

Capital Market Analysis: PortfolioPractice

Outsmart yourself!

June 2008

Allianz 
Global Investors



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Invest wisely using “Behavioural Finance” insights

“Every person is homo oeconomicus and as such makes purely rational decisions. The result of this is efficient capital markets.”
Is this true?

Know yourself!

Behavioural Finance is an approach that is gaining increasing popularity in capital investments. But what lies behind it and how can it be used for investors?

It is based on the work of Daniel Kahneman and Amos Tversky, who with their “Prospect Theory” formulated from a psychological perspective an alternative to the current hypothesis that people made decisions purely as rational “homo oeconomicus”. They could identify behavioural patterns that are simply not explicable rationally. The Prospect Theory may have gained currency in financial economics through Richard Thaler, who applied Kahneman and Tversky’s insights to capital investments, from which the Behavioural Finance Theory then emerged.

The basic premise of Behavioural Finance is that investors tend towards “anomalies”, that is, towards non-rationally explicable behavioural patterns or tendencies, which are reflected in their investment decisions and in the prices of securities and on the stock exchanges. Therefore there are no purely rational investment decisions which, according to the opposite premise, lead to efficient markets. On the contrary: inefficiencies happen consistently.

Thus Behavioural Finance is interesting for investors because:

- Anyone who can identify typical behavioural flaws in themselves can not only optimise his or her own decisions but can also learn from the mistakes resulting from inefficiencies of others; and

“I’ll live on the street with a tin cup in my hand if markets are always efficient.” (Warren Buffett, quoted from Richard Peterson)

Summa Oeconomica

- Investors are only human too. Their decisions are not exclusively rational. On the contrary.
- They tend towards typical behavioural patterns which are reflected in stock exchange prices.
- Behavioural anomalies lead to inefficient markets. These are not only an argument in favour of active management, but can also be used purposefully.
- Whoever recognises this can outsmart themselves and make better, more rational investment decisions.
- The science of Behavioural Finance provides the foundation for this self-realisation.

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Behavioural Finance-Theory classification

“Behavioural Economics” deals with irrational human behaviour in economic situations. Above all, it tries to resolve the assumption of homo oeconomicus, the rational minded and thinking person. Observed behaviour usually contradicts the predictions of classic economic models, which is why Behavioural Economics searches for clarification of this irrational behaviour. Such behaviour can be observed across all life situations, which is why a broad, empirically-based literature has formed. In addition a multitude of theoretical models exist that can always explain specific behavioural anomalies.

Source: Wikipedia.org

The first step is self-realisation, how we think and act, meaning how our brain functions. Anyone who wants to understand capital markets therefore has to first of all understand how he makes decisions him- or herself and what role the brain plays in the process.

The Self and the Brain

The composition of the brain is the product of over millions of years of constant evolution. In its current form it originated in the Stone Age world with its needs to hunt, and the need for life in a manageable clan. On the basis of the needs of that time its basic structure can hardly be ideal for the modern age with its complexity.

Cerebral research stems from three centres in the brain, which have developed differently and interact to some extent very differently:

- anomalies are an important criteria for active management. Only those who believe that markets are always completely rational and that prices include all information available, can rely on passive management, meaning blind investment in benchmarks.
- the cortex, in which logic is anchored,
- the limbic system, responsible for emotions, as well as
- the in-between recumbent part of the brain (the part similar to the brain of

reptiles) which controls basic bodily functions, in which breathing and the heartbeat are also included. It is not relevant for our further observations.

The anterior part of the cortex (the prefrontal cortex) is responsible for learning, logical thinking, planning, calculating and making strategic decisions.

The limbic system is responsible for the more primitive motivations and emotions such as fear and excitement.

The emotional, limbic system is the older part of the brain. We needed emotions for survival before we needed logic. It works very quickly and, like computer circuits, in parallel.

The cortex is responsible for logic. It works slower and serially, in other words it solves tasks consecutively not simultaneously.

The two halves of the brain, equally important for decisions, do work very differently but function together. The combined halves of the brain form two systems by means of neural circuits through which both goal-oriented behavioural patterns are controlled:

- Pursuit of reward and
- Loss prevention.

