# Market Makers in Global Stock Markets: Proposing a Model for Egypt

Nashwa Abdelsalam Hafez

Lecturer, Faculty of Business Administration, MSA University, Egypt

### Abstract

This study identifies market maker activity where is the activity that is essentially dependent to provide continuous prices for the purchase and sale of certain securities for the purpose to increase the liquidity of this security, which the market maker provides with this activity. Also, a market maker is the reverse party of the customer, does not act as intermediary or a trustee, but performs the financial hedging of its customer transactions.

There are three main models of market maker in the developed economies; they are New York model, NASDAQ model, and the model of the "electronic market measured by decentralized order". The study analysed the three models and it recommends imitating one of the most advanced models due to the lack of experience. Finally, the study believes that the best model for the Egyptian stock market is the electronic market measured by decentralized order.

#### **Introduction:**

It is well known that capital markets in developing countries are suffering from two basic problems; the first is the shortage of capital supply, and the second is lack of liquidity. Several research papers proved that developing countries can use the implementation of market making activity in order to increase the overall level of liquidity Venkataraman and Waisburd (2007). Moreover, market making activity can be combined with other restructuring policies to raise market quality Majnoni and Massa (2001).

From this perspective, it is investigated that the implementation of a market making system will raise liquidity levels in the market, lowers transaction costs, reduces volatility and improves daily turnover of listed securities Nimalendran and Petrella (2003).

Consequently, it is important to make an assessment to the existed types of market making systems in developed capital markets in order to specify the factors that enable market makers to succeed in achieving these targets.

This study will examine the design of markets in the developed capital markets that succeeded in using market makers to achieve the goals of increasing liquidity, efficiency, and lowering transaction costs.

It is noted that the Egyptian Stock Market is not deep enough (Omran, 2003). One of the main reasons causing this problem is the lack of liquidity in the Egyptian Capital Markets Nimalendran and Petrella (2003). Several global stock markets use market makers in order to provide more liquidity to their markets. From this perspective, promoting market makers activities can be considered a solution to provide additional liquidity to the Egyptian Stock Market. Moreover, recent economic situation in Egypt and the crucial problems that the Egyptian Economy

suffers from nowadays assure the need to add more market makers to the Egyptian Capital Market. Despite the importance of market making activities, there is no research papers dealing with this issue in Egypt. This research paper is considered the first trial to examine and propose the best model of market making to the Egyptian stock market. Moreover, the study will fill the gap in this literature in case of Egypt.

The main objective for this study is to survey the literature of market makers in global stock markets in order to investigate and evaluate the different market making systems found in most developed capital markets and to provide guidance to Egyptian regulators in order to implement an excellent system for market makers in the Egyptian Stock Market. Also, the study will compare between models available to market making in order to choose the best for Egypt. Moreover, the study will determine the most important obligations and privileges of market makers in the successful global stock markets

This study is asking the following questions:

- What are the main models to design market makers activities in the developed stock markets?
- What are the most important obligations and privileges of market makers in the successful global stock markets?
- What is the most suitable model of market makers activities for the Egyptian Stock Market?
- What are the essential recommendations for the Egyptian regulators with regard to market makers' activities?

## **Literature Review:**

Research on this topic started with a number of theoretical papers such as Garman (1976), Amihud and Mendelson (1980), Kyle (1985), Glosten (1989) and Hasbrouck (1991) that discussed the importance of market makers and the vital role that it plays in the formulation of prices.

According to the most recent literature, there exist two different approaches to analysis the effect of market makers. The first approach is a cross-sectional comparison of market quality either in existence of market maker or in absence of it. The other approach that tests the market quality changes after the introduction of market makers activity.

Nimalendran and Petrella (2003) used the second approach and looked at the introduction of the market making system in the Italian Stock Exchange equity trading process. It investigated several market quality measures before and after the implementation of the system, it found that the market has become more efficient. In addition, with regard to the volume, spread and liquidity (depth of the market), this study found that the introduction of market makers has substantially improved liquidity, increased trading volume and lowered the bid-ask spread (cost of trading) of each individual instrument. Evidence showed that this improvement is greater for low trading (illiquid) stocks.

