

Market Timing and Stock Picking

Trading strategies are like casino gambling. You pay your money and you take your chances. But there are more reliable ways to build your portfolio.

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The message so far is to rely on diversification of your investments through a buy-and-hold strategy covering all available assets. Many people reject this advice by either practicing market timing or stock picking. This seventh part of the series addresses these two topics.

Market timing is the attempt to earn higher rates of return by altering one's risk exposure or asset allocation through time. Typically, this means attempting to increase risk exposure before the financial markets rise and attempting to lower risk exposure before the markets falls. The changes in risk exposure may involve "getting into and out of the market," alternating between long and short positions, rotating between sectors, and so forth.

Stock picking is the idea of trying to improve a portfolio by selecting from among all available risky assets those assets that offer the most attractive combinations of risk and return.

Stock picking is another form of market timing—it is deciding to "time in and out" of various stocks based on predictions of when the individual stocks are going to go up or down.

But all such efforts—from the most detailed level of picking stocks to the most general level of trying to time the direction of the overall market are variations of the same

Table 1: Casino Outcomes Summary

	<i>Mr. All-or-Nothing</i>	<i>Mr. In-Between</i>	<i>Mr. Small-Stakes</i>
Number of Bets	1	100	50
Size of Each Bet	\$100	\$1	\$2
Total Amount Bet	\$100	\$100	\$100
Expected Profit	\$1	\$1	\$1
Chance of Losing \$10+	50%	18%	24%
Chance of Losing \$20+	50%	3%	10%
Chance of Losing \$50+	50%	<.0001%	<.001%

basic theme: trying to acquire a free lunch. The purpose of this seventh part of the series is to set forth the argument that all such efforts are fools' errands.

Market Timing: A Casino? The idea of market timing is to try to be "in" the market when it is more likely to rise and "out" of the market when it is more likely to fall. This contrasts to a buy-and-hold strategy that remains equally exposed to the market through time. Our conclusion will be that the buy-and-hold strategy is the best strategy.

Let's explore an analogy between market timing and casino gambling. Consider a crazy casino that instead of offering bets in favor of the house, offers all bets in favor of the gamblers by offering a gain of 1 percent on every bet. Each bet has a 50 percent chance of returning \$2.02 for each \$1 gambled, and a 50 percent chance of returning \$0 for each losing bet.

We have three gamblers: Mr. All-or-Nothing, Mr. Small-Stakes and Mr. In-Between. All three gamblers place \$100 worth of bets and then leave the casino with whatever money they win.

Mr. All-or-Nothing bets all \$100 on his first and only bet. If he wins he takes home \$202, if he loses he takes home \$0. His expected return is \$101 for an expected profit of \$1.

Mr. Small-Stakes places 100 bets of \$1 each. Each bet either returns \$2.02 or nothing, with an expected value of \$1.01. Together these 100 bets have an expected return of \$101 and a profit of \$1—just like Mr. All-or-Nothing.

But Mr. Small-Stakes is taking much less risk. This is illustrated in Table 1.

Mr. All-or-Nothing has a 50 percent chance of losing everything since he places only one big bet. Mr. Small-Stakes bets 100 times and will probably win somewhere between 40-60 times and will lose 40-60 times. As Table 1 shows, he is somewhat unlikely to lose more than \$10 and highly unlikely to lose more than \$20.

To complete the analogy, now consider Mr. In-Between. He makes 50 bets of \$2 each. He has a level of risk that is much lower than Mr. All-or-Northing but is considerably higher than Mr. Small-Stakes. The reason is that his risk is spread among 50 uncertain events rather than one or 100. Table 1 shows that his chance of losing \$10 or more is a third higher than that of Mr. Small-Stakes, while his chance of losing \$20 or more is three times as high.

The point of this casino example is that a gambler who places many small bets takes less risk than a gambler who places one larger bet. But both gamblers experience the same expected profit (or in a real casino, an expected loss). So if the expected gain is the same, the wise and risk-averse bettor should keep the bets as small as possible.

Fewer but Larger Bets. This section wraps up the casino example by drawing the parallels between the betting strategies and the returns of a person following a market timing strategy. We wish to compare the risks and returns of a market timer (Mr. Market-Timer) with a person adhering to a fixed allocation between risky and riskless assets (Mr. Buy N. Hold).

Let's assume that there are 250 trading days per year and that the stock market offers an expected return that is 0.02 percent per day higher than is received from being in the money market fund. For simplicity, let's assume that Mr. Market-Timer places all of his money in the market 125 days per year (i.e., half the time) and all of his money in a money market fund the other 125 days. Mr. Buy-and-Hold places half

of his money in the market and half his money in the money market fund every day.

