

# TEPE YÖNETİCİLERİ ŐİRKET SATIN ALMA VE BİRLEŐME KARARLARINDA AŐIRI GÜVEN HATASINA DÜŐMEKTEN NASIL KORUNABİLİRLER?

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## ÖZ

*Karar verme tepe yöneticilerin ana görevlerinden biridir. Őirket birleŐme ve satın almaları gibi hayati öneme haiz kararlarda yöneticilerin hissedarların faydalarını maksimize edebilmelerinin yegâne aracı rasyonel karar verme prosedürüdür. Her ne kadar karar verme bu denli önemli bir görev ise de yöneticilerin bu görevi yerine getirirlerken diđer profesyonel meslek sahipleri gibi aŐırı kendine güven hatasına düŐtükleri gözlenmektedir. Őirket birleŐme ve satın almaları aŐırı güven hatasından etkilenen yöneticilerin aldıkları kararlar için iyi bir örnek teşkil etmektedir. Bu nedenle makalede aŐırı güven hatasına neden olan etkiler incelenmiŐ ve bu hataya düŐülmemesi için çözümler geliŐtirilmeye çalıŐılmıŐtır.*

**Anahtar Kelimeler:** Satın Alma Ve BirleŐme, Üst Yöneticinin AŐırı Güveni, Karar Verme

## **HOW COULD CEO'S AVOID OVERCONFIDENCE IN MERGER & ACQUISITION DECISIONS?**

### **ABSTRACT**

*Decision making is the main task for chief executive officers (CEOs). For vital decisions like mergers and acquisitions, rational decision making is the only tool that a CEO should utilize in order to manage the firm in a way to ensure maximisation of shareholder's value. However, just like nearly all professionals, CEOs are affected by a common bias known as overconfidence. Unsuccessful merger and acquisitions are good examples as outcomes of overconfident managerial decisions. Hence, as the writer did in this paper it is of crucial importance to define overconfidence, its reasons and the remedies to get over it.*

**Keywords:** Mergers and Acquisitions, CEO Overconfidence, Decision Making

## INTRODUCTION

Decision making on behalf of their firm is the main task for chief executive officers (CEOs). When issues to be decided are ordinary, intuitive judgement of the CEOs could be beneficial to the firm by allowing fast response to repetitive tasks. However, when it comes to vital decisions like mergers and acquisitions, rational decision making is the only tool that a CEO should utilize in order to manage the firm in a way to ensure maximisation of shareholder's value. However, just like nearly all professionals (defined broadly to include, surprisingly, even doctors) CEOs are affected by a common bias known as overconfidence. Research revealed that when individuals are asked to estimate the probability that their judgements are correct, their answers indicate an overconfidence effect. In complex and ambiguous environments people are more vulnerable to overconfidence bias. (Smith & Dumont, 2006)

Research shows that CEOs are biased by overconfidence when they make merger and acquisition decisions. At least 70% of all merger and acquisitions turn out to be failures. How is it possible that even the successful CEOs make wrong decisions like that, surprisingly, most of the time? Warren Buffet puts the subject of merger and acquisitions into a nice narrative:

"Much management apparently were overexposed in impressionable childhood years to the story in which the imprisoned handsome prince is released from a toad's body by a kiss from a beautiful princess. Consequently, they are certain their managerial kiss will do wonders for the profitability of Company T[arget] ... We've observed many kisses but very few miracles. Nevertheless, many managerial princesses remain serenely confident about the future potency of their kisses-even after their corporate backyards are knee-deep in unresponsive toads. -Warren Buffet, Berkshire Hathaway Inc. Annual Report, 1981" (Malmendier & Tate, 2008).

Unsuccessful merger and acquisitions are good examples as outcomes of overconfident managerial decisions. As the prime decision makers, CEOs illustrate the overconfidence bias in its most severe form, and this often presents itself in the form of otherwise unsound merger and acquisition decisions. Because they are at the top of their firms they have fewer checks on their decisions and face fewer corrections from the firm. CEOs can make bold decisions easily if they have a successful history. When making decisions in totally new conditions, thinking about past experiences could be pernicious. Ignoring information or as Dawes (2012) says, unknowing unknown effects result in overconfidence. When economies bloom the number of mergers and acquisitions increases. Generally successful and profitable firms acquire potentially profitable firms. However, they usually don't ask what their firm has but the other firm hadn't got that brought about the success. What is the probability of on-going failure of the firm to

continue under acquirer firms' management? The most important question to be asked is "was there any effect of luck in our firms' success to this date?" Overconfident CEO's answer is, of course, no. They attribute good outcomes to themselves while bad outcomes to the things which are not in control of them. They believe in misfortune but they don't believe in fortune. Unfortunately, this bias costs firms millions of dollars.

