



Early evidence of short selling effects on dividends payout in Egypt: Does earnings quality make a difference?

By

Dr. Karim Mansour Ali Hassouba

Associate professor of Accounting

Faculty of Commerce, Cairo University

karimmansour@foc.cu.edu.eg

*Scientific Journal for Financial and Commercial Studies and Research
(SJFCSR)*

Faculty of Commerce – Damietta University

Vol.5, No.1, Part 1., January 2024

APA Citation

Hassouba, K. M. A. (2024). Early evidence of short selling effects on dividends payout in Egypt: Does earnings quality make a difference?, *Scientific Journal for Financial and Commercial Studies and Research*, Faculty of Commerce, Damietta University, 5(1)1, 625-656.

Website: <https://cfdj.journals.ekb.eg/>

Dr. Karim Mansour Ali Hassouba

Early evidence of short selling effects on dividends payout in Egypt: Does earnings quality make a difference?

Dr. Karim Mansour Ali Hassouba

Abstract

Purpose- This research aims to (i) test the impact of short selling (SSL) on dividends (DIV) payout in Egypt as one of the emerging markets and (ii) investigate the moderating effect of earnings quality (EQ) on this relationship.

Design/methodology/approach- This research uses data extracted from the financial reports of a sample of listed firms on the Egyptian stock exchange from 2012 to 2021, where the data is processed using the logistic regression and generalised method of moment (GMM) estimator developed for dynamic panel data.

Findings- The results of this research reveal that SSL positively affects the DIV payout of the listed Egyptian firms, while low EQ weakens this relationship.

Originality/value- This research adds to the very little prior literature that examined the impact of SSL on DIV payout in the developed markets, where it provides evidence from Egypt as one of the emerging markets. It also contributes to the existing literature on Div payouts in emerging markets by exploring the impact of SSL on DIV payouts based on signaling and impression management theories which is a relatively rare area of research. Furthermore, this research investigates whether the relationship between SSL and DIV payouts is influenced by the firm EQ, which has not been previously examined.

Practical implications- This research helps policymakers and regulators in emerging markets such as Egypt realise the implications of SSL, especially because of the modernity of this mechanism and the insufficient knowledge among market participants. Also, it helps investors and other stakeholders realise the SSL effects on firm decisions such as DIV payout. Furthermore, it offers insights to corporate managers on the negative impacts of SSL, including reputational damage, limited financial opportunities, regulatory scrutiny, and legal implications.

Limitations- This research has some limitations. The analysis does not explore the long-term effect of SSL on DIV payout, and the sample does not include firms in other emerging markets.

Keywords: Short selling; dividends; earnings quality; Egypt.

1. Introduction

Short-selling (SSL) is the transaction of borrowing securities by short sellers to sell in the expectation of a price drop and returning an equal number of the borrowed securities in the future. Accordingly, short sellers earn a profit if the security price decreases as expected (Jiang and Chen, 2019). This mechanism relies on the idea of anticipating a decrease in the price of the security in the market and then repurchasing it at a price lower than the price that the borrower sold at the date of borrowing, thus achieving a profit margin represented in the difference between the two prices, the largest selling price at the time of borrowing and the lowest repurchase price (ESE, 2019).

On February 26, 2019, the Egyptian Financial Supervisory Authority issued Resolution No. 268 of 2019 regulating the practice of SSL to improve liquidity, stimulate trading, and increase the rate of movement of securities. The Egyptian Stock Exchange also issued Resolution No. 757 of 2019 regarding the criteria for selecting the securities that are allowed to conduct SSL (ESE, 2019). Nonetheless, these decisions have raised great criticism concerning the lack of sufficient awareness among market participants of the mechanism's nature, its investment tools, and methods of implementation, as well as how to deal with it.

The fall in the borrowed securities prices is the only way for the short sellers to make profits, and therefore they will surely seek to discover and disclose any violations of entities eligible for SSL. Accordingly, this mechanism may have an effective supervisory role on these entities, by constraining a firm's incentives to manipulate or misrepresent earnings and help in improving the quality of firms' financial reporting.

In this regard, prior research that investigated the implications of SSL on firms found that short-sellers search actively for unfavourable information, can track firms' discretionary accruals, specify earnings manipulation practises and fraud before they are publicly shown, help uncover aggressive earnings management and financial misrepresentation, curb income smoothing, and accelerate the detection of misrepresentation (Sun and Zhang, 2023; Hirshleifer et al., 2011; Karpoff and Lou, 2010; Cao et al., 2007; Desai et al., 2006; Efendi et al., 2005; Christophe et al., 2004; Dechow et al., 1996). So, SSL can be an efficient monitoring mechanism to positively affect the financial reporting quality and mitigate the manager's ability to manage earnings.

Dr. Karim Mansour Ali Hassouba

The possible decline in stocks that results from SSL will negatively affect the firm in different ways. First, it will constrain the firm's ability to increase finance by issuing new stocks, and instead, it will depend more on costly debt finance. Second, the stock decline will constrain the firm's ability to settle transactions and acquire new firms using its shares. Third, the stock decline will prevent the executives from getting bonuses when their performance is linked to the firm's value. As a result of the negative consequences of SSL on firms' stock prices, a few prior studies examined the firm's reaction to SSL. In this context, Guo et al. (2018) found that tax avoidance levels have decreased in US firms as a reaction to the negative effect of SSL. Hou et al. (2019) indicated that Chinese firms are responding to the increase in SSL by engaging in philanthropic activities. Grullon et al. (2015) found that the US firms in the pilot group with a significant increase in SSL showed larger declines in issuing equities and investments. Chang et al. (2019) showed that acquirers in the US with higher SSL earn higher merger and acquisition announcement returns, supporting the hypothesis that acquirers with a more serious SSL threat are less likely to engage in value-destructive deals.

Based on the signaling theory, managers can use the dividends (DIV) as a signal to the market to avoid a stock price decline (Miller and Rock, 1985; John and Williams, 1985; Kalay, 1980; Bhattacharaya, 1979), where increasing the DIV gives positive signals about the promising prospects of the firm and builds a very positive image of the firm concerning its growth prospects and future stability. Furthermore, according to the impression management theory (Clatworthy and Jones, 2003; Rutherford, 2003; and Courtis, 2004), managers might use DIV as a tool to give a good impression of the firm and positively affect the stock price.

DIV is considered an essential form of information as investors often assess the firms based more on the DIV payments than the reported earnings due to the unreliability, lack, and inaccuracy of financial and non-financial data. So, relying on the DIV as a source of information is an efficient way of measuring the management's views regarding future performance. Therefore, share prices might be positively affected by the increase in DIV payout, and it could be used by managers to support a firm's share price by signaling strong earnings prospects (Al-Malkawi et al. 2010).

Dr. Karim Mansour Ali Hassouba

Accordingly, firms eligible for SSL may depend on the DIV as a response to the possible stock decline. This means that these firms may resort to increasing the DIV to positively affect the stock prices and encourage existing and potential investors to buy the firm's stocks, thus protecting their stocks from declining in response to the expected actions from short sellers. However, paying the DIV is a costly signal, so it may be more noticeable in firms with poor earnings quality (EQ), where short sellers may take advantage of the low EQ to negatively affect the stock prices. In this regard, Chen et al. (2019) investigated the impact of SSL constraints on the DIV payouts of pilot firms in the US. The results show that the DIV payout is only increased in firms vulnerable to increased SSL risks during the Reg SSL program. Tang et al. (2022) revealed that the removal of SSL constraints in China significantly increased the DIV payouts of firms. Also, Francis et al. (2023) investigated the impact of SSL on DIV smoothing using Regulation SHO; the findings revealed that the firms involved in the pilot program were more likely to boost their DIV payouts.

