FIRM PERFORMANCE, CORPORATE DECISIONS AND THE ROLE OF MANAGERIAL OPTIMISM – THE CASE OF GREECE: LITERATURE REVIEW AND METHODOLOGY

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Abstract

Although corporate investment has been of great interest for researchers for many years, research on its correlation with behavioural corporate finance, psychology and investment decision process is quite limited. Since the mechanism of investment decision process is crucial for firms we hope that this study will demonstrate several ways in which managers could tackle with risk and personal, psychological biases in order to achieve greater outcomes. The investigation of managerial behaviour, its mindset and potential behavioural biases such as managerial optimism, is the main area of research in order to find out if these factors can be accounted for the underperformance of companies. Corporate investment decisions are among the most important decisions that firms have to deal with. In order to fully understand the investment decision process we have to focus on investment measures such as capital expenditures, investments in advertising, R&D and intangible assets (Glaser, Schafers and Weber, 2008). Investment decision process encompasses risk and thus, managers have to make decisions that are more or less risky. How managerial optimism as well as other psychological biases affect a firm's investment decision process (Behavioural Corporate Finance)? Is there an optimum procedure risk – averted or not in order to achieve the best investment opportunities for a firm? These are the main questions we deal with in this paper in order to read into managerial optimism and its impact on firm performance and corporate decisions. In our paper we link balance sheet and stock market data as well as optimism measures of managers based on their insider trades (directors' dealings). Our main sample is based on all non-financial Greek ASE stocks between 2008 to present as well as on insider trading data of all senior managers of companies listed in the Athens Stock Exchange.

Keywords: managerial optimism, decision-making, behavioural corporate finance, self-attribution bias, business performance.

1. INTRODUCTION

People, including managers and business leaders, normally associate the quality of a decision with the quality of the result. When managers observe a good result, they believe that they have made a good decision. However, decisions and results are two different things. Decisions are made at a specific moment in time; in the event, people apply these decisions, and the result is observed in the future which seems normally uncertain. The events that happen in the future are not being controlled by managers. Moreover, often managers cannot predict the events that happen. Such events can cause good decisions to have a bad result as well as bad decisions to have a good result. Therefore, the quality of the result is not demonstrative of decision quality (De Reyck and Degraeve, 2010).

Of course, results are not irrelevant for firms and managers. Managers are eventually responsible for the good results for the firm, and responsible to the stockholders who demand the maximising of their profit. Firms usually do two things to achieve, on average, better results. Firstly, they choose to employ the better possible process. Managers using knowledge are obliged to learn to become better business executives. They can learn how to apply the rules of decision-making, learn how to perform better and how to manage their firm using experience and knowledge which are imperative in decision making process. Secondly, firms try to manage the risk in any business project they undertake. That is why the manager must act responsibly for the overall results of the firm (De Reyck and Degraeve, 2010).

The starting point when analysing corporate investment policy decisions is commonly that a firm's investment should depend exclusively on the profitability of its investment opportunities. However, the evidence over the last years strongly shows investment depends on cash flow as well (investment – cash flow sensitivity). A rush of cash flow leads to the result that managers invest too much (Glaser *et al*., 2008). Based on the asymmetric information theories anyone might realise that managers themselves restrict external financing in order to avoid issuing undervalued shares. Recently many behavioural corporate finance theories have been found based on managerial biases in order to explain corporate decisions. Although there is a huge behavioural finance literature in investor behaviour, there is a little empirical research in behavioural corporate finance.

According to Tombaugh (2005) optimistic managers are more likely to see problems as challenges as well as opportunities, strive for longer periods to reach their goals, and search for and appreciate the positive aspects of difficult situations. Therefore, optimism generally influences work and eventually firm performance. Does managerial optimism play an important role in corporate decision making? Do overconfident managers act in the interests of their shareholders preserving their wealth? The overconfidence hypothesis states that managers are simply overconfident and over-invest (Doukas and Petmezas, 2007). However, due to their overconfident profile they tend to devaluate the risks and often make destructive decisions for their firms. Therefore, is overconfidence driven by managers' self attribution bias? All the above questions are going to occupy us trying to understand the power of managerial optimism in decision making process and the existence of self-attribution bias while tackling corporate investment policy decisions.

