
Behavioral Finance: Past Battles and Future Engagements

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Market efficiency is at the center of the battle of standard finance versus behavioral finance versus investment professionals. But the battle is not joined because the term “market efficiency” has two meanings. One meaning is that investors cannot systematically beat the market. The other is that security prices are rational. Rational prices reflect only utilitarian characteristics, such as risk, not value-expressive characteristics, such as sentiment. Behavioral finance has shown, however, that value-expressive characteristics matter in both investor choices and asset prices. Therefore, the discipline of finance would do well to accept the first meaning of market efficiency and reject the notion that security prices are rational. We could then stop fighting the market efficiency battle and focus on exploring (1) asset-pricing models that reflect both value-expressive and utilitarian characteristics and (2) the benefits, both utilitarian and value expressive, that investment professionals provide to investors.

Behaviorists have homed in on precisely these same dividend-related soft spots in the current body of theory (see especially Shefrin and Statman 1984). (Miller 1986, p. S451)

Shooting arrows into the soft spots of standard finance was great fun—especially in the 1980s, when behavioral finance had few spots, soft or hard, to serve as return targets. But now, at the end of the 1990s, behavioral finance has burgeoned, and Fama (1998) has had fun shooting arrows into its overreaction and underreaction soft spots. Investors overreact in half the empirical studies, noted Fama, and underreact in the other half. So, which will it be today, he taunts:

[G]iven the demonstrated ingenuity of the theory branch of finance, and given the long litany of apparent judgment biases unearthed by cognitive psychologists (De Bondt and Thaler 1995), it is safe to predict that we will soon see a menu of behavioral models that can be mixed and matched to explain specific anomalies. (p. 291)

Behavioral finance as a field has grown so that a comprehensive review would require a book. Fortunately, Shefrin (1999c) has written that book, *Beyond Greed and Fear: Understanding Behavioral Finance and*

the Psychology of Investing. Earlier, Bernstein (1996) provided a historical perspective, and De Bondt and Thaler (1985), Statman (1995), and Shiller (forthcoming 2000) provided brief reviews. I do not attempt a comprehensive review in this article. Instead, I examine some past battles and suggest future engagements.

Overreaction and underreaction are weapons in the battle between standard finance and behavioral finance. But the battle is not joined because market efficiency has two meanings. To some, market efficiency means that there is no systematic way to beat the market. To others, it means that security prices are rational—that is, reflect only “fundamental” or “utilitarian” characteristics, such as risk, but not “psychological” or “value-expressive” characteristics, such as sentiment.

The market efficiency battle is being fought as if the believers can win only if the nonbelievers lose. But I argue that finance scholars and professionals would do well to accept market efficiency in the beat-the-market sense but reject it in the rational-prices sense.

The acceptance of the validity of one sense and rejection of the other will allow us to ask questions that relate to asset-pricing models that reflect all characteristics of investor behavior—utilitarian and value expressive—and questions that relate to the roles of investment professionals, roles that go beyond beating the market.

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Standard Finance versus Behavioral Finance

Standard finance is the body of knowledge built on the pillars of the arbitrage principles of Miller and Modigliani, the portfolio principles of Markowitz, the capital asset pricing theory of Sharpe, Lintner, and Black, and the option-pricing theory of Black, Scholes, and Merton. Standard finance is compelling because it uses a minimum of tools to build a unified theory intended to answer all the questions of finance.

Few theories are consistent with all the empirical evidence, however, and standard finance is no exception. Miller readily acknowledged that dividends are a puzzle in standard finance, but he went on to argue that

the rationality-based market equilibrium models in finance in general and of dividends in particular are alive and well—or at least in no worse shape than other comparable models in economics at their level of aggregation. The framework is not so weighed down with anomalies that a complete reconstruction (on behavioral/cognitive or other lines) is either needed or likely to occur in the near future. (p. S466)

I argue that, to the contrary, today's standard finance is so weighted down with anomalies that reconstructing financial theory along behavioral lines makes much sense.

Some people think that behavioral finance introduced psychology into finance, but psychology was never out of finance. Although models of behavior differ, all behavior is based on psychology.

Behavioral finance, like standard finance, is constructed with few tools that have many uses. Some of the tools of behavioral finance are identical to those of standard finance, but some are different because they reflect a different model of human behavior. The tools of behavioral finance include susceptibility to frames and other cognitive errors, varying attitudes toward risk, aversion to regret, imperfect self-control, and preferences as to both utilitarian and value-expressive characteristics.

The role of frames is illustrated well in the dividend puzzle. Consolidated Edison Company, New York City's power company, eliminated its dividend during the energy crisis of 1973–1974. Some shareholders cried at Con Edison's 1974 annual meeting; others had to be restrained from physically harming the chair of the company's board. Here is a typical reaction:

A lady came over to me a minute ago and she said to me, "Please say a word for the senior citizens." And she had tears in her eyes. And I really know what she means by that. She simply means that now she will get only one check a month, and that will be her Social Security, and she's not going to make it, because you have denied her that dividend. (Shefrin and Statman, 1984, p. 277)

Standard finance shareholders would have been upset by the energy crisis and its impact on Con Edison's stock price, but they would not have been upset by the decision to eliminate the dividend. Standard investors follow the arbitrage principles of Miller and Modigliani, so they know that in a world without taxes and transaction costs they should be indifferent between a dividend dollar and a capital dollar. Standard investors are indifferent between dividends and capital because they do not rely on companies to create dividends; they create homemade dividends by selling shares. Moreover, in a world where dividends are taxed more heavily than capital gains, standard investors know they are actually better off when companies refrain from paying dividends.