Also, there is Anand and Weaver (2006) that tested the introduction of the specialist system for equity options on the Chicago Board of Options Exchange (CBOE). It concluded that this new "specialist system" improved the spread (both quoted and effective) and the depth of the market. Moreover, the CBOE was able to attract market share from the other major competitor, the AMEX option exchange.

#### **Methodology:**

This study assumes that a suitable model of market making has a positive impact on the liquidity and performance of the stock market in Egypt.

This study will use a descriptive methodology in order to survey the literature of market makers in global stock markets. The study will hold a comparison between the most advanced models of market making applied in developed economies and the model applied in Egypt so far.

Therefore, the study will analyse the advantages and disadvantages of every system of market making. In addition, the analysis will be extended to include the determinants and constraints that are related to such systems. Also, the analysis will cover the factors that explain the differences appeared in these systems of market making. The paper will concentrate on the market design of every system since it is considered one of the most important factors that formulate foreign investors' decisions to invest at any market.

Finally, all findings of this analysis will be used altogether to determine the optimal model of market making to be applied in Egypt.

#### **Definition of Market Maker:**

Market making is the activity that is essentially dependent to provide continuous prices for the purchase and sale of certain securities for the purpose to increase the liquidity of this security, which the market maker provides with this activity. Also, a market maker is the reverse party of the customer, does not act as intermediary or a trustee, but performs the financial hedging of its customer transactions. Its policy includes balancing client transactions and hedging by providing liquidity and capital, according to the relationship between the market maker and customers is based mainly on the supply and demand forces. The market maker shall be a bank, financial

institution or group of banks Institutions and governors with huge financial potential. It enables it to maintain balance in the markets by intervening in the purchase Stock prices have fallen to unjustified levels, or sold in case prices have reached excessive price levels.

The importance of market makers lies in maintaining balance in financial market, especially on selected stocks that has a direct impact on the prices and indicators of financial markets. Market making leads to non-vulnerability to financial crises, especially those arising from the intensity of speculations Rumours and manipulation of stock prices, and the most important channels Tanker, which increases the likelihood of price volatility between The decline and rise without real justification, especially during the absence of justice in Pricing, and the imbalance of the relationship between corporate stock prices and the level Performance. This situation underlines the need for market makers to create a manufacturer inside the market that is always keeping a balance between Supply and demand to narrow the gap between the selling and buying prices.

These market makers achieve the most important function: the ability to liquidate Stock quickly and easily, finding a constant balance between Supply and demand, limiting price fluctuations up or down which leads to stability and proximity to the fair price. Also, ensuring the continuity of the market in carrying out its duties and achieving its objectives. Fluctuations in the Arab stock markets raised many questions regarding the impact of the lack to a market maker. A lot of trading in the Arab capital markets is focused on speculation on very limited number of stocks, which confirms that speculations dominate the performance of Arab stock markets. Because of this volatility in prices, individual investors are exposed to Great losses. Consequently, the need is urgent to market maker, not necessarily be formal or government. The need to market makers should be sensed by Arab securities bodies and should be accelerated through Enacting laws and regulations.

# **Establishing Market Makers:**

Most market makers are established in global and regional markets through either:

- A public shareholding company whose shareholders are all Brokerage companies, investment banks and joint stock companies that are listed for trading in the financial market.
- Establishment of an investment fund that works only as a mutual fund that makes a market for selected shares or approved as a financial intermediator in the global financial markets. Market makers are licensed from financial markets regulator.

# Market Makers in International Stock Markets:

According to (Westerholm et al., 2003; Jain, 2003), market maker systems can be divided into four categories based on market makers' characteristics and trading design.

