COMMONALITY IN LIQUIDITY AND
THE MALAYSIAN STOCK MARKET

Rapheedah Binti Musneh*
Faculty of Business and Management,
Universiti Teknologi MARA
Faculty of Business, Economics and Accountancy,
Universiti Malaysia Sabah

Mohd. Rahimie Abdul Karim, Caroline Geetha A/P Arokiadasan
Faculty of Business, Economics and Accountancy,
Universiti Malaysia Sabah

ABSTRACT

This is a conceptual paper that reviews the study on the impact of commonality in liquidity on the firm’s stock returns. The commonality in liquidity refers to the impact of a common factor on a firm’s stock liquidity or also known as the systematic component of liquidity (Brockman, Chung and Pérignon, 2009). Previous studies such as Pastor and Stambaugh (2003) and Acharya and Pedersen (2005) provide ample evidence on the significant effect of commonality in liquidity on a firm’s stock return in the developed market but such effect is less emphasized both in the emerging stock market and in order-driven market structure. Studies such as Brockman and Chung (2004) argued that the effect of liquidity commonality is especially stronger in the market with an order-driven market structure. Being one of the emerging markets that practice an order-driven market structure, studying the effect of liquidity commonality in Malaysian firms will provide the two-fold objectives, that is, not only understanding the effect of commonality in liquidity in the emerging market but also the order-driven market structure.

Keywords: liquidity commonality, stock liquidity, market liquidity, Malaysian stock market, stock returns.

1. Introduction

Liquidity has been empirically proven to exert great influence over the stock return variations. Previous studies such as Amihud and Mendelson (1986 a, b) provide evidence on the positive relationship between return and illiquidity. Given the importance of liquidity on stock return, liquidity becomes pronounced among investors and portfolio managers when making investment decisions and portfolio allocation strategy. Earlier studies relate inventory risks and information asymmetry as a determinant factor of liquidity for individual securities. Demsetz (1968), Garman (1976), Grossman and Miller (1988) and Madhavan (1992) for example, have confirmed that liquidity (measured by bid-ask spread) is influenced by the inventory risk arises from the inventory imbalances. While, Glosten and Milgrom (1985), Kyle (1984, 1985) and Easley and O’Hara (1987) paid attention to the influence of private information on stock liquidity. While previous studies have focused on these two factors in explaining the variations of stock liquidity, Chordia et al. (2000), Hasbrouck and Seppi (2001), and Huberman and Halka (2001) have looked into a wider-angle recognize the important of market-wide liquidity as a systematic risk in influencing the level of stock liquidity. Motivated by the effect of the October 1987 stock market crash and the 1998 Russian debt crisis on the reduction of global liquidity,
Chordia et al. (2000), Hasbrouck and Seppi (2001), and Huberman and Halka (2001) provide evidence on the existence of commonality between market liquidity and stock’s liquidity. Since liquidity affects the stock prices, therefore, any fluctuations in the market liquidity will cause variations in the stock return premium (Madhavan, 2000; Amihud et al., 2006). As a result, commonality in liquidity represents a new source of risk in asset pricing (Chordia et al., 2000; Watanabe and Watanabe, 2007). Since then, the literature has started to focus their attention on the impact of commonality in liquidity as a systematic risk in estimating the stock return variation.

Previously, the implication of liquidity commonality on the stock return is actively studied in the developed market with a quote-driven market structure, however, studies conducted in the emerging markets and an order-driven market structure are scarcely found. This study will fill the gap by examining the effect of liquidity commonality in emerging stock returns that practice an order-driven market system. Unlike studies in the developed market that suggest the positive liquidity-return relationship, most of the studies conducted in the emerging market conclude that liquidity and return are negatively correlated. Rouwenhorst (1999), Drew and Veeragahan (2002), Chan and Faff (2003) and Dey (2005) provide this line of evidence. Vovchak (2013) asserts that the positive relationship between liquidity and return will change in direction if liquidity risk matters in asset pricing. Therefore, recognizing the presence of commonality in liquidity is especially important in the emerging markets to provide some suggestive conclusions on the negative relationship between liquidity and return in this market. Further, studies such as Brockman and Chung (2004) argued that the effect of liquidity commonality is especially stronger in the market with an order-driven market structure because there are no market makers act as a liquidity provider of last resort.

