Open Journal of Social Sciences, 2022, 10, 139-166
https://www.scirp.org/journal/jss
ISSN Online: 2327-5960
ISSN Print: 2327-5952

The Extent of the Effect of Voluntary Disclosure on the Firm Performance

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How to cite this paper: Ismail, M. G. I., & Sakr, A. (2022). The Extent of the Effect of Voluntary Disclosure on the Firm Performance. *Open Journal of Social Sciences, 10,* 139-166.
https://doi.org/10.4236/jss.2022.106013

Received: April 25, 2022
Accepted: June 20, 2022
Published: June 23, 2022

Abstract

Progressively, there is a growing public awareness of corporate activities throughout developing and less developed nations in respect of voluntary disclosure and firm performance. As a corollary, investigations on voluntary disclosure and firm performance which include features of corporate governance as well as shareholder and stakeholder views provide insights for authorities, particularly in developing nations engaging in the worldwide industries. Thereby, this paper investigates the determinants and effects of voluntary disclosures in Egypt during the period of 2014 till 2020. We chose this significant time period because 2014 was one of EGX's most years of success, since it required all listed Egyptian firms to implement and adopt the mechanisms of corporate governance. It also suggests that voluntary disclosure can generally boost the firm performance, in which, this provides an incentive for the company to increase openness through voluntary disclosure. Thereon, three key categories are employed as proxies for sustainability and transparency: social, environmental, and intellectual capital. The investigation of this paper thusly is concentrated on the impact of these disclosures on the overall firm performance. Accordingly, the average voluntary disclosure index is used to assess voluntary disclosure, which is regarded as an independent variable. Also, the analysis includes the following control variables: Firm Size, Leverage (S.T.D), Leverage (L.T.D), and Industry. While, the dependent variable is firm performance, which is quantified using five dimensions: ROA, ROS, Market Cap, Earnings per share, and Tobin's Q. Besides, EViews-version 10 was used to collect and analyze data for 46 companies from 2014 to 2020. Therefore, the findings show that the ROA, Market Cap, and Tobin's Q have a significant relationship with an average voluntary disclosure; on the other side, ROS and EPS demonstrate an insignificant relationship with an average voluntary disclosure.

Keywords

Voluntary Disclosure, Firm Performance Indicators, Corporate Governance, Short-Term Leverage, Long-Term Leverage, Egypt

1. Introduction

Disclosure with its various complements such as: (transparency - translucence - limpidity - clarity) is considered a central backbone of corporate governance (Ağca & Önder, 2007: p. 241). In this context, several crises and scandals have taken place globally as a result of absence of inappropriate corporate disclosures (Ağca & Önder, 2007: p. 241). Indisputably, it is widely known that "corporate disclosure is considered a main critical tool that is used by various stakeholders in their decision-making process. Depending on this fact, Disclosure in the accounting literature has a broad definition as 'informing the public by financial statements of the firm'" (Ağca & Önder, 2007: p. 241).

Thus, mandatory disclosures in a company's financial statements should normally protect and cover most of activities and actions that have a financial nature; all these compulsory information are prepared and organized by relevant company's laws and regulations according to the accounting standards that are set by the country in which the firm work and operates (Owusu-Ansah, 1998: p. 608). Next in order, voluntary disclosure includes any information disclosed as mandatory disclosure. The definition stated to Voluntary disclosure by Gray et al. (1995: p. 555) is considered as "unrestrained choices which deal with company's management for the purpose of offering information as accounting and others which is significant and essential to the decision needs of users of their annual reports".

What's more, voluntary disclosures provide an extra precious information about firm's activities encompassing social, ethical and environmental aspects, as well as potential value creation through intellectual capital. This type of non-financial information has a very essential duty of supplementing and strengthening mandatory disclosure (Garcia-Meca & Sánchez-Ballesta, 2010). Although, this kind of information is usually defined and disclosed voluntarily; there is a wide range of voluntary disclosures categories with some exceptions that are found. The majority of voluntary disclosures have been related to social, environmental and intellectual capital aspects (Garcia-Meca & Sánchez-Ballesta, 2010).

