

No. of stocks	US \$ index	Day %	Mon %	YTD %
7844	300.96	0.1	-2.7	-1.6
1103	283.01	0.1	-2.9	-2.1
1878	345.76	0.1	-2.1	0.0
4803	357.22	0.0	-2.4	-0.7
2981	178.95	0.1	-2.7	-1.7
2558	320.58	0.1	-2.7	-1.8
7354	308.87	0.1	-2.5	-1.7
5403	333.25	0.1	-2.2	-0.1
6514	299.65	0.0	-3.0	-1.7
7088	295.36	0.1	-2.1	-1.8
2100	200.73	0.0	-2.5	-1.8
6174	297.51	0.0	-2.5	-1.7
781	278.62	0.0	-2.7	-2.3
188	306.53	0.0	-2.7	-1.0
323	353.69	0.0	-2.6	1.0
1014	409.32	0.0	-2.8	3.0
511	190.35	0.0	-2.7	-0.9
280	250.21	0.0	1.2	-3.1
539	325.80	0.0	-2.3	-1.9
1862	331.04	0.0	-2.9	-3.8
810	167.16	0.0	-3.0	-2.8
1290	191.26	0.1	-1.9	-0.5
177	292.67	0.5	0.4	-2.2
302	367.83	0.2	2.6	4.1
851	409.57	0.0	3.7	8.3
479	117.23	0.5	0.9	-1.0
321	344.51	0.3	-2.8	1.3
539	364.12	0.5	-2.7	0.3
1017	351.68	0.4	-2.6	4.3
860	201.43	0.3	-2.8	1.1
1670	374.17	0.5	-5.5	1.0
322	369.56	0.4	-5.9	1.0
150	370.80	0.6	-5.0	-0.7
788	363.83	0.0	-3.8	5.2
57	344.40	0.9	-9.1	4.5
174	471.12	0.0	-8.6	0.2
173	397.30	0.0	-6.6	-6.1
490	301.95	0.0	-3.9	-0.2
3441	274.83	0.0	-3.1	-3.2
509	326.68	0.0	-2.0	-0.1
748	339.68	0.0	-2.1	-0.1

US \$ index	Day %	Mon %	YTD %
303.73	0.0	-4.5	10.2
501.65	0.0	-5.6	6.0
286.22	0.0	-4.3	10.9
312.12	0.1	-3.1	1.9
268.70	0.2	-2.0	2.5
329.07	-0.1	-3.5	2.2
273.34	-0.1	-2.6	-6.0
377.24	0.1	-3.7	4.2
187.18	0.2	-0.6	-0.3
215.82	0.0	-0.1	3.6
177.85	0.1	-0.4	-1.1
189.64	0.5	-1.0	-2.1
295.83	0.1	-1.1	1.1
199.11	0.7	-2.7	-4.3
204.30	0.8	-3.7	-3.5
187.06	0.5	-0.8	-2.1
202.80	0.0	-1.9	-0.0
10.96	0.0	-2.7	-1.4
74.26	0.0	1.9	0.2
10.57	0.0	1.0	2.9
54.68	0.0	-1.8	-0.2
55.81	0.0	-2.0	-2.6
190.84	0.1	-2.2	3.5
95.29	0.0	-1.4	0.0
52.57	0.0	0.0	0.0
192.64	0.0	0.0	0.0