So, why do companies pay dividends? Shefrin and Statman (1984) began the analysis of the dividend puzzle with a consideration of frames.

Frames are a part of Kahneman and Tversky's (1979) prospect theory. A dividend dollar is different from a capital dollar in prospect theory because the investor frames the dollars into two distinct mental accounts. The decline in the price of Con Edison's shares is a loss in the capital mental account, whereas the elimination of the dividend is a loss in the dividend mental account.

The mental-accounting structure of dividends and capital is one of many frames. People often keep their portfolio money in separate mental accounts or "pockets." Some money is retirement money, some is fun money, some is college education money, and some is vacation money. Markowitz tried to teach investors to consider covariances between their mental accounts and integrate them all into an overall portfolio, but he was not entirely successful. Many investors still divide their money into a mental account for downside protection (containing cash and bonds) and a mental account for upside potential (containing stocks, options, and lottery tickets).

A second part of prospect theory relates to observations that people vary in their attitudes toward risk among their various mental accounts. Investors are often highly risk averse with the money in their downside-protection accounts and much less risk averse, even risk seeking, in their

upside-potential accounts. As Friedman and Savage (1948) observed many years ago, people regularly buy both insurance policies and lottery tickets.

Framing money into separate mental accounts has the drawbacks noted by Markowitz: Covariances between accounts are ignored, and portfolios lie below the efficient frontier. But framing is beneficial to investors with imperfect self-control. Standard finance investors are immune to problems of self-control. They stick to their saving plans and never engage in impulse buying. Behavioral investors are subject to temptation and, as Thaler and Shefrin (1981) noted, they look for tools to improve control.

Rules are good self-control tools. "Not one drop" is a good rule for people whose self-control problems center on alcohol. "Consume from dividends but don't dip into capital" is a good rule for investors whose self-control problems center on spending. Recall that the person who spoke at Con Edison's meeting did not consider the possibility of dipping into capital to create income. Dividend dollars, like Social Security dollars, are framed into *income* mental accounts, distinct from *capital* mental accounts. Homemade dividends are dips into capital, and investors with imperfect self-control are afraid, as recovering alcoholics are, that one dip might lead to another.

Homemade dividends have another disadvantage for behavioral investors; they open the door to regret. Regret (see Kahneman and Tversky 1982) is the pain we feel when we find out, too late, that different choices would have led to better results. Consider an investor who paid for a \$1,000 television set with cash received as dividends. Now, consider another investor who paid for an identical television set with cash received from the sale of shares of stock. Do the two investors feel the same regret when stock shares zoom up soon afterwards? Regret is tied to responsibility for choice. The choice to sell shares involves responsibility, and it brings regret when the share prices soar. The receipt of dividends involves little choice and little regret.

Finally, consider susceptibility to a broad set of cognitive errors (see Kahneman, Slovic, and Tversky 1982). For example, standard investors are never fooled by "the law of small numbers." They know that five years of returns provide little information about the investment skills of a particular money manager. Standard investors also know that the returns of the *average* manager are relevant in the evaluation of a *particular* manager. Behavioral investors, however, often conclude that even a one-year record is plenty of evidence about skill. So, they flock to the mutual funds with the best recent performance.

Standard finance people are modeled as "rational," whereas behavioral finance people are modeled as "normal." The two terms are not always at odds: Rational behavior is usually described as maximizing behavior, but maximizing behavior is quite normal. When offered a choice between a \$10 bill or a \$20 bill, both rational and normal people choose the \$20 bill. Similarly, normal people with imperfect self-control display maximizing behavior by looking for the cheapest way to control it. Willpower is the cheapest way for those who can muster it. People with weak self-control must resort to the control provided by, for example, a spouse who refuses to sign checks, and those with even weaker self-control must resort to the control provided by a government that will not allow one to tap into an Individual Retirement Account.

The Market Efficiency Battle. Proponents of standard finance were shooting arrows into the soft spots of investment practice long before they trained their sights on behavioral finance. The soft spots of investment practice are the claims of active managers that they can beat the market. Standard finance loosed the arrow that you cannot beat the market with fundamental analysis or with technical analysis. The market is efficient.

In this battle, many investment professionals have embraced behavioral finance as an ally against standard finance. Investment professionals were particularly heartened by De Bondt and Thaler's (1985) finding that loser stocks tend to be future winners and by Shiller's (1981) finding that stock market movements are too volatile to be justified by subsequent changes in dividends. So much for market efficiency.

The fury of the market efficiency battle is so great that one can easily miss Fama's (1991) statement that "market efficiency per se is not testable" (p. 1575). Market efficiency must be tested jointly with a model of expected returns, such as the capital asset pricing model (CAPM). The excess returns of small-cap stocks and stocks with high book-to-market ratios (B/Ms) might be the result of market inefficiency or of a bad model of expected returns.