Regarding the emerging market context, several studies examined the determinants of DIV payout, such as investor protection, corporate governance, and firm characteristics (Athari, 2021; Le et al., 2019; Jiraporn et al., 2011). Also, some studies examined the implications of SSL for market liquidity, performance, and efficiency (Mahfouz and Elshayeb, 2022; Lin et al., 2021; Ni and Yin, 2020; Pobric, 2020). However, to the best of my knowledge, prior literature investigating the effect of SSL on DIV payouts in emerging markets using signaling and impression management theories is rare, particularly in the context of Egypt.

The SSL in Egypt is a recent experience, which makes it a unique context in the emerging markets to test the relationship between SSL and DIV payouts based on the signaling and impression management theories, and specifically, to identify indicators of the early reactions of Egyptian firms towards this new mechanism, which may carry risks to these firms. Also, testing the moderating effect of EQ on this relationship is an indicator to identify the extent to which short sellers are cognizant of this mechanism. If short sellers are aware of this mechanism and how to deal with it, they may take advantage of the low EQ in firms eligible for SSL to adversely affect the stock prices.

Dr. Karim Mansour Ali Hassouba

The real motivation of this research is to investigate the potential implications of SSL on DIV payout in Egypt, where none of the previous research addressed that. Specifically, this research investigates how firms eligible for SSL will react to the controversial decision taken by the Egyptian Financial Supervisory Authority No. 268 of 2019 to regulate the practices of SSL, as managers may take actions to mitigate the negative effect of SSL on firms' stock prices through paying more DIV, especially in firms with poor EQ. However, the supervisory role of this mechanism in Egypt may be unclear due to its modernity and insufficient knowledge of how to implement it or its potential effects. So the effect of the SSL on the DIV payout of Egyptian firms is worth investigating.

This research provides several contributions. First, it adds to the very little prior literature that examines the impact of SSL on DIV payout in developed markets, where it provides evidence from Egypt as one of the emerging markets. Second, it contributes to the existing literature on DIV payouts in emerging markets by exploring the impact of SSL on DIV payouts which is a relatively rare area of research. Third, it investigates whether the relationship between SSL and DIV payouts is influenced by the firm EQ, which has not been previously examined. Fourth, it helps the policymakers and regulators in emerging markets such as Egypt realize the implications of SSL, especially because of the modernity of this mechanism and the insufficient knowledge of how to implement it or its potential effects. Fifth, it helps the shareholders and other stakeholders in emerging markets realize how the SSL can affect the firm decisions, such as DIV payout. For example, the results of this research will be useful for shareholders and bondholders, where the agency theory suggests that the excess DIV payouts may be taken as shareholders expropriating wealth from bondholders (Jensen and Meckling, 1976). Sixth, it provides valuable insights for firm management regarding the deleterious consequences associated with SSL practices, including reputational damage, reduced financial access, heightened regulatory scrutiny, and potential legal ramifications. Furthermore, it may incentivize managers to take proactive measures to safeguard their firms, such as implementing robust corporate governance protocols, maintaining regular communication with stakeholders and investors to proactively address concerns, cultivating a strong brand image and reputation, ensuring compliance with relevant legal frameworks, and remaining vigilant to the risks associated with SSL.

Dr. Karim Mansour Ali Hassouba

The current research differs from previous research conducted by Chen et al. (2019), Tang et al. (2022), and Francis et al. (2023), as those studies focused on SSL in the US and China, where the market participants have an experience and knowledge of SSL, while SSL is a relatively recent experience in the emerging market of Egypt. Also, this research is dissimilar to other prior studies (Thornock, 2013; Blau et al. 2011; and Litzenberger and Ramaswamy, 1980) that studied the relationships between SSL and DIVs in the developed markets, specifically the US. For example, Thornock (2013) examined the taxation effects on short sellers' behaviour through the cost of DIV, while the current research is mainly motivated by the signaling and impression management theories to obtain evidence from Egypt as one of the emerging markets about the early reaction of Egyptian firms toward SSL.

The rest of the research is organised as follows: Section 2 is the institutional background in Egypt; Section 3 discusses the literature review and hypotheses development; Section 4 shows the research method; Section 5 presents the data analysis and discussion of results; and the last Section offers the conclusion and suggestions for future research.

2. The institutional background in Egypt

The oldest stock exchange trading in cotton futures was founded in Alexandria in 1861. Nevertheless, in 1883, the Alexandria Stock Exchange (ASE) was officially launched, followed by Cairo in 1903. The two exchanges were very active in the 1940s, and ASE has been rated the fifth in the world (EGX, 2021). Due to the huge and successive waves of nationalisation in the late 1950s, the economic structure radically changed, and the Egyptian stock market was negatively affected. For example, the number of listed firms was reduced from 275 to 55, and the market capitalization as a percentage of the GDP dropped from 13% in 1958 to just 1% in 1974 (Omran, 2006; El-Safwa, 1998).

In 1974, the open-door policy was adopted to enhance the economic environment and encourage investments in the stock market. However, the stock market was negatively affected during the period 1970–1990 for some reasons, like the shortage of protection for small investors, the insufficient requirements for disclosure, and the lack of securities laws. In 1992, Capital Market Law No. 95 was issued to stimulate private investment, enhance investor protection, and improve the role of banks in energising stock markets by establishing mutual funds (CMA, 1996; Omran, 2006).

Dr. Karim Mansour Ali Hassouba

In 2001, the stock market was constantly developing, including (1) the implementation of an automated trading system. 2) the establishment of the Egypt Information Dissemination Company (EGID) to disseminate all market-related information to participants to increase market transparency. (3) gaining international recognition by being included in indices such as the Morgan Stanley Capital International (MSCI) Emerging Markets Index. At the end of 2002, Egypt's equity market capitalization was second only to Saudi Arabia in absolute size in the Middle East and North African region. Additionally, new listing rules have been issued to increase the requirements for disclosure and corporate governance for listed firms (Girard & Omran, 2009; Otaify, 2016). In 2008, the name Egyptian Exchange replaced both the Cairo and Alexandria exchanges (ESE, 2008).

The Financial Supervisory Authority issued Resolution No. 268 of 2019 regulating the practice of SSL. The activation of the new mechanism comes in light of the keenness of the ESE management to complete the trading mechanisms required by the Egyptian market to raise its competitiveness among the markets. The new mechanism would contribute to improving liquidity rates, stimulating trading, and increasing the rate of movement of securities (ESE, 2019).

SSL allows customers to borrow securities from another client that are "expected to decrease in price" and sell them. The borrower then agrees to return the borrowed securities within a certain time period by repurchasing them or using available funds, making a profit from the difference between the buying and selling prices (ESE, 2019).

The Egyptian Stock Exchange also issued Resolution No. 757 of 2019 regarding the criteria for selecting the securities that are allowed to conduct SSL and the stock exchange was based on 7 criteria for selecting the securities eligible for the new mechanism, including the market's capital of freely traded shares, the number of trading days, the daily average of brokerage firms, the daily average of dealers, the number of issued company shares, and the average daily share trading value, and a review will be conducted once every 6 months for the list of securities qualified according to the standards issued by the Egyptian Stock Exchange and approved by the Financial Supervisory Authority (ESE, 2019).

Dr. Karim Mansour Ali Hassouba

Activating the SSL mechanism will restore balance to the trading process in the stock exchange and will cause a revival of the Egyptian capital market, and a major boom will occur in trading volumes and liquidity. This will attract and encourage more foreign investors to enter the Egyptian market. Also, this mechanism will achieve structural support for the market, create a balance, find a buyer at every point, activate the market, and achieve great stability and balance in the Egyptian Stock Exchange indices (ESE, 2019).