Hence, a noticeable number of prior studies have stressed the implications of voluntary disclosure on overall firm performance and the results are still not yet to be conclusive (Orlitzky et al., 2003; Qiu et al., 2016; Simón-Moya et al., 2012) due to different factors, including the apparent constrains of statistical evaluations to evaluate the relationship between disclosure and firm performance (Al-Tuwaijri et al., 2004; Garcia-Castro et al., 2010) and the challenges pertaining to the selection of firm's effective key indicators of its overall performance

(Griffin & Mahon, 1997; Lu et al., 2014; Orlitzky et al., 2003).

Accordingly, in recent times, matter of fact, have seen a growth tendency for voluntary disclosure. Thus, studies concentrated on developing areas have the potential to provide significant contributions for policymakers (Abeysekera & Guthrie, 2005; Eng & Mak, 2003; Haniffa & Cooke, 2002) such as; Western principles of accounting are not adequate for less developed areas (Disu & Gray, 1998). Alternatively, most previous studies in developing countries are restricted to minority of nations, for example; China (Huafang & Jianguo, 2007; Zeng et al., 2012), Malaysia (Haji, 2013; Haniffa & Cooke, 2002; Haniffa & Cooke, 2005) and Singapore (Chen et al., 2014; Cheng & Courtenay, 2006; Eng & Mak, 2003).

Last but not least, voluntary disclosure in the perspective of Egypt context has greater significance than that of other developing areas, notably the three subgroups of voluntary disclosure listed earlier-social, environmental and intellectual capital (Belal & Roberts, 2010). The reason is that, considerably over the former decade, the Egyptian economy has witnessed tremendous development (Belal & Roberts, 2010). The Egyptian government is therefore striving to embellish living structures on both micro- and macro-levels (Belal & Roberts, 2010). As a result, Egyptian enterprises may view social disclosure as a means to legitimize its main various activities, particularly as it (Belal & Roberts, 2010).

Along with it, Egypt's authorities have been enthusiastic in conducting numerous incentives to sustain and impose transparency among enterprises to safeguard the welfare of shareholders. Voluntary disclosure therefore retains more relevance in Egypt (Samaha et al., 2015). Ultimately, studies on voluntary disclosure have predominantly concentrated on developed countries. Conversely, an escalating emphasis on voluntary disclosure in developing countries is emphasized (Samaha et al., 2015). Notably, Because of the deficient socio-economic perspective in some developing countries, corporations persist to disregard voluntary disclosure-related strategies but there might be an opportunity to bring the plans into action and seize this incentive to satisfy both the corporations and the working environment (Abdelsalam & Weetman, 2007; Elbannan, 2011; Samaha & Dahawy, 2011).

Resultantly, Egypt handles with disclosures of social, environmental and intellectual capital significantly as a result of its importance in reflecting the transparency and credibility of its economy (Abdelsalam & Weetman, 2007; Elbannan, 2011; Samaha & Dahawy, 2011). Furthermore, there have been significant studies in affluent nations, as well as recently in some developing countries, concerning voluntary disclosure information in annual reports. Nonetheless, there have been a few empirical studies conducted in the context of listed Egyptian enterprises (Abdelsalam & Weetman, 2007; Elbannan, 2011; Samaha & Dahawy, 2011).

Thereon, the Egyptian government has made significant efforts to urge all sorts of businesses to raise the level of openness in their information in order to facilitate additional chances for management and investment. On that premise, this paper has an ambition to fill this research gap by investigating corporate financial reporting in the context of Egyptian listed companies, in which, the primary objective of this paper is to identify the influence of voluntary disclosures on the overall performance of the Egyptian listed firms. Thereon, there is an opportunity to contribute to the literature by addressing all those issues and Egypt is considered a prime investigatory context. Therefore, the main research question of this study is considered as follows; to what extent does voluntary disclosure impact the firm performance of the Egyptian registered firms?

