Relations between Market Liquidity and New Listings: Istanbul Stock Exchange (BIST) Evidence

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Abstract

The study aims to discover the interactions between new listings and market liquidity in Turkey. While market liquidity can help the process of an initial public offering, new listings can induce the liquidity. The proof of these two way relationship is beneficial for economic and investment decisions. The fact that empirical researches are very limited in the related literature suggests the importance of the study. The Vector Autoregressive methodology is chosen due to its endogeneity bias and other advantages. The data collected from Istanbul Stock Exchange (BIST) is analysed for the period 2000-2012. Granger causality tests and impulse response functions are utilized. Market liquidity conditions are found useless in new issues of financial markets. It indicates that individuals have other interests than following the ease of trading. The analysis also detects that listings have an effect upon liquidity.

Key Words: Listings, Liquidity, Trading Volume, Hot Market, BIST.

Introduction

The purpose of the study is to discover the relationship between new listings and market liquidity in Turkey. A liquid market has significant contributions in the process of initial public offerings, such as reducing underpricing, transaction costs and volatility (Corwin et al., 2005). Reversely, it is expected that new listings, with the help of growing market size, foster the liquidity (O'Hara, 2001).

Different aspects of market liquidity and new listings have received important attention. Ibbotson and Jaffe (1975), introducing hot issues phenomenon, show cyclical behaviour of the initial public offerings. This fact makes us to think that cyclical fluctuations vary with liquidity. Since new listings tend to increase with market peaks (Suchard and Woo: 2003 and Loughran et al. :1994) and trading volume inclines to grow during the bull market due to well-known disposition effect (Ritter: 2001), liquidity can be the core element of IPO processes.

Determinants of cyclical behaviour are noted in the literature. Lowry (2003) presents evidence on substantial fluctuations in the number of initial public offerings and determines that firm's demand on capital and investor sentiment are strong causal factors of new issues in both statistical and economic conditions. Fama and French (2004) suggest that changing characteristic of new listings is affected by cost of capital. Ghosh (2004), examining Indian market, demonstrates insignificant relationship between IPO's and initial returns and detects that firm's listing decisions are dependent to the number of previously listed companies. Ghosh et al. (1999) state that secondary market volume rises around public offerings because of selling activities arise from the diversions to the discounted primary market.

Levine and Zervos (1998) show that liquidity persists correlated with capital accumulation, growth and productivity growth consistent with the view that the ease of trading ownership maintains efficient capital allocation.

Johannes et al. (2011) state that liquidity affects real economy through facilitating investment channels and bears valuable information for predicting current and future state of the economy. Naceur et al. (2007) exhibit that liquidity is important determinant of stock market development in Middle Eastern and North African countries.

This study tries to find whether new listings are responsive to shocks of liquidity and new listings information is potential predictive variable of market liquidity movements. The Vector Autoregressive (VAR) methodology is implemented. Examining this relationship is new to the current literature.

The importance of the study is that we analyse a theoretically possible impact which is not concerned by empirical studies. The results of the study reveal the listing decisions of the market agents in terms of liquidity. It helps to understand the market's focuses. Analysis results give useful implications for financial management. The study also discovers a determinant of liquidity. Liquidity is essential function of financial and economic development. Listings can be influenced by policy planners of country as a way of maintain liquid financial markets.

Materials and Methods

VAR framework (Sims: 1980) is chosen in order to analyse the monthly data. Trading volume is important feature of liquidity as bid-ask spreads is a function of trade size (Glosten and Harris: 1988). It became usual measure of liquidity in the literature (Aitken and Forde: 2003). The market trading volume is employed as a proxy for market liquidity in this study. New listings include number of the initial public offerings and newly quoted funds.

The data applied in this study are obtained from Istanbul Stock Exchange at a monthly frequency and cover 2000-2012 period. Stationary of components is crucial when one needs to employ a hypothesis test in VAR approach. The summary statistics presented in table 1 reveal that both series satisfy stationary condition for level (I=0) according to The Augmented Dickey-Fuller unit root tests.