The old exaggerated saying comes into effect here: Stock markets shift constantly between greed and fear – the two extremes of the pursuit of reward and loss prevention.

Anxiety, fear, panic – these are all feelings that come from the loss prevention system. The system for striving for reward helps us to assess potential prospects and strive for advantages. It is controlled via the neurotransmitter dopamine and can therefore be manipulated by a lack or surplus of dopamine.

Self-test: Feel good in 60 seconds!

For a long time it was believed that emotions resulted from certain events. You feel good for example because you have executed a successful investment. However, the reverse is also true: Emotions can be produced by specific behaviour. Try it! Take a pencil between your teeth and smile at the same time. After about 60 seconds you will feel happier.

Carriers

Neurotransmitters, such as serotonin and dopamine are responsible for the exchange of information between the brain's neurons. Depending on whether these chemical messengers assist or curtail the flow of information between the neurons, they influence our opinions and our reasoning powers as an investor. Among other things they influence cognition, processing and the evaluation of information.

Added to this are other active agents such as opioids, noradrenalin, stress hormones and omega-3-fatty acids.

Pathological disturbances, medication and drugs (including alcohol) as well as caffeine impact on these chemical processes and also affect human behaviour.

Brain – Money – Profit

If only we were always rational, we would make the best decisions and optimise our financial investment free from emotions. We would then be what economic textbooks imply: A homo oeconomicus.

There is indeed an economist in every one of us, because we constantly make economic decisions that promise us the best advantage (for example: get up in the mornings and earn money instead of staying in bed), but we are not computers that can process all of the information, form an emotion-free utility function and finally make the optimum decision.

We carry our history of development around with us, which was helpful to us out in the

wild and on the hunt, but which is in modern society not always beneficial. We combine logical thinking with resulting behavioural patterns from the Stone Age that enabled the survival of our ancestors at that time. We are, as James Montier disparagingly expressed, “Part Man, Part Monkey”.

The structure of our brain, our thought processes, control via neurotransmitters have however an immediate effect on how we invest our money and what profit (or loss) we can make. The pursuit of reward and the prevention of losses override all our behavioural patterns

Behavioural Finance has derived typical behavioural patterns from this realisation. Someone who knows these patterns is a step further not only with self-awareness, but is already on the way to outsmarting themselves.

Hirschleifer here differentiates four super-ordinate investor behavioural patterns/tendencies, which are further subdivided into their resulting behavioural patterns (compare Figure 1):¹

Over-estimation of one's own abilities (hubris)

“One only becomes clever from mistakes—one mistake is not enough.” The deep wisdom in this offhand saying is its assumption: we learn from our mistakes. But learning from mistakes also includes impartiality when recognising mistakes, to acknowledge them in order not to perpetrate them again. Frequently, however, an over-estimation of one's own abilities stands in the way of this learning mechanism: what worked well is our success. What fails, well, that was simply bad luck or bad advice. Hubris also obstructs vision in investment decisions. In the process, this thinking mechanism willingly gathers momentum following initial results that are then credited to one's own prowess. The consequences can be disastrous.

The most common mistakes resulting from hubris are over-optimism and overconfidence. Both tendencies are accompanied by an illusion of control and an illusion of knowledge, meaning it is assumed one is able to control a development that is not controllable, or that one possesses sufficient knowledge for decision making – which is however not the case. In the long run it can even involve random developments which are neither controllable nor predictable but whose result the investor attributes to his or her own knowledge. But this is disastrous: with increasing illusion of control the willingness to absorb new information and evaluate one's opinion decreases. A spiral evolves quickly following initial investment successes, according to the pattern “delight – greed – euphoria – collapse”.

Ask among your colleagues, who in this group rank themselves among the below-average, who among the average and who among above-average drivers. Because everyone orientates themselves to an assumed average, the result would have to be a normal distribution around an average value. Presumably however, more than 50% of your colleagues rank themselves among the above-average operators – which by definition cannot be true.

You can also ask school classes or course participants in educational establishments, who expect themselves to be passed as above-average. Here too, one can expect more than half to rank themselves among those who will pass as above-average.

“Part Man, Part Monkey?”

