Trading Activity as a Liquidity Measure In Indonesia Stock Exchange

Erna Garnia
Sangga Buana YPKP University
Bandung, Indonesia

Rachmat Sudarsono, Dian Masyita, and Ina Primiana
Padjadjaran University
Bandung, Indonesia

***Abstract*—Trading activity that is indicated by the trading volume or the turnover is the measures of stock market liquidity. This paper presents a theoretical and empirical investigation of the relation between return and trading activity. As a consequence of clientele effect that relating the holding period and bid-ask spread, this paper shows that relation between return per unit price per unit time and trading activity, has a concave form similar as the relation between return per unit price per unit time and bid-ask spread. Based on the monthly data from Indonesia Stock Exchange for the period of 2008-2013, the proposed concept has been validated.**

Key words: trading activity, liquidity, clientele effect

I. INTRODUCTION

Liquidity has been considered as a new investment style that is very important in asset pricing [1]. Though it cannot be defined exactly, liquidity can be simply stated as how fast and how much cost to liquidate a stock or an asset. Thus most important parameters of liquidity are the liquidity level and uncertainty of that level, i.e. liquidity risk. For the measures of liquidity, various measures have been used such as bid-ask spread, trading activity and resiliency. Trading activity is usually indicated by the trading volume or the turnover.

Amihud and Mendelson have shown theoretically and empirically the relation between return and bid-ask spread [2]. The work had also shown that holding period is linearly proportional to the bid-ask spread (clientele effect). As consequence of the clientele effect, the relation between return and bid-ask spread has a concave form. Since this work, a lot of works on liquidity adjusted capital asset pricing model were published.

Many works had published on the relation between return and trading activity. Chordia et al. have shown that trading activity has negative effect on the return [3]. However, Campbell has shown an opposite result that is the trading activity has a positive effect on the return [4]. The result of Campbell has been supported by Chan and Faff, who find that the trading activity is positively affecting the return [5]. As far as authors are aware there are no works have explained why there are contradictory results.

This paper presents a theoretical and empirical investigation of the relation between return and trading activity. As a consequence of clientele effect that relating the holding period and bid-ask spread, this paper shows that relation between return and trading activity, has a concave form similar as the relation between return and bid-ask spread. Based on the monthly data from Indonesia Stock Exchange for the period of 2008-2013, the proposed concept has been validated.

II. REVIEW OF PREVIOUS WORKS

Liquidity is an elusive concept that is difficult to define exactly but can be simply stated as how fast and how much the cost to exchange stocks or assets [6]. Based on that definition, stock liquidity can be measured by transaction cost or liquidation cost, trading activity and resiliency. Transaction cost includes ordering cost, holding cost, adverse selection cost and any applicable taxes. Trading activity is usually measured by trading volume and turnover. Resiliency is an indication how the price is affected by the trading volume.

Though the effects of liquidity on asset pricing have been investigated since a long time ago, Amihud and Mendelson are the first that formulating theoretically the relation between return and liquidation cost [2]. The liquidation cost is measured by the relative bid-ask spread. First they show that the stock holding period is positively affected by the bid-ask spread (clientele effect). Thus an investor must hold a stock longer to compensate the higher liquidation cost. As a consequence of clientele effect, they show that the relation between return and bid-ask spread has a concave form. Amihud also has proposed another liquidity measure that is price impact (resiliency) which measures how the trading volume is affecting the stock price [7]. That paper has shown the positive relation between return and this new illiquidity measure. This concept has been proved at several kinds of securities and also several security markets [8].

Many works on the relation between stock return and trading activity were published. A negative relation between trading volume and stock return has been found [3]. However, an opposite result has also been reported [4]-[5]. There are many works using stock turnover as a measure of trading activity, e.g. [9]-[10]. They have also shown that turnover is priced by the investors. Though a lot of works on the relation between stock return and trading activity are still published until recently [11]-[12], as far as authors are aware, there are no works have explained why there are contradictory results.

Many works have been done in Indonesia Stock Exchange. Febrian and Herwany used GARCH to show bid-ask spread, trading frequency and ratio illiquidity as liquidity measures at Indonesia Stock Exchanges [13]. Madyan et al. were worked at liquidity determinants of sharia and non-sharia stocks. Based on 2009-2010 data, they didn't find the difference of liquidity determinant between sharia and non-sharia stocks [14].