Journal of Economics, Finance and Administrative Science 19 (2014) 11–18

JOURNAL OF ECONOMICS, FINANCE AND ADMINISTRATIVE SCIENCE

www.elsevier.es/jefas

Article

Investment cash flow sensitivity under managerial optimism: New evidence from NYSE panel data firms

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A R T I C L E I N F O

Article history:
Received 17 September 2013
Accepted 4 April 2014

JEL classification:
G02
G30
G31
G32

Keywords:
Managerial optimism
Corporate investment
Investment cash flow sensitivity
Over investment
Underinvestment
Financial constraints

A B S T R A C T

Investment cash flow sensitivity constitutes one important block of the corporate financial literature. While it is well documented in standard corporate finance, it is still young under behavioral corporate finance. In this paper, we test the investment cash flow sensitivity among panel data of American industrial firms during 1999-2010. Using Q-model of investment (Tobin, 1969), we construct and introduce a proxy of managerial optimism following Malmendier and Tate (2005a) to show the impact of CEOs' optimism in the relationship between investment and internal cash flow. Our results report a positive and significant coefficient of investment to cash flow for the full sample. While, on estimations of our model using sub-sample of more and less constrained firms, we find that the sensitivity exists stronger only for totally constrained group. We find also that board characteristics can reduce investment policy's distortions.

Sensibilidad de la inversión al flujo de caja bajo el optimismo empresarial: nuevas pruebas de datos de panel de compañías de la Bolsa de Nueva York

Códigos JEL:
G02
G30
G31
G32

Palabras clave:
Optimismo empresarial
Inversión empresarial
Sensibilidad de la inversión al flujo de caja
Sobreinversión
Inversión insuficiente
Limitaciones presupuestarias

R E S U M E N

La sensibilidad de la inversión al flujo de caja constituye un bloque importante de la literatura financiera corporativa. Aunque está bien documentada en las finanzas corporativas estándar, aún es reciente en las conductuales. En este artículo investigamos la sensibilidad de la inversión al flujo de caja en los datos de panel de compañías industriales estadounidenses durante el período 1999-2010. Utilizando un modelo Q de inversión (Tobin, 1969), construimos e introducimos una representación de optimismo empresarial según Malmendier y Tate (2005a) para mostrar el impacto del optimismo del director ejecutivo en la relación entre inversión y flujo de caja interno. Nuestros resultados revelan un coeficiente de inversión al flujo de caja positivo y significativo en toda la muestra. Mientras, sobre las estimaciones de nuestro modelo utilizando submuestras de compañías más y menos limitadas, descubrimos que la sensibilidad es más fuerte solo para el grupo totalmente limitado. También detectamos que las características del consejo directivo pueden reducir las distorsiones de la política de inversión.

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http://dx.doi.org/10.1016/j.jefas.2014.04.001
2077-1886/

1. Introduction

Standard corporate finance literature argues that corporate investment will be sensitive to internal cash flow availability. (Fazzari, Hubbard, & Petersen, 1988; Kaplan & Zingales, 1997, 2000; Harris & Raviv, 1990; Stulz, 1990; Hart & Moore, 1995; Zwiebel, 1996 and Cleary, 1999). In a rational framework, the causes of such sensitivity can be reduced to information asymmetry problems (Mayers & Majluf, 1984) and agency costs (Jensen & William, 1976, and Jensen, 1986).

Beyond the rational framework, a wave of research suggests that optimism or overconfidence biases play a central role in the investment and financing decisions making process (Kahneman & Lovallo, 1993; Shefrin, 2001; Goel & Thakor, 2000; Malmendier & Tate, 2001; Heaton, 2002, Gervais, Heaton & Odean, 2002; Hackbarth, 2008). In this behavioral framework, a new young approach commonly called “behavioral corporate finance” proposes managerial optimism as a factor that can cause corporate investment to be sensitive to internal cash flow.

The aim of this paper is to test the investment cash flow sensitivity under managerial optimism in a first time and we then introduce the effect of managerial optimism bias on investment cash-flow relationship when firm runs financial constraints. Hence, the paper contributes to the existing literature by (I) testing the validity of previous finding since there is a lack of empirical research in this fields. (II) Using new method based on dividend payout ratio to introduce the effect of financial constraint on the effect of optimism on investment-cash flow sensitivity in the American context.