The problem of joint testing makes the market efficiency battle futile. Standard finance proponents regard market efficiency as fact and challenge anomalies that are inconsistent with it. For their part, investment professionals regard market efficiency as false and delight in anomalies that are inconsistent with it. Standard finance proponents were happy with the CAPM as its asset-pricing model as long as it served to show that markets are

efficient, but they abandoned the CAPM in favor of Fama and French's (1992) three-factor model when the CAPM produced anomalies inconsistent with market efficiency. Hawawini and Keim (1998) examined many return anomalies in the United States and abroad. They concluded that finance has no tests powerful enough to distinguish market inefficiency from bad asset-pricing models. "Research over the next 100 years will, we hope, settle many of these issues," they wrote (p. 31).

What we need to do while we wait for 100 years to elapse is to accept market efficiency in the beat-the-market sense and reject it in the rational-prices sense—for two reasons. First, there is little logic in the argument that investment professionals who leave no \$20 bills on the floors of index arbitrage markets leave such bills on the floors of other markets. Second, the problem of jointly testing market efficiency and asset-pricing models dooms us to futile attempts to determine two variables with only one equation. Accepting market efficiency in the beat-the-market sense fixes one variable and allows us to explore the characteristics of the second variable, expected returns.

Utilitarian and Value-Expressive Preferences.

Proponents of standard finance want more than markets that cannot be beaten; they want models of expected returns that are consistent with rationality. Schwert (1983) readily conceded that we need new asset-pricing theory that is consistent with return anomalies. But, he added, the new theory must also be consistent with "rational maximizing behavior" on the part of all investors. The work of De Bondt and Thaler and that of Shiller raised the ire of standard finance not because they found anomalies but because they offered theories that imply "irrationality." In particular, De Bondt and Thaler (1985) argued that the anomaly of past losers becoming future winners is a reflection of the cognitive error of overreaction, and Shiller (1981, 1990) argued that the ups and downs in stock markets might follow irrational fads.

Some of the distinction between rationality and irrationality in the investment context is a distinction between utilitarian and value-expressive characteristics, the two groups into which marketing scholars, such as Munson and Spivey (1981), classify product characteristics. Value-expressive characteristics are those that enable users of a product to identify in it their values, social class, and lifestyles. Anyone who has ever bought a watch knows that it is more than a utilitarian timekeeper. A Timex conveys a lifestyle of modesty or thrift; a Rolex conveys a lifestyle of riches or ostentation. As Green (1983) wrote about the uses of tax-sheltered

securities, "Besides, if you don't have a tax shelter, what are you going to brag about at cocktail parties?" (p. 174).

The relative importance of utilitarian and value-expressive characteristics varies from product to product. Value-expressive characteristics are most prominent in jewelry, less prominent in automobiles, and almost absent in laundry detergents.

In the investment context, risk is a utilitarian characteristic and those who restrict their attention to it are considered rational. The rubric of "rationality" is not so easily extended to other characteristics, such as social responsibility, the display of wealth, the excitement of an initial public offering, or the camaraderie of Internet chat rooms.

Behavioral Asset-Pricing Theory. Proponents of standard finance often regard the value-expressive motives of investors as unimportant detours from the main road, namely, asset-pricing models. For example, Miller wrote:

Stocks are usually more than just the abstract "bundles of returns" of our economic models. Behind each holding may be a story of family business, family quarrels, legacies received, divorce settlements, and a host of other considerations almost totally irrelevant to our theories of portfolio selection. That we abstract from all these stories in building our models is not because the stories are uninteresting but because they may be too interesting and thereby distract us from the pervasive market forces that should be our principal concern. (p. S467)

I argue that good theories of investor behavior are crucial to good theories of asset pricing. The CAPM is one example. The CAPM begins with Markowitz's theory of behavior, in which investors are concerned with the expected returns and the variances of their portfolios; it continues with an equilibrium that results when investors with identical views interact; and it concludes with beta, a measure of risk that determines expected returns.

Shefrin and Statman (1994) developed a behavioral asset-pricing theory as an analog to the standard CAPM. The behavioral asset-pricing model (BAPM) features the market interaction of two groups of traders, namely, information traders and noise traders. Information traders are the ones who populate the standard CAPM; they are free of cognitive errors and have mean-variance preferences. Noise traders live outside the CAPM, commit cognitive errors, and do not have strict mean-variance preferences.

The expected returns of securities in the BAPM are determined by their "behavioral betas," betas relative to the tangent mean-variance-efficient

portfolio. The mean–variance-efficient portfolio is not the market portfolio because noise traders affect security prices. For example, the preference of noise traders for growth stocks may raise the prices of growth stocks relative to those of value stocks. If so, the BAPM mean–variance-efficient portfolio, unlike the market portfolio, is tilted toward value stocks.

Estimating standard betas and behavioral betas raises problems. For example, we know the construction *principles* of the market portfolio, but we have no practical way for a precise construction of it. So, we use imprecise proxies for the true market portfolio, such as the CRSP index of U.S. stocks. For behavioral betas, the proxy problem is even more severe because the composition of the BAPM mean–variance-efficient portfolio changes over time. For example, it might be tilted heavily toward value one month and less heavily the following month.

