FIDUCIARY FORUM

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IS THIS A GOOD TIME TO BE IN THE MARKET?

How well have you weathered the recession and the 2002 financial bear market? Did you do nothing to preserve principal as the value of global equity positions declined? Did you maintain a diversified portfolio only to find that wealth evaporated from multiple capital markets simultaneously? Most investors suffered badly over the past three years, and many find themselves wishing they had engaged a professional money-manager–or, perhaps, a different money-manager.

Most financial firms cite professional management as an advantage of their programs. Although a somewhat ambiguous term, "professional management" generally implies an ability to position an investment portfolio so as to take advantage of forthcoming economic expansions and defend its value in times of economic contraction. Professional management often takes the form of advice regarding capital markets or sectors to embrace – or avoid – during the forthcoming period. After all, diversification is a strategy driven only by ignorance. If you could successfully predict the direction of financial markets, you would have no reason to diversify.

When market volatility increases, asset management strategies calling for diversification across and within global markets can seem more and more sub-optimal. At such times, market-timing strategies seem the smart play for savvy investors. If an investment advisor is worth his fee, should he not know which times are best to invest money and which times are appropriate for taking profits? The intuitive answer is an emphatic yes.

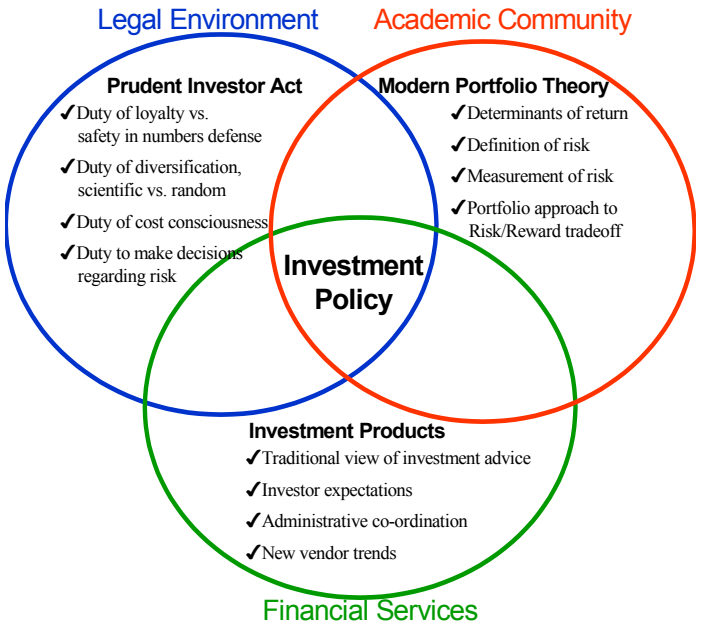
This issue of Fiduciary Forum evaluates the prudence of asset management based on market-timing strategies. We intend to provide insight into the promises and pitfalls of market-timing programs, so that your fiduciary investment decisions reflect the best available information.

Definition of Market Timing

Market timing is the attempt to align portfolio exposure to market risk factors in anticipation of predicted changes in security prices. Security selection ("stock-picking") differs from market timing in that the former involves forecasting price movements of individual securities, while the latter entails macro-economic forecasting of price movements in major capital markets relative to expected returns on cash. There are two kinds of market timing:

1) Asset class exposure as a function of market predictions. When equities in general are expected to do well, the timer shifts from cash and short-term fixed income instruments to stock, and vice versa.

2) Security weighting as a function of market predictions. When equities are expected to do well, the timer increases the Beta of the equity portfolio to increase exposure to equity risk factors, and vice versa.



In the first type, the timer makes concentrated bets on the single capital market that, in the timer's opinion, is most promising. This is an extreme form of asset management strategy that deliberately eschews diversification in an attempt to capture the returns of the single most favorable asset class. When the market timer predicts a bear market for equities, the most favorable returns will be found in bonds or cash.

The second form of market timing is, by contrast, incremental in nature. The timer remains invested in equities, but alters the portfolio to reflect his predictions regarding the business cycle and the functional relationships between the business cycle and stock prices. In some business cycles, stock prices may be very sensitive to factors like growth of the federal deficit or inflation; in other cycles, stock prices may reflect other, very different, economic factors. Thus, market timing skills require accurate forecasts for both macroeconomic factors and for the effects these factors will have on securities prices. At best, these are difficult challenges for even the most astute economist or investor.

Generally speaking, the market timer must predict three things for each market timing success:

1) The inception of the next down market;

2) The magnitude of the down market (it must be large enough to justify the transaction costs required to exit and reenter the market); and,

3) The end of the down market (the reentry decision must be made prior to the market recovery).

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There are always people who will give testimonials to market-timers because they have made money using a system. Under any market condition, there will be both bullish and bearish predictors. Someone is bound to make a sequence of correct predictions, if only as a matter of blind luck; and the widespread public exposure given to successful venders of market timing systems gives them a veneer of credibility.

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The difficulty of successfully predicting three sequential events is daunting. If, for example, a market-timing system is shown to make correct forecasts 70% of the time, the probability of correctly timing the market over just one round trip (out, and then back into the market) in such a way that it adds value to the portfolio is only 34% [.7 x .7 x .7 = .34].

