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The impact of short-selling on market efficiency and liquidity: Evidence from the emerging market of Egypt

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Abstract

The purpose of this study is discussing the recent initiative to activate the short-selling mechanism in Egypt, through the issuance of the regulatory decision no. (268) of 2019 on short-selling. Besides, investigating its effect on market efficiency and liquidity according to market participants' perceptions. A questionnaire was formulated to explore the perceptions of academics, financial analysts, and brokers regarding the possible effects of the activation of short-selling mechanism on market efficiency and liquidity. Data were analyzed using descriptive statistics and multiple regression. Results of analyzing the 117 received questionnaires show that short-selling would not improve market efficiency, measured through price discovery and informativeness. However, there is a significant positive relationship between short-selling and financial reporting quality. Moreover, responses show a significant positive relationship between short-selling and market liquidity measured through; trading activity and volume, bid and ask spread, turnover ratio, and reduced market volatility. These findings support the assumption that short-selling could act as a mechanism to improve liquidity even in emerging markets. This study would benefit policymakers, in Egypt and any other countries with similar contexts, and foreign investment decisions. As it is important to investigate the opinion of parties who would be affected by lifting the restrictions on short-selling.

Keywords: Short-selling, Market Efficiency, Liquidity, Egyptian stock exchange market.

1. Introduction and background

Over the last decade, the Egyptian stock market has witnessed significant changes in the trading environment, regulatory framework, political environment, and economic conditions. To cope with these changes, the Egyptian stock market regulatory agencies agreed to issue a short-selling mechanism on 26th February 2019 as an attempt to improve the performance of the Egyptian stock market. However, it is still unclear whether the short-selling regulations could have the same impact on the less advanced, small, and thin markets, particularly in Egypt, as advanced, large, and deep markets.

A short sale is “a transaction in which short-sellers borrow securities to sell in anticipation of a price decline and return an equal number of the borrowed shares in the future” (Jiang and Chen, 2019). The short seller borrows the security from a securities lender, such as pension funds or insurance companies, either directly or through an intermediary (Geracia, et al., 2018). The goal is to benefit from a share price decline if the short position declines as anticipated. Thus, short-sellers are pessimistic about the future returns of a company’s stock (Gehy, 2013). The two mechanisms for short-selling are covered and uncovered short sales. The covered short sale where the seller borrows the security then sells it short. On the other hand, the uncovered “naked” short sale does not require borrowing the stock beforehand. This could lead to a failure to deliver the security at the time of settlement (Geracia, et al., 2018).

There are various motives to borrow and short sell a stock; namely: purely directional short-selling, various arbitrage trading strategies, and reduction on tax on dividends payment that vary from country to country (Geracia, et al., 2018). Another line of studies considers the short-selling mechanism as a consequence of poor firms’ performance, low reporting quality, and the need to improve liquidity. Chen et al., (2019) stated that it can reasonably be anticipated that firms with ‘flaws’ in their financial reporting information face a higher risk of being sold short. Moreover, Dechow et al. (2001) found that poor performance firms are subject to short-selling that reveals negative information. Additionally, short-selling is also affected by account information quality. Moreover, it was found

that short-selling increases before restatements, whereas stock price decreases after restatement (Desai et al., 2006). Short-selling can also arise from market-making and hedging. The former would provide liquidity to the markets, whereas the latter would allow users to manage risk more effectively (Lou, 2007; Deshmukh et al. 2015).

Short-selling has long been a controversial trading strategy. The academic evidence on the value of short-selling is contradictory. Many financial economists, market participants, and international organizations believe that short-selling might reduce volatility and contribute to market liquidity, thereby enhance overall market efficiency. Others, however, view short-selling as a key factor that contributes to exacerbating market volatility and stock market instability. This study explores how the Egyptian stock market participants perceive the impact of introducing the short-selling mechanism on market efficiency and market liquidity. This impact is considered in the Egyptian stock market as it is classified as a less advanced and emerging one. Furthermore, it provides insights into the country-level effect that are useful for policy-making and foreign investment decisions.

Based on the perceived benefits as well as limitations of short-selling, there is a debate regarding the degree of its restriction. Although most financial regulators agree that short-sellers play an important role to ensure that the market functions efficiently, many of them banned short-selling during the financial crisis (McKenzie and Henry, 2012). For example, in Europe, short-sellers were blamed for the debt crisis, due to usual suspects for financial turmoil and price decline. Consequently, European regulators restricted short-selling activities in 2008 (Bernal et al. 2014). Moreover, some market regulators, especially in less developed markets tend to impose short-selling restrictions to ban short-selling (Jain et al., 2013; Mertzanis, 2017).

Moreover, Jones and Lamont (2002) highlighted potential factors that might contribute to short-selling constraints. First, searching for stock lenders might be costly and time-consuming, especially, in non-centralized shorting markets. Second, stock loans are usually not term loans; this would increase the recall or buy-in risk. Besides, short-selling practices are banned in some countries; due to the illegal and abusive short-selling practices; specifically, bear raids and rumor-mongering that

aim to reduce the stock price; as they would affect market stability (Jiang and Chen, 2019). Accordingly, policymakers started revising policies that would affect short-sellers' trading; to promote market efficiency and ensure that firms would be able to raise capital without price manipulation (Gehy, 2013). However, in countries with fewer regulations, short-sellers together with other market participants, such as institutional shareholders and financial analysts, are considered an additional mechanism to discipline managerial behavior (Jiang and Chen, 2019).

Short-selling regulations differ among countries; being developed or developing according to the market type or size. Chen et al., (2016) highlighted that the difference between the USA and China in the timing of short-selling and margin trading is due to differences in information disclosure regulations. China began to allow stocks to be sold short or bought on margin in 2010 through a list of designated securities, unlike the USA (Chen et al., 2019), where the short sale was banned in 2008 following the subprime crisis; to restore equilibrium to markets. Other European countries banned short-selling in 2011 namely: France, Belgium, Italy, and Spain. However, the stabilization through the short sale constraint is highly controversial (Chang et al., 2014). Ebrahimnejad and Hoseinzade (2019) found that firm-specific information might not be reflected in prices, resulting in higher stock price synchronicity in less developed markets, hence, most emerging markets constrain short-selling. However, removing these constraints would improve price efficiency and reduce the co-movement in prices. Emerging markets could benefit from short-selling by imposing regulations to ensure full and fair disclosure and prevent unlawful insider trading (Chen et al., 2016).

2. Short-selling in Egypt

Since the establishment of the Egyptian Stock Exchange Market, short-selling was banned. However, with the market growth, new financial instruments were needed to improve market efficiency and liquidity. On February 26, 2019, Dr. Mohammed Omran the Chairman of the Financial Regulatory Authority (FRA) issued a regulatory decision no. (268) of 2019 on short-selling rules and activating the mechanism, in which a list of designated securities can be sold short. The decision

indicated that: “the Egyptian Stock Exchange, Misr for Central Clearing, Depository and Registry (MCDR) shall prepare and set up the automated systems and technical requirements related to short-selling mechanism”.