Hence, it is of crucial importance to define overconfidence, its reasons and the remedies to get over it. There are vast of studies in literature about overconfidence. In this paper, first I will address these studies and then I will propose some remedies to get rid of overconfidence bias.

## **LITERATURE REVIEW**

There is no paper solely trying to address the problem of CEO overconfidence. In this paper I gather remedies to overconfidence bias to address the CEO overconfidence bias.

Dawes (1986) compared two methods of making preference judgements based on multi-attribute inputs and introduced linear models to judgement. They reported that even simplest linear models are better predictors than intuitive global judgements. As one of the reasons of overconfidence is self-attribution bias which leads managers to use their intuitions when forecasting outcomes of their decisions, I inferred that linear models suggested by Dawes and Hastie could serve as remedies to overconfidence bias in that manner.

Russo and Schoemaker (Managing Overconfidence, 1992) puts forward that people are prone to be affected by overconfidence and they explain how to recognize its nature and causes. They prescribe a metaknowledge measurement by using a confidence quiz. They presented cognitive causes of overconfidence, namely; availability bias, anchoring bias, confirmation bias, and hindsight bias. Following that they prescribed possible remedies for overconfidence bias.

Hambrick and Hayward (1997) examined the role of a chief executive officers' overconfidence in acquisitions. They put forward that the premium paid for acquisitions has information about the multitude of CEO hubris. They have found that the more CEO has hubris the more premium she pays. According to them there are three main sources of CEO Hubris namely; previous success of the CEO, media praise of the CEO and CEO's self-importance. Moreover they have found that overconfidence bias increases additively from each source. As a result they have claimed that acquisition premium carries significant information about CEO overconfidence.

Malmendier and Tate (2008) analysed overconfidence effect on merger decisions of CEOs of U.S. companies. They found that overconfident CEOs are clearly prone to make lower quality acquisitions especially when there is substantial amount of internal resources which can be

used for acquisitions. They put forward that although in most of the mergers the acquired company's shareholders have gains out of merger while acquirer company's shareholders lose, overconfident managers believe that they are maximizing value. Their results suggest that a significant subset of CEOs is overconfident about their future cash flows after M&A and they realize M&As even if they haven't any rational warranty about the premium they pay. Ferris et. al. (2013) put forward that CEO overconfidence in Merger and Acquisitions in U.S. reported by Malmendier and Tate (2008) also apply internationally.

Lovullo and Kahneman (2003) put forward that managers are optimistic. They think that they have control over future events albeit they don't. Actually they exaggerate the degree of control they have for upcoming events. They stated that "Managers tend to attribute favourable outcomes to factors under their control, such as their corporate strategy on their R&D programs. However they tend to attribute unfavourable outcomes to factors they have no control over, such as inflation etc." In making decisions they describe two main views to a decision namely, inside view and outside view. Kahneman suggested for CEOs and companies to use outside view in order to get rid of overconfidence bias. They claimed that in business situations peoples' naive optimism is magnified by anchoring and competitor neglect biases and organizational pressure.

### **AVOIDING OVERCONFIDENCE**

Up to this point one can see clearly that research put forward that CEOs are affected by overconfidence bias especially in merger and acquisition decisions. In this section I tried to answer the question: How can CEOs and managers as decision makers avoid overconfidence bias?

Using linear model instead of intuition is a way to mitigate overconfidence bias. Dawes' (1986) study is about the comparison of two methods of making preference judgements based on multi-attribute inputs. These methods are:

- 1) A Global evaluation of inputs with using intuition
- 2) A separate evaluation of each input attribute weighted intuitively to form a linear composite.

Research shows that people are more successful when using the second method. Actually both methods are based on intuition but the second one prevents biases when they are caused by global intuition. We are overconfident in our global intuitions and our selective memory for our previous success feeds this overconfidence. Although it is vastly agreed upon in the research that second method is superior to first one Dawes (1986) stated that: "I don't guarantee that a choice based on intuitive weighting will necessarily work better than one based on global intuition-just that it usually will. That is not a global intuitive

judgement of my own, but one based on a large body of research findings." One should bear in mind that using weighted intuitions is not the sole solution to the problem of overconfidence. However, research shows that two methods are rarely tied in which cases second method is not superior to first one.

