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## **THE SOURCES OF INVESTMENT MISTAKES: SELL-SIDE, THE MEDIA AND MAX PLANCK'S CHAUFFEURS**

Investors inevitably make mistakes. Many of them are caused by psychological factors, which we considered earlier (see the “Psychology of investment mistakes” article in the appendix). Equally fatal errors are caused by distorted information. Fortunately, many of these distortions are systemic in nature and, therefore, can be adjusted. To do so, we must first analyze the source of the information.

Investors typically use five standard information channels: investment banks, the media, the investment community, company management, and “field information”—the primary data. We will examine each of these in detail.

### ***Channel 1: Investment banks***

Investment banks have enormous influence on investors. We all daily encounter something like “the ABC Company’s shares fell/rose because the XYZ Investment Bank changed its forecast for its shares” on the wire.

Banks have entire divisions of analysts who regularly publish reports on all noticeable companies. Yet despite the fact that these reports have a professional appearance and a famous logo, the information in them can hardly be considered objective for several reasons.

The most fundamental reason is motivation. The investment banks are brokers; they buy and sell securities on behalf of investors. In many ways, the investment banks’ business model is similar to that of real estate agents or used car dealers.

Receiving a commission from each transaction, they are primarily interested in the transaction itself. The more intense the trading activity is, the greater the bank’s commission is, which is why these divisions of investment banks are called “sell-side.” Virtually all of the information that comes from the investment banks is shared for one goal: to convince the investor to make a transaction. Surprisingly, very few investors remember this simple fact when the next pack of investment reports arrives with the morning emails.

The second, but no less important, reason for the lack of objectivity is the banks’ shortsightedness. By its nature, the sell-side aims for quick results. Every year on the bonus day, up to a third of the bankers quit. Therefore, everything that happens outside the annual (or even semi-annual) time horizon is considered irrelevant.

Investment banks live for today. As a result, current events—even if minor—are given a disproportionate amount of attention, while significant, but long-term events are ignored.

The third reason for the lack of objectivity is the effect of copying others' behaviors. Each analyst is constantly compared with others, and anybody with a few quarters of underperformance relative to their peers is at risk of terminating their professional career. At the same time, over-performance doesn't bring much benefit. This payout matrix disproportionately punishes deviations. Going against the consensus is dangerous and doesn't payoff. Therefore, the dominant strategy is to copy others' behaviors. Analysts prefer to follow the herd, even if they do not agree with it.

Finally, if an analyst truly has expertise and insights and is confident in his ideas, he can earn much more by investing directly instead of composing quarterly reports. However, cases of transition from the sell-side to investors are very rare.

Thus, the information from investment banks is highly distorted, short-term, and biased and aims to generate a transaction. This business survives only because almost no one remembers what the banks were predicting the previous year.

### ***Channel 2: Media***

The media is a common source of information for all investors, but it also has a number of structural defects. Just like with investment banks, it is important to understand the media's motivation. Its primary goal is to attract advertising budgets, which means attracting the attention of the audience. Objectivity is only a secondary goal—and sometimes not a goal at all.

To boost attention, the news channels have an arsenal of techniques at their disposal. For example, a relatively harmless manipulation mechanism can be called “build up a title.” Among the most interesting recent cases, one can recall numerous headlines about the Chinese crisis, whose titles began with “economic growth in China fell to its lowest level in three decades.” The articles themselves, however, indicated that the economic growth was at 6.9% compared to 7.2% in the previous year. But would anybody read an article with a title “growth fell by 0.3 percentage points”?

Journalists' expertise level plays an even more important role in the information bias. Readers of well-reputed magazines often believe that the author of the article has sufficient qualifications and is an expert in the field. The magazine's credibility removes investors' psychological protection shield and disables the critical analysis of the content. A powerful principle of “they said on TV that...” is engaged. However, if a detailed study of the authors' biography is performed, it becomes clear that many are not experts. Sometimes, journalists are simply instructed to write a piece on the hot topic of the day, which can be infinitely far from the area of their specialization.

Another interesting feature of the media is its inherited desire to shape the news background. Some news stories are artificially highlighted, while others are pushed into the shadows. This is the reason for many of the social “epidemics” when some seemingly random topic completely captures the entire media universe. Epidemics are profitable. They bring attention and advertising budgets. Thus, the media chronically biases the agenda. Therefore, it also requires a systematic critical approach.