Brokerage companies would have an important role in managing the short-selling system. Besides, they should provide the market with borrowers and lenders and check cash collateral. In addition, the selling proceeds and cash collateral should be reinvested in fixed instruments such as bank deposits, certificates of deposits, treasury bills. Moreover, custodians should enter contracts with clients wishing to short sale their securities where commissions are taken from them. On the other hand, MCDR should ensure that each lender ratio should not exceed 5% of the company's total shares and that each security lending ratio should amount to 20% of the listed shares. The lender maintains the rights and proceeds related to the ownership of the securities.

Based on EGX Chairman Decree No.757 for the year 2019 concerning the criterion of securities eligible for short-selling, the first list was issued in May 2019 with 30 stocks. It was also indicated that it will be updated periodically alongside both lists of securities allowed for specialized activities. During November, this list was updated to include 26 stocks eligible for short-selling transactions starting from December 2019. Fifty-one brokerage companies out of one hundred twenty-eight were licensed to offer short-selling in the Egyptian stock market till 2019. However, only ten big brokerage companies already have the technological system to conduct short-selling transactions.

3. Research Contribution

The contribution of this research is threefold. First, it addresses a recent initiative to activate the short-selling mechanism through the issuance of the regulatory decision no. (268) of 2019 on short-selling rules in Egypt. We think it is important to know the perceptions of market participants regarding this decision. Second, it investigates the opinion of specialists who would be affected by this decision, which in turn, would benefit policymakers in taking further actions or modifying existing regulations. We tried to present opinions of different specialists including academics, financial analysts, and brokers. Third, it addresses the Egyptian market; where results of an emerging market would add

more insights as prior studies focused on the effect of short-selling after some years of its activation or restriction. Moreover, the results of this study might provide additional insights to other emerging markets with similar contexts to enhance the activation of short-selling mechanism in similar developing countries.

4. Literature Review and hypotheses development

Although prior studies investigated the effect of short-selling on stock markets' price discovery, efficiency, liquidity, and market stability, there is still a debate regarding these variables. Theoretical studies focused on one stock market and the results varied with the variations of different investors' assumptions in different markets. Furthermore, there are some limitations of empirical studies, such as the confidentiality of short-selling data in most countries and the variation of short-selling mechanisms and constraints. Therefore, most empirical studies tested short-selling through different approaches, which resulted in different conclusions (Gao and Gao, 2015). Recently, the real or perceived effects of short-selling grasped the attention of regulators as well as market participants such as issuers and investors. Short-selling provides benefits to some markets while negatively affects others. Various studies discussed the benefits of short-selling; the most important of which are price discovery, market efficiency, improving liquidity, and informative short-sellers.

4.1. Short-selling and market efficiency

Prior literature suggests that short-selling, as a correction tool, contributes to stock market efficiency through correcting stocks mispricing. Based on Miller's (1977) work, it is anticipated that the constraints of short-selling would result in stocks' overpricing. This prediction stems from the argument that with the absence of a short-seller, due to restriction, stock prices will reveal only the opinion of optimistic investors and oversight negative information, resulting in stocks over-valuation. With the absence of short-selling, pessimistic investors would not participate in the market, thus, prices would not reflect negative information, enabling enthusiastic buyers to bid prices above the fair prices (Mertzanis, 2017). Similarly, Diamond and Verrecchia (1987) indicated that the presence of short-selling constraints

slows down prices' adjustments to private information, especially to bad news. Despite that, there is still a controversy regarding the impact of short-selling on market efficiency and it has been widely debated, especially, after the financial crisis.

Regulators, governments, and media support the assumption that short-sellers could lead to market declines. In contrast, financial economists have a different view arguing that short-selling leads to market efficiency (Sobaci et al., 2014). Various previous studies' results support the market efficiency assumption. Lou (2007) documented that short-sellers could help expose financial misrepresentation and other investors can potentially benefit from short seller's actions. Diether et al. (2009) results indicated that short-term stock prices' overreactions could be corrected by short-sellers after examining the daily short-selling activity of US stocks during 2005. Sobaci (2014) indicated that short-selling could correct mispricing, thereby, lead to efficient stock markets. Further, Beber and Pagano (2013) confirmed that the ban on short-selling would slow down price discovery. Bansal et al. (2013) also indicated that short-sale constraints reduce negative information incorporation in stock prices. In addition, restrictions on short-selling compromise the ability of the market to efficiently incorporate bad news in asset prices, resulting in an upward price bias (Jones and Lamont, 2002; Chang et al., 2007).

Similarly, previous studies suggested that the removal of short-selling restrictions would accelerate the incorporation of negative information into stock prices, and, in turn, increase price efficiency (Bris et al., 2007; Saffi and Sigurdsson, 2011; Boehmer and Wu, 2013). Accordingly, removing short-selling constraints would be considered a mechanism to enhance the overall market efficiency and liquidity. Chang et al. (2014) found that lifting the ban on short-selling would increase price efficiency and decrease stock return volatility. Further, Chen et al. (2016) conclude that stock prices' information efficiency has a positive association with short-selling intensity. Jiang and Pang (2016) found that short-selling improves investment decisions through increasing stock price informativeness. Jin et al. (2018) indicated that short-selling facilitates the flow of unfavorable news into stock prices that would improve stock price discovery and information efficiency. Moreover, short-selling could predict security price's poor performance (Chang et

al., 2019). Accordingly, various studies support that short-selling would result in more efficient price discovery (Bris et al., 2007; Chang et al., 2007; McKenzie and Henry 2012; Boehmer and Wu, 2013).

Jin et al. (2018) indicated that short-selling affects corporate financial decisions positively. Besides, it increases accounting conservatism in short-selling Chinese firms. Karpoff and Lou (2010) found that short-sellers could identify, discover, and mitigate the effects of any financial misconduct. Furthermore, short-selling would enhance conservative accounting, as managers are required to identify and disclose bad news in financial reports (Jin et al., 2018). Therefore, short-sellers trading behaviors imply information signals to less-informed investors (Hu and Chi, 2019). Lepone et al. (2019) studied the impact of short-selling restrictions on futures mispricing in the market. It was found that short-selling restrictions result in more persistent futures underpricing in the market. Similar to the scope of the current research, Ebrahimnejad and Hoseinzade (2019) examined the effect of short-selling on stock price using a designated list of companies to be sold short in Hong Kong. They found that after the removal of short-selling constraints, the informativeness of stock prices increase.