Sources of Market Timing Advice

Although many pundits provide market-timing advice, most tie it to sales objectives. For example, some market timers sell their advice to investors by means of investment newsletters and electronic subscription services. Additionally, some Wall Street firms increase sales revenue by providing technical analysis (often for free) based on market trends.

The lure of market timing is strong. It promises a system that generates gains and avoids losses. Market timing vocabulary is pervasive. It is found in many articles written by the popular press, and is constantly broadcast over radio and TV programs. Furthermore, there are always people who will give testimonials to market-timers because they have made money using a system. Under any market condition, there will be both bullish and bearish predictors. Someone is bound to make a sequence of correct predictions, if only as a matter of blind luck; and the widespread public exposure given to successful venders of market timing systems gives them a veneer of credibility.

Independent Academic Evidence

Claims of market timing ability are a fruitful area for independent, third party investigation because standard statistical tests can readily validate or invalidate such claims. In general, market timers justify their asset management strategies by advancing three assertions:

1) The decision maker or advisor, in fact, possesses market timing ability;
2) Market timing transactions reduce investment risk; and,
3) Market timing transactions increase investment returns.

It is critically important for an investor to verify each of the above-listed claims prior to implementing timing-based decisions. By definition, market-timing strategies eschew the diversification of a balanced portfolio approach in favor of concentrating asset positions into a single capital market (stocks, bonds or cash). If the market timing call is incorrect, the effect on portfolio value can be catastrophic. This is easy to see when the market timing recommendation calls for movement from all cash to all stocks. Given the susceptibility of a 100% equity position to unanticipated economic shocks, such a concentrated bet demands a high level of confidence in forecasting skills. When a timing recommendation calls for abandoning stocks for cash, however, the risk may be less easy to see. In this case, however, the catastrophe to wealth occurs not in the form of loss of principal, but in the form of opportunity costs—the cost of missing the wealth-generating process of the stock market

Evidence for Market Timing Ability

Given the potential risks, it is important that the investor make inquiry into academic research on market-timing strategies prior to implementing such a course of action. In general, the standards of prudent asset management suggest that the investor develop and implement strategies that are academically sound and administratively reasonable. The following section reviews the history of academic investigation into asset management strategies based on market timing.

The first important inquiry into market timing abilities is the Treynor and Mazuy essay published in 1966. The authors test the hypothesis that market-timing skill can be found in the universe of professional mutual fund managers. They define market-timing skill as the ability to raise the sensitivity of the portfolio to the return of the stock market prior to the onset of bull market periods and lower portfolio sensitivity to stocks in anticipation of bear markets. Statistically, they compare (regress) returns in excess of the risk-free rate for a mutual fund's portfolio with returns in excess of the risk-free rate achieved by the stock market. If there is evidence of successful market timing ability, the characteristic line of the regression equation (i.e., Beta) should evidence a steep slope as the excess returns of the stock market grow large and a shallow slope as the excess returns turn negative (i.e., the market earns less than a T-Bill). After plotting mutual fund performance over periods exhibiting a wide range of bull and bear market conditions, the authors look for a convex monotonically increasing curve to verify timing skill. However, upon evaluating the professional management of 57 mutual funds over the period 1953 through 1962, the authors identify only one fund that exhibits statistically significant ability to time markets successfully.

In 1975, future Nobel Prize winner William Sharpe proposed another approach to measuring the market timing ability of investment professionals. Sharpe assumes that a manager changes the composition of his or her portfolio based on market forecasts. Shifts in

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portfolio composition and weighting are, therefore, proxies for the manager's market predictions. A close correspondence between the predictions of the manager and the actual direction taken by the market is evidence of superior market timing skill. However, given the fact that markets tend to outperform risk-free investments approximately two-thirds of the time, a market timer who is an eternal optimist will exhibit a 67% success rate. Sharpe therefore proposes several statistical adjustments to measure the proportion of correct timing calls in both bull and bear markets. A perfect market timer generates a score of 200% (correct prediction of each bull and each bear market) while an eternal optimist with no prediction skills generates a score of 100% because he or she will always fail to predict a bear market but will never miss a bull market. Sharpe's research leads to two important conclusions:

⇒ There is little evidence of superior market timing skills among the population of professional investment managers (i.e., the scores do not statistically differ from 100%); and,

⇒ The onus of transaction costs and commissions incurred in a simple one-time-per-year market timing system between stocks and T-bills demands that the market timer make correct calls at a 74% frequency rate (i.e., achieve a score of 148 or better) to beat a naive buy and hold strategy.

In 1981, Merton and Henriksson reopen the investigation of market timing skills. Like Treynor and Mazuy, they utilize the statistical technique of regression analysis to compare market returns of mutual fund managers with actual market performance. Unlike the earlier study that employs a single regression equation to plot the curvature of a beta line over a continuous range of values in both bull and bear markets, the Merton-Henriksson method employs a "dummy variable" set to zero for down markets and to one for up market conditions. This provides them with an analytical tool as finely tuned as Sharpe's and as powerful as Treynor's. Additionally, Merton employs the insights of the newly developed Black & Scholes option pricing theories to measure investment performance net of fair value payment for the option to buy perfect market timing skill from a forecasting guru. Not only does the Merton-Henriksson study fail to confirm the presence of market timing ability to a statistically significant level among professional money-managers; but Merton's option value calculations also suggest that true market timing skill would command such a high price that investors would be unable to make abnormal profits if they paid fair value for an option to use these skills.