But the problems of the CAPM and the BAPM should not halt work toward useful asset-pricing models. Stripped to their basics, all asset-pricing models are versions of the old reliable supply-and-demand model from Introductory Economics. Demand and supply are determined by utilitarian characteristics (such as production costs and prices of substitutes) and value-expressive characteristics (such as tastes). In the CAPM, demand and supply are determined by the utilitarian beta. In the three-factor model, demand and supply are determined by size, B/M, and the market, but are size and B/M utilitarian characteristics or value-expressive ones? Fama and French (1992) considered them utilitarian measures of risk; Brennan, Chordia, and Subrahmanyam (1998) counted them among the nonrisk characteristics.

The list of characteristics in a BAPM would include both utilitarian and value-expressive traits. Consider admiration, a value-expressive characteristic. *Fortune* magazine conducts a survey each year in which executives and analysts are asked their levels of admiration for companies. Shefrin and Statman (1995) found that respondents prefer the stocks of admired companies. Will this preference be reflected in expected stock returns? We can gain insight into this question by comparing the prices of a Rolex and a Timex. Imagine a *Consumer Reports* analysis that compared a \$10,000 Rolex watch with a \$50 Timex one and concluded that they are identical in utilitarian characteristics; the two watches have identical accuracy and reliability. In this case, if buyers care only about utilitarian characteristics, Rolex and Timex will have identical prices. If a Rolex still sells for \$10,000 while a Timex still sells for \$50, we must look to value-expressive characteristics.

Demand-side preferences for utilitarian and value-expressive characteristics are not sufficient for price differentials. The supply side also matters. The price of a Rolex would fall below \$10,000 if the Timex company were allowed to copy the Rolex design and logo. In the absence of such supply-side “arbitrage,” however, the value-expressive high status of a Rolex can command an equilibrium price much higher than can a Timex.

If market efficiency implies rationality in prices—that is, prices reflect only utilitarian characteristics—then the market just described for watches is inefficient: Two equally accurate watches sell for vastly different prices. In the beat-the-market sense, however, this same market can be described as efficient.

Now, consider growth and value stocks. Growth stocks are analogous to a Rolex, and value stocks are analogous to a Timex. The preference for growth stocks will lead to higher prices and lower returns for growth stocks than for value stocks unless one of two conditions holds. First, investors must be persuaded to focus entirely on utilitarian characteristics. Second, value stocks can be packaged to look like growth stocks (for example, by the reputation of some money manager rubbing off on the value stocks in his or her portfolio, as if Timex were allowed to stamp “approved by Rolex” on its watches or add a Rolex logo to the box).

We do not know whether Rolex will maintain its price advantage over Timex or whether growth stocks will maintain their price advantage over value stocks. But we do know where to look for characteristics, both utilitarian and value expressive, that determine expected returns.

Bubbles and Risk Premiums. The CAPM and similar asset-pricing models of standard finance are about differences in expected returns of securities at a given point in time. What about expected returns of stocks *over time*? *In particular, do risk premiums change over time? And are we experiencing a stock market bubble today?*

Risk premiums are named for risk, but the differential between the expected returns of stocks and of risk-free securities may be affected by more than attitudes toward risk; both utilitarian and value-expressive characteristics play roles in the risk premium. Shefrin (1999a, b) used theory and empirical evidence to show that both fundamentals and sentiment affect the risk premium, and Porter and Smith (1995) showed that bubbles occur in laboratory markets.

The practice of tactical asset allocation (TAA) illustrates the difference between market efficiency in the beat-the-market sense and market efficiency

in the rational-prices sense. Tactical asset allocators attempt to sell stocks in times of bubbles and buy them in times of panic. Tactical asset allocators usually include sentiment, a value-expressive characteristic, in their asset-pricing models. But the inclusion of sentiment in TAA models does not imply that beating the market is easy. Philips, Rogers, and Capaldi (1996) found that tactical asset allocators were generally successful from 1977 to 1988 but not afterward. The crash of 1987 was TAA's finest hour; many tactical asset allocators were out of stocks when the crash came. But many tactical asset allocators stayed out of stocks after the crash, so they missed much of the following recovery.

As with all asset-pricing models, researchers should ask questions about the characteristics—utilitarian and value expressive—that drive markets. These characteristics will teach us about the determinants of expected returns, even if they do not help us beat the market.

Behavioral Portfolio Theory. Portfolios recommended by financial advisors, such as mutual funds, commonly have a structure that is very different from the standard finance structure of mean-variance portfolios. For example, Fisher and Statman (1997) noted that mutual fund firms prescribe portfolios with high ratios of stocks to bonds to some investors and portfolios with low ratios to others. This advice is in conflict with “two-fund separation” of portfolios in the CAPM. Two-fund separation calls for a fixed ratio of stocks to bonds in the “risky” portfolio together with varying proportions of the risk-free asset.

Shefrin and Statman (1999) developed behavioral portfolio theory as an alternative to the descriptive version of the Markowitz mean-variance portfolio. Mean-variance investors evaluate portfolios as a whole; they consider covariances between assets as they construct their portfolios. Mean-variance investors also have consistent attitudes toward risk; they are always averse to risk. Behavioral investors build portfolios as pyramids of assets, layer by layer. The layers are associated with particular goals and particular attitudes toward risk. Some money is in the downside-protection layer, designed to avoid poverty; other money is in the upside-potential layer, designed for a shot at being rich.