Another stream of studies adopts the assumption that short-selling mechanism could negatively affect market efficiency. Uninformed and manipulative short-sellers might create fear among investors in a down market and cause market over-reactions, particularly to the negative corporate news event. Critics of short-selling argue that short-sellers manipulate share prices to pursue profits (Deshmukh et al., 2015). Short-sellers have received negative media attention and have been blamed for manipulating share prices downward and contributing to the financial crisis (Gehy, 2013). M Weiner et al. (2004) indicated that when stock prices of thinly capitalized issuers decline, often, the blame is on the short-seller. Moreover, other market participants have a concern regarding short sales conduct and view it as disruptive or manipulative. Supporting the stabilization function played by the short-sale constraint, Bris et al. (2007) found that stock returns are less negatively skewed in countries where short-selling is either not allowed or not practiced.

Lou (2007) revealed that there is an argument that companies targeted by short-selling activity often accuse short-sellers of

manipulation by spreading negative information about that companies. Similarly, Desai et al. (2006) and Christophe et al. (2010) found that short-sellers would exploit private information on upcoming negative corporate news before information announcements. Besides, Bernal et al. (2014) concluded that all short sale regulations harm market efficiency. Baklaci et al. (2016) found that trading activities by short-seller cause volatility of price changes, hence, destabilize the stock market. More recently, Engelberg et al., (2018) demonstrated that short-sellers are subject to various risks, as the risk that stock loans become expensive or recalled. Hence, stocks with more short-selling risk have lower returns, less price efficiency, and less short-selling.

According to the above discussion of the literature, the impact of short-selling on market efficiency provides inconsistent results from a different context. Some prior studies support the positive impact of short-selling on market efficiency through correcting any price overreactions, exposing financial misrepresentation, increasing accounting conservatism, increasing stock price informativeness. In contrast, other prior studies argued that the short-selling mechanism negatively affects market efficiency through manipulating share prices to pursue profits or increasing market volatility of the market. Accordingly, it can be expected that the activation of short-selling in the Egyptian stock exchange market might affect the market efficiency; therefore, the following null hypothesis is formulated:

H01: The activation of the short-selling mechanism in Egypt would not affect the market efficiency.

This hypothesis will be tested through the following sub hypotheses:

H01A: The activation of the short-selling mechanism in Egypt would not affect the price discovery.

H01B: The activation of the short-selling mechanism in Egypt would not affect the financial reporting quality.

H01C: The activation of the short-selling mechanism in Egypt would not affect the informativeness of the market.

4.2. Short-selling and liquidity

Many prior studies were concerned with how short-sellers might contribute to the provision of liquidity. For example, Blau and Whitby (2018) indicated that regulators believe that short-selling is an important part of liquidity provision. Moreover, Diether et al. (2009) viewed that some liquidity providers might be willing to short stocks; to provide liquidity during bullish periods. Furthermore, Blau and Whitby (2018) concluded that the presence of short-sellers, being informed traders, the market makers would widen bid-ask spreads. Similarly, Sobaci et al. (2014) found that increased short-selling was associated with higher liquidity and less volatility, thus improving market quality in Turkey, in the whole sample period; including the financial crisis in 2008.

Supporting this view, some studies highlighted that the ban or constraints of short-selling would be unfavorable to the market liquidity. Lensberg et al. (2015) indicated that when more than 30 countries banned short-selling in 2008, financial practitioners, in contrast to policymakers, claimed that these regulations would reduce liquidity and increase the cost of capital. Moreover, Boehmer et al. (2013) found that although the USA ban in 2008 was intended to stabilize the capital markets, it resulted in reduced liquidity, slow price discovery, and reduced market quality. Alves et al. (2016) also found that short-selling bans negatively affect liquidity after their implementation. Moreover, other studies claimed that constraints on short-selling would result in reduced liquidity and higher volatility, which, in turn, would negatively affect the market quality (Sobaci, et al., 2014). Beber and Pagano (2013) indicated that imposing bans or regulatory constraints during the crisis (2007-2009) was unfavorable to market liquidity, especially for stocks with small market capitalization. Besides, Jin et al. (2018) indicated that regulators in some emerging markets ban short-selling; as it is considered risky and would increase market volatility while undermining market confidence due to the presence of informed, short-sellers, and uninformed traders.

Although the above-mentioned studies highlighted the positive effect of short-selling on market liquidity, other studies suggested that short-selling negatively affects liquidity. For example, Karpoff and Lou (2010) claimed that short-sellers decrease market liquidity as they

undermine investors' confidence in the market. Moreover, Jin et al. (2018) regarded that as short-selling increase market volatility and undermine investors' confidence, it could be considered risky. Furthermore, Sharif et al. (2014) concluded that the trading volume would decline when less informed and uninformed investors avoid trading against better-informed short-sellers. Finally, Brunnermeier and Pedersen (2005) indicated that predatory traders might front-run short-sellers, attempting to liquidate their positions, resulting in less liquidity.

To sum up, studies that supported the relationship between short-selling and market liquidity showed contradictory results. Whereas some studies concluded that short-selling would increase liquidity by affecting its measures, such as trading activity, trading volume, bid and ask, turnover ratio and reduced volatility, another stream of studies supported the opposite view. Results would vary according to the choice of data and methodology used for the analysis and the microstructure setting in which the analysis is carried out (Mertzanis, 2017).

On the other hand, Mertzanis (2017) claimed that there is no relationship between short-selling and market liquidity. It was found that although short-selling would result in more volatile aggregate stock returns in the short run, it does not significantly affect the market. Finally, the study indicated that the effect of short-selling on market volatility and liquidity needs further investigation, where considering the institutional firm-level and country-level elements would provide a more comprehensive understanding. Based on the different results of prior studies, the following hypothesis is formulated to test the relationship, if any, between short-selling and market liquidity within the Egyptian context.

H02: The activation of the short-selling mechanism in Egypt would not affect the market liquidity.

This hypothesis will be tested through the following sub hypotheses:

H02A: The activation of the short-selling mechanism in Egypt would not affect the trading activity and volume.

H02B: The activation of the short-selling mechanism in Egypt would not affect the bid and ask, turnover ratio, and volatility.

5. Data collection

Data was gathered through a questionnaire to determine respondents' perception regarding the activation of short-selling in Egypt and its effect on efficiency and liquidity. It included a cover page indicating the main purpose and assuring confidentiality besides illustrating the used concepts. It was divided into 3 sections: personal information, 30 questions, and other comments. A Likert scale was used: completely agree, agree, neutral, disagree, or completely disagree. These categorical data were then converted into numeric data for regression analysis; from 1 (completely disagree) to 5 (completely agree).

