



Optimism bias and incentive contracts in portfolio delegation

Jian Wang ^a, Jiliang Sheng ^b, Jun Yang ^{c,*}

^a School of Business Administration, Northeastern University, Shenyang, 110819, China

^b School of Information Technology, Jiangxi University of Finance and Economics, Nanchang, 330013, China

^c School of Business Administration, Acadia University, Wolfville, NS, B4P 2R6, Canada



ARTICLE INFO

Article history:

Accepted 22 April 2013

Available online xxx

JEL classification:

D82

D86

J33

Keywords:

Optimism bias

Incentive contract

Portfolio delegation

Investment strategy

ABSTRACT

This paper incorporates the well-documented managerial optimism bias into a standard portfolio delegation problem to study its impact on investment strategies and the optimal incentive contract offered by the investor to the manager. It is shown that the optimistic manager trades a larger quantity of the risky asset and thus takes more risk than the rational manager. Managerial optimism bias can offset her risk aversion and increase the investor's wealth by reducing moral hazard between the investor and the manager. Furthermore, a pronounced optimism bias reduces the incentive component of the incentive contract, suggesting that an optimistic manager requires fewer incentives to align her decisions with the interests of the investor.

© 2013 Elsevier B.V. All rights reserved.

1. Introduction

The past few decades has seen tremendous growth in delegated portfolio management. Increasingly the financial markets are dominated by professional money managers, who work for institutions such as mutual funds, pension funds, and hedge funds, and manage investment for others. Investors trust the money managers' expertise to collect and apply information to make investment decisions. However, the investors cannot observe managerial actions by the money managers, who may not work for the best interest of investors. Therefore moral hazard is a concern in delegated portfolio management industry.

An extensive literature on portfolio delegation that follows the early works of Bhattacharya and Pfleiderer (1985) has demonstrated that to mitigate the moral hazard problem a manager's compensation should be linked to investor's wealth. Linear performance-adjusted compensation contracts are a popular avenue to achieve this (e.g., Admati and Pfleiderer, 1997; Cohen and Starks, 1988; Diamond, 1998; Palomino and Prat, 2003; Sheng et al., 2012). These papers on resolving the

principal–agent problem in portfolio delegation are usually tied to classical rationality assumptions thereby in contradiction with the reality, as an extensive and growing literature on human psychology and behavior shows that most people tend to develop behavioral biases that can significantly influence their decisions. This issue is first addressed by Wiseman and Gomez-Mejia (1998), who bridges agency and prospect theories and proposes a behavioral agency model of executive risk taking. The impact of overconfidence on incentive contracts has been studied by Keiber (2002), who finds that the more overconfident are both the principal and the agent the lower are the agency costs. Palomino and Sadrieh (2011) derive the optimal contract, compare the performance of financial institutions hiring overconfident managers relative to institutions hiring rational agents, and examine the impact of overconfidence on asset prices.

This paper studies the influence of a cognitive bias that has been extensively documented in behavioral research, namely optimism, on investment strategies in portfolio delegation and the optimal incentive contract. The bias of optimism is closely related to overconfidence, but there are clear distinctions between them. As discussed in Gervais et al. (2003), optimism can make one overestimate the probability that favorable events will occur. In contrast, overconfidence can make one think that he is more competent and skilled than others. Following Weinstein (1980) and Kunda (1987), who note that individuals expect good things to happen to themselves more often than to their peers, many studies relate that optimism bias in decision making is among the most robust findings in research on social perceptions and cognitions (Glaser et al., 2008; Helweg-Larsen and Shepperd, 2001; Simmons and Massey, 2012).

[☆] This study is supported by the National Natural Science Foundation of China (#71101024, #71161013, #71171042), the Social Science Foundation of Ministry of Education of China (#10YJC790253, #10YJC630203), the Fundamental Research Funds for the Central Universities in China (#N110406008), and the China Postdoctoral Science Foundation (#2012M511450). Financial support from the Jiangxi Postdoctoral Science Foundation of China (2012) is gratefully acknowledged.

* Corresponding author. Tel.: +1 902 585 1791.

E-mail address: jun.yang@acadiau.ca (J. Yang).

Prior research has demonstrated the impact of managerial optimism bias on many economic phenomena, including corporate financial and accounting decisions (Hackbarth, 2008; Heaton, 2002; March and Shapira, 1987), entrepreneurial activities (Åstebro, 2003; de Meza and Southey, 1996; Landier and Thesmar, 2009), stock investments (Barberis et al., 1998; Puri and Robinson, 2007), and financial analysts' forecasts and recommendations (Carleton et al., 1998; Easterwood and Nutt, 1999; Paleari and Vismara, 2007). However, in financial economics, there has been very little research on the role that optimism bias plays in portfolio delegation. For example, are optimistic managers more willing to take risks than similarly risk-averse rational managers? If so, this should lead to predictable relations among managerial optimism, trading strategies, and optimal incentive contracts between the investor and the manager.

For a number of reasons we may expect that money managers are subject to optimism bias. First, optimistic people are more willing to take risk in financial decisions (Puri and Robinson, 2007). This self-selection makes optimistic individuals more likely to pursue careers in wealth management. Second, while the success in wealth management can be attributed to many factors such as manager's ability, market condition, and luck, optimistic managers are usually more willing to take risks and thus are often awarded for better performance. Therefore optimistic managers are more likely to survive in such a highly competitive industry. Third, institutions often hire optimistic money managers either because optimism and confidence are often perceived as signs of greater ability, or because, as will be argued in this paper, an optimistic manager can better serve the interest of investors (Gervais et al., 2003).