SSL mechanism has many advantages for lenders, the most important of which is that an investor owing a balance of shares in a particular firm can invest them without being exposed to the risks of direct trading in the market and move the stagnant balance of shares in a safe manner that guarantees him a return on the shares he owns. This mechanism also provides additional security to lenders through a guarantee of the loan, whether a financial guarantee or a guarantee of other securities. Furthermore, this mechanism facilitates the process of hedging and balancing price differences, especially if the client purchases shares in large quantities and wants to hedge against a significant drop in share prices. In this case, the same customer may borrow these shares and sell them in the market in a way that allows him to balance the buying and selling prices and even take advantage of the price differences to achieve large profits in a way that supports the total income returns (ESE, 2019).

However, there were many concerns about this new mechanism regarding the lack of sufficient awareness among participants about the nature of the mechanism, its investment tools, and methods of implementation, as well as how to deal with it. In addition to that, it may lead to intense speculation on the downside of achieving a profit. In this regard, SSL has been banned in some countries because of abusive and illegal SSL practices, such as rumour-mongering to push a share price low, so it was considered highly risky to the financial markets' stability (Jiang and Chen, 2019).

3. Literature review and hypotheses development

3.1 SSL and DIV payout

The decline in the prices of borrowed securities represents the sole avenue for short sellers to realize a profit. Consequently, short sellers will probably endeavour to identify and reveal any transgressions committed by firms eligible for SSL. On the other hand, DIV payouts represent a viable policy through which a firm's management can exert a positive influence on its share price or safeguard against potential declines resulting from SSL.

Dr. Karim Mansour Ali Hassouba

In this context, numerous competing theories have been proposed to elucidate the relationship between DIV and stock prices. The signaling theory (Miller and Rock, 1985; John and Williams, 1985; Bhattacharya, 1979) assumes that asymmetric information exists between corporate managers and shareholders and that management has more future information than the stakeholders about the entity's performance and its financial position. Therefore, to achieve specific goals, management may use signals to influence the decisions of stakeholders, and in this regard, management may decide to distribute DIV to shareholders to positively influence stock prices. The DIV may indicate to investors the improvement of the financial position and future cash flows. Specifically, to avoid a stock decline due to the potential negative impact of SSL, managers of firms eligible for SSL may increase DIV, as they believe investors will interpret this as a signal of positive performance and more future profits. According to Chen et al. (2019; Kale et al., 2012; Al-Yahyaee et al., 2011; Bali, 2003; Aharony and Swary, 1980; and Pettit, 1972), the share price usually rises with the increase in DIV payout, as DIV provides signals to the market that the futuristic earning possibility of the entity is better than expected (Chen et al., 2019).

Based on the impression management theory (Clatworthy and Jones, 2003; Rutherford, 2003; and Courtis, 2004), DIV payouts may be an attempt to avoid the negative impact of SSL by influencing the stakeholders' perceptions of the firm's financial performance and positively affect the stock prices, where DIV might be used by managers as a mechanism to give a good impression about the firm. Regarding the agency theory, the stock price might be positively affected by the DIV payout which reduces the negative effects of SSL, as DIV might serve to align the interests and diminish the agency problems between managers and stockholders by decreasing the discretionary funds available to managers (Alli et al., 1993; Jensen, 1986; Easterbrook, 1984; and Rozeff, 1982).

Also, according to the bird in the hand theory (BHT), investors favour the cash DIV "bird in the hand" rather than the future capital gains "two in the bush". Therefore, shares with high DIV payouts are desired by investors and command higher market prices. This is due to uncertainty and inadequate information, as a higher current DIV decreases uncertainty about future cash flows, lowers the capital cost, and thus increases share value. Investors are keener to invest in shares that offer higher current DIV than those that pay DIV in the future and retain the earnings (Walter, 1963; Gordon, 1963; Lintner, 1962; and Gordon and Shapiro, 1956). Based on the BHT theory, firms eligible for SSL may use DIV payouts to mitigate the potential negative effects of SSL.

Dr. Karim Mansour Ali Hassouba

However, according to the irrelevant DIV theory (Bernstein, 1996; Miller, 1986; Miller and Scholes, 1982; Hess, 1981; Miller and Modigliani, 1961), the DIV payout would be irrelevant based on certain assumptions about perfect capital markets, like the equal availability of symmetrical and free information to everyone participating in the market. In a perfect market, DIV policy does not affect either the share prices of firms or their capital costs, and the shareholder's wealth is influenced by the income generated by the investment decisions made by firms, not by how it distributes that income (Miller and Modigliani, 1961). Based on the irrelevant DIV theory, DIV payouts may not be an efficient tool to mitigate the negative effects of SSL.

Several prior pieces of literature that investigated the relationship between DIV and stock prices in both developing and developed countries found a positive effect of DIV on stock prices (Conroy et al., 2000; Gunasekarage and Power, 2002; Howatt et al., 2009; Hussainey and Walker, 2009; Andres et al., 2013; Omran and Pointon, 2004; Sharif et al., 2015; Ullah et al., 2015; Jahfer and Mulafara, 2016; Hamid et al., 2017). For example, Andres et al. (2013) indicated a significant share price reaction after the DIV announcement made by German firms from 1996 to 2006. Omran and Pointon (2003) used a sample of 94 listed Egyptian firms to investigate the relationship between DIV policy and stock price. The results show that DIV positively affects the stock price for a wide portfolio of both actively and non-actively traded shares.

Based on the signaling and impression management theories, and According to the findings of the prior literature that indicated a positive effect of DIV payouts on stock prices, managers of Egyptian firms eligible for SSL may choose to pay more DIV to encourage the investors to buy or hold the firm's stocks to positively affect their prices. This can be seen as a reaction to any potential risks that may be caused by short sellers. In this regard, Chen et al. (2019) tested the impact of SSL constraints on payout policies. They used a controlled experiment of the Regulation SSL pilot programme in the US from 2001 to 2010, and the results reveal that changing the SSL rule brings small entities to increase cash DIV. Also, Tang et al. (2022) investigated the impact of SSL on corporate payout policy using a sample of Chinese-listed firms from the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) over the period from 2007 to 2018 and the findings revealed that the removal of short selling constraint significantly increased

Dr. Karim Mansour Ali Hassouba

the DIV payouts of firms. Furthermore, Francis et al. (2023) examined the effect of SSL on DIV smoothing using Regulation SHO, and the results indicated that during the pilot program, the firms involved were more inclined to raise DIV and less likely to suspend them. However, after the program ended, they were more prone to reducing DIV.

According to the above discussion, the first hypothesis will be as follows:

H1: Egyptian firms eligible for SSL will pay higher DIV compared to other firms.

3.2. SSL, DIV, and EQ

EQ may act as a moderating variable in the association between SSL and DIV payouts, as short sellers who are motivated to identify and reveal low-EQ practices, such as accrual earnings management and other forms of earnings manipulation, may target firms that exhibit such practices. These practices can adversely affect the stock prices of these firms, thus creating opportunities for short sellers to gain more from the SSL mechanism.

Prior research indicated that SSL is an efficient mechanism for constraining earnings management and detecting fraud and managerial misconduct. In this regard, Fang et al. (2016) examined the association between SSL and earnings management using a sample of US firms from 2001 to 2010. The results indicated that Reg SSL pilot firms exhibited less earnings management during the pilot period than non-pilot firms. Jiang et al. (2020) used a sample of 122,591 firm-year observations from 22 countries from 2003 to 2015, and the results reveal that the SSL threat limits real earnings management internationally, especially in firms operating in countries with inadequate stockholder protection. Massa et al. (2015) used a sample of 33 countries from 2002 to 2009 to test the effect of SSL on earnings management, and the results indicated a significant negative association between the threat of SSL and accrual earnings management. The evidence supports the notion that short-sellers are sophisticated traders who are skilled at discovering managerial misconduct. Jiang and Chen (2019) used data on Chinese cross-listing AH-shares from 2010 to 2015 to examine the effect of SSL on earnings management, and the results found that SSL limits accrual earnings management in A-share markets but not in the H-share market. The results also indicated that when the short-sellers perceive a great likelihood of managerial expropriation, they impose strong monitoring on reporting quality, especially in firms with weak

Dr. Karim Mansour Ali Hassouba

internal control or in a weak legal environment. Desai et al. (2006) used a sample of US firms to examine whether short sellers target firms with poor EQ. The results indicate that short sellers pay attention to the information conveyed by accruals and that the increase in short interest is greater for firms with higher accrual levels.