Further refinements in the methodology of statistical measurements generated a sequence of market timing studies in the 1970s and 1980s. The majority of these studies conclude that, in general, the professional money management industry possesses negative market timing skills. A comprehensive study of the market-timing advice industry appears in a series of three research papers published during the 1990s by professors Graham and Harvey of the Fuqua School of Business at Duke University. Graham and Harvey conduct a rigorous examination of the performance record of investment advice newsletters. The three studies provide detailed insight into newsletter track records over the period 1980 through 1995. The performance evaluation equations incorporate past statistical methodologies; plus, they allow for measurement of "differential" timing ability that manifests itself when, for example, a market timing newsletter makes a correct prediction and the prediction is counter to the consensus prediction of market direction for the same period.

Their 1996 publication examines 237 newsletters during the period 1980 through 1992. The authors compile statistics concerning stock market performance in the month following each newsletter's buy or sell recommendations. They note that "when newsletters recommend an increase in equity weights, the subsequent one-month market return (in excess of the riskless rate) is positive 70.4% of the time. However, when a decrease in equity weights is recommended, the subsequent one-month market return is positive 69.4% of the time....the percent of newsletters that change investment weights in the correct direction (i.e. in the same direction as the one-month-ahead market movement)...is 50.1% and there appears to be random variation over time." This result, the authors conclude, "...is statistically indistinguishable from a success rate generated by random investment strategy and indicates an inability to predict the market." When the authors look out six months beyond the buy or sell recommendations, the track record is worse. For example, "...the future market return is more likely to be positive after decreases in recommended ...equity weights. The mean annualized six-month return is 12.7%, while the mean excess return following decreased equity weights is 16.2%. This is the opposite to what we expect if newsletters appropriately time the market."

The introductory section of the Graham and Harvey 1994 publication discusses the methodology used to fairly and accurately evaluate the investment newsletters' advice. They find that evaluation requires two benchmark performance measurements. To create

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Unfortunately, the ability to identify relatively superior newsletters is not particularly helpful to investors looking for asset management guidance. Even the best newsletters have abysmal performance.

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the first performance benchmark, they add or subtract leverage to a cash and S&P 500 portfolio in order to set the volatility of the comparison benchmark to the exact volatility of the newsletter portfolio. Given identical risk, they can compare returns. To create the second performance benchmark, they add or subtract leverage to the newsletters' portfolios until they match a 100% S&P 500 buy-and-hold strategy over the evaluation period. Once again, this provides an "apples-to-apples" performance measurement. After crunching the numbers, the authors determine that when the benchmark portfolio's volatility aligns with the volatility of portfolios recommended by newsletters, the newsletters underperform the benchmark by 1.5% per year (not counting transaction costs). Alternately, when the volatility of newsletter portfolios aligns with the volatility of the 100% stock benchmark, the newsletters underperform by 4.2% per year (not counting transaction costs).

In the 1997 article, Graham and Harvey address the issue of how to find the good newsletters. They examine the track record of 326 newsletters for the 1983-1995 period. Newsletters are graded on their performance (according to the double measurement criteria outlined above) in an initial five-year period. The superior performers receive a grade of 'A.' The worst performers receive grades of 'E' and 'F.' The performance of these two groups is then tracked over the next five year period. For example, an investment in the A grade newsletter portfolios in December of 1990 would have produced an annual return of 12.6% by December of 1995. By contrast, investment in the E and F grade newsletter portfolios would have produced an annual return of only 7.2% over this period. The authors conclude that it is possible to identify newsletters that are able to generate relatively superior long-term performance: "overall, a significant hot-hands / cold-hands effect is present in the newsletter recommendations." Unfortunately, the ability to identify relatively superior newsletters is not particularly helpful to investors looking for asset management guidance. Even the best newsletters have abysmal performance. The authors point out that, during the period under evaluation, "… a passive strategy with the same volatility would have delivered 16.0 percent return…. In our study, overall newsletter market-timing ability is so poor that we cannot identify superior absolute performance…."

The Journal of Financial Services Research published, in 1998, a study that extends research on market timing abilities to an evaluation of bank common ("pooled") trusts during the period 1984 – 1992. The authors conclude that, considered in the aggregate, "bank trust department portfolio managers are unable to time the market successfully by changing their portfolio betas in anticipation of differential market conditions and, thus, are unable to outperform a passive buy and hold investment strategy." These results are what you would expect to find in relatively efficient markets. These are markets in which the effects of economic, political, tax & regulatory, and firm-specific news are quickly impounded in the price of stocks. In this type of market, the price of any asset reflects the consensus opinion of investors regarding all relevant information affecting the risks and rewards of owning the security.