Professor Paul Meehl of the University of Minnesota summarized nearly 20 studies comparing the clinical judgement method with the statistical one. "In all studies, the statistical method did better or the two methods tied." In another study conducted by Professor Jack Sawyer of the University of Minnesota, in which 45 studies comparing clinical and statistical predictions are encompassed. In every single study statistical estimates are superior to intuitional global judgement. In two of the studies he reviewed, clinical judge had more information to use for his judgements. Even then clinical judgement was inferior to statistical one. One of the most surprising studies was about estimating performance of 19.500 soldiers in army in World War 2. In that study Clinical judges used previous test scores of soldiers and aftermath interviewed them. So they had more information than statistical judges who used only previous test scores. However, the result was same. Clinical judgement was inferior even though more information is used in judgement process. (Hastie & Dawes, 2010)

Vast amount of research shows that linear combination is superior to global judgement. However, the significant question that Dawes (Forecasting Own Preference, 1986) asks is: "Do we have to find statistically optimal weights of attributes in linear models?" He states that we don't. He searched for if any old linear model has estimates better than experts'. He made a perfunctory research work and found out that either random weighting or unit weighting linear models are superior to global judgements. So he posited that "since random and unit weights do that much better than global judgement in decision making situations predicting actual outcomes, intuitive weighting should also." (Dawes, 1986) This result states that there is no need to be in search for optimal weightings of attributes. One can just use intuition to specify weights. When it comes to decisions of which have no outcomes Dawes says second methods' success should be superior to first methods.

What is surprising is that he shows that even modifications to linear models by reflexive judgment leads to inferior judgements compared to the same models prior to modification.

If global judgement is that inferior why would we use that? According to Dawes' reasoning, first reason is that we overvalue estimates of experts. We never look for validity of expert decisions. That's why we pay considerable premiums for known doctors. Second reason is that there is not enough feedback mechanism which shows us how global intuitive judgements are wrong. If merger turns out to be a failure then there is misfortune. However, when a linear model underestimate

or overestimate we can falsify the model according to feedback. Kahneman (Thinking Fast and Slow, 2012) puts forward that statistical algorithms are more successful than humans in noisy environments for two reasons: First they detect weakly valid cues and maintain a prudent level of accuracy by using such cues in a consistent manner.

According to proponents of linear models of judgement what must be done is urging CEOs to use linear models when they decide about mergers and acquisitions. Firstly, weights should be attributed to target companies' and acquirer companies' financial and strategic properties. Secondly the CEO should evaluate the M&A for every attribute of target firm, acquirer firm and the prospective firm after M&A and score them. At the end, outcomes of the acquirer firm and the firm after M&A should be compared. If the firm after M&A is evaluated as superior to the acquirer firm then it could be a rational decision to go for an M&A. There is room for possible research regarding what happens if outside view is used with CEO view in linear decision making model. Then there would be a benchmark for the CEO's results produced via the linear model which is expected to increase the overall result.

Russo and Schoemaker (Managing Overconfidence, 1992) stated that, one should know how severe the overconfidence bias is in the first place. To do this first step is conducting a confidence quiz which shows us metaknowledge. It is an indicator of our knowledge about the things we know and we don't know. Researchers found that managers' estimates are not variable depending on the confidence level they are asked for. Even experts and professionals fail in having a reliable metaknowledge. In the experiment they conducted they found that relatedness to the subject of knowledge reduces overconfidence. In related subjects people have higher levels of primary knowledge. Having high level of primary knowledge leads high level of metaknowledge (knowing what you don't know) which reduces overconfidence.

Developing a reliable metaknowledge requires two main elements; namely feedback and accountability. Timely, accurate and precise feedback telling us by how many our estimates missed the mark serves us to reduce overconfidence. Accountability urges us to confront to that feedback. When we evaluate the feedback we change our perceptions about our knowledge and this leads us to change our estimates of confidence intervals of our predictions.

Russo and Shoemaker (1992) put forward cognitive remedies to overconfidence as following:

- 1) Accelerated feedback: Research shows that experiments about possible scenarios of estimations with trivia questions showed that accelerated feedback is effective way of changing metaknowledge. Learning from experience is expensive and slow

and it is known that people don't learn from past experience as they give importance only to success stories. Using real world company records CEOs and prospective CEOs can be educated about their metaknowledge.

2) Counter argumentation: Several studies showed that generating counterarguments reduced overconfidence. There can be counter argumentation section in capital budgeting reports which helps managers to see potential hazards. However, this should be taken seriously. (i.e. in case of failure, reasons of failure should be in counter argumentation section. Managers should be evaluated on that ground.)

3) Paths to Trouble: Even when firms lead managers to create counterarguments, if they don't know potential pitfalls, counter argumentation would not work. In this situation fault tree which is a hierarchical diagram designed to help identify all the paths to some specific fault or problem should be used. Taking account expert opinions should be a compulsory formal procedure for CEOs before making decisions for the firm's future.