POSITIVE CONDITION

NEGATIVE CONDITION

1.1	45.07	12.65	-	64.4	34940	Chubb
4.0	22.84	15.17	0.7	18.1	27738	Chubb
1.2	19.41	12.60	2.9	4.2	11510	Cisco
-6	25.32	15.43	1.4	24.9	15970	Citigroup
1.8	1.265	925	1.0	17.5	1375	Clear Channel
2.709	1.861	2.4	18.6	34821	Comcast	
46.84	38.88	1.4	27.2	26327	ConocoPhillips	
23.29	19.21	2.6	26.7	11434	Costco	
-2.5	685	500.50	4.0	10.7	14462	Cougar
3.6	46.14	35.29	1.6	23.4	19743	Comcast
-1	264.50	191.25	3.6	15.2	8403	Comcast
+1	58.30	40.49	3.1	16.0	30292	Comcast
-3	43.25	33.33	3.6	13.7	21198	Comcast
-6	13.38	10.35	3.0	15.1	42487	Comcast
-3	30.09	25.75	4.4	18.8	27699	Costco
34	422.25	311.75	0.9	16.8	14409	Costco

THE EMOTIONAL Investor

BY SUSAN TRAMMELL, CFA

How well can we read our emotions? How well do we manage them? New research focuses on the emotional drivers of investor behavior.

A growing body of research suggests that investment decisions are heavily informed by emotions, which can be measured, analyzed, and perhaps incorporated into predictive models. This article looks at three concepts—emotional intelligence, emotional accounting, and emotional finance—that involve the impact of emotion on investor behavior. The development of each concept draws on decades of research and applies it to the field of finance, and all may be catalysts for further research.

Illustrations: Robert Megarick

EMOTIONAL Intelligence

How well can we read our own emotions? How well do we manage them?

Self-awareness and the ability to cope with our emotions is a measure of emotional intelligence (EI) or emotional competence. Ongoing research is exploring the relationship between investor behavior and such psychological influences as impulse control and perseverance. In fact, one team of researchers may have found a link between individuals' EI and trading incidence.

In early 2007, more than 1,300 Vanguard investors were administered an online test of EI. The investors were born between 1946 and 1964 and had a required minimal level of savings in an individual retirement account. Almost 70 percent of the respondents were male, and the majority were highly educated, married, still employed, and reported household assets of at least US\$500,000.

The goal of the research was to determine whether a relationship exists between the observed behavior among a set of Vanguard investors and variations in the four components of an EI model: *perceiving*, *understanding*, *using*, and *managing* emotions.

In their initial analysis, the researchers—John Ameriks, principal of Vanguard's Investment Counseling &

Research Group; Peter Salovey (who previously developed the four-component model used in the study), dean of Yale College in New Haven, CT, and professor of psychology at Yale University; and two fellow researchers—found that the data suggest a significant link between aspects of investors' emotional intelligence and their "exchange," or trading, activity. Those scoring in the highest quintile for perceiving emotions tended to trade more frequently than those scoring in the lowest quintile. Those who scored in the highest quintile for managing emotions tended to trade less frequently than those in the lowest quintile. (See Figure 1.) These relationships were observed even after the researchers controlled for major demographic factors.

The data paint a picture of contrasts: the steely nerved investor who is skilled at subordinating the stimuli of market signals versus the investor who is better at recognizing emotional signals and can thus react quickly to volatility in the marketplace.

"I think, first and foremost, these tools help us to understand the factors that drive attentiveness to portfolio changes," says Ameriks, who presented preliminary survey results at the 2007 annual workshop of the Research

Foundation of CFA Institute and is preparing a book on EI for the foundation. (See sidebar on p. 34.) “Research like this helps advisers and individuals be aware of the possibility that these types of characteristics are related to the decisions that they’re making—or to at least think about that fact.”

The survey revealed differences in behavior among participants related to sensitivity to emotional cues as well as managing responses to market signals and stimuli, but the relationship between EI scores and risk taking is not clear in the results. Men were found to be more risk seeking than women in general, and the study showed that men tend to trade more frequently than women and have a higher allocation to equities. But investors who scored in the highest and lowest quintiles of each component of the EI test used in the survey held similar allocations to equities as of a chosen measurement date.

Ameriks is quick to caution that the results of the study are preliminary.