Risk and Market Timing Transactions

Promoters of market timing investment systems sometimes advance the argument that timing increases the safety of the portfolio. One often hears pronouncements like "this is not a good time to be in the market," or, "you can't be hurt by sitting on the sidelines in cash." Consider, for example, a typical market timing prediction reported in Financial Planning magazine on September 1, 1998:

> *Dr. Edward Yardeni, chief economist of Deutsche Morgan Grenfell in New York, is predicting a fairly dire fallout from Y2K. Yardeni is so fascinated with Y2K he is keeping an extensive Web site (www.yardeni.com). The economist, who has testified before Congress on the issue, believes there is a 60% probability that Y2K will trigger a recession."*

Typically, those who advocate practicing an extreme form of market timing articulate their case for exiting the market by using "never-before" or "once-in-a-lifetime" vocabulary. While acknowledging that equity markets are cyclical and that stock prices rise and fall, the triggering event for their market call is extraordinary and unimaginable. Of course, every exogenous economic shock is, by definition, extraordinary and unimaginable (Cuban missile crisis, presidential resignations, gulf war spike in oil prices; world banking liquidity crisis sparked by Russian debt default, Y2K, 9/11, etc.). This is the reason why security prices constantly adjust in order to fully compensate investors for risk. It is the reason, if the planning horizon is long-term, investors want to maintain a position in equities so that when equity prices decrease, they have the expectation of capturing a handsome premium in the future for bearing the risk of ownership. If stocks did not manifest volatility, they would yield only the risk-free rate of return. This, of course, would be a wholly unsatisfactory result for investors; and, it demonstrates why inves-

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Return maximization strategies are rarely employed because they create irrational asset weightings and unfavorable reward/risk tradeoffs. The return maximizing investors that placed their investment capital with Enron, Global Crossing, WorldCom and other "new economy" firms confirm this point.

tors should measure and manage volatility rather than flee from it.

The "never-before" characterization of market risk creates a logical dilemma for investors wishing to embrace market timing asset management strategies. In particular, it demonstrates an uneasy co-existence between market timing systems based on technical analysis (charting) that relies on spotting current price/volume trends that replicate past patterns of price movements, and market-timing systems based on predictions of unique, never-before-seen catastrophic events. Market timing analysis must assume that either the past is relevant or it is not; that either stock prices are fairly valued because they reflect all currently known risks or they are not. If past price movement trends are irrelevant (as both academic studies and "never-before-seen crisis" market timers suggest), then any investment decision based on a technical indicator approach to asset management is difficult to justify. However, if the "never-before-seen crisis" market timers are correct, they must demonstrate that exiting the market *after* the nature and economic consequences of the crisis are fully known, will produce *subsequent* returns that do not jeopardize the ability of investment capital to discharge reasonable future obligations.

What is the cost of safety? Should investors maximize investment safety? Maximizing the safety function calls for minimizing the probability that the worst-case outcome will occur. In Financial Economics this is known as a Min/Min strategy. With respect to asset management it calls for the investor to chart a course that, to the greatest extent possible, avoids risk. However, the investor who pursues this course must also weigh the costs of such a strategy. Consider the following analogy: a person wishing to drive a car evaluates the risks. The worst-case outcome (a fatal accident) is avoidable only by foregoing use of an automobile. However, the opportunity cost of such a strategy, remaining homebound, is not acceptable because it mandates an unfavorable reward/risk tradeoff. Conversely, investors sometimes seek to maximize return (in Financial Economics , a Max/Max strategy). Return maximization strategies ignore risk by concentrating investments in the few securities that offer, in the investor's opinion, the highest expected value over the next time period. Return maximization strategies are rarely employed because they create irrational asset weightings and unfavorable reward/risk tradeoffs. The return maximizing investors that placed their investment capital with Enron, Global Crossing, WorldCom and other "new economy" firms confirm this point.

In general, investors should neither avoid risk nor ignore it. Rather, they should measure risk, and manage it to their best advantage. Unmeasured and unmanaged risk becomes no more than an amorphous uncertainty about the future, and may compromise the ability to make good decisions. It is not sufficient for an investor to say, "the future was uncertain, therefore I chose to avoid risk." This is an imprudent asset management strategy because it flows from an *ad hoc* decision-making process based on hunches and premonitions rather than from sound information and critical evaluation. Poker players, for example, better be able to measure the odds because "hunch" players are merely sheep waiting to be fleeced. Unlike gambling, prudent investment requires a balanced and diversified portfolio approach to risk management. The investor must manage the risk/reward tradeoffs that are inherent in the investment process rather than ignoring them.

A sound portfolio management process maximizes the probability of a successful financial outcome over the relevant planning horizon. To the naïve investor, maximizing the probability of a successful financial outcome may sound either like maximizing the safety function or like maximizing the rate of return function; but, in fact, it is very different. The history of modern academic research into the investment process indicates that both extreme avoidance of risk or reckless indifference to risk are sub-optimal asset management strategies. Furthermore, academic evidence firmly establishes that market-timing strategies increase risk rather than mitigate it. The reason lies in the fact that attempts to truncate downside risk incur substantial upside opportunity costs.