### ***Channel 3: Investment Community***

Another traditional source of information is the investment community. Investors tend to closely communicate with each other, and this community remains very interconnected.

As with any group, the investment community has many psychological group behavior follies. One of the most widespread and obvious is the effect of blindly following the crowd (the Lemmings effect), which we discussed last year (see article in the appendix). Another effect plays a perhaps even more fundamental role in the information distortion: Max Planck’s chauffeur effect, introduced by Charlie Munger, one of the main philosophers of modern business.

After Planck received the Nobel Prize for the discovery of quantum mechanics, he went on a lecture tour, visiting many European universities to explain his truly revolutionary discovery. Every time he was accompanied by the same driver. At some point, the driver jokingly suggested said that, because he’d heard this lecture so many times, he could teach it himself—to which Planck instantly agreed.

At the next university, the driver gave the lecture. Because at the time (in 1919) people did not know what the real Planck looked like, no one noticed the substitution. Moreover, the driver confidently answered all the audience’s standard questions, as they were answers he had heard many times. Only when an unusual question from a specialist came did the chauffer say, “that’s such a simple question that even my chauffeur can answer it”—and he pointed at Planck standing nearby.

This real case may sound like a joke. Nevertheless, it is an example of a fundamental phenomenon that is very common in groups of people formed on any professional basis, such as scientists, doctors, and investors.

Very few people are real experts like Max Planck, located at the edge of their professional field. Many more people are simply chauffeurs: simulators. They learn the speech and answers to the standard questions. They get reputable academic degrees and various evidence of their professional expertise. They perfect their confident appearance and persuasiveness of speech. Externally, they are absolutely indistinguishable from the Max Plancks of the world. But they are only imitators. In unusual situations that require professional expertise, they are useless. The irony is that the chauffeurs constitute the overwhelming majority in almost any professional community. As the community’s

opinion is typically determined by the majority, it is these chauffeurs who determine public opinion.

The investment community is vulnerable to this effect like no other, which leads to enormous distortions of the information flows. Every day, each investor is faced with dozens of chauffeurs with well-known names and impressive regalia, expressing their opinions in the media or at investment conferences. The investment community begins to develop a certain general average opinion: the consensus. Gradually, as more chauffeurs join, the consensus becomes the dominant point of view, at which point an additional psychological effect—confirmation bias—switches on, isolating the community from the information that contradicts the consensus.

Next, the auto-catalyst process kicks in. The newly recruited chauffeurs who join the consensus cause a corresponding change in quotes (e.g., stock price goes up), which is considered proof of the correctness of consensus and attracts even more new chauffeurs. Many investment booms (and subsequent crashes) have been based on this phenomenon.

Calibrating this effect and distinguishing the chauffeurs from the Max Plancks of the world are extremely difficult. One radical solution is to minimize contact with the investment community, which is why some investors tend to avoid global financial centers, having their headquarters in isolated places.

#### ***Channel 4: Management***

Companies' management is perhaps the most important source of information for investors. Periodic reports, financial statements, and meetings with the management teams provide a solid basis for understanding the company's business.

However, even this method has a number of chronic distortions. In the worst scenario, the management may simply falsify data. For example, from 2009 to 2012, hundreds of Chinese companies listed on US stock exchanges turned out to be fake. Foreign investors lost tens of billions of dollars because they habitually and blindly trusted the information provided by the management. As a side note, most of these companies, as it became later apparent, were created by the same group of people located in the United States.

Yet even in the case of real companies, the information from management is almost always subjective and should be adjusted accordingly.

One possible way to calibrate the management information is a simple, but fairly effective model that analyzes the management teams along two dimensions: 1) optimism and pessimism; and 2) how the management evaluates the company's performance.