Further analysis is needed to determine any interplay between EI and other factors, such as demographic variations. Data collected in a separate but similar survey of more than 1,400 participants in employer-sponsored retirement accounts administered by Vanguard are still being analyzed. Moreover, because both surveys are based on a specific population among Vanguard’s clients, the findings cannot be assumed to be representative of the broad investor universe.

Nevertheless, the intriguing question is whether a refined EI paradigm applied to a broad and heterogeneous investor base would show a similar connection between investors’ EI quotients (in other words, emotional IQ) and trading incidence. Such insight could be of great value to investment advisers as they work with clients on designing portfolios. The findings would be particularly pertinent to retirement planning and to helping employees avoid behavior that sabotages their long-term saving strategies.

“The underlying issue that EI is trying to address is paramount: how to help individuals make the right decisions for their retirements,” says Paul Yakoboski, principal research fellow at TIAA-CREF Institute in New York City. “It’s something that industry policy-makers and practitioners have been addressing for decades.” The TIAA-CREF Institute has undertaken exten-

sive research on behavioral considerations that influence employees during the accumulation phase of retirement saving. “EI,” adds Yakoboski, “may very well provide an additional context, more tools and more insights, to help that continuing evolution.”

“I think that understanding the human side of the investment equation is something that academic economists and psychologists and professionals are going to be spending an awful lot of time on going forward,” says Ameriks. “I think EI is here to stay.”

EMOTIONAL Accounting

That people tend to categorize their assets into discrete mental accounts is well known. Much less attention has been paid to the emotions that people attach to money. But research conducted by two marketing professors suggests that how people spend money can also be strongly influenced by the emotions, or “affective tags,” attached to their finances.

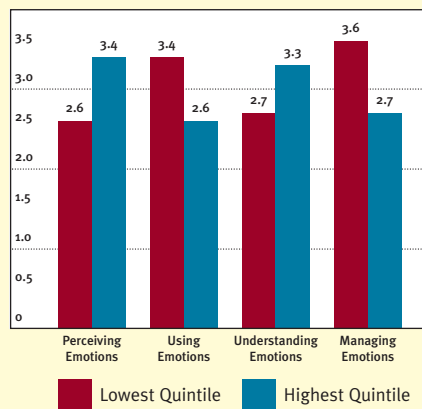
Jonathan Levav, associate professor of marketing at Columbia Business School in New York City, and Peter McGraw, assistant professor of marketing at the Leeds School of Business, University of Colorado at Boulder, teamed up to study how people’s feelings about money affect their consumption choices. Using the circumstances of an unexpected gain, or windfall, these researchers constructed a series of studies that elicited participants’ emotional responses to the particular circumstances surrounding the windfall and how they spent their surprise bounty. In one study, the windfall was an actual unexpected monetary payment received by the study’s subjects, but for the most part, it was proposed within hypothetical scenarios.

The investigators were particularly interested in studying the influence of

FIGURE 1

Emotional Intelligence and Investor Behavior

(differences in survey respondents’ average number of annual exchanges by EI category)



NOTE: Based on 2006 research data.

SOURCE: Vanguard Investment Counseling & Research

an affective tag on an individual's decision to use the windfall for a hedonic, or purely pleasurable, purpose, versus a nonhedonic purpose. They found that when a windfall is received in depressing, negative, or shady circumstances, people try to reduce their negative feelings about their (sometimes ill-gotten) gains in the way they spend the money. They may cope with their feelings by adopting an *avoidance* strategy, a passive mechanism intended to avoid increasing the negative emotions associated with the windfall that puts a distance between the money and themselves. Or they may try to reduce the negative feelings attached to the windfall by choosing to spend it on a virtuous or a utilitarian expense—that is, the mental strategy of *laundering*.

For example, in the first study, which consisted of three vignettes, the participants were presented in one scenario of a gift from a visiting healthy uncle (positive situation) or from a very sick uncle (negative situation). The



subjects—all university undergraduates—tended to express positive feelings about the windfall when it was obtained under cheerful circumstances (a gift from a visiting uncle). They were more likely to make a hedonic purchase than those who received the windfall under a cloud (the sick uncle). The latter were more likely to attach a negative tag to the money and avoid making a hedonic purchase. (See Figure 2.)