Heaton (2002) stated that two extremely important features emerge from a simple model of corporate finance with optimistic managers and efficient capital markets. First, optimistic managers state that capital markets undervalue their firm's risky securities, and may decline positive net present value projects that must be financed externally. Second, optimistic managers overvalue their own corporate projects and may want to invest in negative net present value projects even though they are feeling loyal to their shareholders eventually being related to free cash flow without appealing to asymmetric information or rational agency costs.

The basic objective of this study is, therefore, the investigation of what makes managers to run the process of decision-making within their firm and how psychological biases like optimism and overconfidence can drive their instincts and make them decide what is best for their firms' outcomes. The connection of optimism with the firm's performance is going to constitute the main aim of this study. More generally, this study is going to investigate and expand the link of psychological measures and economic variables in order to test behavioural finance models (Glaser et al., 2008; Puri and Robinson, 2007).

2. THEORETICAL BACKGROUND

2.1 Behavioural finance

Behavioural finance implies the study of finance that is based on solid assumptions regarding the way people behave and act. According to Shefrin (2005) behavioural finance is the consideration of how psychological effects have an impact on financial behaviour. The behavioural perspective of finance has emerged as a challenge and as an alternative new dimension opposed to the traditional finance based on neoclassical economics. Finance theory, like all other forms of economic theory, demands of some specific assumptions regarding investors' behaviour, decision making and attitude towards risk.

Rationality as a human characteristic has not always been doubtful. According to Jensen (1986) the resourceful evaluative maximising model (REMM) of the human behaviour is in opposition to the social victim model of a more sociological tradition. The REMM model is based on a series of assumptions

regarding human beings who care and evaluate, have infinite needs, have as an object of life to maximise their well-being and are creative and ingenious in seeking out their best interest. On the opposite, in the social victim model of human behaviour, movements and actions are principally determined by family background, social group categorisation or genetic structure. Any rational act illustrates both beliefs and desires of those who undertake the act. Consequently, any judgment regarding rationality of human actions postulates coherence in the beliefs and wishes of humans (Elster, 1986).

Behavioural finance incorporates some important implications for the practice of corporate finance. According to Forbes (2009), the traditional approach of corporate finance is based on rational behaviour, the existence of efficient markets and the capital asset pricing model (CAPM). Defenders of behavioural finance support that psychological forces intervene with the three components of the traditional approach that were quoted earlier (Roll, 1986; Weinstein, 1980; Malmendier and Tate, 2004, 2005a, 2005b). They argue that psychological phenomena prevent decision-makers from rational actions.

Behavioural corporate finance examines the impact of managerial psychological biases on a firm's corporate finance decision process. Traditionally, scholars have based their research assuming that managers are fully rational. However, they have also recognised that psychological biases of managers affect decision-making in financial markets and firms. Consequently, behavioural finance has emerged as a challenge to the traditional example during the last years. Behavioural finance is a complete approach that connects finance, psychology and sociology. Financial psychology research has shown that human cognitive biases have many irrational components, even when human beings try to make rational decisions. The cognitive delusions therefore are more likely to affect investment decision process (Kahneman and Riepe, 1998).

2.2 Heuristics and biases

In the late 1960s and early 1970s Amos Tversky and Daniel Kahneman revolutionised research on human judgment with the introduction of their "heuristics and biases" program. Consequently, any discussion of the contemporary history of research on human judgment must encompass the classical model of rational choice. This model was applied strongly in economics. However, its substantial influence can be regarded in all behavioural and social sciences. According to this model, the rational actor's job is the choice to optimally combine probability and utility.

Ritter (2003) argued that cognitive psychologists have established many ideas regarding the behaviour of human beings. They underlined the importance of heuristics, having a great impact on decision-making. They favoured the process of making decisions and make it easier. Heuristic refers to experience-based techniques for problem solving. This pattern is used to expedite the process of finding good solutions. Examples of this pattern incorporate a "rule of thumb", an educated guess, an intuitional judgment, or common sense. However, heuristics can often lead to biases, especially under changing circumstances. These can often lead to investment decisions that are below the optimal level or standard (Gilovich Griffin and Kahneman, 2002).