Additionally, some prior literature indicates that firms with a higher accruals level have poor subsequent earnings and weak stock market performance (Fairfield et al., 2003; Thomas and Zhang, 2002; Xie, 2001; Collins and Hribar, 2000; Sloan, 1996). This evidence corroborates the notion that low EQ practices of firms eligible for SSL provide an opportunity for the short sellers to exert downward pressure on their stock prices and earn profits. In this regard, Hope et al. (2017) indicated that SSL increases the likelihood of mistakes being uncovered to push the share price down.

According to the aforementioned discussion, firms eligible for SSL with poor EQ may engage in financial misstatements and earnings management practices, which might be a good opportunity for short sellers to exploit and negatively affect stock prices by detecting and disclosing these practices. So it is predicted that firms with poor EQ will pay more DIV to avoid the stock market decline than other firms. As a result, the effect of SSL on DIV payout will be more pronounced in firms with poor EQ. However, due to the modernity of the SSL mechanism and insufficient knowledge, short-sellers in Egypt may not be able to track the firms with poor EQ and efficiently benefit from the new mechanism. In this case, firms eligible for SSL with poor EQ may not pay more DIV compared to other firms eligible for SSL with good EQ. Furthermore, according to the signaling theory, firms eligible for SSL with poor EQ may pay less DIV compared to other firms eligible for SSL, where these firms may use the earnings management as an opportunistic signal to mislead investors and positively affect the stock price instead of paying more DIV.

Based on that, the following hypothesis will be as follows:

H2: The EQ moderates the relationship between SSL and DIV payout of listed Egyptian firms.

4. The research method

4.1. Research design and models

This research aims to examine the effect of SSL on DIV payouts and test the moderating effect of EQ on this relationship. SSL was measured as a dummy variable equal to 1 if the firm is eligible for SSL and 0 otherwise (Ye et al., 2020). The Egyptian Stock Exchange published a list of 30 securities based on decree No. 757 for the year 2019, and this list was updated to include 25 securities in February 2020, 46 in August 2020, and 58 in February 2021. The DIV payout was measured using two proxies: the first as a dummy variable that equals 1 if the firm pays a DIV and zero otherwise (Nguyen and Bui, 2019), and the second as a DIV per share (Boumlik et al., 2023).

According to Dechow et al., 1995, this study relies on accrual proxies to measure EQ. Specifically, EQ is the discretionary accruals (DAC), which are computed by the following equations:

$$TAC_{it} = NIO_{it} - CFO_{it} \quad (1)$$

Where:

TAC_{it}: is the total accruals for the firm (i) in the period (t).

NIO_{it}: is the net income from operation for the firm (i) in the period (t).

CFO_{it}: is the cash flow from operation for the firm (i) in the period (t).

$$DAC_{it} = \frac{TAC_{it}}{A_{(it-1)}} - \alpha_1 \left\{ \frac{1}{A_{(it-1)}} \right\} + \alpha_2 \left[\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{(it-1)}} \right] + \alpha_3 \left\{ \frac{PPE_{it}}{A_{(it-1)}} \right\} + E_{it} \quad (2)$$

Dr. Karim Mansour Ali Hassouba

Where:

DAC *it*: is the discretionary accruals for the firm (i) in the period (t).

TAC *it*: is the total accruals for the firm (i) in the period (t).

A (*it-1*): is the total assets for the firm (i) in the period (t).

Δ *REV* *it*: is the change in firm revenues for the firm (i) in the period (t).

Δ *REC* *it*: is the change in firm receivables for the firm (i) in the period (t).

PPE *it*: is the total property, plant, and equipment for the firm (i) in the period (t).

According to the literature review (Denis & Osobov, 2008; Consler & Lepak, 2016; Von Eije & Megginson, 2008; Cooper & Lambertides, 2018; Brunzell et al., 2014; Boumlik et al., 2023), some control variables (firm size, leverage, cash flow adequacy, sales growth, COVID-19, board gender diversity, and firm age) of DIV payout were selected.

Based on the above, the associations between the research variables were formulated as the models below:

$$DIVit = \beta_0 + SSL \beta_1 it + EQJ \beta_2 it + SIZE \beta_3 it + LEV \beta_4 it + GRO \beta_5 it + COV \beta_6 it + AGE \beta_7 it + BGD \beta_8 it + CFAD \beta_9 it + \varepsilon \dots \dots \dots (1)$$

$$DIVit = \beta_0 + SSL \beta_1 it + EQJ \beta_2 it + EQJ \times SSL \beta_3 it + SIZE \beta_4 it + LEV \beta_5 it + GRO \beta_6 it + COV \beta_7 it + AGE \beta_8 it + BGD \beta_9 it + CFAD \beta_{10} it + \varepsilon \dots \dots \dots (2)$$

Table (1) shows the research variables and the related measures:

Dr. Karim Mansour Ali Hassouba

Table 1. Variables and measures

Type of Variables	Related Variables	Measures
Independent variable	Short-selling (SSL)	A dummy variable is assigned a value of (1) if the firm is eligible for SSL in 2019, 2020 and 2021, and (0) otherwise.
Dependent variables	Dividends payout (DIV)	The dummy variable equals 1 if the firm pays dividends and zero otherwise (DIV10). DIV per share (DPS)
Moderating variable	Earnings quality (EQJ)	discretionary accruals (DAC) by the modified Jones model.
Control variables	Firm size (SIZE)	Log of total assets
	Leverage (LEV)	Total liabilities to total assets
	Sales growth (GRO)	Current sales minus previous sales divided by previous sales
	COVID 19 (COV)	A dummy variable equals (1) in 2020 and 2021, and (0) otherwise.
	Firm age (AGE)	The number of years in operation from an enterprise's inception
	Board gender diversity (BGD)	The number of female directors is divided by the total number of directors.
	Cash flow adequacy (CFAD)	Operating cash flow divided by total current liabilities

4.2. Sample selection

The population of this research includes all firms listed on the Egyptian Stock Exchange. A sample of 68 firms from 2012 to 2021 was used as the basis of the analysis. SSL has been ongoing in Egypt since the year 2019 as per Resolution No. 268 of 2019. However, it was preferred to use panel data for a longer period starting in 2012 (following the conclusion of the events of the Egyptian revolution in 2011) to better control for potential biases or outliers, especially due to the events of the COVID-19 pandemic that appeared in Egypt in 2020. This choice also allowed for the establishment of a baseline for DIV payouts before SSL, which improved the

Dr. Karim Mansour Ali Hassouba

assessment of the effect of SSL on DIV payouts. Additionally, it increased the statistical power of the analysis by expanding the sample size and observations and providing a more robust analysis of factors that drive DIV payouts, which is less sensitive to changes in a specific period after SSL. Data were extracted from annual financial reports in the Thomson Reuters Eiko Database; banks and financial institutions were excluded due to different regulations than the other sectors, and the data were processed using STATA software and the generalised method of moment (GMM) estimator developed for dynamic panel data. Table (2) shows details of the sample selection:

Table 2. Sample Selection

	No. of firms	No. of observation
Initial sample	218	2180
Less: Financial firms and banks	45	450
Less: Firms with missed data	105	1050
Final sample	68	680

5. The data analysis and discussion of results

5.1. Descriptive analysis

Tables (3) and (4) present the results of the descriptive analysis for all research variables. The DIV exists in 37% of all the sample observations. The mean DIV per share is .5, and the maximum is 5.6. SSL is present in 9% of the total observations. The mean of discretionary accruals of firms from 2012 to 2021 is .002, with a minimum of -.61 and a maximum of 46, which indicates the existence of earnings management in Egyptian firms. The COVID-19 pandemic appeared in the year 2020 when the outbreak spread in Egypt, so it represents 20% of the sample observations. The liabilities represent 44% of the total assets, and the average firm's age in the sample is 33 years. The female representation in the firm's board of directors is 8% on average, and the means of Size and Gro are 6.11 and 23 respectively.