Management teams can be divided into pessimists and optimists. The former's reports are typically enthusiastic, talking about the rapid pace of future growth. This type of

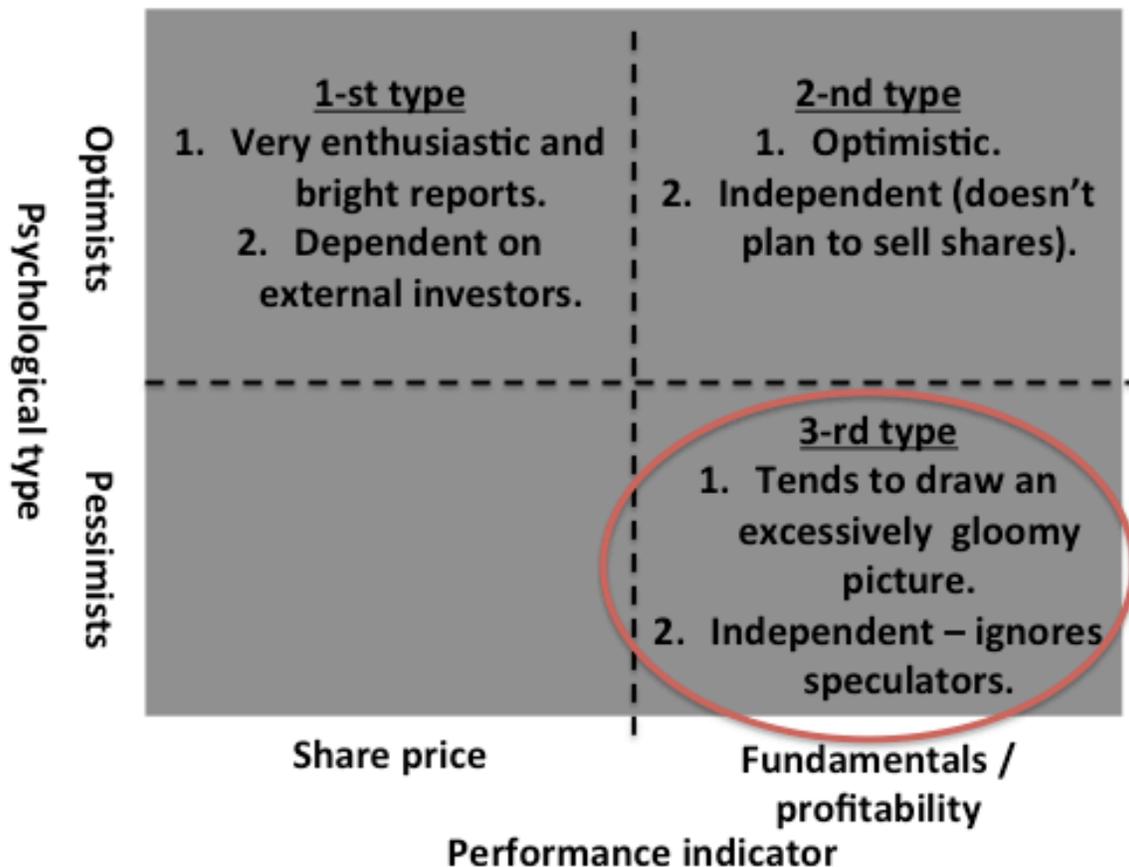
management is common for young companies. Pessimists, by contrast, are more inclined to draw a gloomy picture of the situation and set low expectations.

The model also looks at the criterion the company uses to assess its performance. A lot of top managers primarily consider the stock price of their company as the ultimate measure of its success. For others, the main indicator is the performance of the business itself.

This is a critical distinction! Those who rely on the stock price are mainly guided by the opinions of investors, and do everything to please the shareholders. This is manifested in frequent presentations, road shows, and regular meetings with investment banks' analysts. In other words, such management is primarily concerned with the promotion of their shares among investors. As practice has shown, it is caused either by the company's business requiring a constant inflow of new capital from investors in order to maintain operations or by management's plans to sell part of their shares. In both situations, the management is dependent on a favorable opinion of investors, especially in the near future.

The opposite approach is to evaluate the results based on the actual business performance. In this paradigm the management looks at fundamentals (i.e., profits, cash flow, return on invested capital). Typically, these teams run well-established companies that don't need external capital because they generate enough capital and cash internally. Their quiet confidence and even conservatism replace ostentatious enthusiasm. Often, these management teams are also the main owners of the company. They have no plans to sell their shares, and the opinion of analysts and short-term investors is of no importance to them. The stock price is not a priority; many do not even watch it.