Humans tend to be overconfident regarding their abilities and efficiencies. Managers particularly are likely to be overconfident. Men also appear to be more overconfident than women. Overconfidence can be expressed in many ways. According to Ritter (2003) one characteristic is the existence of too little diversification. People tend to invest too much in what they feel more familiar with, so they avoid diversification in investment. Mental accounting is a concept first depicted by Thaler (1980). It attempts to describe the procedures whereby humans codify, categorise and appreciate economic outcomes. People sometimes tend to differentiate decisions that should, mainly, be associated. The mental accounting bias also influences investing. For example, some investors divide their investments into safe and speculative in order to prevent the negative returns that may affect their entire portfolio (Thaler, 1999).

Tversky and Kahneman (1981) have displayed that framing can influence the outcome of choice problems. This has led to the development of prospect theory as an alternative to rational choice theory. The form or framing of problems confronted by decision-makers is determined on one hand from exogenous guidance of the decision-options offered and on the other hand from forces endogenous to decision-makers (norms, habits, and unique temperament). The representativeness heuristic is a psychological term presenting people judge the frequency or probability of a hypothesis. Although it may eventuate as a very useful pattern in everyday life, it can also result in cognitive biases. The representative heuristic that was first proposed by Tversky and Kahneman (1973a, 1973b, 1974) can lead to a bias toward the belief that causes and effects will resemble each other.

2.3 Overconfidence and optimism

The cognitive psychology literature argues that most people usually display optimistic expectations about the future. On one hand, individuals are more optimistic when they believe that they control positive outcomes and when they are highly committed to them (Weinstein, 1980). Managers, on the other hand, are more optimistic when they control their firm's performance and they feel committed to this good performance because their personal wealth, employability as well as reputation are highly dependent on it (March and Shapira, 1987; Gilson, 1989). Given their leadership positions and managerial compensation, managers are likely to have an important impact on their firms' success (Kaplan, Klebanov and Sorensen, 2008).

The notion that specific managers may be overconfident regarding their own abilities to manage, the selection of upper investment projects and the precision of their knowledge is encouraged by psychological studies of judgment. The most significant finding in this area of study is the phenomenon of overconfidence. Specifically, overconfident managers tend to consider that future outcome of mergers are under their control, especially regarding outcomes of mergers that they are highly committed (Weinstein, 1980; Weinstein and Klein, 2002). A manager who is deceived regarding his power of control is likely to be extremely optimistic about the future prospects of a merger (Langer, 1975; Langer and Roth, 1975; March and Shapira, 1987).

Glaser et al. (2008) argued that there are two important and necessary conditions for a positive relationship between managerial optimism and risk-taking, pure chance related risk and imprecise probabilities. Apparently, this means that there is no relationship between optimism and risk-taking. However, in decision process it is difficult to relate optimism and the level of risk tolerance regarding tasks where risk is skill-related. According to March and Shapira (1987) managers use different principles for risk decisions than standard decision theory. Risk consequently is regarded as a choice based on the expected value of return of a different option. Additionally risk-taking does not seem correlated to adversity. Managers usually do not equate risk with diversity in potential outcomes because they regard risk mostly as a danger. The managerial definition of risk is that a risky decision contains a constant threat of a poor outcome. Hierarchy in management is also very important regarding risk-taking by managers of different level. Higher level managers are more risk-takers than lower level managers and very often try to encourage lower level managers to take more risk.

According to Doukas and Petmezas (2007) the overconfidence hypothesis states that managers are overconfident and over-invest. They also feel that are superior regarding others and more competent. Specifically, overconfident managers strongly believe that future merger outcomes are mainly under their control. Malmendier and Tate (2004, 2005a, 2005b) also tried to demonstrate that overconfidence helps explain merger decisions. Another interesting point in literature is self-attribution bias as reinforcement to individual overconfidence (Langer and Roth, 1975; Miller and Ross, 1975). According to Svenson (1981) this bias is similar to the "better than average effect" which suggests that individuals believe they have above-average abilities to make the correct decisions. Since self-attribution bias amplifies overconfidence, those managers who suffer from this bias are more likely to be highly overconfident regarding their judgment and overestimate or underestimate the positive or respectively negative outcomes of a possible merger.