Considerable research indicates that the biggest risk of market timing is that investors will not be in the market at critical times, thereby reducing their overall investment returns. For example, professor Charles Jones of North Carolina State University calculates that for the ten-year period 1986 through 1995 an investor who remained fully invested in the S&P 500 stock index realized an annualized rate of return (exclusive of commissions, taxes and expenses) of 14.8%. The following table, however, illustrates the consequences of missing critical market upturns:

Days out of the Market	Annualized Return
Fully Invested	14.80%
Best 10 Days	10.20%
Best 20 Days	7.30%
Best 30 Days	4.80%
Best 40 Days	2.50%

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As early as 1936, Professor Albert Cowles concluded that anyone possessing true market timing ability would never want to disclose this fact simply because, keeping their own counsel, they would soon amass fabulous wealth. Once the system was disclosed, however, profits would be trampled as other investors rushed to implement it. .

Additionally, Jones calculates that taking out the best 15 months of S&P 500 performance over the period 1980 – 2000 reduces terminal wealth for an initial $1.00 investment from $18.41 to $4.73.

The danger of market timing is that, even if the investor has a high degree of confidence that his or her future economic predictions are accurate, it still does not make sense to stake the entire sum of investment capital on a single directional bet. Such wagers constitute not risk control but risk maximization.

Market Timing and Expected Return

Advocates of portfolio management based on market timing decisions may justify such a strategy by asserting that it increases expected portfolio return. There is no doubt that any system that can truncate downside investment risk during bear market periods while subsequently capturing the returns of bull markets will outperform a naïve buy and hold portfolio. Thus, one implied promise of successful market timing is the promise of an investment "Bud Light"—great return / less risk.

Financial economists find such an assertion to be of interest for many reasons—not the least of which is that if consistent and persistent market timing ability exists, the prices of assets in the marketplace may, in fact, be all wrong. A skilled investor could invest in risky assets without incurring the uncertainty regarding future investment performance that plagues other buyers and sellers. It is important to note that any market timing system must exhibit both consistency and persistency. Timing concentrates bets; and, if both characteristics are not present, the economic consequences of a single wrong bet can destroy the economic benefits of long sequences of correct market calls.

What does the successful market timer look like? This was the question posed by future Nobel Prize winner Robert Merton in the early 1980s. Merton noted that an investor who purchases $1,000 in 30-day commercial paper on January 1, 1927 [30-day T-Bills did not yet exist] and rolls over all proceeds would, after 52 years, achieve terminal wealth of $3,600 on December 31, 1978. By contrast, an investor who purchases the New York Stock Exchange index and reinvests all dividends ends up with terminal wealth of $67,500. The market timer, possessing the ability to determine at the beginning of each month the investment (cash or stock) that will have the better performance, ends up with terminal wealth greater than either the "safe" portfolio or the "100% equity" portfolio. Although we would want to employ this market timing professional to manage our money, it is unlikely that we will be able to entice him into working for us. This is because, the timer ends up with terminal wealth of $5.36 billion and will not need to earn extra money by selling his or her market timing secrets. Wealth of $5.36 billion in 1978 makes the timer the richest person in the world.

As early as 1936, Professor Albert Cowles (founder of the Center for Research in Securities Prices at the University of Chicago) concluded that anyone possessing true market timing ability would never want to disclose this fact simply because, keeping their own counsel, they would soon amass fabulous wealth. Once the system was disclosed, however, profits would be trampled as other investors rushed to implement it. Every truly successful system, once disclosed, rapidly sows the seeds of its own destruction as it becomes universally implemented. Indeed, academic research indicates that market timing decisions based on publicly available information cannot earn abnormal profits because investors have already rushed to adjust stock prices so that their fair value fully reflects such information. Most academic studies of securities valuation fail to detect persistent and consistent arbitrage opportunities available to a subset of market-timing investors that can successfully exploit them.

However, there is a second line of independent inquiry that calls into question a fundamental premise upon which promoters of market timing base their claims. It is an established phenomenon that equity (stocks) and debt (bonds) exhibit dissimilar performance characteristics over the economic business cycle. During economic expansions, the value of equity tends to rise. During periods of economic contraction, bonds tend to perform well because both inflation and interest rates usually decrease as the economy cools. With the decrease in required yield, the value of fixed income instruments increases. Additionally, most research shows that stock price movements lead economic activity because they reflect investor expectations regarding future economic conditions.

Bond prices move inversely with the business cycle and stock prices lead (rather than move synchronously) the business cycle. These generally accepted economic principles have important consequences for investors. If stock prices lead the business cycle, it should be difficult to predict future stock price movements by analyzing current economic conditions. Generally speaking, academic studies confirm this result. Nevertheless, under volatile market conditions, it may be tempting to decrease or increase a portfolio's equity exposure either to "stop the bleeding" or to

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Prior to 1998, the market delighted investors with a spectacular run that Alan Greenspan characterized as irrational exuberance. Huge profits had been made and were now slipping away.