In line with this research question, this research will focus on examining the determinants as well as the implications of voluntary disclosure throughout the context of Egypt by constructing a disclosure index. Three aspects are required for voluntary disclosure involving disclosure of social, environmental, and intellectual capital resources. This thesis is reliant, along with excavating the determinants of voluntary disclosure, which act as a core aspect of the firm's decision making and as a main significant indicator of scrutiny and monitoring process. Over and above, firm's performance is essential, in order to explore the potential influence of voluntary disclosure and must therefore be appropriately formulated. Upon that, this research takes into account metrics from three different approaches including: ROA, ROS, MCAP, EPS and Tobin's Q.

2. Literature Review

As has been noticeable above-mentioned, this research paper will foremost discuss the above-cited research question, which addresses a prompting investigation of the influences of voluntary disclosure that may affect the firm performance. First of all, the literature review is based generally on the voluntary disclosure studies amongst developed as well as developing countries. Second, it reports the relationship between voluntary disclosure and firm performance amongst the developed and developing countries with a succinct concentration on their precedent studies.

2.1. Voluntary Disclosure Studies within Developed Countries

Overarchingly, numerous antecedent voluntary disclosures studies across varied developed contextures, have been to a large extent formulated with the intention of exploring this type of non-mandatory disclosures' mechanisms or techniques (Deegan & Gordon, 1996). With regard to executing the process of disclosures, during the period 1979 to 1991, Gray et al. (1995) set out a significant study about a consequential conversion in the UK organizations' pattern of their social and environmental disclosures' attitudes. In addition, Campbell (2000) has made a required further verification about the increasing tendency of social disclosures after collecting data for the period between 1969 and 1997 that are noticeably appeared in the yearly reports of the UK firm Marks and Spencer. This former research points out that the growing trend in social disclosures has been appreciably understood.

While, from environmental disclosure outlooks, Deegan and Gordon (1996) has undertaken the responsibility of comprehending voluntary disclosure of Australian companies. This research seeks the answer to solve two apparent issues. At first, firms are disposed positively to direct its consciousness to their environmental performance disclosures and ignore the negativity (Deegan & Gordon, 1996). Second, an escalated tendency has been reported from 1980 to 1991. For instance; Larrinaga et al. (2002) put forward the notion that environmental disclosure is very limited across Spanish firms.

Contrastingly, Sujan and Abeysekera (2007) have a proven study that there is a gradual outgrowth in the awareness of intellectual capital disclosures perspective covering an Australian environment. This significant study's results are mainly instituted on making a crucial comparison of information from 2004 with the information that are driven from Guthrie and Petty (2000). Rested on above hinted pre-discussions, it has been intelligible that voluntary disclosure has gained a formidable attention within developed states (Appuhami & Tashakor, 2017).

2.2. Voluntary Disclosure Studies within Developing Countries

Because of their rapid economic expansion, emerging markets have drawn the attention of worldwide corporations, entrepreneurs, and investment firms. They do, however, suffer from poor investor protection measures, such as manager expropriation of minority owners and shareholder control. They have more information asymmetry between management and investors, as well as a lower level of disclosure than sophisticated nations (Haji & Mubaraq, 2012). Thusly, in the prior stages of voluntary disclosure studies in the light of developing regions, the familiarity with those non-financial disclosures is less prevailed in which, the majority of earlier studies are extremely limited to some emerging nations like; Malaysia, Qatar, Bahrain, China and Singapore (Teoh & Thong, 1984).

By looking on the making usage of social disclosures, Andrew et al. (1989) assay 119 publicly registered companies in Malaysia as well as, Singapore in 1983. They detect that the focal point of social disclosures is restricted only upon the larger firms. While, on the other hand, in accordance with environmental disclosures scenes, Ahmad and Sulaiman (2004) speak about the criterion that there is a very minimal studies concerning the matter of environmental disclosure across Malaysian state of affairs.

Given detailed longitudinal research, Alrazi et al. (2009) put forward that there is a growing predilection across the Malaysians about environmental disclosures. While, with reference to intellectual capital disclosures field of vision, there is a great percipient about the ongoing preeminent role of intellectual capital disclosures especially inside the banking industry across multiple Nigerian firms (Haji & Mubaraq, 2012). Comprehensively, in proportionate with developing sovereign states, a growing tendency of voluntary disclosures matter is competently detected and well-examined in which, there is an incredible increase in the extent of conducting numerous studies in this field (Haji & Mubaraq, 2012).