Questions were then divided into 5 groups, the first one (3 questions) considered the difference between Egypt and developed countries, the benefit for the Egyptian stock market, and restrictions in case of market instability. The second one (4 questions) aimed to measure the independent variable, short-selling: timing, number of stocks, market participants' encouragement, and capabilities to effectively use it. The third group measured the dependent variables; efficiency was measured through price discovery (4 questions), financial reporting quality (3 questions), and informativeness (5 questions). Besides, liquidity was measured through trading volume and activity (4 questions), bid and ask, turnover ratio, and volatility (3 questions). The fourth group (2 questions) measured the control variables: industry type and company size. Finally, the last group (2 questions) aimed to validate the answers of the dependent variables. These measures were selected based on the literature used empirical measures then it is converted into questions to reflect each variable.

5.1 Population and sample size

The population of this study is experts in the Egyptian stock market as the questionnaire aims to explore their opinions regarding the activation of short-selling in Egypt. Accordingly, the researchers regarded both the academics –with accounting or finance majors, as well as practitioners, including financial analysts and brokers. Besides, academic staff in universities are targeted as being knowledgeable about the field and the newly issued regulations. This choice is mainly to consider the difference in opinions between academia and market

practitioners. The researchers focused on academics in Egyptian Universities. As for practitioners, the target group was financial analysts and brokers working in the Egyptian market, whether in brokerage companies, private institutions, banks, or the Egyptian stock market.

The researchers could not identify the specific number of total populations; as there is no census for the financial analysts, brokers and academics specialized in accounting and finance. Accordingly, the sample size was determined based on the number of questions; the questionnaire had 30 main questions. Given that the acceptable sample size would have 10 observations per variable (10:1) (Hair et al., 2010), the sample size was 300. The researchers distributed the questionnaires to the target group, through an online copy using “Google form”. This comprises both Arabic and English versions of the questionnaire.

First, the questionnaire was sent via email to all brokerage firms in Egypt. Besides, individual messages were sent to financial analysts and brokers through LinkedIn. The recipients were selected randomly, taking into consideration the weight of the three categories: academics, financial analysts, and brokers. As for academics, the researchers contacted them personally through private messages. Responses were gathered during three months, where we received 17 Arabic responses and 100 English responses. The response rate was 39%, which was considered acceptable as the number of responses exceeded the minimum number of observations required to run SPSS is 30.

6. Data analysis

Data were analyzed using SPSS (26); both descriptive (frequencies and cross-tabulation), as well as statistical analyses (Cronbach’s Alpha, and multiple regression), were used. The former was used for the first section of the questionnaire, as well as the first and last groups of questions. The latter was used for the second, third, and fourth groups of questions.

6.1.Descriptive analysis

6.1.1.Sample description

The researchers received 117 complete questionnaires from financial analysts (34.2%), academic staff (30.8%), brokers (14.5%), and

others (20.5%). Other respondents included: bankers, administrators, credit analysts, accountants, financial managers, investment managers, financial consultants, technical analysts, investors. The researchers regard the variation between academics and practitioners (financial analysts and brokers) as informative as different perceptions are considered. Most respondents are specialized in finance (60.7%), compared to 24.8% in accounting. The other 14.5% were specialized in marketing, administration, credit, banking, economic sciences, and law. This was due to they are more familiar with the topic and had some experience with short-selling, more than the other specializations. As for the years of experience, it was approximately equally distributed among “less than 5 years: (35%), “from 5 to 10 years” (26.5%), and “above 10 years” (38.5%). The researchers regard this distribution as reliable as different opinions from different generations were considered.

6.1.2. Frequencies and cross-tabulation

The following tables (1 & 2) summarize the results of the descriptive statistics for the first group of questions; including measures of central tendency (mean, median, and mode), as well as measures of variability (standard deviation). Besides, cross-tabulation was conducted to analyze the difference in responses between the 3 categories of the population; academics, financial analysts, and brokers; as well as the difference in opinions according to the years of experience; which ranged from less than 5 years, between 5 and 10 years and more than 10 years.

According to previous studies, short-selling mechanisms might differ from developing to developed countries. Question (6) investigated whether the consequences of short-selling in Egypt, as a developing country, would differ from developed countries. Results showed that on average, respondents agreed that the consequences of short-selling in Egypt would differ from developed countries (mean 3.83). Similarly, the median was also 4 “agree” and the mode was 4; indicating that most respondents agreed that there would be differences. Moreover, it also revealed a deviation of (1.077); This result is consistent with Jain et al. (2013), Chen et al. (2016), Mertzanis (2017), Ebrahimnejad and Hoseinzade (2019); which pointed variations between developing and developed countries; in the timing of short-selling activation or banning and its impact on stock prices.

Cross tabulation indicated that there are differences between respondents according to their jobs. 75% of the academic staff agreed -or strongly agreed- that there would be a difference, whereas 63% of financial analysts had the same opinion, compared to 59% of brokers and 58% of “others”. This variation might result from the gap between academics and practitioners. In other words, 75% of academics’ views there would be a difference, where 60% of practitioners agree. As for the specialization, there were slight differences (69% accounting specialization, 63% finance, and 64% other specialization). Results also varied according to the years of experience; respondents with the least experience (less than 5 years) agreed the most that there would be a difference (76%), followed by 62% of the most experienced (more than 10 years) and only 55% of 5 to 10 years’ experience. The researchers view that years of experience has a role in expressing their opinions that is subject to more experiences.

As short-selling is considered a new mechanism for the Egyptian market, question (9) investigates whether the Egyptian market would benefit from its activation nowadays. Results showed that on average, respondents agreed that there would be some benefits (mean 4.03). Similarly, the median was also 4 “agree” and the mode was 4; indicating that the most chosen opinion was “agree”. Moreover, it also revealed a standard deviation of (0.973). These responses are consistent with the literature that short-selling provides various benefits, such as price discovery, efficiency, liquidity, and less volatility (Bris et al., 2007; McKenzie and Henry, 2012; Sobaci, et al., 2014; Chang et al., 2016; Jin et al., 2018). Further, this result is consistent with some comments of practitioners, who encouraged the introduction of short-selling.

Cross tabulation indicated that academics were more optimistic regarding the benefits from short-selling (92% either agreed or completely agreed that there would be benefits compared to 70% of practitioners). Opinions of brokers, financial analysts, and others were quite similar (71%, 68%, and 75% respectively). Furthermore, there were fewer variations based on specialization (86% of accounting specialization agreed, compared to 75% finance and 71% other specialization). Besides, those with less than 5 years of experience were the least pessimistic regarding the benefits that short-selling would render

(66%), compared to 81% of 5 to 10 years' experience and 84% of more than 10 years' experience.