Hubris, Illusion of control, Illusion of knowledge

“The greatest obstacle to discoveries is not ignorance— it is the illusion of knowledge.”

(Daniel Boorstin)

¹ Hirschleifer, David (2001), “Investor Psychology and Asset Pricing”, Journal of Finance 56, quoted and adapted slightly from James Montier (2002) “Part Man, Part Monkey”, Dresdner Kleinwort “Global Equity Strategy”.

Overconfidence, associated with illusion of control and knowledge, can also happen in capital investment. Anyone who looks back on a series of successful investments will tend to believe that in the future he or she will be able to anticipate markets accurately. It is precisely in a bullish phase on the capital markets that there is a very real danger of crediting oneself with above-average aptitude in financial investment. But what is above average, when everything is going well – and what happens when a slump in the bull market ensues?

One's own powers of recollection can also pull the wool over the eyes of investors. As a general rule losses are gladly forgotten, while profits remain stuck in one's mind. Also a consequence of over-estimating one's own abilities.

An over-estimation of one's own abilities can easily lead to a conservatism bias: instead of rethinking old forecasts, they are maintained and adapted to the reality, with only a delay in time.

The yearning for (self) affirmation is also dangerous. With this only the information that corresponds to the existing assessment is taken into account. Conflicting information is suppressed or is designated as less important.

Cognitive dissonances that can occur if new, uncomfortable truths appear and should have some influence on the investment decision process, also often lead to suppression. The gist is: I do not need to take into consideration what does not suit me.

„Hindsight Bias“

With the benefit of hindsight, everything appears to be “crystal clear”: The development of market indicators and of equity prices – anyone who knows the charts thinks: “How could it have been different? I knew that.” Even the stock market crash that began in 2000 seems today to be predictable and virtually logical. But who could have accurately predicted it before the bursting of the bubble? The danger of this tendency lies primarily in the over-estimation of one's own abilities: Someone who believes that he could have foreseen a lot in the past will also mistakenly presume this in the future.

Heuristic Simplification/ information processing errors

Heuristic simplifications are rules of thumb for progressing through the jungle of information. Frequently they are fully meaningful shortcuts en route to decision making. They can however also lead to



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incorrect results. These mistakes are discussed here.

Representativeness

Representativeness has to do with the significance of random samples in relation to the totality from which they are taken. Often this significance is overestimated and the laws of probability are accordingly rendered inoperative.

James Montier illustrated that with an example² (adapted slightly):

Imagine that a woman takes her philosophy exams and applies for a job. Throughout her studies she is a great champion of the protection of animals.

What is more probable?

That she

a) becomes a bank clerk

or

b) becomes a bank clerk and an animal rights activist?

Answer “b” would normally be selected.

Nevertheless, this judgement runs contrary to probability. In terms of the entire

population, bank clerks as well as animal rights activists make up only a small proportion. Therefore to combine both, in other words to form an intersection of both, is clearly more improbable than simply to have one of either attribute (Figure 2).

For investment decisions the false assessment of representativeness is also important. Successful companies like to assume that they will continue to be so in the future. Successful companies do not however, have to be necessarily representative of future high profits. Often, according to Montier, a return of profit growth back down to average is observed. So anyone who is blinded by current high profits will quickly make a careless investment decision.

„Framing“

Often investors allow their vision to become restricted by inadequate information. The window, or rather the window-frame, through which they observe the investment world, is simply not large enough, to be able to review all the pertinent information and at the same time identify investment alternatives or contradictory facts.

Figure 1: A classification of typical sources of error adapted from Behavioural Finance Theory

Biases			
Self Deception (Limits to learning)	Heuristic Simplification (Information processing errors)	Emotion & Affect	Social
Overoptimism Illusion of control Illusion of knowledge	Representativeness	Mood	Imitation
Overconfidence	Framing	Self control	Contagion
Self Attribution Bias	Anchoring	Fear & Greed	Herding
Confirmation Bias	Availability bias	Regret	Cascades
Hindsight bias	Cue Competition		
Cognitive dissonance	Loss aversion / Prospect theory		
Conservatism bias			

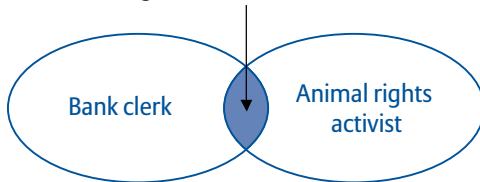
Based on David Hirscheleifer (2001), “Investor Psychology and Asset Pricing”

² Montier (2002b) S. 9 ff.