2.3. Voluntary Disclosure and Firm Performance

Comprehensively, an association between voluntary disclosure and company's performance and its efficiency has been found within voluntary disclosure studies (Orlitzky et al., 2003; Qiu et al., 2016; Elmagrhi et al., 2016). The conclusions of such research, however, are also still conflicting (Allouche & Laroche, 2005; Das & Bhunia, 2016; Lu et al., 2014; Margolis et al., 2009; Margolis & Walsh, 2003; Mathews, 1997; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Qiu et al., 2016; Elmagrhi et al., 2016), awaiting further analysis. Initially on one hand, corporations' performance measurements must either be quantitative or qualitative aspects in which performance is characterized and defined (Worthington & Tracey, 2004).

Approximately, these measurements act as a platform leveraged by businesses to manage development in the attainment of preset priorities and define the major metrics of corporate success and their customer loyalty (Worthington & Tracey, 2004). Upon which, a good performance metric should be accurately evaluated by the population to be assessed, the mode of the measurement and the data source and time span for the evaluation and analysis (Healy & Palepu, 2001).

This is considered a global objective being achieved in the United States, the United Kingdom, Australia, Canada, Brazil, Germany and South Africa (Dalborg, 1999). Whereas, capital maximization by owners is a significant economic target to be accomplished by management of companies (Worthington & Tracey, 2004). This can be achieved by successful resource distribution. In order to meet this purpose, shareholder equity is offset by percentages of benefit or capital balances or financial statements (Gikonyo, 2008).

Whilst, from other hand, a successful means of direct communication is considered achieving voluntary disclosure and transparency (Qiu et al., 2016; Martínez-Climent et al., 2018). From this time forth, by taking voluntary disclosure and company's' performance into consideration together, a high-valued enterprise should have more motivations to invest in voluntary disclosure because this tends to minimize their capital costs and prevent a wholesale discount as "lemons" in a market (Akerlof, 1970).

So far even in developed economies, there is no agreement on the motivations of companies for voluntary disclosure (Verrecchia, 1983; Dye, 1985; Jung & Kwon, 1988; Levi, 2004). Under those circumstances, it may also be argued that voluntary disclosure can have an awe-inspiring influence on the company's performance (Verrecchia, 1983; Dye, 1985; Jung & Kwon, 1988; Levi, 2004). As a result, a large number of previous researches have examined the notable influence of voluntary disclosure on a company's performance in both developed and emerging countries (Verrecchia, 1983; Dye, 1985; Jung & Kwon, 1988; Levi, 2004) as per outstandingly viewed below;

Together with preceding studies, three types of observations and results are documented. Beforehand, a positive relationship is observed between voluntary disclosure and company's performance (Abdolmohammadi, 2005; Zhang & Wang, 2011; Choi et al., 2010; Khlif et al., 2015). This is indicative of the fact that an organization can gain a favorable impression from diverse customers when considering voluntary transparency, which can in turn impact the company's performance. Secondly, compatible with the debate that voluntary disclosure is affected by extra fees and the knowledge or information is not able to be confirmed by shareholders positively, a negative relationship is found between voluntary disclosure and company's performance (Jaggi et al., 2018; Crisóstomo et al., 2011; Mathuva & Kiweu, 2016).

Thirdly, there is no association is detected found between voluntary disclosure and company's performance (Aras et al., 2010; Brine et al., 2007). It must also be acknowledged that while the impacts of voluntary disclosure on corporate performance are investigated by taking into account world wide web disclosures, disclosures of key performance indicators and disclosures of research and development (Albawwat & Khairi, 2015; Elzahar et al., 2015; Garay et al., 2013; Hung et al., 2018; Uyar & Kılıç, 2012), a considerable quantum of researches are severely restricted to social, environmental and intellectual capital disclosures. Furthermore, the assessment of company's output oft-times varies as a wide variety of metrics have been taken into account (Albawwat & Khairi, 2015; Elzahar et al., 2015; Garay et al., 2013; Kim & Sung-Choon, 2013; Uyar & Kılıç, 2012). Detailed results of the impact of the disclosure of socioeconomic, environmental and intellectual capital on many metrics of company success are discussed below.