"capture the rewards of future prosperity." However, if the decision is motivated primarily by considering the "current" state of the economy (which is actually the measurement of the recent past state of the economy that is only now being reported in government statistics), the probability is high that the decision is based on irrelevant information.

If this were the complete story, however, it would not be fatally damaging to asset management strategies based on market-timing decisions. In 1989 professors Fama (University of Chicago) and French (Yale University) published a study of the relationship between stock prices and business conditions. The article confirms the validity of the general principle that stock and bond returns are tied to the business cycle and, hence, move in a countercyclical fashion. However, they document a countercyclical movement in risk premia as well. This means that although, on average, stocks have a higher return over risk-free Treasuries (i.e., a higher risk premium) than do bonds, the expected risk premium is not static. When the economy is in particularly good shape and stocks have risen in value, their relative risk premium advantage over bonds tends to shrink. Conversely, investors can expect to earn particularly attractive risk premiums from owning stocks if current business conditions are poor. At the time everyone wants to own stocks, it is not surprising that returns over the forthcoming period may be meager because prices will have been bid up to relatively high levels. At a time when investors become nervous about owning stocks and wish to execute a "flight to quality," it is not surprising that the odds of earning attractive returns over the forthcoming period increase.

At first, this finding might be seen to provide a strong rationale for adopting market-timing strategies. If portfolio asset weightings can be shifted to take advantage of differential economic conditions, the investor stands to earn abnormal profits. In fact, a subsequent 1998 study of the interrelationships between security prices and business conditions documents that correct cyclical asset reallocations produce substantial profits when compared to buy-and-hold positions. However, the fly in the ointment is that the critical turning points in the business cycles are difficult to predict. In fact, it is not until many months after such turning points occur, that investors can have any real confidence that economic conditions have truly changed (National Bureau of Economic Research announcements "are typically forthcoming 12 to 18 months after an official turning point date has been designated"). Given the inability to predict the business cycle with accuracy (not to mention the conditional task of predicting how stock and bond prices will unfold within the cycle), the authors state, "...we warn the reader against employing our estimated allocation proportions in any type of proactive cyclical asset timing strategy."

The Fama and French evidence suggests that, in fact, investors can expect to earn negative profits from market timing systems that employ macro-economic forecasting triggers. The generally poor history of returns to market-timing strategies confirms such an intuition. The timing moves are often the reverse of what should be done by the astute investor. The systems produce sell signals at the very time that expected future rewards from stock ownership are relatively attractive. Rather than "protecting profits," such market timing moves create a strong probability that profits will never, in fact, be earned.

A Hypothetical Market Timing Call

Was it prudent to eschew diversification in the summer of 1998? The summer of 1998 saw one of the most virulent market declines in recent history. The Russian default on debt obligations (following a persistent monetary crisis in Southeast Asia) triggered worldwide nervousness in financial markets. The enormous asset portfolios managed under highly leveraged strategies by Long Term Capital Management in Connecticut placed heavy bets on the wrong side of currency movements. The extent of portfolio leverage threatened a liquidity death spiral similar to the Savings and Loan crisis that saw the Resolution Trust selling highly leverage real estate for pennies on the dollar. Prior to 1998, the market delighted investors with a spectacular run that Alan Greenspan characterized as irrational exuberance. Huge profits had been made and were now slipping away. What is the correct response?

Prudent decisions sometimes have bad outcomes and poor decisions sometimes yield lucky results. Therefore, although it is tempting to say in hindsight that a decision to exit the market was bad because it missed the subsequent great bull market, a more interesting exercise is to examine the information available to investors at the time of the decision. It may also be interesting for you to chart your own decision-making predilections so that you may achieve a greater understanding of your personal risk tolerance.

An examination of the information available to investors at this time indicates a lack of consensus among market timing practitioners regarding the future direction of the stock market. For example, Investment Quality Trends advice newsletter writes, on June 1:

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"The absence of major negative forces over the past 7½ years has paved the way for the greatest bull market of all time. We continue to believe that the probability of a bear market developing in the months ahead remains near zero. "

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"When is enough enough in the stock market? When does a good thing become too much of a good thing? The answer to both questions is, now....It's time now to count your blessings, count your profits and start thinking of selling, not buying." In this same vein, the June issue of Russ Kaplan's Heartland Adviser states: "While we at Heartland Adviser agree the market will hit 10,000, we do not see it happening in the immediate future....Why are we so cautious? The earnings for the first quarter (the all important 'E' in P/E ratios) have been somewhat disappointing and in our opinion weaken the fundamentals of the market. Another factor is the total panic bandwagon climate for certain stocks, paralleling in our eyes speculative disasters such as the South Sea Bubble, the tulip craze, and the two-tiered market of the 1970s."

Conversely, on June 5, 1998, Bob Brinker's Marketimer opined: "historical evidence suggests five major factors contribute to a bear market. These include tight money, rising interest rates, high inflation, rapid economic growth and overvaluation. The Marketimer stock-market timing model monitors each of these factors on an ongoing basis. Since October 1990, at DJIA 2365, we have recommended a fully invested stock-market position based on our analyses of these factors, which are included in our timing model. The absence of major negative forces over the past 7½ years has paved the way for the greatest bull market of all time. We continue to believe that the probability of a bear market developing in the months ahead remains near zero. As a result, our 100% invested position continues as the summer season approaches. As always, short-term pullbacks of less than 10% can occur in a major bull market, followed by new record highs."