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Figure 2:

The animal rights activist and the bank clerk



Frequently investments are made on the summary story, without analysing how long it will last or whether there might not be other, better prospects.

Information cognition and information acceptance are different, depending on whether the information is consonant or dissonant with one's own attitude. Here the rule is: the more information conforms to one's personal views the more likely it will be accepted.

A good example of investments that select only well-established alternatives, not all potential alternatives, is usually the purchase of rental properties. Given that the street just opposite is better known, the apartment complex there is purchased for rental purposes, instead of finding prospects in other countries or even on other continents.

The frequently observed "Home Bias" is another classic case of Framing: Since DAX-30-shares are known by the majority of

investors, the amount of German shares in investor accounts is clearly higher than their share of the actual global market capitalization. Consequence: poor diversification and the blocking out of better alternatives.

„Home Bias“

The deposit itself is not only badly diversified, the returns on human and financial capital also correlate stronger than necessary, because an investor's salary is more closely connected with the return on domestic shares than with the return on foreign shares.³

“Anchoring“

People will also be inclined to combine their assessment with – completely irrelevant – “anchors” in their memory.

Tversky and Kahneman proved this as early as 1974 with their study that gained fame. They asked their test subjects general knowledge questions, for example: “How many UN-member states are from Africa?” and showed them beforehand numbers generated using a wheel of fortune. But the wheel of fortune itself was manipulated and produced either “10” or “65”. The result was unanimous: people who had seen the number 10 prior to the survey gave a markedly lower figure than people who had seen the number 65 previously. Yet the responses to these questions had absolutely nothing to do with either of these numbers.

³ Adapted from the FIFAM Research Report 04/05, “Zu welchen Renditeeinbußen führt der Home Bias?”

These characteristics also explain why forecasts are frequently given following the last prices as the reference figure. For example: the current price of shares is the anchor for formation of expectations. In actual fact the price should be calculated on the basis of profit estimates time and again, using for example a Dividend-Discount-Model valuation method.

“Availability bias”

Be honest: How many of your good intentions at the start of the year have you kept – and for how long?

Typically we fail our good intentions quickly, because the realisation of the advantage expected from it lies in the future and the future is uncertain, and because we prefer the quickest, most secure profit, current convenience, or immediate advantages. So why go jogging, give up desserts or stop

smoking now, if the expected fruits of this endeavour for one's own health and longer life are in the future? Enjoyment will come before the better life tomorrow. That is reminiscent of a hunter, who immediately consumes his prey, because he does not know whether he will be alive tomorrow or not.

Due to the preference for benefits today by implication the benefit expected tomorrow is discounted in value. That is quite clever, but clearly the discount factor is so high that the benefits expected tomorrow no longer bear any significance.

Disastrous: This is why securing the future, too, is willingly put off until tomorrow, even though the compound interest effect from early saving has an enormous effect. Sacrifice today is experienced as more painful than retirement tomorrow without

How many of your good intentions at the start of the year have you kept?

Anchoring with a reference value

Orientation to an (arbitrary and therefore incorrect) reference value, namely the purchase price, following the slogan “I will wait until the value increases again and I can sell without loss”, is incorrect on three counts: not only because the instrument can lose value even further, but because in the meantime you miss out on better investment opportunities and at the same time lose purchasing power because of inflation.

Self-test Availability bias

You offer a child three pieces of chewing gum, but tomorrow he will get five if he turns them down today. How does the child decide?

€100.00 is offered to you today. How many euros would have to be offered to you for you to refuse the money now and wait a year? Compare the return from it with the return from a secure financial investment.



You offer a child three pieces of chewing gum, but tomorrow he will get five if he turns them down today. How does the child decide?

worry. Someone who saves today needs to put aside considerably less tomorrow.