From a social disclosure standpoint, the influence on business performance is also mixed, with research showing favorable influences (Choi et al., 2010; De Klerk et al., 2015; Murray et al., 2006; Prado-Lorenzo et al., 2008; Reverte, 2016; Verbeeten et al., 2016; Veronica & Sumin, 2010), unfavorable influences (Malarvizhi & Matta, 2016) and no important association (Aras et al., 2010; Brine et al., 2007). Furthermore, for earlier researches, firm success metrics such as ROA, return on equity (ROE), ROS, revenue rise, share price, Tobin's Q, and EPS are generally undertaken (Choi et al., 2010; De Klerk et al., 2015; Murray et al., 2006; Prado-Lorenzo et al., 2008; Reverte, 2016; Verbeeten et al., 2016; Veronica & Sumin, 2010).

In congruence with social disclosures point of view, a mixed finding has been detected in the literature respecting the probable influences of environmental disclosure on company's performance such as; positive effects (Chen et al., 2016; Khlif et al., 2015; Nor et al., 2016; Qiu et al., 2016) and negative effects (Li & Yang, 2016; Mathuva & Kiweu, 2016). By the same token, ROA, ROE, ROS, Return on Investment (ROI), revenue growth, share price, Tobin's Q and EPS are generally regarded as firms' success metrics for previous studies in line with environmental disclosure researches (Chen et al., 2016; Khlif et al., 2015; Nor et al., 2016; Qiu et al., 2016; Li & Yang, 2016; Mathuva & Kiweu, 2016).

Over and above that the results of the disclosure of intellectual capital are studied in an insufficient way relative to social and environmental disclosures and more positive effects were found (Abdolmohammadi, 2005; Anam et al., 2011; Martínez-Climent et al., 2018). As a consequence, MCAP, ROA and market to book value ratio are taken into consideration as a company success metric. In conclusion, the pre-discussions reviewed several prior studies on the effects of voluntary disclosure on firm performance from various research contexts, finding a large number of firm performance indicators have been applied.

3. Research Hypotheses

Based around the well-established idea of the literature review, related hypotheses in this paper are formulated to address the research question that has been aforementioned before. Thereon, the hypotheses about the possible impact of voluntary disclosure on the business performance are outlined in the subsection 3.1. In which, the firm success is central and must consequently be properly described. So, they consist of five metrics from three various methods, including: ROA, ROS, MCAP, EPS and Tobin's Q.

Hypotheses Concerning the Relationship between Voluntary Disclosure and Firm Performance Metrics

Methodically, based upon the assumption of signaling theory, voluntary disclosure of a corporation as previously mentioned-above is considered as an effective means of contact and functions as a signaling canal from a company to customers (Li et al., 2013; Leventis & Weetman, 2004; Watson et al., 2002). In which, A firm can minimize information asymmetry and create efficient contact based on the nature of the signal (Li et al., 2013). Therefore, depending on the existence of the signal (voluntary disclosure), there may be an effect on a company's operating cost and on its reputability (Anderson & Frankle, 1980; Shane & Spicer, 1983), which may ultimately influence the company's efficiency as well as its overall performance.

What's more, the principle of legitimacy is indeed applicable here as voluntary disclosure represents the alignment of a corporation with the social norms, and a company's principles and values (Deegan & Rankin, 1996; Deegan & Gordon, 1996; Guthrie et al., 2006). By taking the concept of voluntary disclosure into consideration, a company can openly reveal compliance with the social norms. Upon that, such compliance will create a good reputation and will bring prestige to the company's brand, thereby positively impacting the performance of the company (Deegan & Rankin, 1996; Deegan & Gordon, 1996; Guthrie et al., 2006).