As an emerging market that displays many of the features that are unique to emerging markets (May et al., 2018), therefore, studying the Malaysian stock market provides an ideal setting to test this hypothesis. Further, the Malaysian stock market is an order-driven market structure (Singh and Yusof, 2002) that depends on the limit order in replace of the market makers to provide liquidity in the market. Thus, this study hopes that it will also be able to provide evidence on the existence of the illiquidity premium in an order-driven market structure.

The remainder of this paper is organized as follows. Section 2 reviews and summarizes the related studies, while section 3 concludes the study.

2. Literature Review

Previous studies on market microstructure have agreed on the impact of specific factors; namely inventory risk and information asymmetry on the individual stock’s liquidity. However, since the happened of the Russian debt crisis in 1998 and the 1997-1998 Asian financial crisis, the liquidity evaporation in the financial market becomes a pronounced issue investigated in the academic literature. Since then, the researchers have focused their attention on the impact of market-wide liquidity factors on the firm’s stock liquidity or also known as commonality in liquidity. Among the earlier studies that support this theory are Chordia et al. (2000), Hasbrouck and Seppi (2001), and Huberman and Halka (2001). Based on 1169 stock in NYSE, Chordia et al. (2000) show the existence of commonality in liquidity during 1992 after being tested using various measures of liquidity. In particular, their findings suggest that the changes in market-wide liquidity have a significant effect on the firm’s liquidity even after controlling for the specific determinants of liquidity such as price, volume, and volatility. While Hasbrouck and Seppi (2001) find a stronger effect of common factors both in order flows and return but not in the liquidity proxies for 30 Dow Jones stock during 1994. Studies documented by Huberman and Halka (2001) also provide strong evidence on the existence of commonality in liquidity in 120 NYSE stocks during 1996.

Besides the US market, the existence of commonality in liquidity has also documented in other countries including Australian stock market (Fabre and Frino, 2004), European emerging markets (Będowska-Sójka and Echaust, 2019) and other 47 stock exchanges documented in the study of Brockman et al. (2009). While studies conducted by Brockman and Chung (2002) in the Hong
Kong stock market, Baeur (2004) in the Swiss stock exchange, and Zheng and Zhang (2006) in the China stock exchange lend strong support on the existence of commonality in liquidity in an order-driven market structure. Further, Zheng and Zhang (2006) argued that the impact of liquidity commonality is stronger in a down market. In fact, their study shows that market liquidity is a leading index of the economic state since the market liquidity is worsening well ahead of the market downturns (Næs et al., 2011). Overall, the commonality in liquidity is pervasive across different market settings, different liquidity measures, and different data frequencies. The following Table 1 summarized the study on the commonality in liquidity.

### Table 1: Empirical Studies on the Commonality in Liquidity

#### Panel A: Empirical studies in the United States

<table>
<thead>
<tr>
<th>No.</th>
<th>Studies</th>
<th>Sample</th>
<th>Study period</th>
<th>Liquidity measure</th>
<th>Level of significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Chordia, Roll and Subrahmanym (2000)</td>
<td>1169 of NYSE stocks</td>
<td>1992 (single period)</td>
<td>QSPR, PQSPR, DEP, ESPR, PESPR</td>
<td>Yes</td>
</tr>
<tr>
<td>2.</td>
<td>Hasbrouck and Seppi (2001)</td>
<td>30 DJIA stocks</td>
<td>1994 (Single period)</td>
<td>Order flows,</td>
<td>Yes</td>
</tr>
<tr>
<td>3.</td>
<td>Huberman and Halka (2001)</td>
<td>120 NYSE stocks</td>
<td>1996 (Single period)</td>
<td>QSPR, Spread to price ratio, DEP, VDEP</td>
<td>Yes</td>
</tr>
</tbody>
</table>