In this paper we define optimism bias as the belief that favorable future events are more likely than they actually are. This definition is motivated by Heaton (2002), who explores managerial optimism and its relation to the benefits and costs of corporate free cash flows. We show that compared to a rational manager, an optimistic manager attaches less importance to the loss stemming from risks and invests more in the risky asset, suggesting that managerial optimism bias to some extent mitigates the moral hazard between the investor and the manager. Furthermore, the optimal incentive component of the contract offered by the investor decreases with the level of managerial optimism bias, indicating that the optimistic manager is willing to accept "cheaper" contracts. Therefore we conclude that the optimistic manager is more attractive than the rational manager to the investor. However, if the investor compensates the optimistic manager as if she was rational it hurts the investor by unnecessarily transferring the investor's wealth to the manager.

2. Related literature

This paper bridges the literatures on portfolio delegation and those on optimism bias in financial markets.

The seminal contribution to the literature on portfolio delegation is due to Bhattacharya and Pfleiderer (1985). However, their model is more one of hidden information rather than hidden action as the principal is able to verify the level of risk taken by the agent. The related literatures that have evolved since then often propose models in which there is also hidden action and study the incentive impact of linear contracts.

Diamond (1998) studies a hidden-action moral hazard problem in which the agent controls both effort and the distribution of the outcome, and proves that if the control space of the agent has full dimensionality, the optimal contract converges to a linear contract as the cost of effort shrinks. Gomez and Sharma (2006) explore the incentive impact of short-sell constraints in portfolio delegation, and show that under moral hazard, linear performance-adjusted contracts can provide managers with incentives to gather information. More recently, Li and Tiwari (2009) demonstrate that the option-type incentive helps overcome the effort-underinvestment problem that undermines linear contracts. Dybvig et al. (2010) show that trading restrictions are essential because they prevent the portfolio manager from undoing the incentive effects of performance-based fees. Kyle et al. (2011) set up a strategic trading model in portfolio delegation, and find that a higher-powered

linear contract induces the manager to exert more effort for information acquisition.

Several studies in the literature are related to ours. Gervais et al. (2003) investigate the impact of overconfidence and optimism bias on executive compensation. They consider a capital budgeting problem faced by a risk-averse manager who may be overconfident and optimistic, and examine the influence of these managerial biases on executive stock options. While their definition of optimism is the same as ours, they define overconfidence as the belief that the precision of one's information is greater than it actually is. They find that overconfidence and optimism provide an alternative solution to the agency problem between shareholders and the manager. Moreover, overconfidence motivates a manager to give more effort, but optimism reduces effort. In another investigation of incentive contracts in a moral-hazard framework, de la Rosa (2011) also carefully distinguishes overconfidence and optimism. While it is found that generally there are efficiency gains stemming from the agent's overconfidence, the impact on incentive contracts depends both on the overall level of overconfidence and on the particular type of bias (optimism or overconfidence). It is clear that higher optimism or overconfidence implies a higher implemented effort level, but different kinds of overconfidence can have conflicting effects in terms of risk taking in equilibrium. Palomino and Sadrieh (2011) also investigate the impact of overconfidence in delegated portfolio management. In particular the authors examine the mechanism (over-acquisition of information) through which overconfidence generates higher trading volumes.

Solely focused on the optimism bias, this paper studies the impact of optimism in a portfolio delegation context in which the manager has the choice of portfolio risk. We show how optimism bias affects the manager's investment strategy, and the closed-form optimal incentive contract for portfolio delegation is derived and discussed.

Recent theoretical behavioral corporate finance literature examines optimism in corporate settings and suggests that optimism bias can substantially influence the investment and financing decisions made by business managers. Hackbarth (2008) investigates the impact of optimism bias on corporate financial policy and firm value. He proves that mildly optimistic managers ameliorate manager–shareholder conflicts. Campbell et al. (2011) suggest that high managerial optimism should cause greater levels of firm investments. Chen and Lin (2012) find that an under-invested firm with a CEO that has a high level of managerial optimism can improve the firm's investment efficiency by reducing the degree of underinvestment, further increasing the value of a firm. However, the optimal contract is not derived in these studies.

The remainder of the paper proceeds as follows. Section 3 introduces the basic model underlying portfolio delegation. Section 4 introduces equilibrium in the absence of optimism bias that serves as a benchmark to study the effects of behavioral bias. Section 5 formally introduces the concept of optimism bias, and shows the influence of this individual trait on the manager's investment strategy. The optimal incentive contract based on managerial optimism bias is derived in Section 6. The conclusions are in Section 7. All proofs are collected in the Appendix A.

3. The model

We consider an economy populated with a risk-neutral investor whose initial wealth for investment is one and a money manager (or just a manager for short). The manager has no initial wealth but some investment skills. The investor delegates the investment decision-making power to the manager. There are two types of assets on the market, a risk-free asset with constant gross return equal to one and a risky asset with gross return equal to \tilde{v} , which is either $v_H > 1$ or $v_L < 1$ with equal probabilities, so that $E(\tilde{v}) = 1$. Consequently, the return of the portfolio that is to be shared between the investor and the manager at the end of the period is $\tilde{w}(x, \tilde{v}) = 1 + (\tilde{v} - 1)x$, where x and $1 - x$ are the amounts (or proportions, since the total amount is one) invested in the risky and the risk-free assets respectively.

Download English Version:

<https://daneshyari.com/en/article/5054476>

Download Persian Version:

<https://daneshyari.com/article/5054476>

[Daneshyari.com](https://daneshyari.com)