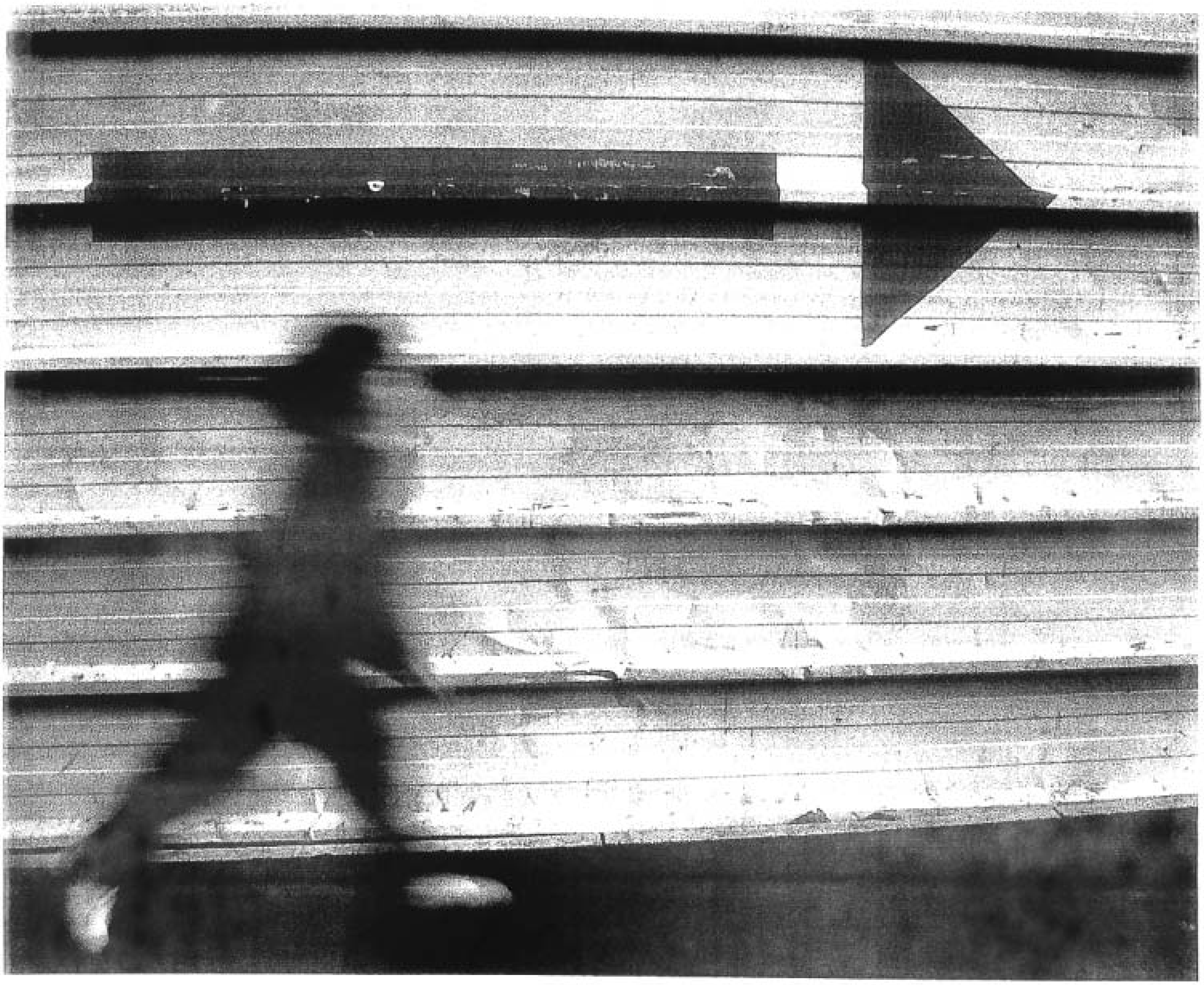
A mental accounting system:

Perceiving risk and return

Risk management should really be described as regret management. Intuition isn't always the best way to build a portfolio



Caution: investor choice is often biased by cognitive, intuitive and cultural factors

If you want to be a smart investor, it helps to understand how people react to economic and financial uncertainty. The classical economic analysis assumes that people's forecasts of the future rationally reflect all the data available to them and that they avoid risk. That is, it is assumed that individuals typically prefer a sure outcome (say, $100,000) over a risky prospect with the same expected value (a 50% chance of $70,000 plus a 50% chance of $130,000).

