% reduction in ending wealth.

This reduction in ending wealth is exactly the same as the investor suffering an instantaneous 32% decline in the value of their portfolio thirty years in the future.

Even this might be justified if it avoided an even larger loss currently. But how often over the past thirty-three years has the 60% equity, 40% fixed income portfolio declined by 32% based upon quarterly ending values? The answer is never. The largest decline, based upon quarterly returns, was about 26.7% from January 1973 through September 1974.

Below, we expand the prior table to include columns representing loss in annual after-tax return and the reduction in ending wealth for different amounts of time our 60% equity, 40% fixed income portfolio is invested in cash:

Percent of Time Period Invested in Cash	Loss in Annual Pre-Tax Return	Loss in Annual After-Tax Return (@20% Tax Rate)	Reduction in Ending Wealth after Thirty Years
5%	0.83%	0.66%	16.9%
10%	1.06%	0.85%	21.0%
15%	1.29%	1.03%	25.0%
20%	1.53%	1.22%	28.9%
25%	1.71%	1.37%	31.7%
30%	1.91%	1.53%	34.7%
35%	2.14%	1.71%	38.0%

So what can investors expect to accomplish by periodically moving their portfolios into cash when times are scary? They may or may not avoid a current market correction. But even if we assume they are right as often as they are wrong, the net effect is to make it likely that they will suffer the equivalent of a major market decline sometime in the future, which is exactly what they set out to avoid.

What is the moral of this story? First, if you are going to try to time markets you better be right significantly more often than wrong, which is unlikely. Second, often when we try to eliminate one risk, we expose ourselves to another equal or greater risk.

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