Dr. Karim Mansour Ali Hassouba

Table 3. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DPS10	680	.00	1.00	.375	.28
DPS	680	.00	5.67	.51	.92
SSL	680	.00	1.00	.091	.2m
EQJ	680	-.61	.46	.002	.08
Size	680	.45	8.19	6.11	.89
Lev	680	.00	1.75	.44	.25
GRO	680	-.99	4.64	.23	.46
COV	680	.00	1.00	.20	.40
Age	680	5.00	115.00	32.61	19.54
BGD	680	.00	.37	.08	.09
CFAD	680	-2.80	3.60	.16	.54

Table 4. Frequencies

	SSL			COV			DIV10		
	Frequency	%	Cum %	Frequency	%	Cum %	Frequency	%	Cum %
1	62	9 %	9 %	136	20 %	20 %	255	37.5 %	37.5 %
0	618	91%	100%	544	80 %	100%	425	62.5 %	100%
	680	100%	-	680	100%	-	680	100%	-

5.2. Correlation

Table (5) presents the correlation matrix between all the research variables. The results indicate that SSL is positively associated with DIV payout. Also, Size, Age, Lev, and CFAD have a positive association with DIV. Conversely, COVID-19 has a negative relationship with DIV. Moreover, the results show no association between GRO and DIV, and at a 5% significance level, the results show that BGD is positively associated with the existence of DIV. Additionally, Table (5) reveals no multicollinearity between the independent variables ($VIF < 10$).

Dr. Karim Mansour Ali Hassouba

Table 5. Correlations

	DPS10	DPS	SSL	EQJ	Size	Lev	GRO	COV	Age	BGD	CFAD	VIF
DPS10	1											-
DPS	.-	1										-
SSL	.26***	.06*	1									1.36
EQJ	-.03	-.07**	-.04	1								1.03
Size	.31***	.21***	.31***	-.09**	1							1.17
Lev	-.01	.11***	-.15***	-.07*	-.11***	1						1.10
GRO	.02	-.01	.02	.00	-.02	-.02	1					1.02
COV	-.07	-.17***	.39***	-.03	.01	.02	.03	1				1.22
Age	.07**	.07**	.05	-.03	-.09***	.14***	.07**	.11***	1			1.06
BGD	.08**	.00	-.02	.03	.06*	.08**	.01	.03	-.10***	1		1.03
CFAD	.23***	.26***	-.04	-.05*	.03	.16***	-.11***	-.1**	-.06*	.07**	1	1.06

Note: *** significant at 1%, ** significant at 5%; * significant at 10%

5.3. Regression results and testing of hypotheses

The panel data methodology was used to test the effect of SSL on DIV and also examine the moderating effect of EQ on this relationship. The generalised method of moment (GMM) estimator was used to test these hypotheses, where the GMM can reduce endogeneity problems due to the potential correlation between regressors and error terms, includes lagged of the dependent variable as covariates, and includes unobserved panel-level effects (Hansen, 1982; Arellano and Bond, 1991). The Arellano-Bond test results show that there is no autocorrelation in all models. Also, the result of the Sargan test indicates that the overidentifying restrictions are not valid in all models (the P-value is insignificant). This means that there is no heteroskedasticity. Regarding the dummy variable DIV10, logistic regression was used to test the research hypotheses.

Table (6) shows the regression results of testing the effect of SSL on DIV payout and the moderating effect of EQ on this relationship. The results in Models 1 and 2 indicate that SSL positively affects the DIV payout. Hence, the first hypothesis is accepted, where firms eligible for SSL pay a higher DIV compared to other firms. The results show that firms with poor EQ are negatively associated with their DIV payout. Regarding the control variables, the results indicate that the CFAD, AGE, size, and BGD positively affect the DIV. Inversely, DIV is negatively affected by each of the Lev and COV. Furthermore, firm age positively

Dr. Karim Mansour Ali Hassouba

affects the existence of DIV and negatively affects the DIV per share. Concerning the effect of EQ on the association between SSL and DIV payout, the results in Model 4 show that EQ has a negative effect on the relationship between SSL and DIV. Hence, the second hypothesis is accepted, where EQ moderates the relationship between SSL and DIV payouts in Egyptian firms.

Table 6. The effect of SSL on DIV

	DIV10 Model (1) (Logestic)		DPS Model (2) (GMM)		DIV10 Model (3) (Logestic)		DPS Model (4) (GMM)	
	B	Wald	COEF	Z	B	Wald	COEF	Z
Cons	-6.45	53.61***			-7.52	53.54***		
DPS L1			0.32	49.92***			0.32	39.07***
SSL	2.54	31.61***	0.32	13.30***	2.55	31.93***	0.30	12.84***
EQJ	.79	.52	-0.27	-3.60***	.83	.58	-0.27	-3.71***
SIZE	.79	39.93***	0.12	4.1***	.79	39.86***	0.16	4.08***
LEV	.10	.20	-.28	-6.53***	.18	.22	-1.16	-6.20***
GRO	.23	1.40	0.01	1.05	.24	1.37	0.01	1.22
COV	-1.45	18.76***	-0.35	-12.73***	-1.45	18.85***	-.35	-13.06***
AGE	.02	12.32***	-0.01	-2.30**	.02	12.65***	0.00	-1.65*
BGD	1.70	3.73*	2.41	9.51***	1.69	3.70*	2.48	9.55***
CFAD	1.17	36.24***	0.21	7.77***	1.18	36.35***	0.22	7.26***
EQJxSSL	-	-	-	-	-4.39	.404	-6.77	-6.18***
Year-effect	Yes		Yes		Yes		Yes	
Firm-effect	Yes		Yes		Yes		Yes	
PROB	0.00		0.00		0.00		0.00	
Nagelkerke R Square	30.6 %		-		30.6 %		-	
OBS	680		612		680		612	
Wald Chi2	-		2821.54		-		2578.80	

Note: *** significant at 1%, ** significant at 5%; * significant at 10%

5.4. Robustness analysis

In order to validate the findings of the basic analysis in this research, different metrics were employed to measure DIV payout and EQ. Specifically, the ratio of DIV per share to earnings per share was used to measure the DIV payout (Yuliani et al. 2013), and the Miller ratio (James, 2009) was used to measure the EQ. The next equation was used to calculate Miller's percentage:

Dr. Karim Mansour Ali Hassouba

$$EM = (\Delta WC / CFO)_{t-0} - (\Delta WC / CFO)_{t-1}$$

Where:

EM is the earnings management

ΔWC is the change in working capital

CFO is the cash flow from the operation

t-0 is the current year

t-1 is the previous year

The results in Table (7) support the results of the research, where Model (1) indicates that SSL positively affects the DIV payout, and the results in Model (2) reveal a negative effect of the EQ on the association between SSL and DIV payout.

Table 7. The effect of SSL on DIV (Robustness analysis)

	DPSEPS Model (1)		DPSEPS Model (2)	
	COEF	Z	COEF	Z
DPSEPS L1	0.29	55.42***	0.29	60.32***
SSL	0.04	3.44***	0.04	3.21***
EQM	-0.00	-1.18	-0.00	-.80
SIZE	0.02	1.35	0.02	1.36
LEV	0.63	5.80***	0.65	7.01***
GRO	0.00	.47	0.00	0.47
COV	-0.05	-8.37***	-0.05	-8.57***
AGE	-0.00	-.93	-0.00	-1.00
BGD	.01	.11	-0.02	-0.20
CFAD	.03	3.53***	0.03	3.24***
EQMxSSL	-	-	-0.01	-3.01***
Year-effect	Yes		Yes	
Firm-effect	Yes		Yes	
PROB	0.00		0.00	
OBS	612		612	
Wald Chi2	21732.11		22169.04	

Note: *** significant at 1%, ** significant at 5%; * significant at 10%

Dr. Karim Mansour Ali Hassouba

5.5. Sensitivity tests

The research observations were separated into positive and negative accruals to investigate the effect of accrual types on DIV. Table (8) shows that the positive accruals negatively affect the DIV, while the negative accruals have no effect. Based on the signaling and impression management theories, firms may use the accruals to increase their profit instead of paying more DIV to provide a good impression of the firm to stakeholders and positively affect the stock price.