In many countries, some restrictions are made on short-selling. Question (10) investigated whether restrictions of short-selling are preferred in case of market instability. Results, on average, were slightly above neutral towards imposing restrictions in case of market instability (mean 3.29). Similarly, the median was also 3 "neutral". However, the mode was 4; indicating that the most chosen opinion was "agree". Moreover, it also revealed a standard deviation of (1.333); which is a relatively high variation of responses compared with the other two questions (Q6 & Q9). This result is inconsistent with Jain et al. (2013) and Mertzanis (2017) that noted the restriction of short-selling is used in less developed countries to increase stability. The researchers view that this might be because it is still relatively new in Egypt, so there is no clear conception regarding the appropriate time for restrictions.

Cross tabulation indicated high variation in opinions, regarding imposing restrictions in case of market instability, between academics (61%) compared to practitioners (44%). However, opinions of different categories of practitioners were similar (47% brokers, 45% financial analysts, and 42% others). As for the first two questions, results did not vary a lot according to the specialization (48% accounting, 51% finance, and 47% other). Finally, the years of experience affected the opinions (39% of the least experienced, compared to 55% of the moderate experienced and 56% of the more experienced).

Table (1): Descriptive Statistics

	Q6	Q9	Q10
N	117	117	117
Mean	3.83	4.03	3.29
Median	4.00	4.00	3.00
Mode	4	4	4
Std. Deviation	1.077	.973	1.333

Table (2): Cross tabulation

	Q6				Q9				Q10				Total															
	a)Job		b) Special.		c) Exp.		Total	a)Job		b)Special.		c)Exp.		Total														
	Academics	Broker	Fin. Anal	Other	Acc.	Fin.		Other	< 5 years	5-10 years	> 10 years	Academics			Broker	Fin. Anal	Other	Acc.	Fin.	Other	< 5 years	5-10 years	> 10 years					
Completely Disagree	0	1	3	0	0	0	3	4	0	0	2	0	2	0	0	0	2	1	6	7	3	6	9	2	2	4	11	17
Disagree	2	1	4	2	3	4	2	9	0	2	5	1	8	1	6	1	8	4	1	5	5	3	10	2	6	5	4	15
Neutral	7	5	8	6	19	3	28	9	3	6	5	11	28	3	10	4	17	9	2	10	6	6	16	5	17	5	27	
Agree	13	6	14	5	11	21	38	14	13	11	11	28	47	14	19	14	47	16	4	8	5	8	21	4	9	12	33	
Completely Agree	14	4	11	9	9	24	38	14	11	14	7	24	43	6	13	5	43	6	4	10	5	6	15	4	7	5	25	
Total	36	17	40	24	29	71	117	45	36	17	40	24	117	36	41	31	117	36	17	40	24	29	71	17	41	31	45	117

6.1.3. Statistical Analysis

6.1.4. Reliability of the questionnaire

Cronbach's Alpha was used to test the reliability of the used questionnaire. It was found that the overall reliability of the questions is (0.82) which is considered acceptable. The following table shows the reliability statistics for the whole questionnaire, as well as for each measure. As shown below, Cronbach's Alpha is greater than half for all measures, with close values, except for "market informativeness".

Table (3): Reliability statistics

Variable	No. of questions in each variable	Cronbach's Alpha
Short-selling	4	.579
Efficiency-Price discovery	4	.547
Efficiency- Financial reporting quality	3	.553
Efficiency- informativeness of the market	5	.355
Liquidity- Trading activity & volume	4	.598
Liquidity- Bid & Ask, Turnover ratio and Volatility	3	.603
Overall questionnaire	30	.818

6.1.5. Multiple Regression

This section presents the results of the statistical analysis used to test the study's hypotheses. Regression was used to test the strength and direction of the relationship between short-selling and each of market efficiency and market liquidity. As indicated previously, market efficiency is tested through; price discovery, financial reporting quality, and informativeness. Market liquidity is tested through; trading activity and volume, bid and ask, and turnover ratio and volatility. Since the effect of short-selling on the market would vary according to industry type or company size (Chen et al., 2016; Jiang and Pang, 2016; Hu and Chi, 2019), they are included as control variables in the regression models. Furthermore, as various measures of liquidity are likely related

to efficiency measures, liquidity measures are considered as control variables when measuring efficiency and vice versa.

6.1.6. Testing the first hypothesis

The first hypothesis assumes that short-selling would not affect market efficiency, through; price discovery, reporting quality, and informativeness. Multiple regression was used to test whether the activation of short-selling, as an independent variable, would affect each market efficiency measure independently and the efficiency compound variable, while controlling for the effect of size, industry type, and liquidity measures.

The first model tests whether the activation of short-selling in Egypt would affect price discovery, considering the above-mentioned controls. Regression results, table (4), show that 16% only of variation in efficiency-price discovery can be attributed to short-selling, industry type, size, and liquidity measures, which indicates that there are other economic and market factors beyond our analysis and focus that might affect it. Further, short-selling has an insignificant positive relationship with price discovery. This result is inconsistent with previous studies of Chang et al. (2007), McKenzie and Henry (2012), Sobaci et al. (2014), Chen et al. (2016), Mertzanis (2017), Jin et al. (2018). Hence, the first null sub-hypothesis is accepted; indicating that the activation of the short-selling mechanism would not affect price discovery. In addition, the firm size has a significant positive relationship with price discovery at 0.05. This result is consistent with the argument in the literature that the positive impact of short-selling is more pronounced in large firms (Chen et al., 2016; Hu and Chi, 2019).

$$\text{EFF.PRIC} = \text{B}_0 + \text{B}_1 \text{SH} + \text{B}_2 \text{Ind} + \text{B}_3 \text{Size} + \text{B}_4 \text{Liq}_1 + \text{B}_5 \text{Liq}_2 \dots \dots \dots \text{Model (1)}$$

Where:

EFF.PRIC= Efficiency measured by price discovery.

SH= Short-selling.

Ind= Industry type.

Size= Size.

Liq₁= Liquidity measured by trading activity and volume.

Liq₂= Liquidity measured by bid and ask, turnover ratio, and volatility.

The second model tests whether the activation of short-selling in Egypt would affect the financial reporting quality, considering the controls. Regression results, table (4), show that 27.8% of the variation in financial reporting quality can be attributed to variation in short-selling, industry type, size, and liquidity measures. Moreover, short-selling has a positive significant relationship with financial reporting quality, at a significance level of 0.05. This result confirms the empirical literature that indicates that short-selling increases conservatism in financial reporting and exposes financial misrepresentation (Lou, 2007; Karpoff and Lou, 2010; Lou, 2010; Jin et al., 2018). Accordingly, the second null sub-hypothesis is rejected; indicating that the activation of the short-selling mechanism would positively affect financial reporting quality. Moreover, the size and the Liq₂ have a significant positive relationship with reporting quality at 0.01 level.

$$\text{EFF.REP} = \text{B}_0 + \text{B}_1 \text{SH} + \text{B}_2 \text{Ind} + \text{B}_3 \text{Size} + \text{B}_4 \text{Liq}_1 + \text{B}_5 \text{Liq}_2 \dots \dots \dots \text{Model (2)}$$

Where:

EFF.REP= Efficiency measured by financial reporting quality.