FIFAM (“Research Institute for Asset Management”) has come to the conclusion that threatened poverty in old age is considered as hardly a threat.⁴ Many considered this risk as controllable and harmless in comparison with other risks. Three very unfortunate behavioural patterns may coincide here:

- Illusion of control
- Suppression of cognitive dissonances
- Time preference

Instead of maximising the cash equivalent of one’s entire lifetime income, the here and now is overrated to the detriment of securing one’s future.

“Cue Competition”

The intensity with which we absorb information and the probability with which we will remember it increases according to the intensity of the key stimulus that makes us absorb the information.

Do you still remember where you were on 9 November 1989? Presumably you remember precisely where you were and what you felt on the day the wall in Berlin fell.

But can you also remember when India turned towards the global market and turned towards a market economy? It was in 1991.

Both events occurred around the same time in the past and had enormous economic and political significance. With India’s change to a market economy at the beginning of the 90s, globalisation gained in intensity. But in the case of the fall of the Wall we can remember much more clearly, because the key stimulus was appreciably greater.

According to what criteria do you choose the securities you invest in? Is there a stringent selection process at the outset or is the insistent way many of your stocks appear in the printed media? It is interesting to know

that yields on shares and press reports are closely connected – negatively. Gadarowski discovered that shares which are frequently mentioned in the press in one year, only generated below-average returns in the following two years.⁵

“Loss aversion”

Someone offers to play a game with you with a coin. If you lose, you must pay €100.00. What profit would it take for you to be willing to get involved in the game?

There is no correct answer in this case. It depends on your propensity for risk. If you accepted a profit of €100.00 from the game you would be risk-neutral. As a rule, however, people get involved when they can win more than the potential loss. People have an aversion to loss. They want to keep what is theirs. This often leads to a displacement effect with financial investment. Securities that perform worse than expected are not sold, and remain in the account. “It’s happened again”, is the attitude. Losses are only accepted reluctantly.

Emotion/Affect

Rational decisions are superimposed on emotion and affect. The combination of both sides of the brain, the cortex and the limbic system, plays a particular role here. The most important characteristic is the oscillation between fear and greed, or put more elegantly: the attempt to prevent losses and obtain rewards.

Moods are another thing that influence our investment decisions. Whether we are lucky or unlucky, nervous or impassive, stressed or relaxed they all influence our investment behaviour. Not forgetting of course stimuli such as coffee, alcohol or medication that affect our mood.

Happy people for example are more decisive and are rather inclined to an over-estimation of their own abilities. They are more willing to

⁴ FIFAM Research Report 05/05, “Kundennutzenorientierte Gestaltung der Anlageberatung im Privatkundengeschäft”.

⁵ Gadarowski, Christopher (2002) “Financial Press Coverage and Expected Stock Returns”, Rowan University.

take risks and readily ignore even important detailed information. They get over losses easier and try again.

People who tend to be depressive are detail-oriented and indecisive. They want to avoid losses if at all possible.

Extroverted, optimistic people consider the risks less than anxious people.

Moods themselves can thereby be affected by investment performances. The sense of pleasure from a good investment frequently decreases the evaluation of the risks, the over-estimation of one's own abilities increases and can lead to additional purchases. A series of successes can then lead to blind greed that masks all rational thinking and immunises people against warning information– and that can end up in a fully fledged rogue trader. Self-control has become totally blocked out.

The case with failures is the opposite. This misfortune leads to elimination effects and to aversion.

Regret: The majority of people feel more regret from something that they have done than from something that they have not done.

Example: They have an equity fund A and are considering whether they should change it for equity fund B, but then do nothing. In

hindsight they find out that this way they have lost €10,000.00.

Their friend has equity fund B and exchanges it for equity fund A. As a result he receives €10,000.00 less than he could have received with equity fund B.

Who is more annoyed? You or your friend?

Presumably you say your friend is more upset. He actively decided on the change and as a result received less profit. Except that in your case it is a matter of lost prospects (“opportunity costs”); in the case of your friend it is actual losses. But you both have the same result. Therein lies the difference as to how something is regretted.

