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Home and foreign investor sentiment and the stock returns

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ABSTRACT

We investigate the impact of home and foreign investor sentiment on stock returns. We use the total investor sentiment index of Baker and Wurgler (2006) and consider the closed-end funds discount as a measure of foreign investor sentiment. Based on data of all the firms of the CAC All Tradable index over the period 2003 and 2013, we find that foreign and home sentiment are strong contrarian predictors of stock returns. This result supplies evidence that equity home bias is an important component of investor sentiment. In addition, we find that only favorable sentiment matters in French stocks' valuation. Our results are robust to the using of different measures of total investor sentiment.

1. Introduction

Relevant behavioral literature highlights the prevalence of the contrarian impact of the investor sentiment on stock market returns. Kothari and Shanken (1997) examine the relationship between the aggregate book-to-market ratio and the US stock returns over the period 1926–1941 and find that negative risk premiums are associated with higher book to market ratios. They argue that investor sentiment hypothesis could explain this evidence which is inconsistent with market efficiency. Baker and Wurgler (2000) support this evidence and note that total new shares and debt issues are also strong contrarian predictor of US stock market returns between 1928 and 1997. Lee, Jiang, and Indro (2002) highlight that the magnitude of bullish (bearish) changes in sentiment leads to higher (lower) future excess returns on a sample that covers the period 1973–1995. Still, Baker and Wurgler (2007) show that investor sentiment has important and regular effects on individual firms and on stock market as a whole. Nevertheless, Brown and Cliff (2004) do not find evidence of predictability of investor sentiment for near-term future stock returns. Also, Brown and Cliff (2005) document that investor sentiment has only predictive power of long-term stock returns.

Another extend literature of behavioral finance assumes that higher investor sentiment affects future stock returns while lower sentiment has no effect on prices. Yu and Yuan (2011) study the influence of investor sentiment on the market's mean–variance tradeoff and document that stock market excess return is positively related to market conditional variance in low-sentiment periods but unrelated to variance in high-sentiment periods. Stambaugh, Yu, and Yuan (2012) explores the role of investor sentiment on eleven well-documented anomalies in cross-sectional stock returns. They find that for each anomaly, the long-short and the short-leg strategies are more profitable following high levels of sentiment. However, investor sentiment is not related to returns of the longlegs strategies. Chung, Hung, and Yeh (2012) also examine the asymmetry of the predictability of investor sentiment across economic expansion and recession states. They find evidence that predictability of investor sentiment is most pronounced in an expansion state. Nevertheless, in a recession state, the predictive power of sentiment is generally insignificant. Ben-Rephael, Shmuel, and Avi (2012) support this finding and show that noise in aggregate market prices is induced by favorable investor sentiment.

Finally, a growing number of studies substantiate the idea that international investor sentiment matters in home stocks' valuation. Hwang (2011) outline that American investor sentiment affects the demand for securities from a specific country and causes security prices to deviate from their fundamental values. Baker, Wurgler, and Yuan (2012) also find evidence that investor sentiment plays a significant role in international market volatility and generates return predictability of a form consistent with corrections of overreaction.

In this paper, we investigate the impact of investor sentiment on French stock returns. Our results complement the existing behavioral literature in three respects. First, we provide new evidence on investor sentiment-driven components. Specifically, we study whether foreign and home sentiment cause prices to deviate from

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their fundamental values. Second, France has a different economy, financial market and legal system, compared to the United States. As a matter of fact, a main reason of the success of the Baker and Wurgler (2006) sentiment index is that US market present higher values of the variables measures of total investor sentiment such as liquidity, number of initial public offering, volatility premium etc. Hence, it is not obvious that a similar result would hold in a different context. Third, we use different specifications of pooled regression approach to assess the predictability of investor sentiment. Our model involves dummy variables measures for the expansion/recession states. The idea behind the consideration of these variables is to examine whether favorable investor sentiment has better effect on stock returns. In addition, we propose new measure of foreign investor sentiment namely the closed-end funds discount and we study its correlation with the foreign direct investment in France.

Using data of all the firms of the CAC All Tradable index over the period 2003 and 2013, we show that total investor sentiment is a significant contrarian predictor returns for the French market. We also show that our results for stock excess returns are driven by both home and foreign sentiment. More precisely, we find evidence that home sentiment estimates are close to those of foreign sentiment. This finding provides evidence that equity home bias play an important role in stocks' valuation. In addition, we show that that only the dummy variable associated to the expansion state is statically significant. This conclusion raises the important issue of the favorable investor sentiment. Results are robust when using the French consumer confidence index, market turnover and dividend premium as independent measures of total investor sentiment.