Finally, regarding firm investment and optimistic managers, Glaser et al. (2008) underlined the fact that managerial optimism gives an explanation for corporate investment even when other variables are controlled for. This is mainly driven by managers' optimism regarding capital expenditures. The effects of managerial optimism on capital expenditures are stronger in small firms as well as stocks with a low percentage of closely held shares. Still regarding acquisitions there is a difference between the fact that all managers decide together as a group and an individual manager deciding alone. Optimism of all managers significantly increases the probability of an acquisition whereas single manager's optimism alone does not.

2.4 Decision-making under risk and prospect theory

To understand developments in behavioural finance we need to read into how financial decisions are made under risk and uncertainty. Luce and Raiffa (1957) give their definition of "risk" by distinguishing three types of decision-making situations. Most decision-makers make their decisions either under certainty, where every action is expected to lead to a specific outcome, under risk, where every action can lead to one of some specific outcomes occurring with a known probability, and under uncertainty, where each action may result in a set of outcomes occurring with no known probability.

Kahneman and Tversky (1979a and 1979b) first developed a theory that depicts decisions between alternatives which require risk where the probabilities are known, and was first displayed as a psychologically realistic alternative to expected utility theory. This theory is known as prospect theory and describes decisions that are based on judgments under conditions of risk and on psychophysical models such as those that originally inspired the expected value proposition. They applied these psychophysical patterns in order to investigate judgment and decision-making. People make decisions without knowing the exact computations their brain makes in editing and valuating choice.

Prospect theory upgrades the idea of "utility" in a very useful and precise direction and adds the extra information of the difference that exists between utility curves in domains of gain and in domains of loss. Moreover, the pattern of prospect theory's value curves is parallel among individuals. Explicitly prospect theory is also more flexible than a subjective expected utility model that would presuppose greater information about the individual utility curve before prediction would get possible (Kahneman and Tversky, 1979a, 1979b). It is also designed to rationalise the idea of a common pattern of choice. It is descriptive and naturally empirical; perhaps the foremost of the elements of behavioural economics and its application to the area of finance.

2.5 Main findings

According to Heaton (2002) the managerial optimism theory associates the costs and benefits of free cash-flow with two variables: managerial optimism and investment opportunities. Optimistic managers believe that capital markets value their firm's risky securities at low prices and consequently pass up projects with positive net present value that must be financed externally. It has been demonstrated that managers although they are loyal to shareholders, many times they wish to invest in negative net present value projects. These results suggest an overinvestment-underinvestment tradeoff connected to free cash-flow, without appealing to asymmetric information and rational agency cost theories. The adopted model suggests that the implications of free cash-flow are hazy.

The model of Malmendier and Tate (2004) predicts that overconfident managers tend to undertake value-destroying acquisitions when perceived synergies and the company's equity undervaluation are substantially large while the part of the deal that is financed by equity is significantly small. Additionally, they argue that an overconfident manager is more probable to conduct an acquisition than a "rational" manager.

Lin, Hu and Chen (2005) try to examine the relation between managerial optimism and corporate investment decisions by reading into the impact of managerial irrationality on corporate policies. Consistent with the vast majority of literature they accept that optimism is a personal characteristic, which leads managerial decisions into a systematic overestimation of a firm's future performance. Consistent with Weinstein (1980) and March and Shapira (1987) they find that individuals in general are more optimistic when they have full control of outcomes and particularly managers tend to be more optimistic when they have their firm's performance under their control.

Due to the lack of empirical evidence documenting that self-attribution bias matter to managerial decision-making, Billett and Qian (2005) explore managerial self-attribution bias in mergers and acquisitions by focusing on the sequence of deals made by individual acquirers. They find that there are two characteristics that are exhibited when managers by mistake attribute past acquisition success to skill rather than to good luck. The first is that acquirers will be more likely to acquire again if they become overconfident due to successful acquisition experience. The second characteristic is that acquirers eventually will do worse in their consequent acquisitions because of this overconfidence.

