Industry-based style investing

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Abstract

Motivated by the style investing model of Barberis and Shleifer (2003), we examine the industry-wide investment decisions of retail investors. We find that retail investor industry demand is highly correlated and strongly related to past industry returns. Moreover, industries heavily bought by retail investors over the past year significantly underperform industries heavily sold over the subsequent year. Similarly, stocks in industries heavily bought by retail investors underperform stocks in industries heavily sold, even after controlling for firm-level demand. Our results suggest that industry-wide categorization influences the investment decisions of retail investors and has a significant impact on asset prices.

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There is growing evidence that investors often group stocks into categories or “styles” based on shared commonalities. For example, Barberis, Shleifer, and Wurgler (2005) find that stocks added to the S&P 500 Index begin to covary more with other members of the Index, and Greenwood (2008) provides similar evidence for the Nikkei 225. Similarly, Green and Hwang (2009) document that stocks that undergo stock splits experience an increase in comovement

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with low-priced stocks and a decrease in comovement with high-priced stocks. These results are consistent with investors categorizing stocks based on index membership and price.\footnote{Other papers that present evidence consistent with style investing include Teo and Woo (2004), Kumar (2009), Boyer (2011), and Wahal and Yavuz (2013).}

Another potentially important category is industry. For example, Microsoft, Google, and Yahoo are often categorized as “technology stocks,” while Merck, Pfizer, and Eli Lilly are often grouped together as “pharmaceutical stocks.” Industry-wide categories are particularly important in the top-down investing approach, where investors first select promising industries before moving to stock selection. Industry analysis is also important for both buy-side and sell-side institutions. Buy-side institutions frequently offer sector-oriented mutual funds such as “Vanguard Utilities” or “Fidelity Select Wireless.” Sell-side strategy analysts regularly issue industry-level forecasts and recommendations in their research reports. Similarly, firm-level analysts specialize by industry and often supplement firm-level recommendations with industry-wide recommendations (Kadan, Madureira, Wang, and Zach, 2012). Further, many financial phenomena, such as hot and cold IPO markets (Chemmanur and He, 2011), mergers and acquisitions (Harford, 2005; Ahern and Harford, forthcoming), executive compensation (Lewellen, 2013), and stock market bubbles (e.g., the dotcom bubble) often have an industry-wide component.

If investors categorize stocks by industry membership, then their investment decisions will have an industry-wide component. This implies that industry-level reallocations should occur with greater intensity than reallocations across stocks grouped randomly. There are at least two reasons to expect that industry-level reallocations will be particularly strong amongst retail investors. First, retail investors tend to have more limited resources than institutional investors. Thus, retail investors seem more susceptible to simplifying complex investment decisions by categorizing stocks by industry. Indeed, processing information on 50 different industries is far less time consuming than processing information on thousands of different stocks. Second, prior research has found strong evidence that the trading of retail investors is systematically correlated (e.g., Kumar and Lee, 2006; and Barber, Odean, and Zhu, 2009a).\footnote{Prior research has also found that institutional investor trading is correlated; however, the magnitude of retail investor herding is generally much larger than institutional herding. For example, Lakonishok, Shleifer, and Vishny (1992) and Grinblatt, Titman, and Wermers (1995) report herding measures of 2.7% for pension funds and 2.5% for mutual funds, respectively. In contrast, Barber, Odean, and Zhu (2009) find that herding ranges from 6.8% for retail investors at a discount brokerage to 12.8% for retail investors at a full-service brokerage.}

Thus, if retail investors do categorize stocks by industry, it seems likely that the industry-wide investment decisions of individuals will aggregate into large industry-wide demand shocks.

In this paper, we explore three main questions about retail investor industry trading. First, is retail trading correlated at the industry level (i.e., do retail investors herd into and out of certain industries)? Second, how does retail investor industry demand impact both industry prices and stock prices? Third, to what extent is the poor performance of retail investor trading driven by their industry-wide investment decisions?

To answer these questions, we calculate the proportion of all trades in an industry that are buys (industry proportion bought) using the Trade and Quote (TAQ) and Institute for the Study of Security Markets (ISSM) transaction data over the period of 1983–2000. We find that retail investor industry demand is highly persistent, consistent with retail investors following each other into and out of the same industries. For example, the cross-sectional correlation between small trade proportion bought in week $t$ and week $t+1$ ($t+52$) averages over 60% (16%). Moreover, persistence in industry demand cannot be explained by retail investors following each