Behavioral portfolio theory answers some portfolio questions and asks others. For example, what are the links between portfolio theory and the increasingly popular value-at-risk approach to portfolio construction? What are the characteristics of securities, both utilitarian and value expressive, that are best for each layer of the portfolio?

The Value of Investment Professionals

Accepting market efficiency in the beat-the-market sense and rejecting it in the rational-prices sense lets us explore the contributions of investment professionals, contributions that are related to value-expressive, as well as utilitarian, services. Teachers, baseball players, and investment professionals are all paid on the basis of the services they provide. But the nature of the investment professional's services has much to be explored.

Ellis (1998) described his vision for the world of investment professionals in what he termed a “New Paradigm.” In the New Paradigm, investment professionals will concentrate on investment counseling. They will do so by bundling investment counseling with investment management. Bundling will allow investment professionals to charge for attempts to beat the market while they provide investment counseling for free. Investment professionals must bundle the two, noted Ellis, because investors are willing to pay for the first but not the second.

Part of the reluctance of investment professionals to emphasize counseling rather than market beating is their reluctance to mix the utilitarian features of investments with value-expressive features. Witness the resistance by investment professionals to the inclusion of value-expressive social responsibility among investment criteria. Robert Clark (1998), editor of the *Dow Jones Investment Advisor*, wrote about Amy Domini's Social Equity Fund:

What really troubles me about the Social Equity Fund is the trend it represents. Yes, Amy and her folks are mostly harmless, and yes, I agree with most of what she stands for. But, do we really want people pooling their investing power for the avowed purpose of achieving some specific end, other than making more money? (p. 12)

Value-expressive characteristics are mixed with utilitarian characteristics in the work of all investment professionals. The next sections explore various categories of investment professional from the standpoint of the utilitarian and value-expressive needs of their clientele.

Financial Advisors. Ellis's call in the New Paradigm for investment managers to concentrate on investment counseling may be new in the world of money managers, but financial advisors have been practicing it for years. Their experience illustrates both the promise of the paradigm and its difficulties. Fee-only advisors, defining themselves as counselors, unbundle counseling from the man-

agement of investments. Investors resist paying for counseling, however, and the fee-only model has attracted few advisors. Other financial advisors bundle investment management and counseling; they charge wrap fees for asset allocation and provide counseling for free.

Counseling is education. Financial advisors regularly explain to their investors that, contrary to intuition, growth stocks provide no higher expected returns than value stocks. But counseling is more than education. Many investors need the help of financial advisors to overcome weak self-control that tempts them to buy a Rolex when a Timex would do or when the retirement coffer is a better place for extra funds.

One of the dangers of bundling investment management and counseling is that it might confuse not only investors but also financial advisors. Investment management calls for skills and aptitudes that are different from those needed in counseling. Financial advisors who enter that field in the belief that it is about investment management often treat counseling as a nuisance, a diversion from their work, rather than its center.

Security Analysts and Money Managers.

Bundling investor counseling with investment management is difficult enough for financial advisors, who cater to individual investors; it is even more difficult for security analysts and money managers, who cater to institutional investors. Money managers are rarely hired to provide counseling on an overall institutional portfolio, and counseling is surely beyond the role of security analysts. So, what valuable services do they provide?

Security analysts claim that their value is in beating the market, and evidence indicates that, on average, they perform the task well. Womack (1996) found that analysts' buy recommendations are generally followed by price increases and their sell recommendations are followed by decreases. But the market-beating value of analysts seems to get lost as it is implemented. Money managers are customers of security analysts, and the evidence shows that, on average, money managers trail the market. Perhaps the value of security analysts is in their support for the investment banking arms of their brokerage firms. Michaely and Womack (forthcoming 1999) found that analysts provide "booster shots" for stocks underwritten by their firms.

Market Makers. Money managers care about returns because high returns produce Morningstar stars, money inflows, and high incomes. Market makers are different; volume, not returns, determines their incomes.

Volume is a puzzle in the rational standard finance world. Indeed, explaining why *any* trading takes place among traders in such a world is difficult. For example, Grossman (1976) noted that an offer to trade indicates to potential counterparties that the trader may have private information. Rational traders would refuse to trade under such conditions, and trading volume would be zero.

Black (1986) and Treynor (1971) argued that the cognitive errors of noise traders offer an exit from the no-trading trap, and Gervais and Odean (1997) and Odean (1998) developed models that identify the error as overconfidence. That is, bull markets make traders overconfident about their trading abilities, and overconfident traders increase their trading volume following bull markets. Statman and Thorley (1999) found that trading volume does indeed follow bull and bear markets: In their study, high returns brought high volume over the following months and the crash of 1987 brought low volume for years afterwards.

Brokers and market makers understand the link between investor confidence and trading volume, and these investment professionals do what they can to increase confidence. Shortly after the 1987 crash, Merrill Lynch & Company (1988) printed a full-page advertisement in the *Wall Street Journal* under the heading "Investor Confidence Must Come First." It read, in part:

[m]arket volatility has become a problem so serious that it has led many investors to lose their confidence in the market system as a whole and to seriously question whether there really is a level playing field.