In another study, the subjects received an unanticipated payment for completing a sham survey. Some participants were told that the reward had come from an internet search engine firm, and others were told that it had been given by a tobacco company. The respondents were then asked to write down their feelings about their windfall before choosing whether to spend it on a candy bar (hedonic outcome) or a pen (utilitarian). As the researchers theorized, subjects who had obtained their windfall under circumstances that evoked a negative tag tended to launder their feelings by selecting the utilitarian option. In fact, they were almost twice as likely to opt for the pen over the candy bar than were their “positive scenario” counterparts.

“We didn’t set out to study money,” says Levav. “Our research started with a question about ambivalence. If you look at our paper [“Emotional Accounting: Feelings about Money and

Consumer Choice,” forthcoming in the *Journal of Marketing Research*], you’ll see that when people get money under negative circumstances, they usually feel both good and bad about it. What we discovered was that it’s not the ambivalence that drives people’s behavior but the desire to reduce the negative emotions. We ended up studying money as a vehicle to studying how people manage their emotions about objects.”

Levav thinks that the insights revealed by his and McGraw’s studies may alert investment advisers to the emotional component of certain sums of money.

“A really good wealth manager who’s built a good relationship with his clients, particularly clients that have millions of dollars, should have an intuition about what this money means to them,” he says. “Drawing out the history of that money starts with a conversation.”

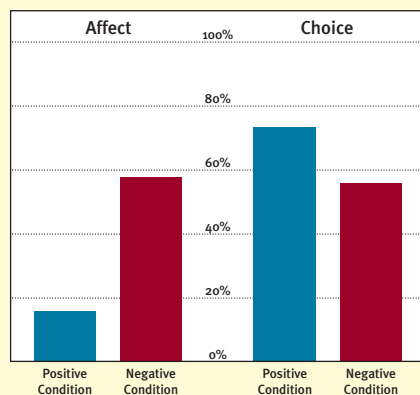
EMOTIONAL Finance

The trajectory of market bubbles is well documented, but their psychological underpinnings are still being explored. Because these phenomena stand at the crossroads of finance and intangible drivers of individuals’ behavior, researchers from two very different academic fields—psychoanalysis and finance—teamed up to study the emotions of investors caught up in market euphoria.

David Tuckett, visiting professor in psychoanalysis at University College London, and Richard Taffler, professor of finance and investment at the University of Edinburgh Management School, joined forces to study the states of mind that foster market instability. Tuckett and Taffler base their research on a conceptual framework developed by Melanie Klein and Wilfred Bion, two leading British psychoanalysts who rose

FIGURE 2

Emotional Accounting



NOTE: Scenario and results of one study. Study participants who attached a negative tag to a scenario were less likely to use a windfall to make a hedonic purchase than their survey counterparts, who received their windfall under circumstances to which they attached positive feelings.

SOURCE: Jonathan Levav and Peter McGraw.

to prominence in the mid-20th century. The resulting paradigm, rooted in Freudian psychoanalysis, forms the foundation of what Tuckett and Taffler call “emotional finance.”

Klein described two basic mental states—the *paranoid-schizoid* and the *depressive* positions—and proposed that people oscillate between the two. When we are in a depressive state of mind, we generally see people and things as they are—a blend of desirable and undesirable attributes producing mixed feelings. Such a realistic view of another person or object allows us to experience the consequences of the other’s imperfections while enjoying the pleasure they bring us at the same time. Bion’s related work established three fundamental emotional relationships:

L (loving), H (hating), and K (knowing). (See **Figure 3**.) By recognizing that we both love and hate people and objects, we mature and appreciate reality, thus reaching the depressive (D) position.

