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Investor sentiment, accounting information and stock price: Evidence from China

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ABSTRACT

This paper analyzes the mechanism behind the effects of investor sentiment and accounting information on stock price based on the residual income valuation model. Using data from China's A-share market, we construct the sentiment index and examine the sentiment effect from the perspective of the expected earnings growth and the required rate of return. Furthermore, we investigate the joint effect of sentiment and accounting information on stock price and highlight the asymmetric effect of investor sentiment and the moderating effect of information uncertainty. The empirical results show that investor sentiment can change both the expected earnings growth and the required rate of return, thus affecting the stock price. However, the sentiment effect during pessimistic period is evidently different from that when sentiment is relatively high, especially for the required rate of return. In addition, accounting information and investor sentiment can both explain the stock price. However, accounting information is more reliable for stocks with stable earnings, whereas investor sentiment has evident asymmetric effect on stock price and should receive more focus for stocks with high information uncertainties.

1. Introduction

Recently, China's A-share market has experienced a severe fluctuation.[1] The Shanghai Composite Index rose from 2100 in July 2014 to a peak of 5178 in June 2015, and then it dropped dramatically to approximately 3500 in less than one month, exhibiting an obvious speculative atmosphere. In addition, the growth of China's real economy is gradually slowing, and the IMF has lowered its expectation of China's economic growth in 2015 to <7%. Undoubtedly, both the investors' irrational behavior and economic fundamentals could impact the market value of financial assets. However, for investors, which should be focused on more when making investment decisions?

As noted by traditional finance theory, accounting information reflects the quality of assets and the profitability of the enterprise; thus, it can be used to forecast equity prices. Several studies in the literature, such as Ball and Brown (1968), analyze the relevance between the accounting information and the asset price. However, many studies in traditional finance are developed based on the market efficiency hypothesis as well as the rational expectation hypothesis and cannot explain many financial anomalies. Studies in the field of behavioral finance believe that investors may be irrational; thus, investors' psychological factors or cognitive bias could affect their investment decisions. Therefore, the stock price variation relies not only on the intrinsic value represented by accounting information but also on investors' irrational behavior, which can be measured by investor sentiment.

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[1] A-share market indicates the stock market trading RMB common stocks issued by companies in China.

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Investor sentiment, which derives from incorrect subjective beliefs or information unrelated with asset value, may lead to false market anticipation and fuel market volatility. In the past, certain dramatic movements in the financial market, such as the recent boom and slump in China's A-share market, have made investor sentiment and its pricing function more appealing.

Existing studies have shown that investor sentiment may systematically affect the stock market; however, few provide explanation for the mechanism behind the sentiment effect. Chen (2011) develops a framework to explain the sentiment effect and finds that investor sentiment can affect the value relevance of accounting information. It is intuitive that sentiment could affect the predicted earnings growth because investors usually have an optimistic attitude toward the future during the high sentiment period, and stock analysts tend to issue higher ratings for those hard-to-value stocks (Cornell et al., 2014). In addition, sentiment could affect the required rate of return in a more complicated manner. According to the pricing theory, the required rate of return equals the product of risk quantity and risk price, whereas optimistic investors may underestimate their risk exposure but require higher compensation for their risk-taking during periods of high sentiment. Because sentiment may impact both the expected earnings growth and the required rate of return, how do these two effects interact with each other and affect stock price jointly? Furthermore, if sentiment could also explain the future stock price in addition to the accounting information, which should receive more focus when making investment decisions, particularly for those stocks with high earnings volatility? We attempt to answer these questions by exploring the unmarked mechanism behind the effect of accounting information and investor sentiment.

This paper decomposes the effect of accounting information and investor sentiment on the basis of the theoretical framework proposed by Ohlson (1995) and Chen (2011). Using data on China's A-share listed companies from 2002 to 2011, we construct investor sentiment index based on the principle component method and examine the channels behind the sentiment effect on stock price from the perspective of the expected earnings growth and the required rate of return. Then, we investigate the combined impact of sentiment and accounting information on stock prices. Moreover, we highlight the asymmetric effect of investor sentiment and the difference of the mechanism provided by information uncertainty. Our study extends the valuation model from the perspective of behavioral finance and provides empirical evidence for the specific mechanism of the sentiment effect on future price in the emerging market. In addition, we give a clear explanation for asymmetric sentiment effect and demonstrate the moderating effect of information uncertainty on sentiment and accounting information. Our study provides certain recommendations for investors' behavior decisions and is meaningful for accounting policy and market regulation.

The remainder of our research is structured as follows. Section 2 reviews the related literature, and Section 3 introduces our sample, data, major variables and models. Section 4 presents the empirical results and analyses, and Section 5 provides our conclusions and implications.

2. Literature

Accounting information has long been recognized as an important factor of stock price. Ball and Brown (1968) analyze the relation between earnings variation and price changes empirically, and Beaver (1968) employs a mean value test to further verify its significance. Chan et al. (1996) find that the percentage of cash flow can affect the accounting surplus in the next year and thus has a significant effect on the future stock return. In addition, certain studies note that earnings management can also affect the stock valuation. Chaney and Lewis (1995) indicate that earnings management of information asymmetric enterprises may lead investors to overestimate the stock price; certain other studies also find that lower accounting quality may lift the cost of equity and increase the stock valuation error (Aboody et al., 2005; Barth et al., 2013; Francis et al., 2005). However, Core et al. (2008) find there is no evident relation between the accounting quality and the equity cost, and Rajgopal and Venkatachalam (2011) argue that the worsening accounting quality is closely correlated with high return volatility.

Wang et al. (2010) note that the effect of accounting information can arise from accounting measurement and investor behavior; this implies investor behavior can also affect the stock valuation in addition to the fundamental accounting information. De Long et al. (1990) indicate that the irrational behavior of noise traders may cause the so-called “noise trader risk”; thus, the stock price is jointly determined by the “rational” intrinsic value and “irrational” noise trader risk. The behavior of noise traders is always measured by investor sentiment (Lee et al., 1991), which derives from incorrect subjective beliefs or information unrelated with stock value and reflects investors' overall optimistic or pessimistic attitude toward the stock market (Brown and Cliff, 2004). Baker and Wurgler (2006) define investor sentiment as the propensity to speculate, which drives the demand for speculative investments. In addition, the researchers find that investor sentiment has a larger effect on stocks with highly subjective valuations or those difficult to arbitrage stocks.

Different approaches are applied to gather proxies for investor sentiment in existing studies, among which some use the implicit indicators. Lee et al. (1991) employ the discount rates of Close-end Funds to describe the investor sentiment, and certain market liquidity indicators, such as the average turnover rate, are applied by Baker and Stein (2004). In addition, Schmeling (2009) suggests that the CCI (Consumer Confidence Index) can also be used to measure market sentiment. Certain other studies quantify sentiment based on certain explicit indicators. For example, Brown and Cliff (2004) use the questionnaire information such as the investors' view of the market trend and reaction to news to directly measure sentiment. In addition, Baker and Wurgler (2006) select six measures suggested by prior studies and orthogonalize them on several macroeconomic variables to extract the irrational components. Thereafter, a composite sentiment score is constructed from the six residuals using principle component analysis. Because it considers multiple information sources related to investor sentiment, the method proposed by Baker and Wurgler (2006) is widely used in the existing empirical literature (Stambaugh et al., 2012).

Many studies note that investor sentiment may have an effect on stock price. Brown and Cliff (2004) indicate that high sentiment may alter the investors' expectation of future cash flows and thus affect prices. Certain other studies (Cornell et al., 2014; Hribar and