The current discussions about extended trading hours illustrate well the utilitarian and value-expressive characteristics of trading. It is hard to argue that corporate managers need round-the-clock trading to inform them of the value of their stocks. It is equally hard to argue that investors need such trading to rebalance the risk and expected returns of their portfolios. Investors want 24-hour trading, however, much as viewers want 24-hour television. So, Nasdaq-Amex has good business reasons to extend trading days. It is also aware of the business pitfalls. An advertisement by Nasdaq-Amex (Nasdaq 1999) said:

It is becoming clear that the growing demands of today's accelerated investor activity cannot be fully met within the confines of the traditional trading day. And, in keeping with our belief that what's good for the investor is good for the market, we are preparing to move toward extended trading hours. . .

Security Designers. Financial products range from dividend-paying stocks to Internet mutual

funds and LYONs (liquid yield option notes). The successful financial products, like all successful products, are those that meet the needs of customers. For example, McConnell and Schwartz (1992) described how the option marketing manager at Merrill Lynch & Company observed in 1983 that many investors who held large balances in the Merrill Lynch Cash Management Account, a money market fund, used the interest to buy call options. His observation was the spark for LYONs, securities that combine the downside protection of a money market fund with the upside potential of options.

Consider the recent spate of Internet mutual funds, such as Munder Capital Management's Net-Net Fund. Lucchetti (1999) reported that such funds carry high fees, but investors do not seem to care. Lucchetti quoted Ric Edelman, a financial planner, as follows: "Many consumers say 'charge me whatever you like as long as you double my money'."

Finally, consider dividends. Dividends are usually discussed in the context of valuation and market efficiency, but perhaps discussing them in the context of security design would be better. Charles Dow (1903), an originator of the DJIA, did not include common stocks among his recommendations at the turn of the century. The goal of investors, wrote Dow, is "to secure the largest return consistent with safety of principal" (p. 12). Dow recommended railway bonds and, perhaps, small amounts of railway preferred stocks for those who must take risks to obtain higher income. His point was that stocks have to offer an advantage over bonds, and in the early part of the 20th century, advantage meant higher dividends than interest rates.

The emphasis on dividends waned in the 1920s, but the crash of 1929 brought renewed emphasis. "Who Is the True Investor?" asked a *Literary Digest* article in 1930: "He buys stocks as he plants an orchard—to enjoy its fruit" (p. 44).

Investors of the mid-1970s, like the Con Edison investors described earlier, lived off dividends. Today's investors save for retirement and prefer low dividend yields. Weigold (1999) surveyed young and old investors and reported that today's low dividend yield is well designed for today's younger investors. "The simple fact is, while dividends still matter," he wrote, "they don't matter to investors as much as they used to."

Security Marketers. The tremendous growth of mutual funds in recent years is partly the result of firms making increasing use of the marketing techniques long practiced by consumer product companies. Nocera (1994) described the contribu-

tion of Charles Jarvie to the early marketing efforts of Fidelity Investments. Jarvie, who marketed Tide and Pringles at Procter & Gamble, noticed two marketing deficiencies when he joined Fidelity in 1983. First, Fidelity was not stressing its Fidelity brand; the firm's Magellan Fund, for example, was advertised as "Magellan" rather than "Fidelity Magellan." Second, Fidelity was putting little effort into cross-selling products. Jarvie pushed Fidelity to redefine itself as a "family of funds" and to make it easy for investors to switch from one Fidelity fund to another. Today's mutual fund companies have come a long way since 1983. For example, these companies are keenly aware of investors' tendency to extrapolate recent performance. So, they advertise their recent winners.

Companies market their stocks as mutual fund firms market their funds. Investors may regard security analysts as analysts, but companies regard them as marketing channels for their stocks. Investor relations officers within companies work to make their stocks attractive to security analysts and, through them, to investors. Analysts do not follow all stocks, any more than department stores carry all clothing labels. Investors prefer stocks of admired companies, so analysts concentrate their coverage on such companies. Admired companies have high recent stock returns, and McNichols and O'Brien (1997) found that analysts add such stocks to their coverage lists whereas they drop stocks with recent low returns.

Stock exchanges are also marketing channels. The brand image of the NYSE is different from that of Nasdaq; the NYSE promotes itself as solid, whereas Nasdaq promotes itself as innovative.

The Internet is another marketing channel, and recent events illustrate the dangers of losing control over such a channel. Moss (1999) reported that Richard Scrusby, the chief executive officer of HealthSouth Corporation, found that Internet banter was describing his company as a house of cards starting to tumble. Moss went on to note that until the Internet came along, the traffic in opinion about stocks and bonds was largely—and for the most part calmly—controlled by Wall Street analysts. The Internet, however, lets all comers vent their feelings. Corporate executives who ignore outrageous Internet postings may invite even more outrageous postings.

Investment Clubs. Internet chat rooms and bulletin boards are places where investors interact with one another without the intermediation of investment professionals. Today's investors receive their information from many sources—investment magazines, television shows, newspa-

pers, Internet chat rooms and bulletin boards, a plethora of personal finance books, and investment clubs. Those in finance might debate whether members of investment clubs (or writers of investment magazines) are investment professionals, but if we want to understand the roles of utilitarian and value-expressive characteristics, we would do well to study them.

The Beardstown Ladies investment club may be the most famous, but it is not alone. More than 35,000 investment clubs are operating in the United States. These clubs usually consist of 10–15 friends, coworkers, or relatives, each contributing an average of \$25 a month. Harrington (1998) noted that investment clubs are also social clubs. She studied an all-men's investment club of sports car hobbyists, a club of women who are members of the American Association of University Women, and a club of men and women who met through a church singles group.