Additionally, Ben-David, Graham and Harvey (2006) document that overconfidence of individuals is strongly connected to personal characteristics and firm history. In their sample, overconfident managers generally are employed in firms that have grown quickly in the five years preceding to their survey and have optimistic ideas regarding the future of the US economy. Yet, consistent with the psychology literature (Heath and Tversky, 1991) they argue that managerial overconfidence and managerial optimism increase along with skill and education levels and decrease with professional experience of managers as well as firms with optimistic managers tend to keep up the higher debt ratios and longer debt maturity, usually pay out fewer dividends, repurchase fewer shares, have greater proneness to issue managerial forecasts, invest more vigorously and depend more intensively on variable performance-based compensation. Finally, their results indicate that overconfidence and optimism psychological biases are associated with both personal characteristics as well as firm culture.

While the majority of literature suggests that mergers and acquisitions display the agency relation between managers and shareholders (Jensen and Meckling, 1976), Doukas and Petmezas (2007) try to examine whether managerial overconfidence can explain the short-term and long-term performance of mergers. Their overconfidence hypothesis mainly argue that managers are simply overinvest and overconfident. Overconfident managers believe that they have upper skills and are more capable and efficient than others. These cognitive biases lead them to be arrogant regarding their decision-making and often to engage in extremely complicated and risky tasks such as acquisitions.

Glaser et al. (2008) underline the importance of behavioural finance in explaining corporate decisions while trying to add more empirical research in behavioural corporate finance. They mainly concentrate in a specific behavioural bias of managerial decision-making, optimism. They ascertain their basic hypothesis that managers are optimistic. Managers voluntarily increase their exposure to company specific risk, although they should try to avoid it and reduce their exposure. As a consequence they also find that firms which are being managed by optimistic managers invest more. The investment cash-flow sensitivity is greater for firms with optimistic managers mainly for financially constrained firms. Glaser et al. (2008) confirm the behavioural corporate finance models as previously Heaton (2002) and Malmendier and Tate (2005a, 2005b) had done. Their results are consistent with the notion that in some firms, managers are biased and make decisions that are often harmful for the firm.

Martin (2008) tries to shed light on managerial behaviour and on the behavioural biases that are responsible for the underperformance of firms. He draws his theoretical prediction both from the behavioural literature as well as from the rational expectations literature. Optimistic managers are identified by studying their personal trading behaviour. To test the optimistic manager hypothesis, Martin (2008) investigates the impact of the amount of new cash that was raised from primary shares, on firm performance, conditional on insider buying. Generally, Martin (2008) explores the differences in corporate investment decisions by optimistic and pessimistic managers.

With a survey-based approach Graham, Harvey and Puri (2009) try to provide new insight on corporate decisions. They focus on psychometric personality tests and other behavioural phenomena. Their study attempts to measure attitudes of managers directly through personality tests in order to connect them with firm level policies. The survey investigates managerial personal characteristics using information from educational and demographic criteria. Specifically, Graham et al. (2009) find that these corporate policies are significantly related to the personal characteristics of managers. Firms with risky managers tend to initiate more mergers and acquisitions. Additionally, optimistic managers usually expect the profitability of their firm will last a little longer, or they are extremely confident regarding the future.

3. METHODOLOGY, RESEARCH DESIGN AND DATA

We formulate our basic hypothesis that we will also test in our study (Glaser et al., 2008; Malmendier and Tate, 2005a) that is, the investment of firms with optimistic managers is more sensitive to cash flow than the investment of firms which do not have optimistic managers. The main variables we use are total assets, leverage ratio, sales growth, cash flow, lagged assets, capital expenditures and Tobin's Q. Tobin's Q that has substantial macroeconomic importance, will be calculated based on Baker, Stein and Wurgler (2003) and Glaser et al. (2008): Q is the market value of equity plus assets minus the book value of equity all over assets.