## Calibrating information model by management types



*Figure: Calibrating information from management based on management type.*

Thus, the first type of management—an optimist for whom the stock price and the opinion of short-term investors are of high importance—will unconsciously tend to embellish reality, sometimes very significantly. On the other hand, a pessimist that is independent of short-term investors will show excessively gray, sometimes ugly pictures. In both cases, adjustments are needed to understand the real state of affairs.

As practice has shown, companies controlled by the management of the third type—pessimists ignorant to the opinion of speculators—can be very attractive investments. These are managers with realistic expectations who focus on their business, not on what others think about them. It is often these qualities that companies require to succeed.

### ***Channel 5: Field information***

Finally, the last important source of information for investors is the primary information—that is, data about business collected “in the field.” For example, it may be the results of an independent observation of the company’s business as well as the results of a study of clients and suppliers. The legendary Philipp Fisher called this approach “scuttlebutt.”

Direct observations of the company’s business are the least distorted source of information. However, this method has a number of disadvantages as well. First, it can’t be applied to all industries. For example, monitoring banks cannot provide any useful information, as banks are extremely complex and convoluted organizations. For example, the Lehman Brothers showed that even a bank’s management often does not have an adequate understanding of its own business. Banks are generally unanalyzable.

However, in many industries, scuttlebutt works well, especially in the consumer sector, where transactions between the buyer and seller are typically observable. In many cases, store visits can help develop a fairly objective view of the state of the company’s business, especially if the business is of poor quality. Such visits do not need the presence of management, which adds an additional layer of independency and objectivity. Another very useful source of information for scuttlebutt is discussions with vendors and suppliers as they provide additional perspectives in understanding the company.

However, one disadvantage of this method is that it is extremely labor intensive when applied to consumer companies. It requires dozens, hundreds, sometimes thousands of store visits in multiple cities. Yet labor intensity can also be an advantage. The majority of investors do not have the time and/or willingness to “do the dirty work” and neglect efforts to observe the business, which reduces competition for those who do.

Another important disadvantage is the scuttlebutt’s susceptibility to the confirmation bias, the previously mentioned psychological effect. If an observer already has a pre-established opinion about the business, he will be inclined to ignore any evidence to the contrary.

In sum, investors are constantly floating in the streams of biased information. They are attacked by investment banks on a daily basis. The media routinely misinforms them, often deliberately. Chauffeurs—simulators posing as Max Planck types—gather in groups and distort information background. Management teams also contribute by passing data through the prism of their psychological adjustments and interest. Even the raw data from the fields can be biased.

The investor finds himself in the role of a pilot, with a dashboard where not a single gauge can be completely trusted. To land the plane safely in such circumstances requires developing a system that filters and calibrates the incoming information.

## **APPENDIX**

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### **Psychology of investment mistakes**

Compelling pro and con arguments exist for the concept of evolution, but it is hard to deny that previous generations' environments and experiences affect us and shape our behavior. In large part, our behavior and decision-making systems were formed many generations ago. Since then, our environment has changed dramatically, but our internal systems are not able to change as quickly and continue to operate as if we lived in the distant past.

According to archaeological research, the development of humans as a biological species began 6 to 8 million years ago. Since then, people have spent most of that time engaged in hunting and gathering. The era of agriculture began relatively recently, only about 10,000 years ago. Thus, our species has spent more than 99% of our existence thus far in the hunting environment. As a result, our thinking apparatus and behavioral mechanisms have been shaped and designed by the need to survive in a society of hunters and gatherers. Yet in modern times, these mechanisms often lead to mistakes and failures.

Investors are ideal objects for the analysis of the nature of such irrational decisions. First, they are particularly vulnerable to such errors, as the investing environment changes extremely quickly. Second, the investors' failures are usually observable and measurable. The above-mentioned time-gap causes psychological errors for several reasons, including group following, quick response, short-term time horizon, asymmetrical loss aversion, and patterns search tendency.

This division is rather subjective: Many errors have multiple causes. Although the gap between today's environment and the conditions of the past helps explain a number of typical psychological failures among modern investors, it is certainly not the only cause of such failures, albeit it is one of the most important.