The money-making record of the clubs is miserable. In studying the returns of 166 investment clubs that had accounts with a large brokerage firm, Barber and Odean (1998) found that 60 percent of clubs lagged the market; the average underperformance was 3.8 percent a year. Perhaps investment clubs, like the Beardstown Ladies, do not know how to calculate returns, or perhaps investment clubs are mainly social clubs, whose members care about the value-expressive features of investing more than they care about the utilitarian features of risk and return.

Conclusion

People are “rational” in standard finance; they are “normal” in behavioral finance. Rational people care about utilitarian characteristics but not value-expressive ones, are never confused by cog-

nitive errors, have perfect self-control, are always averse to risk, and are never averse to regret. Normal people do not obediently follow that pattern.

Standard finance asks for too much when it asks for market efficiency in the rational sense, and investment professionals ask for too much when they insist that the primary contribution of behavioral finance is its potential help in beating the market. We would benefit from the insights of behavioral finance by accepting market efficiency in the beat-the-market sense but rejecting it in the rational sense. We could then develop a behavioral asset-pricing model that includes value-expressive as well as utilitarian characteristics.

The BAPM of the future will not be as beautiful as the CAPM, but it will be more robust. Indeed, the BAPM will be the old economics model of demand and supply. It will begin with an identification of the preferences of buyers and sellers, continue with the characteristics that capture value-expressive as well as utilitarian preferences, and conclude with equilibrium prices.

Accepting market efficiency in the sense of beating the markets and rejecting it in the sense of rationality would allow finance researchers to ask questions about the roles of investment professionals that go beyond the role of beating the market. Investment professionals belong to many groups, and we need to understand the benefits, both utilitarian and value expressive, they provide.

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References

- Barber, Brad M., and Terrance Odean. 1998. “Too Many Cooks Spoil the Profits: The Performance of Investment Clubs.” Working paper. University of California, Davis.
- Bernstein, Peter L. 1996. *Against the Gods: The Remarkable Story of Risk*. New York: John Wiley & Sons.
- Black, Fischer. 1986. “Noise.” *Journal of Finance*, vol. 41, no. 3 (July):529–543.
- Brennan, Michael J., Tarun Chordia, and Avanidhar Subrahmanyam. 1998. “Alternative Factor Specifications, Security Characteristics and the Cross-Section of Expected Stock Returns.” *Journal of Financial Economics*, vol. 49, no. 3 (September): 345–373.
- Clark, Robert. 1998. “Anti-Social Investing.” Editor’s Note in *Dow Jones Investment Advisor* (September):12.
- De Bondt, W., and R. Thaler. 1985. “Does the Stock Market Overreact?” *Journal of Finance*, vol. 40, no. 3 (July):793–805.
- . 1995. “Financial Decision-Making in Markets and Firms: A Behavioral Perspective.” In *Handbooks in OR and MS*, vol. 9. Edited by R. Jarrow et al. Amsterdam: Elsevier:385–410.
- Dow, Charles H. 1903. “The Woman with a Little Money to Invest.” *Ladies’ Home Journal*, vol. 20 (October):12–13.
- Ellis, Charles. 1998. “Lessons from the Warwick and Chateau Chambord.” *The Future of Investment Management*. Charlottesville, VA: AIMR:25–31.