In this paper we try to link balance sheet data and stock market data correlated with optimism measures of managers. Our main sample consists of all non-financial Greek stocks of firms listed in the Athens Stock Exchange between 2007 to present. We exclude all financial firms due to the fact that these firms compile their annual statements using differing approaches. We run our basic regressions (disconnected from optimism measures) using data from the same period in order to analyse whether this period is rather special regarding the investment behaviour of firms.

Directors' dealings data will help us base our optimism measures. These deals are specifically all transactions of members of the Executive and Supervisory Board on their personal accounts. According to the Greek regulations of transactions in the Athens Stock Exchange a firm has to report any share transaction carried out by a member of its board of directors that has to do with the firm's shares to the Supervisory Authority of Athens Stock Exchange. During the period from 01/01/2007 to 31/06/2012 a total of 18,574 directors' dealings were reported according to Directors Deals – Global Data & Analysis, which is a specialist global market data company which monitors and analyses share transactions made by directors in

the shares of their own company. All transactions that were executed by legal entities were excluded because the study is based on individuals' transaction behaviour. For example, share repurchases, pension transactions, stock transfer to employees, securities lending and subscriptions rights, that are being executed by legal entities were excluded from the sample.

As a result, 17,061 transactions (14,655 bys and 2,406 sells) of insiders executed by members of the Executive and Supervisory Board will be used in this empirical analysis. 1,513 transactions were excluded such as zero stock price, subscribe, exercise, contract buys and awards. These rejected transactions will constitute a second data set that will be used for robustness check of our results. The directors' dealings data consists of information regarding the date that the transaction has been reported, the name of party that carries out the trade, the type of the transaction, the date and currency of the transaction, the number and price of shares traded and the number of buys/sells used to score the director in Dealing Rank.

The optimism measures we use are based on Glaser et al. (2008) who constructed for optimism models, using four measures; the number of purchases, the number of sales, the volume of purchases and the volume of sales which are accumulated on an annual basis. These optimism measures are based on transactions of members of the Executive and Supervisory Board on their personal accounts. In line with Glaser et al. (2008) we incorporate members of the Supervisory Board too in the estimation of optimism measures because very often the Supervisory Board influences the decisions on corporate and investment policy decisions.

The calculation of optimism measures first of all will help us divide the total of CEOs and CFOs that were taken into consideration in our research, to two groups. The first group will constitute of the optimistic managers and the second one of the non-optimistic managers. The correlation of optimism measures will help us examine the significance level of decisions made by managers (directors' dealings) regarding their position in firm (either CEOs or CFOs). Next, we aim to examine the relation between managerial optimism and corporate investment by implementing our basic regressions, using our main variables such as cash flow, leverage ratio, sales growth and total assets according to the managerial optimism constant. Finally, we intend to investigate the same relation based on firm size and ownership structure. Empirical results will also be quoted regarding optimistic managers versus rational managers; how the psychological bias of optimism affects their firms' performance.

4. DISCUSSION AND CONCLUSION

Although corporate investment has been of great interest for researchers for many years, research linked with behavioural corporate finance, psychology and investment decision process is quite limited especially in Europe and more specifically in Greece. Moreover since the mechanism of investment decision process is crucial for firms we hope that this study will demonstrate several ways in which managers could tackle with risk and personal, psychological biases in order to achieve greater outcomes. The implementation of Risk Management in corporate investment decision process is of great interest because risk is associated with any form of finance and investment.

Apparently it is crucial to examine the effect of losses in decision making under risk and uncertainty. It intrigues us to extend our research specifically in Greece because capital markets in Greece are still at an early stage. It is generally admitted by academics and businessmen that the theory as well as practice of financial management and corporate investment in Greece is somewhat primitive compared to the North American standard. The only stock – exchange in Greece, the Athens stock exchange, is almost motionless. Low savings rates and unsophisticated managers and investors are the chief reasons for the narrow financial markets.