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation	Median	ADF Test Prob. Value
Liquidity	28310917	18665964	24721304	0.0001
Listings	1.365385	2.076245	1.000000	0.0015

Median of listings is 1 due to non-existence of new listing in most of the months of sample period, as seen in Figure 2. Figure 3 shows that liquidity measure, unlike listings, has increased gradually.
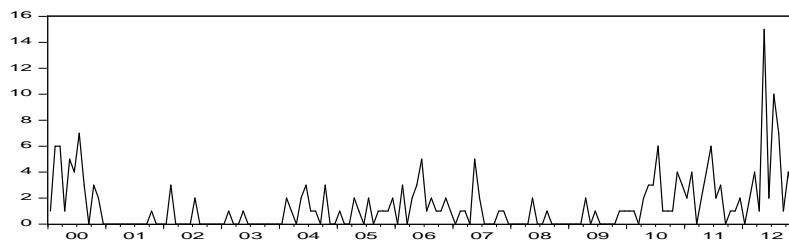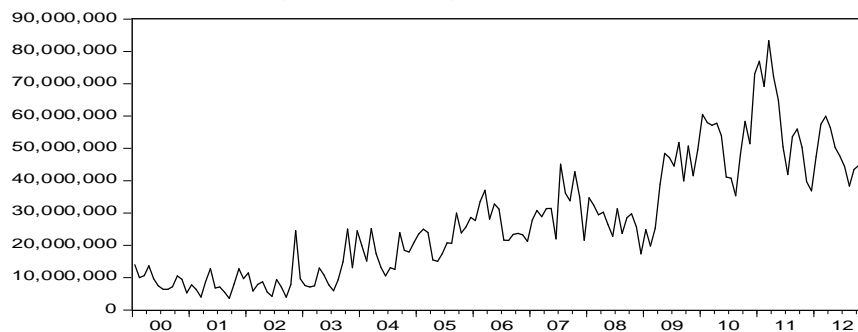

Figure 2: Listings (2000-2012)

Figure 3: Liquidity (2000-2012)

In contrast to single-equation regression, VAR model explains causes, allows to see lag effects and overcomes endogeneity bias. Causes can give benefits to individuals who want to know the future values of the variables.

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Lag effects are also important for the examination of reaction time to the news. According to the literature, the variables can interact bidirectionally, therefore, there is need to eliminate endogeneity bias. VAR model is chosen, since it helps to clear these issues.

VAR model used in the study is displayed in Equation (1) and Equation (2)

$$(1) LIQ = \alpha_{0t} + \sum_{J=1}^{k} \alpha_j + LIQ_{t-j} + \sum_{J=1}^{k} \beta_j + LIST_{t-j} + e_t$$

$$(2) LIST = a_{0t} + \sum_{J=1}^{k} b_j + LIST_{t-j} + \sum_{J=1}^{k} b_j + LIQ_{t-j} + e_t$$

In equations, j is number of lags, LIQ is the liquidity, LIST is the listings, et is the error term, bj and βj are the coefficients of lagged independent variable and α j and aj show the coefficients of lagged regressors.

The lag length is selected using Akaike information criteria, determining the maximum lag at 14 and the minimum at 1. VAR model is able to explain granger causes, impulse-responses and variance decomposition. Next section presents the results of the model.