New research in behavioral finance has come to a different, less sanguine conclusion: people's intuitions about money and wealth management are fragile. Of course, investors try for the best. But their true capabilities fall far short of the ideal of *homo economicus*. People are human. They apply heuristics to simplify the decision process. They consider only a limited number of alternatives and focus on key aspects of the problem. They do not keep looking to improve decisions that are adequate. Most significantly, the judgments and choices of investors are biased by cognitive, intuitive and cultural factors.

> "People think in stereotypes, naively extrapolate from small data samples and are frequently misled by first impressions"

For instance, behavioral finance has found that the theory of risk aversion is at best a half-truth. It may apply in cases like the one described above. However, in situations where the probability of an investment loss has become quite large, many investors tend to take risky gambles that they would not take under normal circumstances. The driving force behind this type of behavior is the desire to break even. People are decidedly loss-averse.

Defining losses and gains in wealth depends on how we interpret the status quo. The appropriate reference point here is a question of investment objectives. Do we need to maintain principal (the original capital sum), do we want to keep up with an index such as the S&P 500, or do we aim for something else? Investor sentiments and preferences are often not stable. Many people juggle their aspiration levels in order to explain the outcomes after the fact. This is all about feeling good and saving face. For instance, during the second quarter of 2002, US equity markets tumbled about 13%. Investors who beat at least one of the major stock market indexes, however, may have derived some consolation there.

How decision outcomes are framed affects people's sense of well-being as well as how they make choices. Sometimes, people experience regret when it appears, in retrospect, that they should have made a different choice. For example, a friend of mine invested her parents' inheritance in a low-interest savings account and regrets now that she missed out on the bull market of the 1990s. As her experience shows, feedback on what might have been is crucial. Regret means that, if the clock could be turned back, one would undo that which is regretted.

Evidence suggests that many investors act to minimize their future regrets. Some 90% of what is commonly called risk management should properly be labeled regret management. The anticipation of regret unfortunately distorts choice in undesirable ways. For instance, regret may favor the continuation of a bad strategy. With too much invested to quit even if logic runs the other way, investors become prisoners of the past. At times, regret aversion can be beneficial, however, if it stops hasty decisions.

Not all investment decisions are overshadowed by the fear of disappointment. Whether regret exerts its influence depends on various factors. The first is whether someone expects feedback on a rejected option. Another element is whether the investor himself bears responsibility or whether he can shift the blame to another party. A third factor is whether the investor in the past actually experienced and now vividly remembers the pain of missed opportunities.

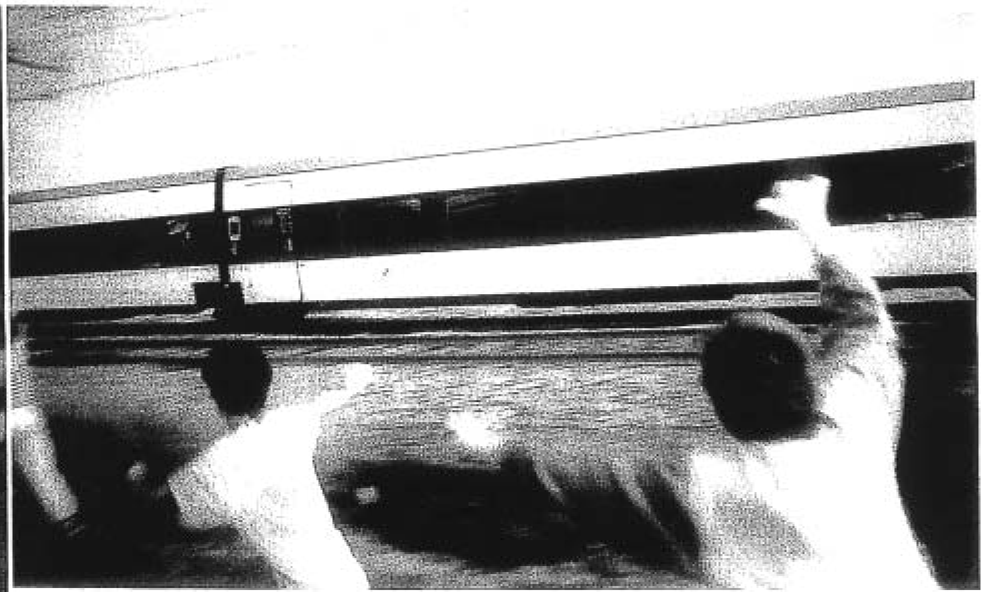
In general, behavioral research finds that people organize their financial affairs in sets of mental accounts. Examples of mental accounts may be 'my holding in DaimlerChrysler' or 'my investments in bond funds'. People usually judge the performance of each account separately. For this reason, they sometimes make choices that objectively, from the perspective of the total portfolio, are absurd. For instance, evaluating stocks on an individual basis may lead them unwittingly to hold on to inferior equity portfolios.