To make the math easier, we assume that there are no transactions costs or tax consequences involved and that the money market fund earns no interest. When we look carefully at the numbers, this is what we find: *If Mr. Market-Timer is completely unable to guess which way the market is headed, then the expected return of the two investors is equal, but Mr. Buy N. Hold has lower risk!*

The reason that the expected returns are equal is that each investor has an average exposure to the market that is the same: 50 percent. Mr. Market-Timer has an average market exposure of 50 percent because he is 100 percent in the market half the time. Mr. Buy N. Hold has an average market exposure of 50 percent because he is 50 percent in the market all the time. These numbers are illustrated in Table 2.

In terms of expected returns, Mr. Market-Timer has an annual expected gain of 2.5 percent (found from investing 100 percent in the market for 125 days with an expected gain each day of 0.02 percent). Mr. Buy N. Hold also has an expected gain of 2.5 percent (found from being 50 percent in the market for 250 days with an expected gain of 0.01 percent per day). Mr. Buy N. Hold's expected daily return is also 0.01 percent (or 2.5 percent in all) because he is equally invested in the market and the money market fund each day.

At first glance, it may appear that both investors have the same risk since they both are in the market the same amount on average. It might

seem that being completely in the market half the time is equally risky as being half in the market all the time. But that is not true. The bottom panel of Table 2 shows that Mr. Market-Timer is almost four times as likely to suffer a 12 percent or greater loss relative to his expected return. In effect, Market-Timer is placing 125 "full-sized bets" each year while Mr. Buy-and-Hold is placing 250 "half-sized bets" each year (by being half in the market every day). Placing 250 small bets is better diversified than placing 125 large bets.

Our previous analogy to casino gambling made it clear that placing many small bets is safer than placing a few large bets. So, the first point is this: Market timing is a riskier strategy than buying and holding. Some arguments for market timing show that by avoiding a few of the worst days of being in the stock market, a market timer can earn stunningly higher returns than a buy-and-hold investor. That is true. It is also true that by *missing the best days of being in the market* a market timer can have stunningly lower returns than a buy-and-hold investor. And that reinforces the point. Market timing is risky relative to a buy-and-hold strategy.

In any case, our example assumed that Mr. Market-Timer did not have skill. And everybody who uses market timing believes that they have skill.

The Biggest Myth. The biggest myth about market timing is that market timers as a group or as a whole perform better than other market participants. That claim is untrue for any time interval past, present, or future.

The proof takes some time to follow but is actually simple. Logically speaking there can only be two types of market participants: market timers and non-market-timers (buy-and-hold investors). Further, the market timers trade only amongst themselves. The reason is that mar-

Table 2: Market Timing Outcomes Annual Summary

	<i>Mr. Market-Timer</i>	<i>Mr. Buy N. Hold</i>
Number of Days in Market	125	250
Amount in Market Each Time	100%	50%
Daily Average Market Exposure	50%	50%
Expected Profit over Money Fund	2.5%	2.5%
Chance of 4% + Lower Outcome	36%	28%
Chance of 12% + Lower Outcome	11%	3%

ket timers can only trade with other market timers since the buy-and-hold investors do not actively trade.

The full picture can be understood in this light. Let's assume that all investors in the world could temporarily be gathered together into a single room and divided into two types: market timers and buy-and-hold investors. Let's assume that whether the investors are market timers or buy-and-hold investors, they hold perfectly diversified portfolios—the market portfolio—and money market funds.

For simplicity, let's start this experiment assuming that the total size of the market portfolio is \$10 trillion. Finally, let's assume that at the start of the experiment the two groups are equal in size so that the two types of traders hold equal amounts of wealth and have equal total amounts in the market portfolio. So market timers stand on one side of the room holding \$5 trillion of the market portfolio while buy-and-hold investors hold the other \$5 trillion of the market portfolio and stand on the other side of the room.

The experiment begins with market timers furiously altering their risk exposures through time and with buy-and-hold investors keeping their funds in place. But the market timers can only transact with one another—they cannot trade with the buy-and-hold investors because the buy-and-hold investors don't trade! Instead, the money flows back and forth among the market timers just as it does for gamblers at a roulette table.

Years later, the total market portfolio might rise to \$20 trillion or fall to \$5 trillion, but regardless, the buy-and-hold investors must still own exactly half of whatever the total value is. Why? Because the buy-and-hold investors by definition have not changed their portfolios.

So, what would happen to the market timers? Combined together they must also always be holding the other 50 percent of the market

portfolio. This is the simple, logical result of the fact the market timers merely trade amongst themselves.

Clearly, on an individual basis some market timers win and some lose. But any abnormal gains to one market timer must come at the expense to another market timer. A market timer cannot “out-time” a buy-and-hold investor since the buy-and-hold investor does not trade and is therefore assured the return of the market portfolio.