Other variables: same as in model (1).

Table (4): Regression results: Models 1 and 2

	Panel A: Model (1) Summary					Panel A: Model (2) Summary				
	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>Std. Error</i>	<i>Sig. F</i>	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>Std. Error</i>	<i>Sig. F</i>
	0.401	0.161	0.123	2.705	0.001	.527	.278	.245	1.899	0.000
Independent variables	Panel B: Coefficients					Panel B: Coefficients				
	<i>Unstand. Coeff.</i>		<i>Stand. Coeff.</i>			<i>Unstand. Coeff.</i>		<i>Stand. Coeff.</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t-value</i>	<i>Sig.</i>	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t-value</i>	<i>Sig.</i>
(Constant)	6.440	1.945		3.311	.001	4.119	1.366		3.016	.003
SH	.127	.090	.140	1.413	.160	.138	.063	.202	2.189	.031
Ind	.226	.232	.091	.976	.331	.148	.163	.078	.907	.367
Size	.554	.277	.192	1.998	.048	.546	.195	.251	2.806	.006
Liq ₁	.015	.110	.014	.138	.890	-.018	.078	-.022	-2.31	.818
Liq ₂	.214	.129	.170	1.657	.100	.242	.091	.255	2.677	.009
Dependent Variable	EFF.PRIC					EFF. REP				

The third model tests whether the activation of short-selling in Egypt would affect the market informativeness, considering the controls. Regression results, table (5), show that only 13.9% of the variation in informativeness can be attributed to short-selling, industry type, size, and liquidity measures. Further, there is no significant relationship between short-selling and informativeness. Hence, the third null sub-hypothesis is accepted; indicating that the activation of short-selling would not affect informativeness. This is inconsistent with Engelberg et al. (2012), Chang et al. (2014), Jiang and Pang (2016), Blau and Whitby (2018). Besides, Liq₁ has a significant positive relationship with informativeness at 0.01 level. This might be due to the assumed relation that liquidity might enhance efficiency and vice versa.

$$\text{EFF.INF} = B_0 + B_1 \text{SH} + B_2 \text{Ind} + B_3 \text{Size} + B_4 \text{Liq}_1 + B_5 \text{Liq}_2 \dots \dots \dots \text{Model (3)}$$

Where:

EFF.INF= Efficiency measured by informativeness.

Other variables: same as in model (1).

The fourth model tests whether the activation of short-selling in Egypt would affect the efficiency compound three measures, considering the controls. Results, table (5), show that the 27.3% of changes in total market efficiency, could be attributed to the activation of short-selling, industry type, size, and liquidity measures. Furthermore, there is no significant relationship between short-selling and efficiency compound measure. This is inconsistent with Chang et al. (2014), Chen et al., (2016), Jin et al. (2018), and Ebrahimnejad and Hoseinzade (2019). This might be attributed to investigating perceptions of the consequences of activating short-selling based on a questionnaire, while prior studies analyzed the effect of the presence of short-selling on market efficiency. Accordingly, the first main null hypothesis is accepted supporting that short-selling does not affect the compound market efficiency. However, the size and Liq₂ show a significant positive relationship with compound market efficiency at 0.05. These results support the assumption that liquidity is one of the main variables that enhance market efficiency. Moreover, short-selling within larger companies would affect efficiency.

$$\text{EFF.COM.} = B_0 + B_1 \text{SH} + B_2 \text{Ind} + B_3 \text{Size} + B_4 \text{Liq}_1 + B_5 \text{Liq}_2 \dots \dots \dots \text{Model (4)}$$

Where:

EFF.COM= Efficiency measured by a compound measure of EFF.PRIC, EFF.REP, and EFF.INF

Other variables: same as in model (1).

Table (5): Regression results: models (3) and (4).

	Panel A: Model (3) Summary					Panel A: Model (4) Summary				
	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>Std. Error</i>	<i>Sig. F</i>	<i>R</i>	<i>R</i> ²	<i>Adj. R</i> ²	<i>Std. Error</i>	<i>Sig. F</i>
	.372	.139	.100	2.574	0.005	.522	.273	.240	5.145	.000
Independent variables	Panel B: Coefficients					Panel B: Coefficients				
	<i>Unstand. Coeff.</i>		<i>Stand. Coeff.</i>			<i>Unstand. Coeff.</i>		<i>Stand. Coeff.</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t-value</i>	<i>Sig.</i>	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t-value</i>	<i>Sig.</i>
(Constant)	9.668	1.851		5.224	.000	20.227	3.699		5.468	.000
SH	-.020	.085	-.023	-.230	.819	.245	.170	.133	1.436	.154
Ind	.346	.221	.148	1.567	.120	.720	.441	.141	1.632	.106
Size	.193	.264	.071	.732	.466	1.294	.527	.220	2.453	.016
Liq ₁	.283	.105	.281	2.696	.008	.281	.210	.128	1.336	.184
Liq ₂	.099	.123	.084	.809	.420	.555	.245	.216	2.264	.025
Dependent Variable	EFF. INF					EFF. COM				

6.1.6.1. Testing the second hypothesis

Multiple regression was used to test whether the activation of short-selling would affect each liquidity measure independently as well as the compound measure while controlling for the effect of size, industry type, and the three efficiency measures.

The fifth model tests whether the activation of short-selling in Egypt would affect liquidity measured by the trading activity and volume, considering the controls. Results, table (6), show that 19.7% of the variation in trading activity and volume can be attributed to short-selling, industry type, size, and efficiency measures. Moreover, there is a significant positive relationship between short-selling and trading activity and volume, at a significance level of 0.01. This is consistent with Chague et al. (2019) that short-selling increases trading volume, while inconsistent with Sharif et al. (2014) that short-selling decreases trading volume. Hence, the null hypothesis is rejected; indicating that the activation of short-selling would positively affect the trading activity and volume. Besides, informativeness, as a measure of efficiency, has a

significant relationship with Liq_1 at 0.01, supporting that informed market participants might enhance the liquidity by increasing their trading volume.

$$Liq_1 = B_0 + B_1 SH + B_2 Ind + B_3 Size + B_4 EFF.PRIC + B_5 EFF.REP + B_6 EFF.INF \dots \dots \dots \text{Model(5)}$$

Where:

Liq_1 = Liquidity measured by trading activity and volume.

Other variables: same as previous models.