The remainder of this paper is organized as follows. After this introduction, in Section 2, we present a literature review around the effect of managerial optimism on investment-cash flow relationship and we develop our hypothesis. In Section 3 we introduce our adjusted Q-investment model to test the effect of optimism on investment cash flow sensitivity and we offer a variables description and measurement. In this section we also provide a full description of managerial optimism measures. Section 4 provides that managerial optimism increase investment cash flow sensitivity and that this sensitivity will be intense when firms also run financial constraints. Section 5 offers discussions to our findings. Section 6 provides some empirical implications and Section 7 concludes.

2. Literature review and hypothesis development

Departing from the hubris theory, Roll (1986) predicts that managerial overconfidence can affect corporate decisions. More recently, Heaton (2002) proposes a simple model of corporate finance with the introduction of managerial optimism. He predicts that CEOs’ optimism could have an explanatory power for firms’ decision making since it can cause investment cash flow sensitivity phenomena.

With optimistic managers, corporate investment should be interacted with firms’ internal financing sources. Heaton (2002) associates CEO’s optimism to financing decision. Optimistic managers are assumed to be less rational from their portrait in traditional behavioral finance models. They believe that firm’s projects under their control are better than they actually are. In such case, managers will attribute a higher expected return to these projects than their true value.

In Heaton’s model (2002), managers with optimism bias are described as thinking that security issuing will be systematically under valuated by outside investors. Firms will use internal cash flow to finance their investment opportunities because internal financing seems to be costless with managerial optimism bias. This will lead to a cash flow investment phenomena.

Malmendier and Tate (2005a) propose a model where they introduce managerial overconfidence bias and they conclude that investment cash flow sensitivity exists and is robust among a sample of large American firms. They empirically demonstrate that managerial overconfidence increases the sensitivity of corporate investment to internal cash flow availability. Such conclusion may succeed to explain overinvestment and underinvestment problems. Corporate investment policies distortions can be influenced by managerial optimism that make it depended on internal cash flow. CEOs will intensively invest when cash flows are ample and we are facing an overinvestment friction and they will under invest when internal funds are insufficient. This will cause an under investment behavior which is a direct implication of overconfident mangers’ perception to the external sources of financing that seem having a high cost.

Malmendier and Tate (2005a) empirically validate a Heaton (2002) prediction who predicts a sensitivity of corporate investment policies to internal funding sources. Such relationship is dependent on firms’ financial constraints. Using the Kaplan and Zingales (KZ) measure of financial constraints, Malmendier and Tate (2005a) find that CEOs’ overconfidence increases the sensitivity of investment to cash flow and this will be greater for more constrained firms. The intuition here is that these firms run big difficulties when they want to finance their investment projects by external funds. The cost of external financing will be higher than that of others less constrained firms. For this reason, optimistic managers should prefer internal funds and the sensitivity of their corporate investment to internal cash flow will be intense when firms also are financially constrained. According to Hovakimian and Hovakimian (2009), financial constrains are defined as firms having restrictive and costly access to external capital markets and so that financially constrained firms should rely more on internal funds to finance their investment policy.

Malmendier and Tate (2005b) propose a revisited managerial overconfidence measure and they come up with similar results. Investment cash flow sensitivity persists in the American context and this result is robust, even if measures of overconfidence were changed. All the reviewed studies in this field document a positive relationship between investment and corporate cash flow availability.

Campbell, Johnson, Rutherford, and Stanley (2011) with minor substitutions for the governance control variables, due to data availability problem, confirm the Malmendier and Tate’s finding that firms with optimistic managers have significantly greater investment cash flow sensitivity in the American context.

In a first study out of the United States, Lin, Hu, and Chen (2005) investigate the impact of managerial optimism on firm’s investing activities. Among the listed companies from Taiwan, they find a positive correlation between investment and internal cash flow.

On the contrary, existing literature has documented positive correlation between top executives’ overconfidence and investment-cash flow sensitivity without any assumptions about agency cost. Wei Huang et al. (2011) suppose that there is a misalignment of the managerial and shareholders interest investigating how agency cost can affect the relation between top executives’ overconfidence and investment cash flow sensitivity using the data on exchange listed companies in China during 2002-2005. In their work, the main objective was to explore whether investment cash flow sensitivity differs between state-controlled and non state- controlled companies whose agency costs show significant difference.

Wei Huang et al. (2011)’ results demonstrate that average top executives’ overconfidence leads to increased investment cash flow sensitivity. However, this relation holds only for companies with state owned entities as controlling shareholders and it is not significant for non state controlled firms. This is because state-controlled