The point is this: Market timers are involved in a “zero sum game” among each other. They cannot—as a group—earn more money or less money than the buy-and-hold investors. *But as individuals they will tend to bear more risk!* The reason was detailed above. Market timers take a small number of large bets by being very aggressively in the market for a small number of days. That is riskier than being moderately in the market everyday.

In sum, market timing is a risk-increasing exercise that on average generates no added return.

Two More Reasons.... There are actually three reasons why the odds are against market timers: added risk, added transactions costs, and lost tax options. The previous sections detailed the idea that market timing is riskier. Obviously, market timing causes higher transactions costs. Even market timing with mutual funds causes investors to have to select mutual fund families that allow market timing—and those fund families tend to have higher expenses. And when an investor makes buy and sell decisions based on market timing, he is less able to exploit tax-motivated transactions. Thus, tax planning becomes a lower priority to market timers, and they therefore are less tax efficient.

Whether because of luck or skill, there will only be a few winners amongst market timers who earn enough higher return to compensate them for the higher risk, cover their transactions costs,

and compensate for the increased taxation. Many people will fool themselves into believing that their strategy will be successful. Many people will even deceive themselves into believing that their past efforts were successful. Casinos make a lot of money each year on just such people.

Market timing is very tempting. Most investors have tried it to one extent or another. The upshot of this article is that it should not be attempted by 99.9 percent of investors. There might be one person in a thousand who can actually consistently benefit from attempts to market time. For all others, it is a bad idea! Unfortunately, most investors who think that they will benefit from attempting to time the market will fail.

The message is clear. Market timing is an uphill battle. When an investor varies her risk exposure through time, she ends up taking more risk, on average, for each dollar of expected return compared to an investor who holds a steady risk exposure.

Ditto for Stock Picking. This article is also about stock picking—the idea of concentrating one's portfolio in assets believed to offer superior returns rather than holding a fully diversified portfolio. At first glance, stock picking may sound like a completely different concept from market timing. But in reality they are virtually identical.

First, stock pickers face the same three problems that market timers face: higher risk, higher transactions costs, and higher taxes. The higher risk comes from the fact that stock pickers, by definition, are not fully diversified. Instead, they are concentrated in those stocks they perceive as winners, and they avoid those stocks that they perceive as losers. That means less diversification than holding the market portfolio.

Stock pickers move from stock to stock as their investment forecasts do or do not materialize. That

causes transaction costs. And like market timers, when the focus is on trading opportunities, there will be less focus on tax minimization. Stock picking is market timing on a micro level.

But Aren't Some Stocks Better than Others? The converse of being a stock picker is being a diversifier. If we divide the world into stock pickers and diversifiers, the myth of stock picking can be seen. The stock pickers only trade with each other because the diversifiers keep constant proportions of their wealth in every asset.

As a group, stock pickers earn the same returns as diversifiers. But some of the stock pickers earn higher returns, and some earn lower returns. Thus, they take more risk than diversifiers because in addition to taking on market risk, they are

taking on the idiosyncratic risk of whether or not they are successful at picking stocks.

False Promises. Market timing and stock picking are the enemies of wise investing for 99.9 percent of investors. So why do so many people try? The answer is actually quite simple. Everyone wants to be successful and earn higher returns. They search for ways to succeed. In fact, they look at lots of ideas and listen to many, many people talking about how to succeed at earning higher profits.

Usually, they can see the fallacy in a get-rich scheme. But people are imperfect—they make mistakes no matter how smart they are. Sometimes they are too positive or optimistic, and sometimes they are too negative or pessimistic. But eventually, they will find a stock picking

strategy, a market timing strategy or another get-rich-quick scheme that they believe will work.

Everyone who looks for a get-rich-quick scheme will eventually find a strategy that they think will work. The bigger the mistake, the more exciting the strategy will appear. Investors who search for the free lunch of low risk and high returns will be drawn towards those ideas that they least understand. In other words, they end up speculating in those ideas for which their analysis is most mistaken. Thus, people invest in the assets that they most over-value.

This series has advocated diversification and has laid out a plan of asset allocation based on appropriate risk taking. It is not a strategy that generates goose-bumps, but it is a strategy that maximizes the chance for good decision making.

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Our high-yield Dow (HYD) investment strategy provides a good example of the practical benefits of this collaborative process. AIER and AIS developed the HYD model strategy to accommodate the Institute's dual objectives of income and growth for its charitable giving program. AIER sought a combination of consistent income for trust beneficiaries and long-term capital appreciation to fund its mission. Unlike other popular but simplistic "Dogs of the Dow" methods, our HYD model is based on an exhaustive review of the monthly prices, dividends, and capital changes for each of the stocks in the Dow Jones Industrial Average beginning in 1962.

HYD has proven to be a successful large-cap value strategy for income-oriented investors. For a thorough discussion, we recommend AIER's book, *How to Invest Wisely*.

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