Investor attention and the expected returns of REITs

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A B S T R A C T

This study investigates the effect of retail investor attention on the expected returns of REITs. The attention-induced price pressure hypothesis of Barber and Odean (2008) suggests that increased attention leads to increased buying, which temporarily pushes prices and returns higher. This upward trend in prices and returns is followed by a reversal. We test the attention hypothesis on REITs from 2004 to 2012 using Search Volume Index (SVI) data in Google Trends. We find that REITs that generate high retail investor attention, as measured by SVI, earn higher returns compared to REITs that generate no retail investor attention. The results are driven by small stocks and stocks with high book to market ratio. We report that the SVI effect is not due to impediments to trade and conjecture that SVI increases retail investor recognition among REITs that are characterized by information incompleteness, leading to higher returns. Over time, this increase in returns is followed by a reversal.

1. Introduction

Real Estate Investment Trusts (REITs) are investment tools used to facilitate investor participation in the real estate market; as directly investing in this market can be costly in terms of resources and information. REITs are closed-end investment companies that are traded like stocks. These stocks have gained increased popularity in the last two decades as they are used as tools for diversification (Goetzmann & Ibbotson, 1990), are liquid (Han & Liang, 1995), and constitute an economic way to purchase real estate due to the reduction in transaction and information costs they provide (Ghosh, Miles, & Sirmons, 1996).

According to the National Association of Real Estate Investment Trusts’ (NAREIT) website, there were 202 USA publicly traded REITs with a market capitalization of over $670 billion at the end of 2013. Two major categories comprise the REITs market. These are Equity REITs (EREITs) and Mortgage REITs (MREITs). EREITs are real estate investment companies that generate their income primarily from rent. MREITs are real estate investment companies that generate their revenue from interest earned from mortgage loans and mortgage-backed securities. EREITs constitute the majority of these publicly traded REITs with a total of 161 publicly traded stocks and a total market capitalization of over $608 billion as of the end of 2013.

Classic theory suggests that information is immediately incorporated into stock prices. However, existing empirical evidence shows that investors are limited in terms of the amount of information they can process. Kahneman (1973) reports that attention is a scarce cognitive resource. Prices, therefore, may not reflect all available information due to limited investor attention.

Recent studies report evidence suggesting that investor attention has an effect on common stocks. REITs are considered to be a “distinct asset” class (Wei & Yang, 2012). As a result, existing research examining the effect of investor attention on stock returns excludes REITs from their sample (Barber & Odean, 2008; Chemmanur & Yan, 2009; Da, Engelberg, & Gao, 2011; Hou, Xiong, &
We contribute to the literature by examining the effect of investor attention on REITs returns. In addition, we use a novel and direct proxy of retail investor attention, which is Google's Search Volume Index (SVI). SVI is considered an appropriate measure of retail investor attention. Given that REITs behave like small stocks and are characterized by information opaqueness (Danielsen & Harrison, 2000; Devos, Ong, & Jo, 2007; Sun & Yung, 2009), they are more likely to attract retail investors (Barber & Odean, 2008). REITs' limited information dissemination and lack of transparency provide an appropriate setting to directly test the effect of investor attention on returns.

We find that SVI is a unique measure of investor attention among REITs and does not merely reflect other investor attention measures, such as trading volume, analyst coverage, or excess returns. We also find that REITs that attract high investor attention, as measured by SVI, generate higher returns than REITs with no investor attention. The univariate analysis shows that average returns are especially higher for the REITs that are small, with high book to market ratio, low past month return, low price, and are highly illiquid.

Given the uniqueness of SVI as an attention measure, we use it to test the attention-induced price pressure hypothesis of Barber and Odean (2008). The hypothesis posits that individual investors are net-buyers of “attention-grabbing” stocks. Prior to buying, investors consider a set of stocks they research and to which they devote attention. When buying, they choose from this set of stocks. However, when selling, they can only sell what they already own. The attention hypothesis proposes that increased attention leads to increased buying, which temporarily pushes prices higher and results in higher returns. As attention wears off over time and given that individual investors are, on average, uninformed, this price pressure is reversed in the long-term.