# 1. <u>New York Stock Market Model:</u>

This system is characterized by the centralized market maker with its broad powers of access to sales and purchase orders. In this type, the market maker is largely decide information regarding sales and purchase orders issued by investors and should be shown to the public. A clear advantage of this model is the satisfaction of institutional investors because they are convinced by the expertise and skills of the hall's mediators and their abilities in exchanging information faster and thus getting prices Good. There is a hall in the market for middlemen. They give their orders in the language of common signs, and then send orders to the market makers - and their number is seven - who in turn will sell and buy if the need arises based on these information, as well as information received electronically. They are keen to maintain liquidity in circulation. Fixes the maker according to this system is the opening price of the share which is not necessarily the previous day's closing price as mentioned above, and the market maker is duty-free when he trades for his benefit.

#### 2. NASDAQ Model:

All forms of trades, in this model, are electronic. The number of market makers for each company is not concentrated on only one as in the model NYSE. Each listed company has many makers in the market who are competing which has a positive impact in increasing the market efficiency and liquidity. Investors are not trading Ordinary in this type of stock exchanges directly among themselves. But through the market makers who are registered in the NASDAQ market, they are around 500 market makers.

#### 3. <u>The model of the "electronic market measured by decentralized order":</u>

This system is available in Euronext, Italy and the Greek Stock Exchange. There can be more than only one market maker for one company and they are competing with each other. Also, they are competing with ordinary investors without a monopoly of information as the case in the New York Stock Exchange.

The main task of the market maker in this model is to increase liquidity available for trading transactions which is done through an agreement between the market maker and the company that issued the listed share. The market maker makes their market for a certain fee, within mechanisms and conditions of the stock market.

#### **Possible Options for Creating a Market Maker in Egypt:**

In fact, talking about the best model For the Egyptian Stock Exchange in the absence of a real system of market making puts policy makers in a critical situation. The governing bodies have two main options;

- Imitating and selecting one of the leading global models and adopting them after standing the advantages and disadvantages of the trade-offs between them, which is the most likely option; or
- while the second option is represented in the formulation of a new model for the market maker which is a difficult option due to the lack to experience in this field.

## The Most Optimal Model for Egypt:

In general, there are deep discussions among experts in developed markets about the advantages and disadvantages of each system of market maker. Of course, some of the controversial elements in this regard include; liquidity, transparency and non-monopoly of the information, the difference between the bid prices and the ask prices, factors of integrity and distance from manipulations powers. On the other hand, the Egyptian stock markets are characterized by high volatility, tight liquidity, and a lack of systems needed to operate Markets with efficient and sophisticated transactions accompanied with weak implementation. In addition, many manipulations, contradictions, and the weakness in investment awareness, lack of specialized calibres, weak institutional investment and shy progress in corporate governance.

For the above reasons, the study believes that the best model for the Egyptian stock market is the electronic market measured by decentralized order. At the current primary stage, there will not be a sudden coup in the market to a centralized system or system depends on the prices set by the market maker. However the trading systems will remain in its general form as it is with some modifications that require the market maker to increase liquidity and comply with trading regulations defined by markets and regulators. It is assumed that markets are considering adopting other models if this stage is successful and the feeling that adopting another model may be appropriate at the time. In this model, the market makers will compete with other market makers for the same the listed company agrees with them, as well as will compete with the market of ordinary investors including institutional investors. For some risk, the market maker takes risks such as a total or partial exemption from the trading fees that the market imposes on the listed company's shares, and fees it gets for its own benefit from the listed company by making its own market, and it may also be given certain privileges such as short selling and margin trading.

The company is expected to be a market maker in the Egyptian stock market for this model and doing its best because it can generate guaranteed income from the listed company concerned and for their revenues or losses as a result of trading. They are assumed to depend on experienced people who are able to manage trading matters to their companies with high professionalism.