In a paranoid-schizoid (PS) state, we split ambivalent feelings of love and hate so that we elevate a person’s or an object’s positive attributes and their deficiencies simultaneously but are aware of only one such attitude and the feeling it induces at any time. Splitting is accompanied by an unconscious anxiety that is the basis for crushing reversals in confidence or trust in people or objects, such as can be seen in the current markets.

Taffler and Tuckett are particularly interested in how emotional states of mind affect investor judgment. They

trace the occasional mass exuberance of the market to the development of a predominant paranoid-schizoid mood. In such a state of mind, speculative investments are idealized to the point of becoming what they term “phantastic objects.” The objects are fantasies, in that they unconsciously represent the opportunity to fulfill one’s deepest desires, creating the impression that what had been thought impossible might be attained after all.

Investors in a paranoid-schizoid state necessarily split off awareness of feelings of uneasiness and doubt associated with the object of their affections. Rather than recognizing that there is good and bad in every investment, they bestow attributes of perfection on an investment and assign exorbitant values

The Research Foundation of CFA Institute

The research conducted by John Ameriks, Peter Salovey, and colleagues on emotional intelligence and investor behavior was underwritten by a grant from the Research Foundation of CFA Institute and will be the subject of a forthcoming Research Foundation book. (A preliminary account of the research is available in the article “Emotional Intelligence and Investor Behavior” published in *Vanguard Perspectives*. The article can be accessed online at <https://institutional.vanguard.com/iip/pdf/ICRVIPF2007.pdf>).

The Research Foundation was established in 1965 as a separate governing body of CFA Institute. It is funded by an endowment earmarked for supporting research projects and disseminating information of practical value to investment professionals.

Selecting foundation grant recipients starts with identifying emerging areas that are likely to have a major impact in the fields of investment and finance. Laurence Siegel of the Ford Foundation, New York City, is currently research director of the Research Foundation. His task is to solicit and secure the best thinking in the targeted areas.

The foundation fulfills its mission by publishing books on the topics of interest, such as the upcoming monograph on emotional intelligence. In addition, it publishes literature reviews on a variety of subjects—from behavioral finance to private equity and credit risk. The reviews are designed to give readers a one-stop shop for accessing the most important research in a particular field. The foundation also conducts educational seminars, much of which is available at no charge via webcasts at www.cfawebcasts.org. The Research Foundation workshop held in conjunction with the CFA Institute 2008 Annual Conference focused on behavioral finance. Registration and information about all CFA Institute and Research Foundation workshops and seminars can be found in the Conferences area of the CFA Institute website.

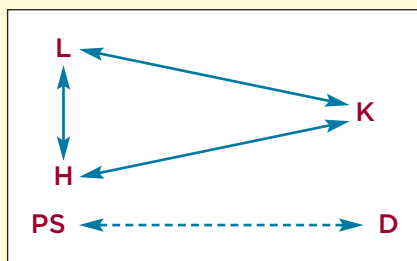
CFA charterholders and other members of CFA Institute are encouraged to use the Research Foundation’s resources. All foundation publications are available without charge at www.cfapubs.org, and CFA Institute members can sign up to receive hard copies of forthcoming books by visiting the sidebar at www.cfainstitute.org/foundation.

to it that reflect unlimited upside. Glaring faults are denied or shifted to competitors. Moderators who flag such incaution are accused of “rocking the boat” and are dismissed by investors as “not getting it.” When this phenomenon catches hold in the market, others are drawn in even if they do not believe. The authors suggest that our increasingly sophisticated risk measures may reinforce a feeling of omnipotence and obscure the reality, in the authors’ view, that investing in the capital markets is always gambling on an unknowable future.

When the bubble bursts, as it is sure to do, investors who were once in a fever of infatuation experience a state of shock. As reality returns to the marketplace, excitement and jittery optimism are replaced by the pain of loss, humiliation, and embarrassment. Panic and manic contempt give way to feelings of persecution, followed by a projection of blame onto others and a hunt for the guilty.