The sixth model tests whether the activation of short-selling in Egypt would affect liquidity measured by bid and ask, turnover ratio, and volatility, considering the controls. Results, table (6), show that 19.3% of the variation in the bid and ask, turnover ratio, and volatility can be attributed to short-selling, industry type, size, and efficiency measures. Moreover, there is a significant positive relation between short-selling and Liq_2 , at a significance level of 0.05. This is consistent with Sobaci et al. (2014) and Blau and Whitby (2018) that short-selling increases liquidity. Therefore, the null hypothesis is rejected; indicating that the activation of short-selling would affect the bid and ask, turnover ratio positively and decrease volatility. Further, the efficiency, measured by reporting quality, has a positive significant relationship with Liq_2 , at 0.05. This indicates that respondents regard market liquidity could be improved through enhancing financial reporting quality.

$$Liq_2 = B_0 + B_1 SH + B_2 Ind + B_3 Size + B_4 EFF.PRIC + B_5 EFF.REP + B_6 EFF.INF \dots \dots \dots \text{Model (6)}$$

Where:

Liq_2 = Liquidity measured by bid and ask, and turnover ratio and volatility.

Other variables: same as previous models.

The seventh model tests whether the activation of short-selling in Egypt would affect the compound measure of liquidity, considering the controls. Results, table (6), show that 23.3% of changes in market liquidity, measured by the compound measure of liquidity could be attributed to the activation of short-selling, industry type, size, and

efficiency measures. Furthermore, the relation between short-selling and compound measure of liquidity is significant at 0.01 level. This result supports the assumption in prior literature that banning short-selling would decrease market liquidity (Sobaci, et al., 2014; Lensberg et al., 2015; Alves et al., 2016). Moreover, it confirms the sub-hypotheses results that the activation of short-selling affects all measures of market liquidity; hence, the second main null hypothesis is rejected. Moreover, informativeness, as a measure of efficiency, have a significant relationship with liquidity compound measure at 0.01. Hence, informed market participants and the existence of short-selling might improve liquidity.

$$\text{Liq.COM} = B_0 + B_1 \text{SH} + B_2 \text{Ind} + B_3 \text{Size} + B_4 \text{EFF.PRIC} + B_5 \text{EFF.REP} + B_6 \text{EFF.INF} \dots \dots \dots \text{Model (7)}$$

Where:

Liq.COM = liquidity measured by a compound measure of Liq₁ and Liq₂.

All other variables: same as the model (1).

Table (6): Regression results: models 5, 6 and 7

	Panel A: Model (5) Summary				Panel A: Model (6) Summary				Panel A: Model (7) Summary						
	R	R ²	Adj. R ²	Std. Error	Sig. F	R	R ²	Adj. R ²	Std. Error	Sig. F	R	R ²	Adj. R ²	Std. Error	Sig. F
	.444	.197	.153	2.474	.000	.439	.193	.148	2.120	.001	.483	.233	.191	3.859	.000
	Panel B: Coefficients				Panel B: Coefficients				Panel B: Coefficients						
Indep. variables	Unstand. Coeff.	Std. Error	Beta	t-value	Sig.	Unstand. Coeff.	Std. Error	Beta	t-value	Sig.	Unstand. Coeff.	Std. Error	Beta	t-value	Sig.
	B					B					B				
Constant	9.743	1.810		5.382	.000	4.126	1.552		2.659	.009	13.87	2.825		4.910	.000
SH	.265	.080	.315	3.322	.001	.150	.068	.209	2.195	.030	.415	.124	.309	3.335	.001
Ind	-.196	.214	-.084	-.915	.362	-.080	.184	-.040	-.437	.663	-.276	.334	-.074	-.826	.410
Size	-.396	.260	-.148	-1.526	.130	.020	.223	.009	.091	.927	-.376	.405	-.088	-.928	.356
Eff.PRIC	.010	.098	.011	.102	.919	.036	.084	.045	.427	.670	.046	.154	.031	.300	.765
Eff.REP	.043	.137	.035	.317	.752	.238	.117	.227	2.032	.045	.282	.214	.144	1.319	.190
Eff.INF.	.284	.089	.287	3.184	.002	.122	.076	.144	1.594	.114	.406	.139	.256	2.916	.004
Depend. Variable	Liq ₁					Liq ₂					Liq.COM				

6.1.6.2. Further Analysis

Results of the last group of questions that aimed to validate the results show that only 57.3% of respondents disagreed that short-selling would result in a less efficient stock exchange market, whereas 70.9% of respondents disagreed that short-selling would decrease the overall market liquidity. This might be attributed to asking about the effect on the overall efficiency and liquidity without specifying the measures, while the statistical analysis revealed that liquidity measures were more significant than efficiency measures to short-selling.

After testing the main study hypotheses, the researchers conducted also further analysis to test the inverse relation (i.e. the effect of market efficiency and liquidity on the activation of short-selling in Egypt). Table (7) shows that 24.4% of the activation of short-selling might be attributed to market efficiency and liquidity, besides the control variables (industry type and company size). Results show a positive significant relationship between short-selling and the compound measure of liquidity, at 0.01. on the other hand, there is an insignificant relationship between short-selling and the compound measure of efficiency. Besides, the size of the company significantly affects the activation of short-selling at 0.05. Supporting the assumption that if short-selling is within larger companies then market participants would be motivated to activate it. This result confirms the results of the main hypotheses, that, regardless of the direction, the relationship between short-selling and liquidity is significant, whereas that between short-selling and efficiency is insignificant.

$$SH = B_0 + B_1 \text{Liq.COM} + B_2 \text{EFF.COM} + B_3 \text{Ind} + B_4 \text{Size.. Model (8)}$$

Where:

All variables: same as previous models.

Table (7): Further analysis

Panel A: Model (8) Summary					
	<i>R</i>	<i>R</i> ²	<i>Adjusted R</i> ²	<i>Std. Error</i>	<i>Sig. F</i>
	.494	.244	.217	2.830	.000
Panel B: Coefficients					
Independent variables	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t-value</i>	<i>Sig.</i>
(Constant)	-.615	2.230		-.276	.783
EFF.COM	.073	.052	.135	1.413	.160
Liq.COM	.218	.066	.292	3.300	.001
Ind	.359	.243	.130	1.475	.143
Size	.628	.288	.197	2.185	.031
Dependent Variable: Short-selling					

6.2. Observations and Analysis of respondents' comments

Practitioners are more familiar with the idea of short-selling more than academics. Some of them were so helpful and supported the topic and they were eager to get a copy of the findings. Those specialized in finance had more details regarding short-selling than other specializations. The last part of the questionnaire was an open question; asking respondents to add any relevant comment. It was mentioned that short-selling would be effective in the global depository receipt (GDR) market, and it needs more efficient markets to deal through. Moreover, it was indicated that “the above assumes professional implementation of short-selling without any difficulties from regulatory authorities”. Further, another respondent viewed that although short-selling has benefits as well as limitations, it is considered a complementary instrument that might enhance the market efficiency as well as the trading volume in different directions.