#### Features of the Proposed Model of Market Making in Egyptian Stock Market:

The proposed model to operate in the Egyptian Stock Market requires the participation of financial institutions, banks, and joint stock companies or companies and investment funds called "market makers". Licensing and monitoring are done through the Egyptian Financial Supervisory Authority, the latter can also grant licenses to flirt an industry career. In all cases, the licensees are required to satisfy a set of conditions determined by the Securities Commission to perform their duties. After obtaining the license, the market makers compete in pricing to reach the best selling and buying prices. It should be noted that the implementation of orders to buy and sell investors through only intermediaries who have direct contact with the

system of trading, with the need to coordination between intermediaries and market makers.

# **Conclusion:**

From the previous explanation, the study concluded some results that are evident from which the importance of a market maker in the Egyptian stock market appears. The market maker can be a bank, financial institution or group of banks Institutions and investment funds with huge financial potential. It enables to maintain balance in the stock market through intervening with the purchase of stocks when prices have fallen to unjustified levels, or sell in case prices have reached excessive price levels. The volatility of the performance of the Egyptian stock markets, the limited role of the institutional investor in trading operations and leadership in the market increases the urgency to the establishment of the market maker activity. Finally, the study believes that the best model for the Egyptian stock market is the electronic market measured by decentralized order.

# **References:**

- Anand, A., Tanggaard, C. and Weaver, D. 2008, "Paying for Market Quality", Journal of Financial and Quantitative Analysis, forthcoming. <u>https://www.researchgate.net/publication/5092729\_Paying\_for\_Market\_Quality</u>
- Anand, A. and Weaver, D. 2006, "The Value of the Specialist: Empirical Evidence from the CBOE", Journal of Financial Markets, Vol. 9 No. 2, pp. 100-118. https://www.sciencedirect.com/science/article/abs/pii/S1386418106000061
- Battalio, R., Ellul, A. and Jennings, R. 2007, "Reputation Effects in Trading on the New York Stock Exchange", Journal of Finance, Vol. 62 No. 3, pp. 1243-1271. <u>https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1540-6261.2007.01235.x</u>

- 4. Barclay, M. 1997, "Bid-Ask Spreads and the Avoidance of Odd-Eighths Quotes on Nasdaq: An Examination of Exchange Listings", Journal of Financial Economics, Vol. 45 No.1, pp. 35-60. <u>https://www.sciencedirect.com/science/article/pii/S0304405X9700010X</u> <u>https://www.acsu.buffalo.edu/~keechung/MGF743/Readings/D6%20Bid-ask%20spreads%20and%20the%20avoidance%20of%20odd-eighth%20quotes%20on.pdf</u>
- 5. Barclay, M., Kandel, E. and Marx L. 1998, "The Effects of Transaction Costs on Stock Prices and Trading Volume", Journal of Financial Intermediation, Vol. 7 No. 2, pp. 130-150. <u>http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.6267&rep=rep1&type=pdf</u>
- Bennett, P. and Wei, L. 2006, "Market Structure, Fragmentation and Market Quality", Journal of Financial Markets, Vol. 9 No. 1, 49-78. <u>https://www.sciencedirect.com/science/article/abs/pii/S138641810500039X</u>
- Bessembinder, H. and Kaufman, H. 1997, "A Comparison of Trade Execution Costs for NYSE and Nasdaq Listed Stocks", Journal of Financial and Quantitative Analysis, Vol. 32 No. 3, pp. 287-310. <u>https://www.jstor.org/stable/2331201?seq=1#page\_scan\_tab\_contents</u>
- 8. Bessembinder, H. 1999, "Trade Execution Costs on Nasdaq and the NYSE: A Post–Reform Comparison", Journal of Financial and Quantitative Analysis, Vol. 34 No. 3, pp. 387-407. <u>https://www.cambridge.org/core/journals/journal-of-financial-and-quantitative-analysis/article/trade-execution-costs-on-nasdaq-and-the-nyse-a-postreform-comparison/5553D0CCD7C972BD7A8833ED193FEBF9 https://www.jstor.org/stable/2676265?seq=1#page\_scan\_tab\_contents</u>
- Chakravarty, S., Van Ness, B.F. and Van Ness, R.A. 2005, "The Effect of Decimalization on Trade Size and Adverse Selection Costs", Journal of Business Finance & Accounting, Vol. 32 No. 5, pp. 1063-1081. <u>https://onlinelibrary.wiley.com/doi/full/10.1111/j.0306-686X.2005.00622.x</u>
- 10.Comerton-Forde, C. and Rydge, J. 2006, "The Current State of Asia-Pacific Stock Exchanges: A Critical Review of Market Design", Pacific-Basin Finance Journal, Vol. 14 No. 1, pp. 1-32. <u>https://www.sciencedirect.com/science/article/pii/S0927538X05000351</u>