Table 8. The effect of SSL on DIV (positive and negative accruals)

	DPS Model (1) Positive accruals		DPS Model (2) Negative accruals	
	COEF	Z	COEF	Z
	DPS L1	.14	9.78***	-.04
SSL	.31	3.87***	.22	6.49***
EQJ	-.78	-3.18***	.20	.53
SIZE	-.08	-1.88*	.42	19.62***
LEV	.46	4.06***	-2.47	-7.76***
GRO	-.00	-.01	.07	3.07**
COV	-.32	-6.41***	-.68	-36.31***
AGE	-.01	-2.65**	.00	2.66***
BGD	5.86	12.83***	3.51	9.94***
CFAD	-.05	-1.39	-.01	-.63
Year-effect	Yes		Yes	
Firm-effect	Yes		Yes	
PROB	0.00		0.00	
OBS	190		150	
Wald Chi2	3.29		2.59	

Note: *** significant at 1%, ** significant at 5%; * significant at 10%

5.6. Discussion of Results

This paper aims to investigate the effect of SSL on DIV payout, as well as to test the effect of EQ on these relationships. Regarding the effect of SSL on DIV payout, the results reveal that SSL positively affects the DIV payout in Egyptian firms. This result can be explained by the signaling theory, where firms eligible for SSL may prefer to pay more DIV to avoid the possible stock decline as a reaction to the resolution No. 268 of 2019 because they believe that the investors will translate

Dr. Karim Mansour Ali Hassouba

that as a signal of positive performance and more future profits. Also, this result is in line with (Chen et al. 2019; Tang et al. 2022; Francis et al. 2023). However, based on the agency theory, SSL may harm other stakeholders' interests, such as bondholders, where the excess DIV payouts to shareholders may be taken as shareholders' expropriating wealth from bondholders (Jensen and Meckling, 1976). The results of the control variables' effects on DIV payout reveal that Lev and COV have a negative effect on DIV payout, while the BGD, size, and CFAD have a positive effect. In addition, the existence of DIV is positively affected by the firm age, but for the DIV per share, this effect is negative.

In terms of the moderating effect of EQ on the relationship between SSL and DIV payout, the findings show that firms eligible for SSL with low EQ do not pay more DIV than other firms. This result goes against the notion that SSL-eligible firms with low EQ could increase DIV payments to improve their shareholders' perceptions of the firm, boost their stock prices, and lower the risks associated with short sellers.

In general, this result is not matched with prior literature (Dechow et al., 1996; Christophe et al., 2004; Efendi et al., 2005, Desai et al., 2006; Karpoff and Lou, 2010; Cao et al., 2007; Hirshleifer et al. 2011 and Krishnamurthy and Venkataraman, 2006, Massa et al. 2015; Fang et al. 2016; Qin, and Bai, 2020) which indicated that short-sellers search actively for unfavourable information, can track firms' discretionary accruals, identify earnings manipulation and fraud before they are publicly revealed, helps uncover aggressive earnings management and financial misrepresentation, and accelerates the rate at which misrepresentation is detected. This can be explained by two reasons: first, according to the signaling theory, firms eligible for SSL with poor EQ may use the earnings management as an opportunistic signal to mislead investors and positively affect the stock price instead of paying more DIV. Second, due to the modernity of this mechanism and a lack of understanding, short sellers in Egypt are not experienced traders who are adept at spotting managerial malfeasance. Therefore, firms eligible for SSL who have low EQ do not pay more attention to boosting the DIV payout compared to those who have a high EQ.

Dr. Karim Mansour Ali Hassouba

According to the results of the current research, which provide early evidence of SSL effects on firms' decisions, The introduction of SSL may create challenges for Egyptian firms that are not accustomed to the practice and may require them to adapt their strategies and operations to the new market environment, especially if these firms are seen as overvalued or underperforming. Also, the impact of SSL on Egyptian firms may depend on some factors, such as the firm size, liquidity of the firm's stock and the level of investor interest in the firm.

It is worth noting that the full impact of the post-regulatory changes may not be immediately apparent and may become clearer over time as investors and regulators adapt to the new rules and market conditions evolve. Therefore it is important to conduct ongoing assessments to fully understand the long-term effects of regulatory decisions.

6. Conclusion and suggestions for future research

This research addresses a critical issue regarding the great conflict in the motivations between firm executives and short-sellers, where short-sellers seek to discover and disclose any violations of entities eligible for SSL to negatively affect the stock price, while the firm executives seek to avoid the stock decline to maintain the firm's future ability to increase finance from equity, use the firm shares to settle transactions and acquire new firms, and, in addition, to get more bonuses if the performance is linked to the firm value. This research examines the effect of SSL on DIV in particular, as firms may use it as a positive signal to the market to avoid a possible stock decline. The research also sheds light on the role of a firm's EQ in moderating this relationship.

Using a sample of 68 listed firms on the Egyptian stock exchange from 2012 to 2021, the results indicate that SSL positively affects the DIV payout, while there is a negative effect of EQ on the relationship between SSL and DIV payout.

This research provides several contributions. First, it adds to the limited body of research that explores the relationship between SSL and DIV payouts in developed markets by presenting empirical evidence from Egypt, which is an emerging market. Second, It enriches the extant literature on DIV payouts in emerging markets by investigating the impact of SSL on DIV payouts based on signaling and impression management theories which is a relatively rare area of research. Third, it examines whether the relationship between SSL and DIV payout

Dr. Karim Mansour Ali Hassouba

varies based on the firm EQ, which has not been examined before. Fourth, it helps the policymakers, regulators, and stakeholders in emerging markets like Egypt realise the implications of SSL, especially in light of the novelty of this mechanism and the lack of understanding regarding its implementation or potential repercussions. Fifth, it assists firm management in understanding the detrimental effects of SSL on businesses, which may include reputational harm, restricted access to finance, greater regulatory scrutiny, and the possibility of legal action. Additionally, the results of this study might inspire managers to take the necessary actions to safeguard their firms. This could involve putting in place sound corporate governance procedures, staying in regular contact with stakeholders and investors to address concerns, working to establish a strong brand and reputation, making sure their firms comply with all applicable laws, and being fully aware of the risks of SSL.

However, there are some limitations to this research, as the analysis did not examine the long-term effect of SSL on DIV payout, and the sample did not include firms in other emerging markets. Further research could be carried out to study the long-term implications of SSL on liquidity and trading in emerging markets. Furthermore, future research could examine the long-term effect of SSL on firms concerning performance, value, decision-making, and stock crashes. Also, consider the effects of corporate governance strength, share repurchase, internal control efficiency, and corporate social responsibility when testing the effects on SSL.

References

- Alli, K. L., Khan, A. Q., & Ramirez, G. G. (1993). Determinants of corporate dividend policy: A factorial analysis. *Financial Review*, 28(4), 523-547.
- Aharony, J., & Swary, I. (1980). Quarterly dividend and earnings announcements and stockholders' returns: An empirical analysis. *The Journal of Finance*, 35(1), 1-12.
- Al-Yahyaee, K. H., Pham, T. M., & Walter, T. S. (2011). The information content of cash dividend announcements in a unique environment. *Journal of Banking & Finance*, 35(3), 606-612.
- Andres, C., Betzer, A., Van den Bongard, I., Haesner, C., & Theissen, E. (2013). The information content of dividend surprises: Evidence from Germany. *Journal of Business Finance & Accounting*, 40(5-6), 620-645.