Our paper is organized as follows. Section 2 is dedicated to a description of our data. Section 3 details the methodology employed in this study. Section 4 contains the empirical results. Section 5 discusses the robustness. We conclude in Section 6.

2. Data

We work on monthly French data over the period 2003–2013. Our paper selects all the firms of the CAC All Tradable index, which groups the 250 largest listed firms. These firms are traded on the Euronext market and are part of the main French market's indexes namely CAC 40, CAC next 20, CAC large 60, CAC mid 60, CAC small, SFB 120 and CAC mid and Small. Our data are obtained from a variety of sources. Market price, book value and market turnover are extracted from Datastream database while IPO's number and first-day IPO returns are updated version of Ben Aissia (2014). Besides, we use market value and net asset value of four closed-end funds working in the real estate industry namely Intervest Offices and Warehouses, Leasinvest Real Estate, Nexponor and Vastned Retail Belgium. These data are available on Datastream and COMPUSTAT. In addition, we obtain data relative to foreign direct investment in France from the reports of the Banque de France. We also obtain data of the French consumer confidence index[1] from the reports of the National Institute of Statistics and Economics Studies. Finally, we use the CEPR business cycles to classify the state of the economy (recession or expansion).

3. Methodology

This section describes our methodology which involves two steps. First, we assess the measures of investor sentiment. We use the monthly investor sentiment index of Baker and Wurgler (2006) as a measure of total investor sentiment. Our index is based on four proxies of investor sentiment namely: dividend premium, market turnover, number of IPOs and first-day IPO returns. Total investor sentiment index is derived from data series of normalized sentiment proxies using the principal component analyze. Furthermore, we use closed-end funds discount as a measure of foreign investor sentiment. Home sentiment is then estimated as the residual of its total sentiment regressed on foreign sentiment.

Second, we examine the impact of investor sentiment on stock returns using multifactor regression models. More precisely, we include in the Mitton and Vorkink (2007) and the Fama and French (1993) models measures of investor sentiment and dummy variables proxies for economic good/bad states.

3.1. Total investor sentiment

We examine several key behavioral theories which predict that investor sentiment should matter in future returns. These theories present different measures of the total investor sentiment. Lee et al. (2002), for example, use an investors' intelligence index computed at the end of each week as the ratio of the number of investment advisory services that are bullish relative to the number of advisory services that are either bullish or bearish. Baker and Stein (2004) document that market liquidity is an indicator of investor sentiment. Derrien (2005), Lemmon and Portniaguina (2006), Qiu and Welch (2006) and Cornelli et al. (2006) consider the consumer confidence level from the FED. Still, Kumar and Lee (2006) define a buy-sell imbalance index to measure sentiment for retail investors[2] while Baker and Wurgler (2006, 2007) construct an investor sentiment index based on different financial variables known to detect sentiment. The formers also define an orthogonalized version of their sentiment index by regressing each of the used variables on macro-series variables. Recently, Ben-Rephael et al. (2012) measure investor sentiment with mutual fund flows and Roger (2014) proposes a different index[3] for investor sentiment based solely on changes in portfolio diversification by individual investors.

In our study, we use the Baker and Wurgler (2006) investor sentiment index.[4] To construct this index, we consider four measures of investor sentiment which we define and calculate in the following subsections.

3.1.1. Dividend premium

The dividend premium (PDIV) is defined as the monthly logarithm of the difference between the average market-to-book ratios of the dividend payers and non payers firms. The motivation of this variable derives from theoretical prediction that it reflects a salient characteristic of safety associated to the decision of distributing dividend. The investor sentiment is then inversely related to dividend premium since optimistic investor swaps an optimistic valuation of market returns against the security at the time of the decision to distribute dividends. This is by analogy to Baker et al. (2012) use of the volatility premium defined as the relative

[1] The French consumer confidence index is monthly constructed based on a survey done on about 2000 households. It describes, in a unique variable, the commune component of eight opinion's indexes namely: past and future evolution of personal financial situation, past and future evolution of standard of living in France, unemployment perspectives, opportunity to invest in consumption goods and actual and future saving capacity. It is calculated via the factorial analysis technique. Details relative to the construction of the French consumer confidence index are available on: ⟨http://www.insee.fr/fr/indicateurs/ind20/method_idconj_20.pdf⟩.

[2] See also Barber and Odean (2008); Kaniel, Saar, and Titman (2008); Barber, Odean, and Zhu (2009) for the use of buy-sell imbalance index as measure of investor sentiment.

[3] Roger (2014) shows that his index outperforms other usual indices (based on investors' intelligence, macro-economic variables or buy-sell imbalance).

[4] We do not use the orthogonalized version of Baker and Wurgler (2006) index since we introduce in the regression models dummy variables measures for economic states.