4) Paths to the Future: When thinking beyond the just reasons of failure explicit scenario analysis may help. Fault trees call attention to individual causes whilst scenarios focus on their conjunction. Asking managers to construct different scenarios makes they better appreciate the uncertainty in key parameters or estimates. CEOs should use managers' opinions in these constructing scenario tasks.

5) In addition to these four techniques sometimes awareness alone may help to reduce overconfidence. However, finding an appropriate means to provide awareness to managers and CEOs is problematic. In my opinion experiments would help to increase awareness of overconfidence bias. Kahnemans' outside view approach could be very useful to increase awareness of managers and CEOs. In other words let a counsellor outside of the firm provide experiments to managers and the CEO of the company.

Kahneman (Thinking Fast and Slow, 2012) puts forward the outside view approach to decrease overconfidence. He states that: "Companies can introduce into their planning processes an objective forecasting method that counteracts the personal and organizational sources of optimism." When making decisions there are two kinds of sources from which forecasting possible outcomes stem. They are inside view and outside view. The inside view is the decision which is adopted spontaneously by the expert and the team. They make forecasts according to the case in front of them. They consider the objective of the case, the resources they brought in and the obstacles to its completion. They construct in their minds scenarios of their

coming progress and extrapolate current trends into the future. Kahneman sees that it is unsurprising that the outcome is exceedingly optimistic.

The outside view totally ignores inside view. It takes into account the outside environment of the project. It forms a distribution for the reference class of the project using a class of similar projects and positions the current project in that distribution. The resulting forecast would be much more accurate.

Research shows that peoples' forecasting ability using outside view is much more accurate. Outside view mitigates cognitive and internal biases. How can we ensure outside view to top management and CEOs? Appointing External members to board of management is a way of getting outside view. Hayward and Hambrick (1997) reported that higher percentage of outside directors helped to reduce acquisition premiums.

### **CONCLUSION**

It is evident and proved by research that people suffer from overconfidence in their decision making performances. Overconfidence bias actually is composed of cognitive biases such as hindsight bias, anchoring bias etc. Foci for research in this area has been either increasing the awareness to overconfidence or suggesting solutions to it. Overconfidence is more apparent in professionals like doctors, managers CEOs etc... who had individual success before. They tend to attribute favourable outcomes to themselves while unfavourable ones to extrinsic factors. Overconfidence decreases the accuracy of forecasts and performance of professionals.

Using linear models in decision making process in professions which are known to require intuition is a solution to mitigate overconfidence bias of professionals. It is proved that when a decision has multiple attributes even the simplest linear model has higher accuracy than intuitive judgements. Using linear models appears as a solution to the problem of overconfidence bias. Companies may form procedures for decisions like acquisitions, entering new markets or new projects. Instead of CEOs global intuition, linear combination of weighted intuitions of attributed outcomes stemming from these new projects yield better results owing to mitigated CEO overconfidence. However, constructing linear models and implementing them is a time consuming process. One should bear in mind that it is not usable for every managerial decision. Companies should educate managers and CEOs about overconfidence. Increasing awareness of professionals (i.e. doctors, managers, CEOs etc...) about overconfidence is a good start to deal with it.

In order to make professionals aware of their overconfidence bias psychological experiments are of great importance. Confidence quiz is a useful tool that can be used for the purpose of supplying a



measurement of metaknowledge. By this approach people first realise that what they don't know and how much they are overconfident in their decisions. Developing good metaknowledge via good feedback and accountability is first step for curing overconfidence bias.

Although these remedies could be implemented to reduce overconfidence of employees, when it comes to CEOs some problems may arise. There may not be anyone to supply feedback to CEOs. For a loan officer there are routines and procedures to correct overconfidence bias of the loan officer. It is more likely for top management and CEOs to be affected by their overconfidence. Setting procedures and routines for novel decisions of top management and CEO would mitigate this issue.

Another approach to deal with over confidence is including outside view to decision making processes. Forecasters who are inside the decision making team are prone to be affected by overconfidence bias. They are inclined to exaggerate the capability of the team whilst understate the potential pitfalls. Also they don't take into account previous experience of reference groups in resembling tasks. Appointing people outside of the firm to board of members is a good example for ensuring outside view.

It is obvious that overconfidence is a prevalent bias among people who are meant to decide on something. When it is personal things to decide (i.e. marriage, job selection) it is probably the person him/herself who suffers from it. However, when it comes to CEOs there are millions of dollars at stake. Hence, it is a bias which should be addressed. Although there isn't any one size fit all prescription for the overconfidence problem, mitigating overconfidence is possible and furthermore, imperative for a healthy way of corporate governance.

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