Therefore, our basic aim is to appreciate the present understanding of corporate investment decision process, to examine in depth its mechanism, analyse managerial psychological biases such as optimism and risk aversion to examine risk management and its impact on corporate investment process and to update the research attempts worldwide, and especially in Europe, on corporate investment policy. Since no study has been yet conducted in Greece regarding the impact of behavioural corporate finance and risk managerial perspectives on corporate investment policy, we intend to empirically examine what drives managers to make decisions either risk-free or risky. We use two unique samples of Greek stocks as well as transactions made by managers of both private and public sector in Greece in order to investigate whether managerial optimism may analyse how the strict decision process works within a firm. Finally, we intend to explore, analyse and compare the results with other in other countries and make considerations and suggestions for Greek managers generally regarding investment policy decision-making.

REFERENCES

1. Baker, M., Stein, J. C., & Wurgler, J. (2003), "When does the market matter? Stock Prices and the Investment of Equity Dependent Firms", *Quarterly Journal of Economics*, 118(3), 969-1005
2. Ben-David, I., Graham, J. R. & Harvey, C. R. (2006), "Managerial overconfidence and corporate policies", working paper [13711], National Bureau of Economic Research, Cambridge, December 2007
3. Billett M. T. & Qian, Y. (2005), "Are overconfident managers born or made? Evidence of Self-attribution bias from frequent acquirers", working paper, University of Iowa, Iowa City, Iowa
4. De Reyck, B. & Degraeve, Z. (2010), "Voices: more important than results", *Business Strategy Review*, 21(2), 81-83
5. Doukas, J. A. & Petmezas, D. (2007), "Acquisitions, overconfident managers and self-attribution bias", *European Financial Management*, 13(3), 531-577.
6. Elster, J. (1986), "*Rational Choice: Readings in Social and Political Theory"* Introduction, In Elster, J. (Ed.), New York: New York University Press
7. Forbes, W. (2009), *Behavioural Finance,* Chichester, West Sussex, UK: John Wiley and Sons
8. Gilovich, S., Griffin, D., & Kahneman, D. (2002), *Heuristics and biases: The Psychology of Intuitive Judgment*, New York, NY: Cambridge University Press
9. Gilson, S. (1989), "Management turnover and financial distress", *Journal of Financial Economics*, 25(2), 241-262.
10. Glaser, M., Schafers, P. & Weber, M. (2008), "Managerial optimism and corporate investment: Is the CEO alone responsible for the relation?", working paper, AFA 2008 New Orleans Meetings Paper, available at SSRN: http://ssrn.com/abstract=967649 or http://dx.doi.org/10.2139/ssrn.967649
11. Graham, J. R., Harvey, C. R. & Puri, M. (2012), "Managerial Attitudes and Corporate Actions", *Journal of Financial Economics*, forthcoming
12. Heath, F. & Tversky, A. (1991), "Preference and belief: Ambiguity and competence in choice under uncertainty, *Journal of Risk and Uncertainty*, 4(13), 5-28
13. Heaton, J. B. (2002), "Managerial optimism and corporate finance", *Financial Management*, 31(2), 33-45.
14. Jensen, M. & Meckling, W. (1976), "Theory of the firm: managerial behavior, agency costs and capital structure", *Journal of Financial Economics*, 3(4), 305-360.
15. Jensen, M. (1986), "Agency costs of free cash flow, corporate finance, and takeovers", *American Economic Review*, 76(2), 323-329.
16. Kahneman, D. & Tversky, A. (1979b), "Prospect Theory: An analysis of decision under risk", *Econometrica*, 47, 263-291
17. Kahneman, D., & Riepe, M. (1998), "Aspects of investor psychology", *The Journal of Portfolio Management*, 24, 52-65
18. Kahneman, D., & Tversky, A. (1979a), "Intuitive prediction: Biases and corrective procedures", *Management Science*, 12, 313-327
19. Kaplan, S. N., Klebanov, M. M. & Sorensen, M. (2008), "Which CEO Characteristics and abilities matter?", working paper, Swedish Institute for Financial Research Conference on the Economics of the Private Equity Market, New Orleans Meetings Paper, New Orleans, July 2008
20. Langer, E. J. (1975), "The illusion of control", *Journal of Personality and Social Psychology*, 32, 311-328
21. Langer, E. J., & Roth, J. (1975), "Heads I win tails it's chance: The illusion of control as a function of the sequence of outcomes in a purely chance task", Journal *of Personality and Social Psychology*, 32, 951-955
22. Lin, Y., Hu, S. & Chen, M. (2005), "Managerial optimism and corporate investment: Some empirical evidence from Taiwan", *Pacific – Basin Finance Journal*, 16(1-2), 160-181.
23. Luce, R. D., & Raiffa, H. (1957), *Games and Decisions: Introduction and critical survey*, New York, NY: John Wiley and Sons
24. Malmendier, U. & Tate, G. (2004), "Who makes acquisitions? CEO overconfidence and the market's reaction", *Journal of Financial Economics*, 89(1), 20-43.
25. Malmendier, U. & Tate, G. (2005a), "CEO overconfidence and corporate investment", *Journal of Finance*, 60(6), 2661-2700.
26. Malmendier, U. & Tate, G. (2005b), "Does overconfidence affect corporate investment CEO overconfidence measures revisited", *European Financial Management*, 11(5), 649-659.
27. March, J. G. & Shapira, Z. (1987), "Managerial perspectives on risk and risk taking, *Management Science*, 4(1), 141-183
28. Martin, J. (2008), "The Impact of Optimistic and Pessimistic Managers on Firm Performance and Corporate Decisions", Working paper, Swiss Finance Institute, University of Lugano, Lugano, May 2008
29. Miller, D. T., & Ross, M. (1975), "Self-serving biases in attribution of causality: fact or fiction?", *Psychological Bulletin*, 82(2), 213-225
30. Puri, M. & Robinson, D. T. (2007), "Optimism and economic choice", *Journal of Financial Economics*, 86(1), 71-99