Results and Discussion

It is shown that listings have part in liquidity of the market. Liquidity does not affect the listings. Impulse response and granger causality analyses are implemented. The results are obtained with aid of the model which is explained in previous section. Figure 3 shows the impulse response functions.
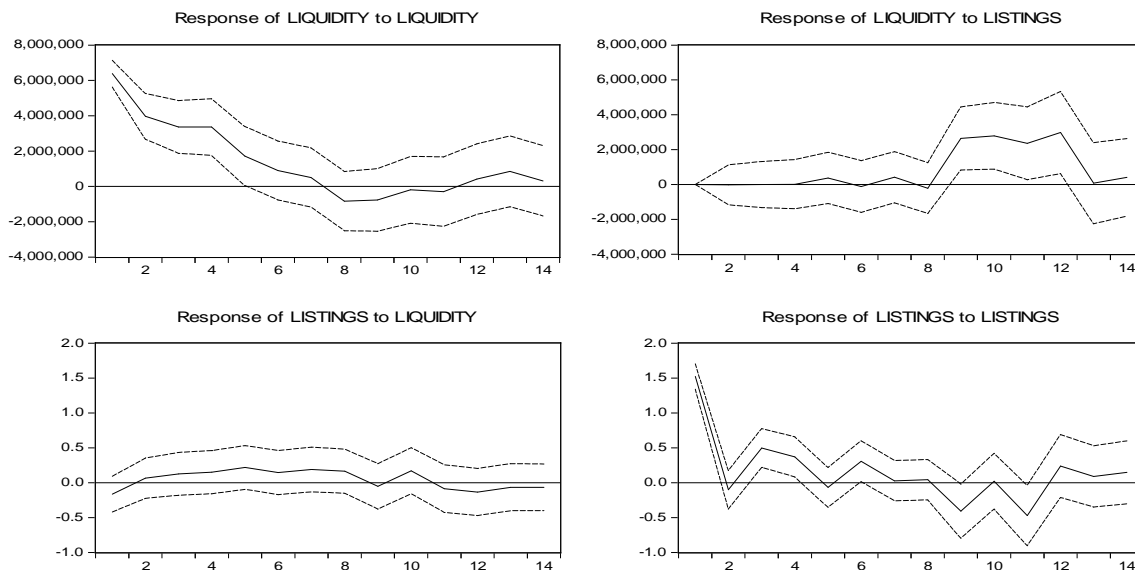

Figure 3: One Standard Deviation Impulse Responses of Liquidity and Listings in A ±2 Standard Error Band

Impulse-response functions is called a primary tool for VAR analysis (Bhargava and Malhotra: 2007) and used to explain the effect of shock in one variable on other variables in the system. Figures show that liquidity and listings increase in response to their own shocks. Instant reaction of liquidity to listings is insignificant. However, liquidity subsequently responds positively and significantly to listings and finally the effect disappears. Positive relationship is expected owing to the fact that market gains size with new listings. The same can be true for listings when we consider benefits of liquid markets. Nevertheless, listings present insignificant reaction to liquidity.

Table 2: Granger Causality Test of Liquidity and Listings

Dependent Variable	Chi-sq	Df	Prob.
Liquidity	29.12731	14	0.0100
Listings	19.06129	14	0.1626

Causalities of the variables are presented in Table 2. Granger's test of causality allows us to decide whether we can predict the future values of a variable by using another variable.

When listings are considered as a dependent variable, liquidity becomes insignificant in order to forecast listings. This result is in aligning with the impulse response analysis. The impulse response functions demonstrate significant positive impact of listings on liquidity. This pattern is also same according to the granger causality test. The test provides evidence of causality at one percent level of significance from listings to liquidity.

Corwin et al. (2005) state that transaction costs, underpricing and volatility problems can be less destructive in liquid financial markets. There are potential benefits for new issuers of financial products. Thus, positive impact of the market liquidity on listings is anticipated. However, our finding is different than what was expected. The benefits of liquidity are not interested by new issuers. A possible reason for that could be different concerns of agents in Turkey. According to Lowry (2003) and Fama and French (2004), agents can pursuit cost of capital and may become highly affected by investor sentiment. The demand on new capital could be another major factor for new issues in Turkey.

O'Hara (2001) explains that liquidity can respond to new listings on account of raising market size. Our results are consistent with this view. This finding can also support the idea that investors diverge between markets as stated in Ghosh et al. (1999).

The basic form of VAR is applied in the study. Complex analyses, considering other potential factors that can take part in the system, may exhibit different results. The variables of the study are proxied by trading volume and numbers of listings. Different proxies are plentiful in the literature. These matters can be considered as the limitations of the study.

Conclusion and Policy Implications

This study employed VAR techniques to enquire the interactions between liquidity and listings. The Causality test results show that listings granger cause liquidity. New listings have information content to predict future market liquidity in Turkey. The opposite relationship is found insignificant. Liquid markets do not manifest the hot issue periods. These findings are supported by impulse-response analysis. Listings do not respond to the liquidity and liquidity begins to react to innovations in new listings after eight month. The effect disappears in one year.