#### Panel B: Empirical studies in the other countries

<table>
<thead>
<tr>
<th>No.</th>
<th>Studies</th>
<th>Sample</th>
<th>Study period</th>
<th>Liquidity measure</th>
<th>Level of significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Fabre and Frino (2004)</td>
<td>660 of Australian stocks</td>
<td>2000 (single period)</td>
<td>QSPR, PQSPR, DEP, VDEP</td>
<td>Yes</td>
</tr>
<tr>
<td>5.</td>
<td>Brockman et al. (2009)</td>
<td>47 stock exchanges</td>
<td>October 2002 to June 2004</td>
<td>QSPR, DEP</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes: NYSE=New York Stock Exchange, DJIA= Dow Jones Industrial Average, QSPR=Quoted spread, PQSPR=Proportional quoted spread, DEP=Depth, ESPR=Effective spread, PESPR=Proportional effective spread, VDEP=Dollar depth, ILLIQ=Illiquidity, SHSE= Shang Hai Stock Exchange, SZSE= Shenzhen Stock Exchange.

The evidence on the commonality in liquidity has shown that firm’s stock liquidity is sensitive to the changes in the market-wide liquidity (Chordia et al., 2000) and thus any fluctuations in market liquidity will cause the variations in liquidity premium (Madhavan, 2000; Amihud et al., 2006). As a result, commonality in liquidity constitutes a new source of systematic risk that should be factored in asset pricing or known as liquidity risk (Pastor and Stambaugh, 2003; Acharya and Pedersen, 2005); a risk that the stocks become illiquid when the market is in general illiquid (Acharya and Pedersen, 2005). A high level of commonality in liquidity indicates a high level of liquidity risk that should be compensated with higher returns for holding such stocks (Watanabe, 2004). This line of evidence has shown that commonality in liquidity has financial implications to the investors and portfolio manager. Despite this fact, very few studies conducted to understand the liquidity premium.
associated with the commonality in liquidity, particularly in the emerging market. Among studies that focus on the effect of liquidity commonality risk on stock returns are Pastor and Stambaugh (2003) who found that the higher returns are paid to those stocks that are sensitive to the changes in market-wide liquidity even after controlling the size, value and momentum factor.

In addition to Lee (2011), the impact of liquidity commonality on stock returns has also been studied in other countries such as the Spanish stock market (Martínez et al., 2005), the Portuguese stock market (Miralles-Quirós et al., 2017), the Greek stock market (Papavassiliou, 2013), and the Finish stock market (Butt and Virk, 2015). All this line research provides an agreement on the importance of commonality in liquidity as a priced factor in the stock returns. Although there is a voluminous number of studies conducted in the developed markets, studies done in the emerging markets particularly in the Malaysian stock markets are found to be limited. This is a surprising fact as the event such as the 1997-1998 Asian financial crisis was one that motivates the studies on the commonality in liquidity. The lacking of literature on the emerging market suggests that there is still an open area to discover, which this study tries to fulfill.

Besides, this study will further contribute to the significance of the study by investigating the liquidity commonality phenomenon in an order-driven market microstructure. Although studies such as Brockman and Chung (2002) and Zheng and Zhang (2006) provide evidence on the significant effect of commonality in liquidity in an order-driven market structure, but, very few researches done to identify whether there exists the premium in the liquidity commonality in the emerging stock market with an order-driven market structure. The paper will further validate this issue by investigating its impact on the Malaysian stock market that practiced an order-driven market structure.

3. Conclusion

This paper reviews the related studies on the commonality in liquidity both in the developed markets and in the emerging markets. Besides, this study also discusses some of the empirical evidence on the impact of commonality in liquidity in an order-driven market structure. Despite the extensive studies done discussing the issue of commonality in liquidity, its impact on the emerging stock returns with an order-driven market system is still lacking. Therefore, this study aims to fill this gap by studying the impact of commonality in liquidity in the Malaysian stock market that practiced an order-driven market system.

References

Economics, 56(1), 3-28.