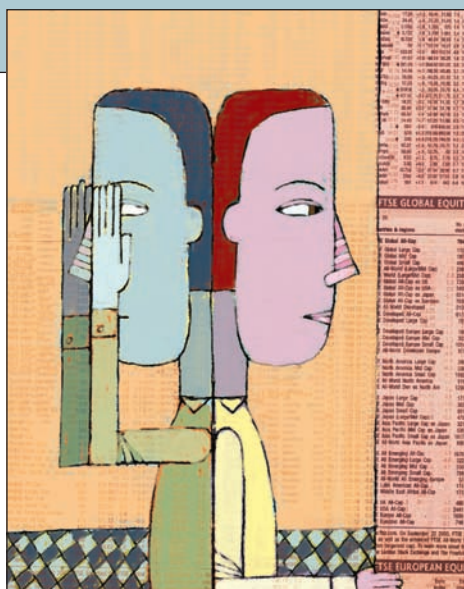
FIGURE 3

Emotional Finance: Loving, Hating, or Knowing?



NOTE: Based on a psychoanalytical theory of loving (L), hating (H), or knowing (K) people or objects. People mature and learn to appreciate reality by recognizing that they both love and hate people and objects, thus reaching the depressive (D) position. Research suggests that investors who make decisions in the paranoid-schizoid (PS) state of mind gamble with risk, whereas those in a D state recognize that there is risk and don't deny the downside, thus making more realistic decisions.

SOURCE: David Tuckett and Richard Taffler



“When we talk to money managers, it's very interesting because they relate to these processes,” says Taffler. Tuckett has conducted in-depth interviews with 50 portfolio and asset managers, and his preliminary findings confirm the underlying idea that decision making dominated by uncertainty is saturated with emotion, as described in the authors’ article, “Phantastic Objects and the Financial Market's Sense of Reality: A Psychoanalytic Contribution to the Understanding of Stock Market Instability” (which was due to be published in the *International Journal of Psychoanalysis* in April 2008; the results of the fund manager interviews are still being analyzed).

Taffler and Tuckett report that, although many money managers during the dot-com era of the late 1990s admitted to being skeptical of “new economy” stocks that had been bid up to astronomical levels on the flimsiest fundamentals, they felt pressured by their colleagues, the outperformance of other managers, and the intensity of the marketplace. Private clients expected managers to shift into more aggressive equity portfolios, and private wealth managers who resisted that expectation felt the heat.

“Managers, if they're dealing directly with the client, need to establish a certain amount of trust,” says Arnold Wood, president and CEO of Martingale

Asset Management in Boston. Trust, according to Wood, who is a trustee of the Research Foundation of CFA Institute and a vocal proponent of behavioral finance, “is defined as clients believing that what you tell them is, in fact, accurate, true, and in their best interest.” In other words, it means establishing a sound “depressive position”-based relationship that can weather the atmosphere of distrust that characterizes the paranoid-schizoid state.

“Investors who make decisions in a more paranoid-schizoid state of mind gamble with risk, whereas those in a depressive-position state recognize that there is risk and don't deny the downside, thus making more realistic decisions,” Taffler says.

No Absolutes

The goal of the research efforts described here and those undertaken by other academics and industry professionals is not to eliminate emotions from the investment process. Rather, it is to recognize that moods and emotions exert an influence on investor behavior, to detect and interpret the signals, and to manage their effect. Emotion-based studies help observers and market participants understand the behavior of the most unpredictable variable in the capital markets: the investor.

“It's not that everybody behaves in one way under one condition and everybody behaves another way in another condition,” says Levav. “There's simply a chunk of people who behave more in one direction than another in a certain condition. There aren't going to be any absolutes here.”

Susan Trammell, CFA, provides business plan writing and market research services through her New York City consulting firm.