Controlling for risk factors using the CAPM, the Fama French (1993) three-factor model, and the Carhart (1997) four-factor model, we find that high SVI returns in high average returns among stocks that are small and with high book to market ratio. To ensure that the SVI effect is not spurious, we investigate whether impediments to trade are behind the effect. The impediments-to-trade hypothesis suggests that limits to arbitrage, due to severe market frictions, cause mispricing to persist. As a result, the SVI effect may be due to illiquidity and lack of professional investors' involvement. Our findings suggest that the SVI effect is not explained by impediments to trade. Using illiquidity proxies, such as Amihud's (2002) illiquidity ratio, the dollar trading volume, and price, we find insignificant profits among highly illiquid stocks. We conclude that although the SVI effect is strong among small stocks, we find no support that the effect is due to impediments to trade.

Rather, the SVI effect is due to improvement in investor recognition. Merton's (1987) investor recognition hypothesis suggests that in markets with incomplete information, investors are not aware of all securities. As a result, a stock that has low investor recognition needs to offer higher returns to compensate its holders for being imperfectly diversified. Lehavy and Sloan (2008) explain that investor recognition increases returns over the short term, but decreases expected returns over the long run. We find that SVI improves investor recognition among stocks with no analyst coverage and poor information dissemination, which results in higher returns.

We also find that SVI has a positive and significant effect on excess returns, controlling for alternative measures of attention. Splitting the sample between REITs with no analyst coverage and those with analyst coverage, we find that the effect is driven by stocks with no analyst coverage. We conclude that SVI improves investor recognition among stocks that suffer from poor information dissemination. This lends support to Merton's (1987) investor recognition hypothesis. The results also support the assertion that REITs behave similarly to common stocks.

Finally, we investigate the effect of SVI over time. We find evidence of a reversal as early as three months. SVI, therefore, results in increased buying which pushes prices and returns higher only temporarily. Because individual investors are uninformed, the effect of SVI wears off over time and results in a reversal. This supports the predictions of the attention-induced price pressure hypothesis of Barber and Odean (2008). In a Granger causality test, we find that the returns of REITs with high levels of SVI do not predict the returns of REITs with low levels of SVI. The result suggests that SVI does not impound information into share prices.

The remainder of the paper is organized as follows. The next section presents the literature review. Sample description and data are described in the third section. The fourth section summarizes the findings. The final section concludes the paper.

2. Literature review

Our paper relates to two strands of literature. It contributes to the strand of literature that examines the effect of investor attention on stock returns and to the literature that investigates the determinants of REITs returns. According to the efficient market hypothesis, stock prices reflect all available information (Fama, 1970). This hypothesis, however, is challenged by the argument that investors have limited attention. Kahneman (1973) suggests that attention is a scarce cognitive resource. Individuals have bounded rationality. When faced with large amounts of information, they are limited in terms of how much they can process. Consequently, they must be selective about the type of information to which they can dedicate their attention.

Several studies have examined the effect of investor attention on asset pricing. Engelberg, Sasseville, and Willaims (2012) find that stocks that Jim Cramer mentions in his popular CNBC TV show Mad Money earn significantly positive overnight returns. Da et al. (2011) report that, in the case of IPOs, increased attention results in high abnormal returns in the first two weeks and the effect is reversed in one year. Tetlock (2011) reports that stale news result in temporary price movements among stocks dominated by individual investors. DellaVigna and Pollet (2009) find that investor inattention is high on Fridays. Earnings announcements made on Fridays have a 15% lower immediate response and a 70% higher delayed response. Hirshleifer, Lim, and Teoh (2009) document that investor inattention increases on days crowded with earnings announcements. As a result, the immediate price response to earnings surprises is weaker and the post-earnings announcement drift is stronger. Fang and Peress (2009) suggest that investors' limited
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