Dr. Karim Mansour Ali Hassouba

- Al-Malkawi, H. A. N., Rafferty, M., & Pillai, R. (2010). Dividend policy: A review of theories and empirical evidence. *International Bulletin of Business Administration*, 9(1), 171-200.
- Athari, S. A. (2021). The effects of institutional settings and risks on bank dividend policy in an emerging market: Evidence from Tobit model. *International Journal of Finance & Economics*, 26(3), 4493-4515.
- Brunzell, T., Liljebloom, E., Löflund, A., & Vaihekoski, M. (2014). Dividend policy in Nordic listed firms. *Global Finance Journal*, 25(2), 124-135.
- Blau, B. M., Fuller, K. P., and Van Ness, R. A. (2011). Short selling around dividends announcement and ex-dividend days. *Journal of corporate finance*, 17(3), 628-639.
- Bernstein, P. L. (1996). Dividends: The Puzzle. *Journal of Applied Corporate Finance*, 9(1), 16-22.
- Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand" fallacy. *The Bell Journal of Economics*, 259-270.
- Bali, R. (2003). An empirical analysis of stock returns around dividend changes. *Applied Economics*, 35(1), 51-61.
- Boumlik, Z., Oulhadj, B., & Colot, O. (2023). The Effect of the COVID-19 pandemic on corporate dividend policy of Moroccan listed firms. *Journal of Risk and Financial Management*, 16(8), 350.
- Consler, J., & Lepak, G. M. (2016). Dividend initiators, winners during 2008 financial crisis. *Managerial Finance*.
- Collins, D. W., & Hribar, P. (2000). Earnings-based and accrual-based market anomalies: one effect or two?. *Journal of Accounting and Economics*, 29(1), 101-123.
- Conroy, R. M., Eades, K. M., & Harris, R. S. (2000). A test of the relative pricing effects of dividends and earnings: Evidence from simultaneous announcements in Japan. *The journal of finance*, 55(3), 1199-1227.
- Chen, H., Zhu, Y., & Chang, L. (2019). Short-selling constraints and corporate payout policy. *Accounting & Finance*, 59(4), 2273-2305.
- Chang, E. C., Lin, T. C., & Ma, X. (2019). Does short-selling threat discipline managers in mergers and acquisitions decisions? *Journal of Accounting and Economics*, 68(1), 101223.
- Christophe, S. E., Ferri, M. G., & Angel, J. J. (2004). Short-selling prior to earnings announcements. *The Journal of Finance*, 59(4), 1845-1876.

Dr. Karim Mansour Ali Hassouba

- Capital Market Authority, 1996b, Egypt's Securities Market: A new era of development, (Cairo: CMA).
- Cooper, I. A., & Lambertides, N. (2018). Large dividend increases and leverage. *Journal of Corporate Finance*, 48, 17-33.
- Denis, D. J., & Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy. *Journal of Financial economics*, 89(1), 62-82.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary accounting research*, 13(1), 1-36.
- Desai, H., Krishnamurthy, S., & Venkataraman, K. (2006). Do short-sellers target firms with poor earnings quality? Evidence from earnings restatements. *Review of Accounting Studies*, 11(1), 71-90.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 193-225.
- Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *The American economic review*, 74(4), 650-659.
- Efendi, J., Kinney, M., & Swanson, E. P. (2005). Can short sellers anticipate accounting restatements? Working paper, Texas A&M University. Available at SSRN.
- El-Safwa Brokerage Company, 1998, Capital Market in Egypt: History of Capital Market in Egypt, (Cairo: El-Safwa,).
- Egyptian stock exchange (ESE), 2021, available at <https://www.egx.com.eg/ar/History.aspx>
- Egyptian stock exchange (ESE). (2008). Annual report. available at <https://www.egx.com.eg>.
- Egyptian stock exchange (ESE). (2019). Guide to the beginning of applying the short-selling mechanism. available at <https://www.egx.com.eg>.
- Fairfield, P. M., Whisenant, J. S., & Yohn, T. L. (2003). Accrued earnings and growth: Implications for future profitability and market mispricing. *The accounting review*, 78(1), 353-371.
- Fang, V. W., Huang, A. H., & Karpoff, J. M. (2016). Short selling and earnings management: A controlled experiment. *The Journal of Finance*, 71(3), 1251-1294.

Dr. Karim Mansour Ali Hassouba

- Francis, B. B., Samuel, G., & Wu, Q. (2023). The impact of short selling on dividend smoothing. *Journal of Financial Stability*, 65, 101117.
- Gordon, M. J., & Shapiro, E. (1956). Capital equipment analysis: the required rate of profit. *Management Science*, 3(1), 102-110.
- Girard, E., & Omran, M. (2009). On the relationship between trading volume and stock price volatility in CASE. *International Journal of Managerial Finance*.
- Grullon, G., Michenaud, S., & Weston, J. P. (2015). The real effects of short-selling constraints. *Review of Financial Studies*, 28(6), 1737–1767.
- Guo, S. Y., Chi, S., & Cook, K. A. (2018). Short selling and corporate tax avoidance. In *Advances in Taxation*. *Advances in Taxation*, 25, 1–28.
- Gordon, M. J. (1963). Optimal investment and financing policy. *The Journal of Finance*, 18(2), 264-272.
- Gunasekarage, A., & Power, D. M. (2002). The post-announcement performance of dividend-changing companies: The dividend-signalling hypothesis revisited. *Accounting & Finance*, 42(2), 131-151.
- Hess, P. J. (1981). Dividend yields and stock returns: A test for tax effects.
- Hirshleifer, D., Teoh, S. H., & Yu, J. (2011). Short arbitrage, return asymmetry and the accrual anomaly. *Review of Financial Studies*, 24(7), 2429–2461.
- Hou, D., Meng, Q., Zhang, K., & Chan, K. C. (2019). Motives for corporate philanthropy propensity: Does short selling matter? *International Review of Economics and Finance*, 63, 24–36.
- Hussainey, K., & Walker, M. (2009). The effects of voluntary disclosure and dividend propensity on prices leading earnings. *Accounting and business research*, 39(1), 37-55.
- Howatt, B., Zuber, R. A., Gandar, J. M., & Lamb, R. P. (2009). Dividends, earnings volatility and information. *Applied Financial Economics*, 19(7), 551-562.
- Hope, O. K., Hu, D., & Zhao, W. (2017). Third-party consequences of short-selling threats: The case of auditor behavior. *Journal of Accounting and Economics*, 63(2-3), 479-498.
- Hamid, K., Usman Khurram, M., & Ghaffar, W. (2017). Juxtaposition of micro and macro dynamics of dividend policy on stock price volatility in financial sector of Pakistan:(comparative analysis through common, fixed, random and GMM effect). *Journal of Accounting, Finance and Auditing Studies*, 3(1), 64-79.