- 11.Chan, K., Covrig, V. and Ng, L. 2005, "What Determines the Domestic Bias and Foreign Bias? Evidence from Mutual Fund Equity Allocations Worldwide", Journal of Finance, Vol. 60 No. 3, pp. 1495-1534. <u>https://onlinelibrary.wiley.com/doi/full/10.1111/j.1540-6261.2005.768\_1.x</u>
- 12.Christie, W. and Huang, R. 1994, "Market Structures and Liquidity: A Transactions Data Study of Exchange Listings", Journal of Financial Intermediation Vol. 3 No. 3, pp. 300-326. <u>https://www.sciencedirect.com/science/article/pii/S1042957384710084</u>
- 13.Christie, W. and Schultz, P. 1994, "Why do Nasdaq Market Makers Avoid Odd-Eighth Quotes?", Journal of Finance, Vol. 49 No. 5, pp. 1813-1840. <u>https://onlinelibrary.wiley.com/doi/full/10.1111/j.1540-6261.1994.tb04782.x</u> <u>https://www.jstor.org/stable/2329272?seq=1#page\_scan\_tab\_contents</u>
- 14. Coughenour, J. and Harris, L. 2004, "Specialist Profits and the Minimum Price Increment", working paper, University of Delaware. https://poseidon01.ssrn.com/delivery.php?ID=349115115064090012084089 1150830920640460630480460950650281240761210670020230060261081 0301304204706012205501912408603101311711007205803003100400608 7069123118101007047064099069026112009111102097077087075067025 121070117100099008112077072124113112084&EXT=pdf
- 15.Heidle, H. and Huang, R. 2002, "Information-Based Trading in Dealer and Auction Markets: An Analysis of Exchange Listings", Journal of Financial and Quantitative Analysis, Vol. 37 No. 3, pp. 391-424. <a href="https://poseidon01.ssrn.com/delivery.php?ID=466101127096064117011111">https://poseidon01.ssrn.com/delivery.php?ID=466101127096064117011111</a> <a href="https://poseidon01.ssrn.com/delivery.php?ID=466101127096064117011111">https://poseidon01.ssrn.com/delivery.php?ID=466101127096064117011111</a> <a href="https://poseidon0100230050260930810870080960780601010380550">https://poseidon01.ssrn.com/delivery.php?ID=466101127096064117011111</a> <a href="https://poseidon02310505200102208702608600306609811009">https://poseidon01.ssrn.com/delivery.php?ID=4661011270960640100380550</a> <a href="https://poseidon02310505200102208702608600306609811009">https://poseidon01.ssrn.com/delivery.php?ID=4661011270960640100380550</a> <a href="https://poseidon02310505200102208702608600306609811009">https://poseidon010380550</a> <a href="https://poseidon02310505200102208702608600306609811009">https://poseidon02310505200102208702608600306609811009</a> <a href="https://poseidon033112093117088122096115096004011015067065084">https://poseidon033112093117088122096115096004011015067065084</a> <a href="https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=287451">https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=287451</a>
- 16.Hendershott, T. and Moulton, P. 2008, "Speed and Stock Market Quality: The NYSE's Hybrid". working paper, University of California, Berkeley. <u>https://www.sciencedirect.com/science/article/abs/pii/S138641811100005X</u>

