2 Review of Studies on the Relationship between Trading Volume and Stock Returns

Trading volume has attracted researchers’ attention for years, resulting in voluminous existing literature. LO/WANG (2000) report to have found 190 articles from various fields of study including economics, finance and accounting. Within the finance literature, studies exist mainly on volume-return relations, market microstructure, volume-return volatility relations, and models of asymmetric information.

Following the objectives of the research project, the focus of this literature overview is placed on volume-return relations, with selective inclusion of market microstructure and asymmetric information models as potential explanations of observed empirical evidence. Studies on volume-return volatility relations, however, are out of scope of this review.2

The structure of the chapter follows the direction of the relationship between volume and returns studied, for example lagged volume-return or contemporaneous volume-return relations.3 Within these categories, the discussion includes both a summary of previous empirical findings as well as potential theoretical explanations thereof. Note, however, that existing literature is vast, even within the defined focus area. As a result, this review can only include a selection of the most important articles.

2.1 Lagged Volume-Return Relationship

The first area of research analyzes whether different measures of lagged trading volume relate to subsequent returns (in other words, whether there exists a relation between trading volume and expected returns). The articles presented are divided into three parts based on whether the object of the investigation is the volume level, change in volume, or the variability in volume.

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2 One exception is the correlation between volume and absolute returns. In some studies, squared stock returns are used as a measure of realized return volatility. See below, 2.3.1.

3 We are aware that not all of these relations are directly related to our research questions. However, a detailed overview of previous volume-return research helps to integrate the contribution of this project into existing literature.
2.1.1 Volume Level

There is strong evidence in US stock market data that different types of volume level relate negatively to expected returns. A possible theoretical explanation for this empirical phenomenon is that different types of trading volume proxy for liquidity, with illiquidity being a priced factor in the stock markets. However, not all empirical results support this view.

2.1.1.1 Empirical Findings

Table 2.1 summarizes results of empirical studies on the relationship between different types of trading volume level and expected returns, divided into studies on US and international stock market data.

Several researchers apply Fama-MacBeth type regressions or variations thereof:⁴ HAUGEN/BAKER (1996) run regressions of stock returns on over 40 firm characteristics related to risk, liquidity, price level, growth potential and price history. They report a statistically significant negative relationship between the ratio of dollar volume to market capitalization and returns for stocks in the Russell 3000 stock index. Several authors confirm the existence of a negative relation between volume level and expected returns in the major US stock markets applying different measures of trading volume such as dollar trading volume or share turnover.⁵ In addition, BRENNAN ET AL. (1998) and CHORDIA ET AL. (2001) find the trading volume effect to be persistent even in risk-adjusted returns.⁶ Finally, HU (1997) confirms the existence of a negative relationship between lagged share turnover and returns in the Tokyo stock exchange.

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⁴ See FAMA/MACBETH (1973) and 3.3.1.1.1 for background on this methodology.
⁶ In BRENNAN ET AL. (1998), excess returns are adjusted using both the principal components approach of CONNOR/KORAJCZYK (1988) and the FAMA/FRENCH (1993) factors.