The study is crucial for evidencing the link between liquid and hot markets. Liquidity does not seem to be an element for hot issue markets and practical for new listings. The other factors cited in the literature, like cost of capital, demand on capital and investor sentiment can be the main concerns of individuals in Turkey. The finding that liquidity is significantly affected by liquidity can manifest the deviation between primary and secondary markets. As liquidity is one of the core attributes of financial markets, determining its relations presents important information.

The paper presents some policy implications for Turkey. Liquidity affects growth of the real economy and financial market soundness. The costs and legal requirements of new issues create problems for individuals. Policy planners in Turkey should ease new issue restrictions when the market liquidity wanted to be increased.

Comparing interactions of liquidity and listing conditions between developed and other developing countries could be the intention of future research investigations. Calculating performance of new listings in the conditions of liquidity in Turkey can show useful results. The determinants of liquidity and listings vary in the literature. These factors could be examined by future studies. Surveying practitioners' beliefs can support the relations between liquidity and listings.

References

Aitken, F. and C. C. Forde (2003). How Should Liquidity Be Measured?. Pacific- Basin Finance Journal 11, 45-59.

Bhargava, V.and D.K. Malhotra (2007). The Relationship Between Futures Trading Activity And Exchange Rate Volatility, Revisited. Journal of Multinational Financial Management 17, 95-111.

Borsa Istanbul (2013). Halkaarzve Borsa Istanbul'daIşlem Gorme.Bilgilendirme Kitapcıgı.

Brooks, C. (2008). Introductory Econometrics For Finance. New York: Cambridge University Press.

Corwin, S. A., J. H. Harris, and M. L. Lipson, (2005). The Development of Secondary Market Liquidity. The Journal Of Finance 59, 2339-2373.

Johannes, R. N., A. Skejeltorp and B. A. Odegaard, (2011). Stock Market Liquidity and The Business Cycle. Journal of Finance 66.139-176.

Fama, F. E. and R. K. French, (2004). New Lists: Fundamental and Survival Rates. Journal of Financial Economics 73, 229-269.

Ghosh, C., R. Nag and C. F. Sirmans, (1999). An analysis of Seasoned Equity Offerings By Equity REITs, 1991 to 1995. Journal of Real Estate Financial Economics 19, 175-192.

Ghosh, S. (2004). Booms and Slump Periods in The Indian IPO Market. Reserve Bank of India Occasional Paper 25, 39-56.

Glosten, L. R. and L. E. Harris (1988). Estimating The Components Of The Bid Ask Spread. Journal Of Financial Economics 21, 123-142.

Guo, F. and Y. S. Huang (2010). Does "hot money" drive China's Real Estate and Stock Markets?. International Review of Economics And Finance 19, 452-466.

Ibbotson, R. G. and J. F. Jaffe, (1975)."Hot Issue" Markets. The Journal of Finance 30, 1027-1042

Levine, R. and S. Zervos, (1998).Stock Markets, Banks and Economic Growth.The American Economic Review 88. 537-558

Loughran, T., J. R. Ritter and K. Rydqvist, (1994). Initial Public Offerings: International Insights. Pacific-Basin Finance Journal 2, 165-199.

Lowry, M. (2003). Why Does IPO Volume Fluctuate So Much?. Journal Of Financial Economics 67, 3-40.

O'Hara, M. (2001). Designing Markets For Developing Countries. International Review of Finance 2, 205-215

Ritter, J. (2003). Behavioral Finance. Pacific-Basin Finance Journal 11, 429-437.

Sims, C. (1980). Macroeconomics and Reality. Econometrica 48, 1-48.

Suchard, J. A. and L. A. Woo, (2003). Are Hot Markets Driven By Hot Resource Shares or Hot Commodities? Australian Journal of Management 28, 319-344

Naceur, S. B., S. Ghazouani and M. Omran, (2007).The Determinants of Stock Market Development InTheMiddle-EasternAnd North AfricanRegion. Managerial Finance 33, 477-489.