- 17.Huang, R. and Stoll, H. 1996a, "Competitive Trading of NYSE Listed Stocks: Measurement and Interpretation of Trading Costs", Financial Markets, Institutions and Instruments, Vol. 5 No. 2, pp. 1-53. <u>https://www.jstor.org/stable/2331201?seq=1#page\_scan\_tab\_contents</u>
- 18.Huang, R. and Stoll, H. 1996b, "Dealer Versus Auction Markets: A Paired Comparison of Execution Costs on Nasdaq and the NYSE", Journal of Financial Economics, Vol. 41 No.3, pp. 313-357. <u>https://www.sciencedirect.com/science/article/pii/0304405X9500867E</u>

19.Jain, P. 2003, "Institutional Design and Liquidity at Stock Exchanges Around the World", working paper, Indiana University. <u>https://poseidon01.ssrn.com/delivery.php?ID=800100124064067081090091</u> 0050761020810360460340420330201010030980721210711060930960951 1000301001600704809800001808502401912710307405907903609009809 4125114094124048007077097069066068082065104119065083067069093 091091124068112020099087025066095119078&EXT=pdf https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=869253

- 20.Kyle, S.A. 1985, "Continuous Auctions and Insider Trading", Econometrica, Vol. 53 No. 6, pp. 1315-1335. https://www.jstor.org/stable/1913210?seq=1#page\_scan\_tab\_contents
- 21.Lauterbach, B. 2001, "A Note on Trading Mechanism and Securities' Value: The Analysis of Rejects from Continuous Trade", Journal of Banking and Finance, Vol. 25 No. 2, 419-430. https://www.sciencedirect.com/science/article/pii/S0378426699001326
- 22. Majnoni, G. and Massa, M. 2001, "Stock Exchange Reforms and Market Efficiency: the Italian Experience", European Financial Management, Vol. 7 No. 1, 93-115.

https://onlinelibrary.wiley.com/doi/pdf/10.1111/1468-036X.00146

23.Nimalendran, M. and Petrella, G. 2003, "Do 'Thinly-Traded' Stocks Benefit from Specialist Intervention", Journal of Banking and Finance, Vol. 27 No. 9, 1823-1854.

https://www.sciencedirect.com/science/article/pii/S0378426603001031

24.O' Hara, M. 2001, "Designing Markets for Developing Countries", International Review of Finance, Vol. 2 No. 4, pp. 205-215. <u>https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-2443.00026</u> 25.Pagano, M. and Roell, A. 1996, "Transparency and Liquidity: A Comparison of Auction and Dealer Markets with Informed Trading", Journal of Finance, Vol. 52 No. 2, pp. 571-611.

https://www.jstor.org/stable/2329372?seq=1#page\_scan\_tab\_contents

26.Pagano, M.S. and Schwartz, R.A. 2003, "A Closing Call's Impact on Market Quality at Euronext Paris", Journal of Financial Economics, Vol. 68 No. 3, pp. 439-484.

https://www.sciencedirect.com/science/article/pii/S0304405X03000734

- 27.Panayides, M. 2007, "Affirmative Obligations and Market Making with Inventory", Journal of Financial Economics, Vol. 86 No. 2, pp. 513-542. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=890803</u>
- 28.Sofianos, G. 1995, "Specialist Gross Trading Revenues at the New York Stock Exchange", NYSE Working Paper 95-01. <u>https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=6582</u>
- 29.Sofianos, G. and Werner, I. 2000, "The Trades of NYSE Floor Brokers", Journal of Financial Markets, Vol. 3 No. 2, pp. 139–176. <u>https://qz.com/1078602/why-the-new-york-stock-exchange-nyse-still-has-human-brokers-on-the-trading-floor/</u>
- 30. Theissen, E. 2002, "Price Discovery in Floor and Screen Trading Systems", Journal of Empirical Finance, Vol. 9 No. 4, pp. 455-474. <u>https://www.sciencedirect.com/science/article/abs/pii/S0927539802000051</u>