Up and down: evidence suggests that investors act to minimize future regrets

This mental accounting system arises from the cognitive need to simplify a complex world, the desire to manage one's emotions and the need to coordinate decisions with family members. Professor Richard Thaler from the University of Chicago has applied some of these ideas to the psychology of saving. He believes that most families have a current income account, an asset account and a future income account. The propensity to save rises across accounts. He has devised a dual personality model of the investor to explain how a family often organizes its savings. A far-sighted planner restrains a myopic doer by imposing rules that say how much may be spent from a given account for a given purpose. For instance, it may be acceptable to tap into the asset account to make a down-payment on the purchase of a home but this is not an acceptable way to pay for a vacation.

The ideas investors hold about the uncertainty of the economy's future are also fundamental to their behavior. It would be a gross oversimplification to assume that people behave as if they know the true model of the economy. The main finding that emerges from the study of intuitive judgment is that people are subject to systematic cognitive biases. They think in stereotypes, naively extrapolate from small data samples, give too much weight to salient information and are frequently misled by first impressions.

On top of all that, people – particularly men – tend to be overconfident. They have an inflated view of their own abilities and they see themselves as invulnerable. One recent study of stock trading in the United States finds that single men trade 67% more than single women and earn 2.3% less. Interestingly, people maintain a high degree of confidence in the validity



of specific answers, such as which soccer team will win tonight's game, even if they are well aware that their overall hit rate is low.

Usually, one probability entered into a decision analysis is a subjective degree of confidence. In a series of papers published in the 1970s and the 1980s, two Britons, George Wright and Lawrence Phillips, found that the intercultural differences in probabilistic thinking, such as between British and Asian samples of respondents, were quite large compared with intracultural differences, such as those between Moslem and Christian Indonesians, and between sexes. While the accuracy of the different groups was comparable, Asians adopted a less finely differentiated view of risk. For instance, they were more likely to say that they were 100% sure, but this perceived certainty was illusory.

Investing is an activity that generates a great deal of popular discussion and media attention. A recent survey of affluent investors in six European countries confirms that culture matters. It found that, compared to other respondents, equity investors believe more often that they are leaders, and that they make decisions quickly. They admire entrepreneurship. They feel that investment is fun. In their view, stocks are the best long-term investment. In contrast, fixed-income investors worry more about the future than equity investors do and they fear failure. They agree more strongly that regulation benefits society. These investors worry about stock market volatility and they strongly believe that investing has an ethical dimension. It is reasonable to think that configurations of cultural values and beliefs that people hold about themselves and the world, and that are correlated with national identity, are linked to the perceived attractiveness of asset classes and investment strategies.

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www.psychologyand markets.org
The Institute of Psychology and Markets was founded to study the effect of psychology on investor decision-making
www.mpib-berlin.mpg.de
Within the Max Planck Institute for Human Development site, the section on adaptive behavior explores the strategies people use to make judgments in the face of uncertain situations

More links can be found at www.ubs.com/optimus