Do Suppliers Benefit from Selling to High Inventory Turnover Retailers?

1. Research Problem

Our research question is whether suppliers benefit from selling to high inventory turnover retailers. High inventory turnover (HIT) has been considered as a virtue in retailing industry (e.g. Chen et al. 2007; Alan et al. 2015). However, it is unclear whether HIT retailers gain superior financial performance at the expense of their suppliers or they create value for both themselves and their suppliers, i.e., a win-win situation. Our research aims to answer the following questions: How does a retailer’s inventory turnover performance affect their attractiveness to a supplier who is selecting a retail partner? When faced with a pool of prospective retailers, should a supplier choose a retailer that has high, low, or intermediate inventory turnover?

Hendricks and Singhal (2009) pioneered the use of event studies to investigate the negative impact of announcements related to customers’ (e.g. retailer) inventory information, such as excess inventory, on suppliers’ stock returns in short time windows of one to five days after the announcement. Their paper underscores the relevance of retailers’ inventory information to the market values of their suppliers. Croson and Donohue (2006) show that downstream firms’ inventory information helps their suppliers to alleviate the bullwhip effect by better anticipating and preparing for fluctuations in inventory needs of the downstream firms. Recently, Taylor and Xiao (2010) demonstrate that manufacturer benefits from selling to a better-forecasting retailer under certain retailer’s characteristics and economic conditions. Kesavan and Kushwaha (2014) suggest that knowledge of retailers’ inventory investment behavior during macroeconomic shocks facilitate the suppliers to plan inventory efficiently. Kesavan et al. (2016) provide empirical evidence that HIT retailers appear to have more responsive supply chains than LIT retailers. Our research adds to this stream of literature by focusing on the impact of retailers’ IT on suppliers’ financial performance and showing that suppliers benefit from selling to HIT retailers.

2. Methodology

We conduct portfolio-based asset pricing tests to investigate how inventory turnover performance of retailers affects future stock returns of their suppliers. In particular, we sort supplier stocks into tercile portfolios by their retailer’s IT. The portfolios are rebalanced every year on 31 July of year $t$ using customer’s accounting information on or before 31 January. We also form an equal-weighted zero-cost portfolio which is composed of
buying the top one-third and selling the bottom one-third of the suppliers based on their retailers’ normalized IT. From an efficient market perspective, if retailers’ IT does affect their suppliers’ stock returns and investors are capable of computing the IT ratio of the retailers as well as determining its externalities, then we expect the effect of retailers’ IT to be absorbed into suppliers’ stock prices soon after this information becomes publicly available. As a result, retailers’ IT should not be a useful signal in implementing a portfolio trading strategy even if it positively influences the profitability of their suppliers. However, prior studies in accounting and operations management show that inventory information and its impacts along the supply chain are not fully understood by market participants. For example, Thomas and Zhang (2002) find that inventory changes are negatively related to future stock returns. Raman et al. (2005) present a case study of a hedge fund manager who invests in retail stocks on the basis that inventory assessment is subjective and is not fully absorbed into stock prices. Hendricks and Singhal (2009) provide evidence that the stock price performance of the supplier is adversely affected when their upstream customer has excess inventory. Motivated by this literature, we investigate whether the retailer’s inventory productivity affect their suppliers’ future stock returns.

3. Summary of Major Results and Implications

Our sample consists of 518 supplier firms and 86 principle customer firms (4,419 pair-years) which belong to retail industry during the period 2000–2015. Using the sample of U.S. retailers and their suppliers traded on the NYSE, the AMEX, and NASDAQ over the period from 2000 to 2015, we document strong return predictability of suppliers based on their retailers’ operational efficiency, i.e. IT. We observe an increasing return pattern across tercile portfolios. In particular, the equal-weighted zero-cost portfolio yields 0.813% average monthly excess return (benchmarked to the risk-free rate) and 1.025% average monthly abnormal return (alpha) after considering the risk factors using in Fama–French–Carhart four-factor model (Fama and French 1993, Carhart 1997). Our time-series analyses indicate that these returns are statistically significant.

One explanation for the existence of this result is a potential market inefficiency that leads to investors’ failure to utilize retailers’ IT information even after it becomes publicly available. Our additional analysis supports this explanation because we show that portfolio returns depend on incorporating inventory information into stock
investment decisions in a timely manner. This result suggests that investor should be attentive to the operational information as well as the supply chain linkages.

In addition, we find that suppliers who consistently trade with HIT retailers are associated with better operating performance, and the market fails to incorporate this information into the stock prices and earnings forecasts. This finding illustrates the importance of retailers’ lean operations for their suppliers’ long-run success in a predictive model. It has several managerial implications. First, we show the strong information content of retailers’ operational efficiency on their suppliers’ stock return. Previous research has examined the impact of downstream retailers’ specific operational initiatives, such as forecasting accuracy and inventory investment policy, on their suppliers’ corporate behaviors. Our work complements these studies by showing a strong link between retailers’ operational efficiency and suppliers’ expected return. Second, we show that incentives and performance measurements that are tied to a retailers’ financial performance seem to be well aligned with their suppliers, i.e. retailers could benefit themselves as well as their suppliers with higher IT. Last, our analysis shows the financial importance of effective inventory management, particularly in the retailer-and-supplier setting.

References