#### **1. Group following**

Automatically following the group is one of the most common causes of erroneous decisions. In small hunting communities, group approval was crucial; without the help of tribesmen, our ancestors could not hunt large prey and defend themselves against predators. As group exiles had no chance for survival and left no children, we are all descendants of people who learned to integrate into the group and imitate the majority's behavior.

In the modern world, our dependence on groups is much less acute, but we still copy the behavior of people around, even if they are complete strangers to us. We typically do not even realize that we constantly pay close attention to what others do or what we think they expect from us. It is so common that we do not even notice it. It is only when we are placed in an unusual environment with others vastly different from us or when there are too many others that the group influence begins to lose its power on us and becomes evident and accessible for analysis.

In everyday life, the blind group following effect is especially forceful in uncertain and urgent situations. When we have no time or resources to make our own decisions, the most effective strategy is to copy the behavior of others. For example, in unfamiliar places, we automatically follow the crowd exiting the train car; we have no time to discover the exit on our own, so we blindly rely on others. Another typical example is “canned” laughter. Professor Cialdini described how producers of humorous television programs specifically add laugh tracks to make the audience members laugh even when they know that the sound is not genuine. The power of group following is so strong that we willingly follow, even knowing that the signal is not authentic.

In most cases, especially in simple standard situations typical of primitive societies, the group following strategy is justified. However, in complex situations it often leads to unconscious irrational actions.

Investors are particularly vulnerable to the group following mentality, partially because investments are always accompanied by enormous uncertainty and a lack of reliable information. The trend-following strategy is psychologically comfortable; to a certain extent it generates good results, driven by contributions from new group members that confirm the correctness of the choice made. Almost every time a financial bubble forms, it is because at some point the blind group imitation tendency is activated.

Another psychological advantage that this approach gives to investors is protection against criticism. Any investment analyst faces a dilemma: The risk of being wrong alone is disproportionately high compared to the benefit of being right alone. If he acts alone and is right, he gets a “well done” from his boss and perhaps a small bonus. However, if he turns out to be wrong, the outcome can depend on whether he followed the group or not. If he is with the majority, he gets reprimanded but retains his job just because everyone else was wrong as well. If he acts alone, he loses his job.

Thus, for investment analysts, conformism is the optimal strategy. As birds are safer in a flock, the investment analysts feel more comfortable surrounded by similarly minded people.

Being wrong together with others is much safer than being wrong alone. Referring to lemmings—which are believed to be prone to blindly following the group, even

when it leads to death—Warren Buffett said that "as a group, lemmings have a very bad image, but at the same time no individual lemming has ever been criticized by the public."

## **2. Quick reaction**

In hunting communities, an immediate response was essential for survival. Every noise in the bushes required an instantaneous reaction and solution. Those who spent time pondering were either left hungry or became something's dinner. Our forefathers gave us this tendency to react instantly: We instinctively make decisions as quickly as possible, which explains, for example, our tendency to draw conclusions based on the first impression.

In the primitive and aggressive environment of the past, such a strategy was justified. But in the complex situations of the present, the "shoot first, ask questions later" method returns inadequate results.

The power of the quick decision is magnified by such additional psychological mechanism as confirmation bias. Once a decision or an opinion has been made, we start looking for evidence confirming the correctness of our decision and unconsciously reject and ignore those that do not support it. We do not like to admit mistakes and willingly self-deceive ourselves in order to avoid the need for such admissions. As a result, the first decision or impression usually becomes the final one.

As a result, investors often give investment decisions less time than, for example, buying a car or a smartphone. After receiving unexpected news, we tend to react instantly. We constantly try to minimize the amount of time we spend on one of the most important decisions in life.

## **3. Short-term time horizon**

Hunters, unlike farmers, do not need much planning. They do not have to decide what to sow the field with in order to harvest enough food six months later. They make mainly tactical decisions.

Our relatively brief era of living in agricultural societies was not enough to change us. We still rarely look beyond today. We attach disproportionate importance to the events that have either just happened or are about to occur in the nearest future. What is beyond that timeframe remains mostly ignored.

Suppose we had the opportunity to receive a million dollars right now or to wait and receive two million after one year. Despite the high interest rate we would earn by waiting (i.e., 100% per annum), most people would choose to receive the money right now. Now suppose that we could get one million dollars in one year or two

million dollars in two years. Structurally, nothing has changed. The time difference between the payments is the same: one year. The interest rate is also unchanged. But this time, most people would wait for the two million dollars. From a psychological point of view, in the first case, we chose between now and then; in the second, we chose between then and then.