- Fama, Eugene. 1991. "Efficient Capital Markets: II." *Journal of Finance*, vol. 46, no. 5 (December):1575-1617.
- . 1998. "Market Efficiency, Long Term Returns and Behavioral Finance." *Journal of Financial Economics*, vol. 49, no. 3 (September):283-306.
- Fama, E., and K. French. 1992. "The Cross-Section of Expected Stock Returns." *Journal of Finance*, vol. 47, no. 2 (June):427-465.
- Fisher, Kenneth, and Meir Statman. 1997. "Investment Advice from Mutual Fund Companies." *Journal of Portfolio Management*, vol. 24, no. 1 (Fall):9-25.
- Friedman, M., and L.J. Savage. 1948. "The Utility Analysis of Choices Involving Risk." *Journal of Political Economy*, vol. 56, no. 4 (August):279-304.
- Gervais, Simon, and Terrance Odean. 1997. "Learning to Be Confident." Working paper. University of Pennsylvania.
- Green, Richard. 1983. "The Dark Side of Tax Shelters." *Forbes* (July 4): 174.
- Grossman, S.J. 1976. "On the Efficiency of Competitive Stock Markets When Traders Have Diverse Information." *Journal of Finance*, vol. 31, no. 2 (June):573-585.
- Harrington, Brooke. 1998. "The Social Construction of Investing: A Case Study of Identity Formation in Investment Clubs." Working paper. Harvard University (August).
- Hawawini, Gabriel, and Donald B. Keim. 1998. "The Cross Section of Common Stock Returns: A Review of the Evidence and Some New Findings." Working paper. University of Pennsylvania.
- Kahneman, D., and A. Tversky. 1979. "Prospect Theory: An Analysis of Decision Making under Risk." *Econometrica*, vol. 47, no. 2 (March):263-291.
- . 1982. "The Psychology of Preferences." *Scientific American*, vol. 246, no. 1 (January):160-173.
- Kahneman, D., P. Slovic, and A. Tversky. 1982. *Judgment under Uncertainty: Heuristics and Biases*. New York: Cambridge University Press.
- Literary Digest*. 1930. "Who Is the True Investor?" Topics of the Day, New York (November 1).
- Lucchetti, Aaron. 1999. "Internet-Stock Funds Carry High Fees." *Wall Street Journal* (June 30):C25.
- McConnell, J., and E. Schwartz. 1992. "The Origin of LYONS: A Case Study in Financial Innovation." *Journal of Applied Corporate Finance*, vol. 4, no. 4 (Summer):40-47.
- McNichols, Maureen, and Patricia C. O'Brien. 1997. "Self Selection and Analyst Coverage." *Journal of Accounting Research*, vol. 35 (Supplement):167-199.
- Merrill Lynch. 1988. Advertisement in the *Wall Street Journal* (February 1):45.
- Michaely, Roni, and Kent Womack. Forthcoming 1999. "Conflicts of Interest and the Credibility of Underwriter Analyst Recommendations." *Review of Financial Studies*.
- Miller, Merton H. 1986. "Behavioral Rationality in Finance: The Case of Dividends." *Journal of Business*, vol. 59, no. 4 (October):S451-S468.
- Moss, Michael. 1999. "CEO Exposes, Sues Anonymous Online Critics." *Wall Street Journal* (July 7):B1.
- Munson, J.M., and W.A. Spivey. 1981. "Product and Brand-User Stereotypes among Social Classes." *Journal of Advertising*, vol. 21, no. 4 (August).
- Nocera, J. 1994. *A Piece of the Action*. New York: Simon & Schuster.
- Nasdaq. 1999. "Extended Trading Hours? A Matter of When." *Wall Street Journal* (June 30):A27.
- Odean, Terrance. 1998. "Volume, Volatility, Price, and Profit When All Traders Are Above Average." *Journal of Finance*, vol. 53, no. 6 (December):1887-1934.
- Philips, Thomas, Greg Rogers, and Robert Capaldi. 1996. "Tactical Asset Allocation: 1987-1994." *Journal of Portfolio Management*, vol. 23, no. 1 (Fall):57-64.
- Porter, David P., and Vernon L. Smith. 1995. "Futures Contracting and Dividend Uncertainty in Experimental Asset Markets." *Journal of Business*, vol. 68, no. 4 (October):509-541.
- Restak, Richard M. 1994. *Receptors*. New York: Bantam Books.
- Schwert, William G. 1983. "Size and Stock Returns, and Other Empirical Regularities." *Journal of Financial Economics*, vol. 12, no. 1 (June):3-12.
- Shefrin, Hersh. 1999a. "Irrational Exuberance, Heterogeneous Beliefs, and Option Markets." Working paper. Santa Clara University.
- . 1999b. "On Kernels and Sentiment." Working paper. Santa Clara University.
- . 1999c. *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*. Boston, MA: Harvard Press.
- Shefrin, Hersh, and Meir Statman. 1984. "Explaining Investor Preference for Cash Dividends." *Journal of Financial Economics*, vol. 13, no. 2:253-282.
- . 1994. "Behavioral Capital Asset Pricing Theory." *Journal of Financial and Quantitative Analysis*, vol. 29, no. 3 (September):323-349.
- . 1995. "Making Sense of Beta, Size, and Book-to-Market." *Journal of Portfolio Management*, vol. 21, no. 2 (June):26-34.
- . 1999. "Behavioral Portfolio Theory," Working paper. Santa Clara University.
- Shiller, Robert J. 1981. "Do Stock Prices Move Too Much to Be Justified by Subsequent Changes in Dividends?" *American Economic Review*, vol. 71, no. 3 (June):421-436.
- . 1990. "Speculative Prices and Popular Models." *Journal of Economic Perspectives*, vol. 4, no. 2 (Spring): 55-65.
- . Forthcoming 2000. "Human Behavior and the Efficiency of the Financial System." In *Handbook of Macroeconomics*. Edited by John B. Taylor and Michael Woodford. Amsterdam: North Holland.
- Statman, Meir. 1995. "Behavioral Finance versus Standard Finance." In *Behavioral Finance and Decision Theory in Investment Management*. Edited by Arnold S. Wood. Charlottesville, VA: AIMR.
- Statman, Meir, and Steven Thorley. 1999. "Overconfidence, Disposition and Trading Volume." Working paper. Santa Clara University.
- Thaler, R., and H. Shefrin. 1981. "An Economic Theory of Self-Control." *Journal of Political Economy*, vol. 89, no. 2 (April):392-410.
- Treynor, Jack [Walter Bagehot, pseud.]. 1971. "The Only Game in Town." *FAJ*, vol. 22, no. 2 (March/April):12-14.
- Weigold, C. Frederic. 1999. "Dividends Are Less Popular among Younger Investors." *Wall Street Journal Interactive Edition* (February 25, 1999), <http://interactive.wsj.com/articles/SB19927232922327000.htm>
- Womack, Kent. 1996. "Do Brokerage Analysts' Recommendations Have Investment Value?" *Journal of Finance*, vol. 51, no. 1 (March):137-167.