Social

People are creatures of the herd. They rarely decide autarchically, that is without regard to their milieu. And in herds there are Alpha animals who lead the herd and provide direction. People like to imitate the behaviour of successful Alpha animals.

Are you aware of that? Have you ever bought a “hot tip” that turned out to be a non-starter afterwards? There are no such “hot tips”. Hard work underlies recommendations that promise success. Why should anyone give away the results of their work? Perhaps he is only doing it because he is looking for

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someone who will buy his tips from him so that he can rake in a profit or because he wants to earn the commission. With all their rational weaknesses people are nevertheless still economists.

So what have you really done with your purchase? You have imitated someone, who “must be in the know”. Because he is a broker for example, or a “proven expert” in internet stocks, or this, or that, or the other. Or simply an Alpha animal.

Perhaps you were only caught out because a lot of others also trusted this tip. It appeared in all the newspapers and spread like an epidemic. An epidemic that with the help of rationality could only be managed with great difficulty.

Another thing: Do we feel most at home in the herd because it provides security? Why develop another opinion; the majority must be right, mustn't they? If however each person relies only on the majority, who really decides any more – and is that rational?

Cascading information is not dissimilar in its consequences from herding. It does not, however, originate from the deliberate orientation of the herd, rather it is a result of sharing collective information and exchanging it. Research reports, ticker notices, current prices etc. ... are pieces of information that are available to everyone at the same time. Then investment decisions are nourished from the same sources and are frequently evaluated by people who are

If everyone only thinks the same thing, then not a lot will be thought about.

The anatomy of shares hype

Peterson demonstrates, with the excellent example of an under-age stock market freak whom we will call Goldfinger, how he succeeded in unleashing total hype about several shares and pocketed massive profits through front-running.⁶ His aim was clear: purchase shares with low market capitalisation (“penny stocks”), then try to push the prices upwards and to sell when others had bought (too late).

Goldfinger followed a multi-step approach.

1. Goldfinger picked shares that he could promote with their novelty value. He did this on several internet platforms, in chat forums and by spam mails. He could count on the fact that their supposed novelty value would attract attention to them. “Novelty” is a key stimulus that leads to increased awareness.
2. Then he promised large profits and bet accurately on greed, which can override all critical thinking.
3. He coated all his recommendations with a veneer of (apparent) information. His readers could not or did not want to process this and looked forward to the brief “summary”: “Buy”.
4. Naturally everything was supposedly cheap: “Junk prices”, “undervalued” were key words, which played on greed for the quickest profits.
5. He acted like an expert with his vocabulary and thereby enticed others to follow him.
6. Anyone who was not yet convinced he got around with alleged time pressures. He deliberately wanted to shake his readers out of their inclination to wait and see. Investors have a tendency to postpone decisions until the following morning.
7. Naturally he could also count on Framing: his audience was almost forced to only look at the stocks recommended by him, and overlooked many other investment opportunities.

Eventually however, he attracted the attention of the Exchange Supervisory Authority and received hefty penalties. It is nevertheless a textbook example of how hype develops and how inexperienced investors can lose.

⁶ Peterson, Richard (2007), S. 94 ff.

in contact with one another, for example because they are present on the same trading floor. Who would be surprised if they come to the same or at least similar assessments and decisions? Often it only takes a rising price in order to produce future purchases.

Outsmart yourself!

Nobody is free from behaviour-oriented investment decisions, the consequence of which is less-than-optimal investments. We are people, not robots. We are a combination of heart and brain – and even the brain is not a machine that only knows one process to the right result.

Because of that, remember, in every (investment-) decision: Outsmart yourself! In order to make this easier, here is a checklist that should precede each decision:

- A stringent investment process, one that preferably eliminates emotional behaviour, helps against an over-estimation of one's own abilities. Restricting oneself to an investment universe in which the investor has specific knowledge is a first step to self-commitment. Then fundamental analysis should follow, looking at future expected income and not at previous successes.
- Find information which contradicts your opinion, and have conversations with people who can assume the role of devil's advocate. This protects you against being addicted to self-affirmation.
- Think of the danger of believing you knew everything in advance, even if your memory suggests this.
- Is the "window", from which you regard the investment world large enough for you to decide between important investment alternatives, or do you look through a too-small "frame onto the world, because you know something particularly well ("German companies"), because you like a particular story ("internet shares") or something special is close by (rental properties in your street instead of real estate investment prospects around the world)? Try taking a look beyond your own backyard.
- Reduce the complexity of your decisions so that you are not too constricted in the way you view things, but at the same time do not land yourself with a jumble of information. Regular commitments entered into for the long term can help: someone who has once decided which risk type he or she is for the investment doesn't have to constantly determine his or her shares or borrowings ratio again, and is also protected from the need to be gazing constantly at the equity price ticker. Once you have decided which particular investment themes (emerging countries, new energies, commodities) you want to add and what does not fit into your plan doesn't have to be constantly thinking about all possible new proposals.
- Complexity reduction can also mean basically only investing in what one has really understood. What use are the best investment ideas that promise high returns, but whose risks are not assessable?
- Plus: a good basic understanding also helps in reduction of complexity. For example someone who has realised that a higher expected rate of return is generally linked to a higher risk is immune from irresponsible investments which do not pay off in the long run.
- The danger of a lack of basic understanding is also that you miss out on good prospects because you always postpone the decision on them – because you don't have the knowledge. Therefore you are investing in your general financial education.
- Take stock of your emotional state at the time of the upcoming decision: Are you perhaps especially strung up on coffee just now, or on a series of successes in capital investments that are making you headstrong? As a basic principle sleep on far-reaching decisions overnight. What still seems good in the morning is worth a second look.
- Which emotionally-controlled behavioural patterns are you potentially subject to? Are

you prone to over-estimate your own abilities? Are you affected right now by a particular market phase or by price gains? Have you also considered negative information that does not tally with your opinion or do you simply ignore it because it is unpleasant to you, or because it does not fit in with your world-view? Do you prefer to sleep overnight on a decision and/or do you look specifically for information that contradicts your positive view?

- What actually makes you hold onto a security that produces losses? Is it the purchase price as reference value or is it the determined expectation of future profits, on the basis of which you have recalculated the price that can be expected? Ask yourself the basic question: Would I buy this security again today? If not:
- “Limit losses, let winners go” is for the most part a good rule against denial of wrong decisions or the premature realisation of profits which place a quick profit now above even greater yields in the future.
- Actively managed funds can be a good tool against loss aversion and a habit of procrastination. Management takes over the purchase and sale of securities. The investor delegates these actions and does not remain victim to the tendency to sell losers too late and profits too early.
- Do you only follow the herd because everyone is talking about certain capital investments, or do have you your own opinion, which fails to be affected by self-appointed experts with “hot tips”? Do your own research and look for other routes.
- “What you can do today do not put off until tomorrow” is a popular saying full of wisdom, giving preference to the here and now at the expense of foresight, and the tendency to stick with what is familiar.

- Discipline is important. Anyone who regularly examines his financial assets runs less danger of becoming a victim of ostrich-like behaviour” when it comes to losses.

Investors are people too – and as such we are intelligent enough to recognise that and therefore capable of conquering our human weaknesses. And that’s why the slogan is: Outsmart yourself!

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Bibliographical references

Hirschleifer, David (2001), “Investor Psychology and Asset Pricing”, *Journal of Finance* 56

Daniel Kahneman and Amos Tversky (1979): “Prospect theory: An analysis of decision under risk, *Econometrica*”, Vol. 47, No. 2, S. 263–291.

Peterson, Richard L. (2007), “Inside the Investor’s Brain”, New Jersey

Montier, James (2002a), “Part man, part monkey”, *Dresdner Kleinwort*

Montier, James (2002b), “Behavioural Finance – Insights into Irrational Minds and Markets”, Chichester

Thaler, Richard (1985), “Does the stock market overreact?”, *Journal of Finance*

Wikipedia.org on: Verhaltensökonomik und Prospekttheorie:

<http://de.wikipedia.org/wiki/Verhaltens%C3%B6konomik>

http://de.wikipedia.org/wiki/Prospect_Theory

Imprint

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Mainzer Landstraße 11–13
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Capital Market Analyses

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Data origin - if not otherwise noted: Thomson
Financial Datastream.



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