Lying between Heartland Adviser's doomsday analogies with the South Sea bubble and the tulip craze, and Bob Brinker's optimistic forecasts of new record highs, are commentaries like that found in the June 3rd edition of Richard Russell's Dow Theory Letters: "...bonds have acted well, and that constitutes a plus for the stock market. Over and over again, the long bond has tested the 6% yield level, and again and again that level has been rejected. The stock market likes nothing better than a firm or (better still) a rallying bond market....Nobody's talking about this, but if the U.S. stock market lapses into a trading range, stock buyers will be collecting 1.5% or less in the way of dividends. What I am saying is that with stocks providing record low dividends, if stocks don't go up, buyers will be sitting with literally no return....At this juncture, I prefer putting new money into government paper."

Mainstream investment publications cautioned against market timing reactions to market volatility. The June 19, 1998 Wall Street Journal, for example, states: "What about money you already have in stock funds in your 401(k) or other retirement plan? Leave it alone. More than likely you bought into the funds at much lower prices, so you're already ahead, even if the funds lose some value in the coming months. Next, shift toward a more conservative allocation. A lot of people use a rigid percentage – they may have 70% in stocks if they're in their 40s, 60% if they're in their 50s. But you ought to consider having a range – say, from 50% to 70%. This gives you the flexibility to move up and down the range as market conditions change. You aren't market-timing. You're being sensibly flexible."

Likewise, the June 5th issue of National Business Review cautioned investors about employing market timing asset management strategies: "In the 1960s, financial economists Arnold Moore and Eugene Fama statistically analyzed daily stock prices over the periods 1951 – 1958 and 1958 – 1962, respectively and found that they had only a 3% correlation one day to the next, which means that only 3% of the total variation in daily stock prices is explained by the historical patterns and the rest is pure noise. Essentially, this means past stock prices are useless in predicting the stockmarket....At no time has market timing worked. A study of mutual fund cash holdings from 1970 to 1989 conducted by Goldman Sachs showed that mutual fund managers miscalled all nine major turning points in the stockmarket during the 1970s and 1980s.... The same thing happened in 1992, 1993, and 1994, with fund managers foreseeing market drops that never occurred."

The one area in which consensus regarding appropriate asset management strategies seems to exist during the period is found among large plan ERISA fiduciaries. The Washington Times, on September 4th quotes the chief investment officer for the Virginia state employee retirement fund (acknowledging losses of $900 million) as maintaining a policy of consistent exposure to the equity markets: "We don't do market-timing investments." The Washington Times reports that this approach is typical of the investment directors for the nation's public pension accounts. Maryland's executive director for the State Retirement and Pension System affirmed that they planned no major asset allocation changes following the one-day drop of 512 points (approximately 6%) in the value of the Dow Jones Industrial stock average. A spokesman for the California Public Employee Retirement System affirmed that they maintained an allocation of 65% in equities. Furthermore, follow-

(Continued on page 9)

ing the 700-point slide in the Dow from its July 17th value (resulting in a paper loss of approximately $5 billion), CalPERS officers announced that they viewed this as "a good time to invest."

In contrast to fiduciary investors, individual investors self-directing their personal 401(k) accounts, moved a record amount of money out of equities and into bonds and cash following the single 512 point day plunge in the Dow and, in a classic market timing call, moved back into stocks when they rebounded on the following day: "that was exactly the wrong thing to do, because as stock prices fell on Monday, bond prices soared, and stocks bounced back on Tuesday." The consensus opinion of the professional money management community at the end of the second quarter of 1998 appears to have favored keeping a stable asset mix. Morningstar reports on September 3rd that there was no evidence that balanced fund managers "have changed their asset allocation....tactical asset allocation and market timing have fallen out of vogue. It's been shown that it's not an efficient and effective way of investment."

Market timing systems seem to share many characteristics common to fads, fashions, and other transitory styles and tastes. The popularity cycle of market timing decisions ebbs and flows with market volatility.

Conclusion

Rather than constituting a prudent and suitable tool for investment management, market timing systems seem to share many characteristics common to fads, fashions, and other transitory styles and tastes. The popularity cycle of market timing decisions ebbs and flows with market volatility. It is difficult to characterize market timing as a defensible and academically sound investment approach; however, from time to time it becomes a "popular" approach. Assets are managed according to an interior decorator model that incorporates the latest "thing to do" rather than according to reasonable and academically supportable criteria.

Knowing that the Summer of 1998 would produce a virulent decline in world capital markets, would you have liquidated your investments in favor of cash or T-Bills? Would you have abandoned a diversified asset management approach? Obviously, your decision is colored by the fact that you know the end of 1998 saw record-setting returns for major stock indices. This information provides you with great comfort because, in hindsight, you know when to reenter the market. Looking backwards, everyone is a superlative investor. What about 2003? When is it prudent to abandon a diversified approach to asset management?