One of the important consequences of the short-term focus is a tendency to extrapolate the most recent events into the distant future. Recent events are the most vividly preserved in our memory, and they form our expectations. We do not remember what happened before that and consider it irrelevant. If we just recently experienced strong economic growth, we start to consider it a norm that will indefinitely repeat in the future. This situation is similar to, during summer, believing that there will be no winter. We all have a natural tendency to develop such beliefs.

#### **4. Asymmetric loss aversion**

In hunting societies, our ancestors could not reserve significant amounts of food. Most of the hunted animals caught were inevitably lost to other predators or simply wasted. People only had time to preserve and retain a small part of the prey. Thus, the benefit from a large catch was limited. Yet at the same time the risk of loss of food reserves was enormous as it could instantly put survival of the entire team at risk. Therefore, the main task was to preserve the stocks, while attempts to catch larger prey were of much less importance.

We have inherited this trait: We perceive the loss of something far more sharply than the joy of its acquisition. This effect, called asymmetrical loss aversion, was first identified by Kahneman and Tversky, who received the Nobel Prize in economics in 2002. A simple experiment shows this effect in everyday life. If we give a child a chocolate, she will be happy. If we then take the candy back, the child will be upset—much more upset than she was in the beginning. The net result will be a child in a very bad mood despite the fact that nothing has essentially changed for her. We suffer the loss a lot stronger than enjoying gaining the same thing.

This effect has a surprisingly powerful impact on investors in the stock market. When investors check stock quotes, most of the time they see only slight ups and downs. Statistics show that, on average, stocks experience major price changes only 10% of the time. The remaining 90% of the time, stock prices simply fluctuate around a relatively stable level, with no particular direction. Yet the downs are perceived psychologically more acutely. Market fluctuations have the same effect on the investor as the constant repetition of the candy give-and-take. The investors are disproportionately exposed to a feeling of loss. Thus, about 90% of the time, investors experience psychological pressure, but in reality nothing is happening.

## 5. The pattern search tendency

Uncertainty forced our ancestors to seek models explaining the complex world. Even if the models were completely wrong, from a psychological standpoint they were better than the unknown.

Such a tendency was shown in the experiment by Harvard University professor Skinner, who observed the behavior of pigeons. Food was given to pigeons at time intervals that were determined by chance and did not depend on the pigeons' behavior. However, the majority of pigeons developed a certain pattern of behavior that they believed caused the supply of food. Different pigeons developed different models; some believed that counterclockwise spinning triggered the food whereas others thought it was squatting. The chosen model usually depended on what a pigeon was doing the first time the food appeared. Once the pigeon accepted a behavior model, each new food supply was seen as proof of the model's correctness. This experiment was called "Superstitious Pigeons."

People didn't evolve far from the superstitious pigeons; a search for simple explanations in the world is one of our inherited features based on our ancestors' tendency to invent models and find patterns even where none exist. This is well shown in the dialogue between Hamlet and Polonius:

HAMLET

Do you see yonder cloud that's almost in shape of a camel?

POLONIUS

By th' mass, and 'tis like a camel indeed.

HAMLET

Methinks it is like a weasel.

POLONIUS

It is backed like a weasel.

HAMLET

Or like a whale.

POLONIUS

Very like a whale.

In the investment world, the tendency to search for patterns has found fertile ground. For example, technical analysis, a hugely popular trading approach, is

almost entirely based on searches for patterns. Technical analysts monitor the charts in an attempt to identify shapes and patterns. They give the figures very well-sounding names: "Golden Cross," "The Holy Grail," and "Bearish turn on the Japanese candles."

The errors and biases discussed herein are a result of our cognitive apparatus being formed in an environment very different from the modern world. Of course, our thought processes and decision-making systems adapt to new changes, but the society and the environment around us change even faster. The resulting irrational behavior cannot be fully corrected, but understanding the nature and mechanism of these errors can help avoid at least the most obvious ones.

<http://www.forbes.ru/mneniya/istoriya/297025-priroda-investitsionnykh-oshibok-zhiv-li-v-nas-zov-predkov>