In addition, it was claimed that the presence of short-selling would create equilibrium in the Egyptian stock market by imposing a new

direction in trading, not just buying, and selling of stocks. The final comment was that short-selling would make the market less volatile. Moreover, investors would need from one to two years to understand this instrument and its effect to be able to use it. The obstacle in implementation is that most large brokerage firms face in the market nowadays, is the absence of short-sellers.

7. Conclusion

The objective of this paper is to examine the efficacy of the recent initiative to activate the short-selling mechanism in the Egyptian stock exchange market through the issuance of the regulatory decision no. (268) of 2019 on short-selling rules. The short-selling mechanism has been used in various stock exchange markets around the world for decades. However, many developing countries, like Egypt, were restricting the use of such a mechanism either due to lack of sufficient regulations to ensure proper application, or fear from the drawbacks that such mechanism could bring to the market. A sample of 117 questionnaires was distributed among various market participants and academics, with accounting or finance specialization, to explore their perceptions.

First, descriptive statistics and cross-tabulation show that 75% of the academic staff agreed that the consequences of short-selling would differ from developed to developing countries. Besides, 63% of financial analysts have the same opinion, compared to only 59% of brokers and 58% of other respondents. This would be justified on the ground of the lack of awareness of such a mechanism and the lack of a strict legal framework to avoid any misconduct in developing countries.

Consequently, results of multiple regression show that, overall, short-selling would not improve market efficiency where price discovery and informativeness show an insignificant relationship with short-selling, whereas financial reporting quality showed a significant positive relationship. This result indicates that short-selling would enhance the quality of financial reporting, which might reflect management's desire to correctly present financial information to attract short-sellers and avoid the negative views regarding the short companies' financial position. On the other hand, activating short-selling would not improve price

discovery or informativeness. This could be attributed to the respondents' perception that market efficiency in developing countries with emerging economies would not be improved through one mechanism. However, it might be affected by the legal and economic environment.

Regarding the impact of short-selling activation on market liquidity, statistical analysis shows a significant positive relationship between short-selling and market liquidity, measured through trading activity and volume, bid and ask, turnover ratio, and reduced market volatility. Further, the relation between short-selling and a compound measure of liquidity indicates a significant positive relationship. Hence, most respondents support that such a mechanism would attract new investors, increase trading when the market index is declining, which, in turn, would enhance market liquidity even in an emerging market, like Egypt. Generally, academics are more optimistic than practitioners, however, the variation is only on the degree of support to our hypotheses.

The regression models considered industry type and company size as control variables. Only the size shows a significant relationship with the compound measure of efficiency as well as the price discovery and financial reporting quality. Besides, as various measures of liquidity are likely related to efficiency measures as if the market becomes more active that would lead to enhancing the efficiency gradually. Results show that informativeness affects liquidity measured by trading activity and volume and vice versa. Moreover, financial reporting quality affects liquidity measured by bid and ask, turnover ratio and volatility, and vice versa. These results mean if the market is informative and the financial reporting with high quality, then the liquidity would increase. Consequently, the traditional assumption that an efficient market would enhance liquidity, and vice versa, is also expected by market participants in Egypt as a developing country.

Finally, the further analysis examines the inverse direction of the assumed relation to investigate whether respondents regard market efficiency and liquidity would affect the activation of short-selling. Results reveal that liquidity would affect, whereas efficiency would not. These results indicate that if the market is more efficient then such a mechanism would not be necessary, while even if the market is liquid it

is assumed that short-selling would be needed to ensure greater liquidity in such markets.

Nevertheless, the main current barrier to the application of such a mechanism in the Egyptian stock exchange market is the time needed to understand. Further, the current obstacle that most brokerage firms face nowadays is the absence of short-sellers. Moreover, as developed countries impose restrictions on short-selling in case of market instability, 64% of our respondents agree to impose restrictions in case of market instability. Finally, there is a need to increase awareness of all market participants about short-selling, its benefits, limitations, and possible effects.

8. Future research

After a few years, when short-selling would be more popular and more exercised within the Egyptian stock market, the variables of the study could be empirically tested; to examine the effect of short-selling on liquidity and market efficiency. These studies would apply more advanced statistical analyses. Moreover, cross-sectional studies might investigate the variations of the effect of short-selling in different industries. This effect would also be examined in small versus medium and large companies. In addition to this, interviews might be conducted with decision-makers; to get the other point of view. Furthermore, time series analysis would be made; to examine the effect of short-selling in earlier years of lifting the restrictions compared to later years. Besides, comparative studies would consider other emerging markets besides Egypt.

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تأثير عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية Short Selling على كفاءة السوق والسيولة في مصر كأحد الأسواق الناشئة

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المستخلص:

تهدف هذه الدراسة إلى مناقشة المبادرة الأخيرة لتفعيل آلية عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية "Short Selling"، من خلال إصدار القرار التنظيمي رقم (٢٦٨) لسنة ٢٠١٩ الخاص بقواعد عمليات إقتراض الأوراق المالية بغرض البيع وبدء تفعيل هذه الآلية. بالإضافة الى ذلك، التحقق من تأثيره على كفاءة السوق والسيولة وفقاً لتصورات المشاركين في السوق. تمت صياغة استبيان لاستطلاع تصورات الأكاديميين والمحليلين الماليين والوسطاء فيما يتعلق بالآثار المحتملة لتفعيل آلية عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية على كفاءة السوق والسيولة. تم تحليل البيانات باستخدام الإحصاء الوصفي والانحدار المتعدد. أظهرت نتائج تحليل ١١٧ استبياناً أن عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية لن يحسن كفاءة السوق، مقاسة باكتشاف الأسعار والمعلوماتية. ولكن هناك علاقة إيجابية ذات دلالة إحصائية بين عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية وجودة التقارير المالية. علاوة على ذلك، تظهر الإجابات علاقة إيجابية ذات دلالة إحصائية بين عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية وسيولة السوق التي يتم قياسها من خلال؛ نشاط وحجم التداول، تحسين العرض والطلب، معدل الدوران، وانخفاض تقلبات السوق. تدعم هذه النتائج الافتراض بأن عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية يمكن أن تكون بمثابة آلية لتحسين السيولة في الأسواق الناشئة. وقد تفيد هذه الدراسة صانعي السياسات في مصر وفي أي دولة أخرى ذات سياق مماثل وقد تؤثر على قرارات الاستثمار الأجنبي. حيث أنه من المهم معرفة آراء الأطراف التي ستتأثر برفع القيود عن عملية إقتراض الأوراق المالية بغرض البيع بالبورصة المصرية.

الكلمات المفتاحية: عملية إقتراض الأوراق المالية بغرض البيع، كفاءة سوق الاوراق المالية، سيولة سوق الاوراق المالية، البورصة المصرية