Dr. Karim Mansour Ali Hassouba

- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Jiang, H., & Chen, J. (2019). Short selling and financial reporting quality: Evidence from Chinese AH shares. *Journal of Contemporary Accounting & Economics*, 15(1), 118-130.
- John, K., & Williams, J. (1985). Dividends, dilution, and taxes: A signalling equilibrium. *the Journal of Finance*, 40(4), 1053-1070.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American economic review*, 76(2), 323-329.
- Jahfer, A., & Mulafara, A. H. (2016). Dividend policy and share price volatility: evidence from Colombo stock market. *International Journal of Managerial and Financial Accounting*, 8(2), 97-108.
- Jiang, H., Qin, Y., & Bai, M. (2020). Short-selling threats and real earnings management—International evidence. *Journal of International Accounting Research*, 19(2), 117-140.
- Jiraporn, P., Kim, J. C., & Kim, Y. S. (2011). Dividend payouts and corporate governance quality: An empirical investigation. *Financial Review*, 46(2), 251-279.
- James, M. N. (2009). „Earnings Management and Banks Dividend policy“. *Accounting Global Journal*, Vol. 3, No. 5, pp. 45-50.
- Karpoff, J. M., & Lou, X. (2010). Short sellers and financial misconduct. *The Journal of Finance*, 65(5), 1879-1913.
- Kalay, A. (1980). Signalling, information content, and the reluctance to cut dividends. *Journal of financial and Quantitative Analysis*, 15(4), 855-869.
- Kale, J. R., Kini, O., & Payne, J. D. (2012). The dividend initiation decision of newly public firms: Some evidence on signaling with dividends. *Journal of Financial and Quantitative Analysis*, 47(2), 365-396.
- Lintner, J. (1962). Dividends, earnings, leverage, stock prices and the supply of capital to corporations. *The review of Economics and Statistics*, 243-269.
- Lin, H., Chen, Y., & He, C. (2021). Short Selling and Information Quality: Evidence from Natural Experiments in an Emerging Market. *Emerging Markets Finance and Trade*, 1-17.

Dr. Karim Mansour Ali Hassouba

- Le, T. T. H., Nguyen, X. H., & Tran, M. D. (2019). Determinants of Dividend Payout Policy in Emerging Markets: Evidence from the ASEAN Region. *Asian Economic and Financial Review*, 9(4), 531-546.
- Litzenberger, R. H., & Ramaswamy, K. (1980). Dividends, short selling restrictions, tax-induced investor clienteles and market equilibrium. *The Journal of Finance*, 35(2), 469-482.
- Miller, M. H., & Rock, K. (1985). Dividend policy under asymmetric information. *The Journal of finance*, 40(4), 1031-1051.
- Massa, M., Zhang, B., & Zhang, H. (2015). The invisible hand of short selling: Does short selling discipline earnings management?. *The Review of Financial Studies*, 28(6), 1701-1736.
- Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *the Journal of Business*, 34(4), 411-433.
- Miller, M. H., & Scholes, M. S. (1982). Dividends and taxes: Some empirical evidence. *Journal of Political Economy*, 90(6), 1118-1141.
- Miller, M. H. (1986). Behavioral rationality in finance: The case of dividends. *Journal of Business*, S451-S468.
- Mahfouz, M. M., Elshayeb, N. A. (2022). The impact of short-selling on market efficiency and liquidity: Evidence from the emerging market of Egypt. *Scientific Journal for Financial and Commercial Studies and Research*, 3(1)1, 113-151.
- Ni, X., & Yin, S. (2020). The unintended real effects of short selling in an emerging market. *Journal of Corporate Finance*, 64, 101659.
- Nguyen, T. T. N., & Bui, P. K. (2019). Dividend policy and earnings quality in Vietnam. *Journal of Asian Business and Economic Studies*, 26(2), 301-312.
- Otaify, M. (2016). Egyptian Stock Exchange: Analysis of Performance & Activity. Available at SSRN 3599555.
- Omran, M. (2006). Structural break in the Egyptian stock market: A logistic regression analysis. *International Journal of Business*, 11(4), 403.
- Omran, M., & Pointon, J. (2004). Dividend policy, trading characteristics and share prices: empirical evidence from Egyptian firms. *International Journal of Theoretical and Applied Finance*, 7(02), 121-133.
- Pettit, R. R. (1972). Dividend announcements, security performance, and capital market efficiency. *The Journal of Finance*, 27(5), 993-1007.

Dr. Karim Mansour Ali Hassouba

- Pobrić, N. (2020). Couls short selling improve the quality of emerging stock markets?—review of some theoretical and empirical evidence presented in literature. *Economy, Business and Development: An International Journal*, 1(1), 1-18.
- Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of Financial Research*, 5(3), 249-259.
- Sun, X., & Zhang, T. (2023). The impact of short sale prospect on income smoothing. *Review of Accounting and Finance*, Vol. 22 No. 1, pp. 62-83.
- Sharif, I., Adnan, A. L. I., & Jan, F. A. (2015). Effect of dividend policy on stock prices. *Business & management studies: an international journal*, 3(1), 56-87.
- Sloan, R. G. (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings?. *Accounting Review*, 289-315.
- Tang, D., Pan, Y., Liang, D., & Zhao, R. (2022). Does Short Selling Affect Corporate Payout Policy Evidence from China. *Emerging Markets Finance and Trade*, 58(14), 4065-4078.
- Thomas, J. K., & Zhang, H. (2002). Inventory changes and future returns. *Review of Accounting Studies*, 7(2), 163-187.
- Thornock, J. (2013). The effects of dividend taxation on short selling and market quality. *The Accounting Review*, 88(5), 1833-1856.
- Ullah, H., Saqib, S. E., & Usman, H. (2015). The impact of dividend policy on stock price volatility: A Case study of selected firms from textile industry in Pakistan. *International Journal of Academic Research in Economics and Management Sciences*, 4(3), 40-51.
- Von Eije, H., & Megginson, W. L. (2008). Dividends and share repurchases in the European Union. *Journal of financial economics*, 89(2), 347-374.
- Walter, J. E. (1963). Dividend policy: its influence on the value of the enterprise. *The Journal of Finance*, 18(2), 280-291.
- Xie, H. (2001). The mispricing of abnormal accruals. *The accounting review*, 76(3), 357-373.
- Yuliani, YL, Isnurhadi, I., and Bakar, SW (2013). Investment decision, financing, and dividends to the value of the company with the business risk as a mediating variable. *Journal of Finance and Banking*, 17 (3), 362.
- Ye, Q., Zhou, S., & Zhang, J. (2020). Short-selling, margin-trading, and stock liquidity: Evidence from the Chinese stock markets. *International Review of Financial Analysis*, 71, 101549.

Dr. Karim Mansour Ali Hassouba

الشواهد الأولية لتأثيرات البيع على المكشوف على مدفوعات توزيعات الأرباح

في مصر: هل هناك تأثير لجودة الأرباح؟

د. كريم منصور علي حسوبة

أستاذ المحاسبة المساعد – كلية التجارة – جامعة القاهرة

Karimmansour@foc.cu.edu.eg

ملخص البحث

يهدف هذا البحث إلى دراسة تأثير آلية البيع على المكشوف على مدفوعات توزيعات الأرباح في مصر كإحدى الأسواق الناشئة، بالإضافة إلى اختبار الأثر المعدل لجودة الأرباح على هذه العلاقة. وقد تم إجراء هذا البحث على عينة من الشركات المدرجة في بورصة الأوراق المالية المصرية خلال الفترة من عام ٢٠١٢ الي عام ٢٠٢١ ، وتوصلت نتائج هذا البحث باستخدام الإنحدار اللوجيستي Logistic Regression وأسلوب اللحظات المعمم (GMM) Generalized Method of Moment إلى وجود تأثير إيجابي للبيع على المكشوف على مدفوعات توزيعات الأرباح، بينما يؤدي انخفاض جودة الأرباح إلى الحد من هذا التأثير الإيجابي. تعتبر نتائج هذا البحث مهمة للجهات التنظيمية وأصحاب المصالح في الأسواق الناشئة مثل مصر للتعرف على التأثيرات المحتملة للبيع على المكشوف، نظراً لحدائثة هذه الآلية وعدم توافر المعرفة الكافية بها. كما يضيف هذا البحث للدراسات السابقة القليلة التي تناولت تأثير آلية البيع على المكشوف على مدفوعات توزيعات الأرباح، بالإضافة إلى دراسة الدور المعدل لجودة الأرباح على هذه العلاقة والذي لم تتناوله الدراسات السابقة من قبل.

الكلمات المفتاحية : البيع على المكشوف، توزيعات الأرباح، جودة الأرباح، مصر.