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Economic determinants of price informativeness about future earnings☆

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ABSTRACT

This study investigates how the value-creation process affects the extent to which stock prices incorporate value-relevant information about future earnings. In contrast to previous studies focusing on the value-reporting process, this paper shows that strong product market power accelerates the incorporation of future earnings into current equity prices due to less uncertainty about future cash flows and that intensive long-term investment deters such incorporation because of greater uncertainty regarding future cash flows. The results suggest that firm fundamentals shaped by product market competition and long-term investment explain the price informativeness about future earnings beyond the impact of management's reporting discretion.

1. Introduction

This study investigates whether and how the value-creation process affects the extent to which current stock prices incorporate value-relevant information about future earnings. Prior studies document that stock prices lead accounting income in reflecting the change of firm value (e.g., Beaver et al., 1980; Kothari and Sloan, 1992; Warfield and Wild, 1992). A series of subsequent studies explore firm characteristics that explain the price informativeness about future earnings.[1] They document that current stock returns incorporate more information about future earnings when firms provide higher quality disclosures (e.g., Lundholm and Myers, 2002; Gelb and Zarowin, 2002; Ettredge et al., 2005; Choi et al., 2011; Park, 2011) and they have better information environments (e.g., Jiambalvo et al., 2002; Ayers and Freeman, 2003; Piotroski and Roulstone, 2004). In contrast to the previous studies focusing on the value-reporting process, this study examines product market power and long-term investment in the value-creation process as economic determinants of the price informativeness about future earnings.[2]

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[1] This study uses the terms "price informativeness about future earnings," "informativeness of stock prices (or current returns) about future earnings," and "prices leading earnings" interchangeably throughout the paper.

[2] In this paper, the value-creation process represents business process through which a firm generates its cash flows and increases its shareholder value, and the value-reporting process represents financial reporting process through which a firm prepares and discloses its financial reports about the level and change of shareholder value (Engel et al., 2003).

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This study is motivated by several influential academic studies. First, the informativeness of current returns about future earnings explains a significant portion of the return-earnings association. For instance, Collins et al. (1994) show that the inclusion of future earnings into the regression of current returns on contemporaneous earnings increases the explanatory power of the regression model by three to six times. In addition, the price informativeness about future earnings increases over time and becomes more important in understanding equity price formation (Ryan and Zarowin, 2003; Lev and Zarowin, 1999). Second, the price informativeness about future earnings captures the time lag between stock prices and accounting income in reflecting information about future cash flows. The recognition principle enhances the reliability of financial reporting by requiring the compliance of formal recognition conditions but inadvertently lengthens the time lag of accounting earnings in mirroring the change of equity value (Warfield and Wild, 1992; Collins et al., 1994). Thus, investors are likely to use forward-looking information about future cash flows after weighing the trade-off between timeliness and reliability of the information, and the price informativeness about future earnings reveals the trade-off. Third, prior studies have documented little about firm-level economic fundamentals that may influence the time lag between stock prices and accounting income and, in turn, the investors' capitalization of anticipated future earnings into equity prices. Firm fundamentals that determine the uncertainty about the realization of expected future cash flows can account for a significant portion of the association between current returns and future earnings even before managers exercise discretion over financial reporting and voluntary disclosures. This study, therefore, focuses on product market power and long-term investment in the value-creation process as two fundamental economic determinants in explaining the informativeness of stock prices about future earnings.

The choice of product market power and long-term investment as economic fundamentals is based on valuation models that decompose equity value into (i) the present value of expected future cash flows from investment generating a normal rate of return, and (ii) the counterpart from investment generating an above-normal rate of return (Fama and Miller, 1972; Ohlson, 1995; Feltham and Ohlson, 1995). Specifically, Feltham and Ohlson (1995) show that equity value is a function of the persistence of abnormal earnings and the growth in operating assets.[3] On the one hand, a firm's monopolistic power in product markets increases the persistence of above-normal earnings (Lev, 1983; Cheng, 2005; Healy et al., 2014) and reduces the uncertainty of future cash flows (Gaspar and Massa, 2006; Irvine and Pontiff, 2009; Datta et al., 2011). On the other hand, a firm's long-term investment determines the growth rate of operating assets (Feltham and Ohlson, 1995) and heightens the uncertainty over expected future earnings by increasing operating leverage and the volatility of future cash flows (Lev, 1983; Biddle and Seow, 1991).

This study posits that fundamental uncertainty in anticipated future earnings, determined by product market power and long-term investment, shapes the informativeness of stock prices about future earnings (Peress, 2010). Stock returns incorporate economic events related to the change of equity value continuously whereas accounting income reflects such events discretely due to the recognition principle. When investors receive forward-looking information with low uncertainty about future cash flows, investors would incorporate such information immediately into their stock trading activities. In contrast, when the information about future earnings is highly uncertain, investors are likely to await additional supporting information and thus postpone incorporating the forward-looking information into their equity trades. Therefore, the market's capitalization of future earnings into stock prices depends on the speed of resolution of uncertainty regarding future cash flows.

Building upon the preceding discussion, this study hypothesizes that, as economic determinants of the fundamental uncertainty embedded in future cash flows, product market power and long-term investment are associated with the extent to which stock prices reflect the information about future earnings. First, firms with strong power in the product market are predicted to have more informative stock prices about future earnings. Firms operating in monopolistic (or oligopolistic) product markets can transfer potential negative shocks to consumers rather than absorb them and thus exhibit not only more persistent earnings streams (Lev, 1983; Cheng, 2005; Healy et al., 2014) but also less uncertainty about future earnings (Gaspar and Massa, 2006; Irvine and Pontiff, 2009; Datta et al., 2011). The low uncertainty over future operating performance helps investors anticipate the future earnings of monopolistic firms and encourages investors to participate in the trading of such stocks (Hou and Robinson, 2006; Peress, 2010). Therefore, a firm's product market power is expected to make its stock prices more informative about future earnings by reducing its fundamental uncertainty.

Second, firms with intensive long-term investment are predicted to have less informative stock prices about future earnings. The investment in tangible and intangible operating assets increases the fundamental uncertainty about future cash flows. The long-term capital investment increases the operating leverage and the volatility of future cash flows (Lev, 1983; Biddle and Seow, 1991). Similarly, the investment in research and development (R&D) induces a greater risk of future cash flows (Kothari et al., 2002; Shi, 2003). If a firm invests intensively in long-term projects, investors are less likely to utilize forward-looking information with high uncertainty immediately for their stock trades but would seek additional information about the potential benefits from the long-term investment (Dow and Werlang, 1992; Cao et al., 2005; Easley and O'Hara, 2010). This tendency to defer the information-based trading would make the stock prices of high-investment firms less informative about future earnings than those of low-investment firms.

This study measures the investors' capitalization of anticipated future earnings into current stock prices by the future earnings response coefficient (FERC), the coefficient on future earnings in the regression of current stock returns on both current and future earnings after controlling for past earnings and future returns (Collins et al., 1994; Lundholm and Myers, 2002). A higher FERC indicates that current returns reflect more information about future earnings because investors incorporate forward-looking

[3] Feltham and Ohlson (1995) present valuation models including three key parameters: the persistence of abnormal earnings, the long-run growth in operating assets, and the degree of accounting conservatism. Accounting conservatism is not considered as an economic fundamental because management has a direct influence on the level of conservative accounting. In addition, the empirical results of this paper are robust to controlling for accounting conservatism (see Section 5.3).