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[1] Rao, S.P., "Market Timing and Mutual Fund Performance," American Business Review (June, 2000), pp. 75-79.
[2] See, for example, Bodie, Z., Kane, A., & Marcus, A., Investments Second Edition (Richard D. Irwin, Inc., 1993)
[3] Treynor, Jack & Mazuy, Kay, "Can Mutual Funds Outguess the Market?" Harvard Business Review (July-August, 1966),
[4] Sharpe, William F., "Likely Gains from Market Timing," Financial Analysts Journal (March-April, 1975).
[5] Henriksson, Roy, & Merton, Robert, "On Market Timing and Investment Performance: Statistical Procedures for Evaluating Forecasting Skills," Journal of Business (October, 1981)
[6] Merton, Robert C., "On Market Timing and Investment Performance: An Equilibrium Theory of Value for Market Forecasts," Journal of Business (July, 1981).
[7] See, for example, the survey in Reilly, Frank K., & Brown, Keith C., Investment Analysis and Portfolio Management Fifth Edition (Dryden Press, 1997), pp. 1015-1016; and Jones, Charles P., Investments: Analysis and Management Eighth Edition (John Wiley & Sons, Inc., 2002), pp. 303-304.
[8] Graham J.R., & Harvey, C.R., "Market timing ability and volatility implied in investment newsletters' asset allocation recommendations," National Bureau of Economic Research Working Paper 4890 (1994); Graham J.R., & Harvey, C.R., "Market timing ability and volatility implied in investment newsletters' asset allocation recommendations," Journal of Financial Economics 42 (1996); and Graham & Harvey, "Grading the Performance of Market-Timing Newsletters," Financial Analysts Journal (November/December, 1997).
[9] Sahu, A., Kleiman, R., & Callaghan, J., "The Timing and Stock Selection Abilities of Bank Funds: Evidence Based on Meta-Analysis," Journal of Financial Services Research (1998), pp. 137-152.
[10] The notable exception to the preponderance of academic opinion is found in Grinblatt, M. & Sheridan, T., "Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings," Journal of Business (1998), pp. 393-416. This study finds evidence of market timing performance persistence and abnormal returns from market-timing strategies. However, the magnitude of abnormal returns was not great enough to justify the costs of implementing timing strategies. Other studies (e.g. Wagner, Jerry C., "Why Market Timing Works," Journal of Investing (Summer, 1997), pp. 78-81) provide evidence of positive returns to market timing for only limited sample periods. The phenomenon of limited periods of success for market timers, however, has been more deeply examined (e.g. Bauer, R. & Dahlquist, J., "Market Timing and Roulette Wheels," Financial Analysts Journal (January/February, 2001), pp. 28-40) and the basic academic conclusions regarding the low probability of success are reaffirmed.
[11] A general commentary on market timing and risk control appears in the March 9, 1998 issue of Business Week: "Most timers defend their systems as a way to minimize risk. If that's your goal, there are better ways. One method, which is easy with mutual funds, is to diversify into other asset classes such as bonds, foreign equities, and real estate." P. 102.
[12] Jones, Supra pp. 304-305. Alan Feld, writing in the CPA Journal of February 1995, notes that in 1991 the stock market gained 26%. Approximately two-thirds of the gain came in the very tense period—the 21 trading days following the beginning of Desert Storm. Many individual investors were out of the market waiting to see if events would unfold favorably.
[13] Fama, E. F. & French, K. R., "Business conditions and expected returns on stocks and bonds," Journal of Financial Economics," (vol. 25) pp. 23-50.
[14] This observation can also be extended to decisions to sell equities into a down market. Anyone who demands liquidity (i.e. trades equity for cash) may pay extraordinarily high trading costs as measured by the magnitude of dealer bid/ask spreads as well as by the magnitude of the transaction's market impact. Investors who supply liquidity in down markets often achieve superior investment results simply by trading against the crowd.
[15] Brocato, J. & Steed, S., "Optimal Asset Allocation over the Business Cycle," The Financial Review (August, 1998)
[16] Market Timing citations from Barron's "A Sampling of Advisory Opinion," June 15, 1998 Market Watch column.
[17] Schultz, Ellen, "When to Run for Cover in Your Retirement Plan—Market Jitters May Prompt You to Cut Back on Stocks, But Needs Can Differ Widely," Wall Street Journal June 19, 1998.
[18] "Beware the 'Greater Fool' Theory of Stockmarket Investment," National Business Review June 5, 1998.
[19] "Pension funds take long view on Dow," The Washington Times, September 4, 1998.
[20] "Balanced Funds: Managers Avoid Market Timing" Dow Jones New Service September 3, 1998.

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SCHULTZ COLLINS
LAWSON CHAMBERS
INVESTMENT COUNSEL

455 Market Street, Suite 1450
San Francisco, California 94105
(877) 291-2205
(415) 291-3000
FAX (415) 291-3015

22 W. Pennsylvania Ave., Suite 606
Towson, Maryland 21204
(410) 583-5800

1912 Sunderland Place N.W.
Washington, DC 20036
(202) 429-0200

www.schultzcollins.com
E-Mail: trusts@schultzcollins.com