31. Ritter, J. R. (2003), "Behavioural Finance", *Pacific-Basin Finance Journal*, 11(4), 429-437
32. Roll, R. (1986), "The hubris hypothesis of corporate takeovers", *Journal of Business*, 59(2), 197-216.
33. Shefrin, H. (2005), *Behavioural Corporate Finance*, New York, NY: McGraw-Hill/Irwin.
34. Svenson, O. (1981), "Are we all less risky and more skillful than our fellow drivers?", *Acta Psychologica*, 47, 143-148.
35. Thaler, R. (1999), "The end of Behavioural Finance", *Financial Analysts Journal*, 55, 12-17.
36. Thaler, R. H. (1980), "Towards a positive theory of consumer choice", *Journal of Economic Behaviour and Organization*, 1, 39-60.
37. Tombaugh, J. R. (2005), "Positive leadership yields performance and profitability: effective organisations develop their strengths," *Development and Learning in Organizations*, 19(3), 15-17.
38. Tversky, A. & Kahneman, D. (1973a), "Availability: A heuristic for judging frequency and probability", *Cognitive Psychology*, 5, 207-232.
39. Tversky, A. & Kahneman, D. (1973b), "Response Induced reversals of preference in gambling: an extended replication in Las Vegas", *Journal of Experimental Psychology*, 101, 16-20.
40. Tversky, A. & Kahneman, D. (1981), "The framing of decisions and the psychology of choice", *Science*, 211, 453-8.
41. Tversky, A. (1995), "The psychology of decision making", in Wood, A. (Ed.), *The Psychology of Risk in Behavioural Finance and Decision Theory in Investment Management*, AIMR Publication, 4 April 1995, 2-6.
42. Tversky, A. & Kahneman, D. (1974), "Judgment under uncertainty: Heuristics and Biases", *Science*, 185, 1124-1131.
43. Weinstein, N. D. & Klein, W. M. (2002), "Resistance of personal risk perceptions to debiasing interventions, in Gilovich, T., Griffin, D. & Kahneman, D. (Eds.), *Heuristics and biases: The Psychology of Intuitive Judgment*, New York, NY: Cambridge University Press.
44. Weinstein, N. D. (1980), "Unrealistic optimism about future life events", *Journal of Personality and Social Psychology*, 39(5), 806-820.