Therefore, over and done with the literature, the above phenomenon has been considered by an overwhelming number of studies (Orlitzky et al., 2003; Elmagrhi et al., 2016). Whereas amongst various countries, mixed results have been observed and the time spans and approaches followed have varied considerably (Griffin & Mahon, 1997; Margolis et al., 2009; Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016). Thereupon, three forms of consequences have been recognized by evaluating prior researches on the effects of voluntary disclosure on firm performance: positive, negative and neutral (Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016).

First and foremost, a significant number of earlier studies suggest that voluntary disclosure has a typical positive impact on a company performance in which, numerous varied arguments confirm these positive effects (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016). For example, it has been claimed that businesses can gain a favorable response about the commodity or premium price by contemplating the matter of voluntary disclosure (Bhattacharya & Sen, 2003). In addition, some researches have also revealed that businesses plan to communicate good events or news, including such worth-related details to stakeholders by taking voluntary disclosure (intellectual capital) into consideration, and this could contribute to a rise in market capitalization (Anam et al., 2011; Uyar & Kılıç, 2012).

Categorically, not only the previous researches have provided an empirical proof endorsing this line of argument showing that, voluntary disclosure has a positive influence on companies' performance (Abdolmohammadi, 2005; Anam et al., 2011; Chen & Wang, 2011; Cheng et al., 2016; Chi, 2009; Choi et al., 2010; Garay et al., 2013; Khlif et al., 2015; Montabon et al., 2007; Prado-Lorenzo et al., 2008; Uyar & Kılıç, 2012) but also, there are many studies which indicate the existence of a negative relationship between voluntary disclosure and firm performance (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016).

Hence, in order to understand these new findings, it has been observed that the shareholder can consider financial results as more significant than voluntary disclosure and that the company's profitability would be diminished by too much reliance on voluntary activities (Li & Yang, 2016; Crisóstomo et al., 2011). Under those circumstances, it is further claimed that voluntary reporting is subject to increased expenses which, in turn result in a reduction of company's productivity or its competitiveness capability and financial results being diminished (Grimely & Friedman, 1970; Mathuva & Kiweu, 2016). Additionally, certain stakeholders may assign no significance to social knowledge, so voluntary disclosure may have a negative effect on company's performance because of the increased costs involved (Crisóstomo et al., 2011).

Therefore, in accordance with these claims and these empirical evidences, the different former studies have indicated that voluntary disclosure has a negative impact on company's performance (Chen et al., 2016; Li & Yang, 2016; Crisóstomo et al., 2011; Mathuva & Kiweu, 2016). In addition to the positive and negative performance consequences of voluntary disclosure, it is often stated that there is no substantial impact on firm performance from voluntary disclosure (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016). For instance, Aras et al. (2010) contend that voluntary disclosure from a developing world viewpoint is a large concern and may not be adequately connected to company financial and economic success.

On the grounds of the aforementioned discussions, there are mixed results on the impact of voluntary disclosure on the company's performance (Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016). It is worth noting, though, that most researches evaluating the correlation between the practices of voluntary disclosure and company's performance, report a positive impact (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorín et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016). In which, there is so few findings have concentrated on the background of Egypt (Samaha et al., 2015). And by developing hypotheses that have not yet been considered in the sense of Egypt, the current thesis aims to resolve this void. As a consequence, the hypotheses are compatible with other literature models. Whereas, the hypothesis one is established to be as follows:

H (3-1): Voluntary disclosure is positively related to the firm performance.

Over and above that, several metrics of corporate performance were considered in the previous researches. Firm performance metrics are classified as accounting, marketing and mixed. It should be remembered that possible drivers to mixed outcomes are a broad variety of firm performance factors considered in the literature. This research considers metrics from each major group for a wider comprehension target. The five important and commonly used metrics are therefore considered for this analysis, including the followings:

H (3-1-1): voluntary disclosure has a positive relationship with return on asset.

H (3-1-2): voluntary disclosure has a positive relationship with return on sales.

H (3-1-3): voluntary disclosure has a positive relationship with earnings per share.

H (3-1-4): voluntary disclosure has a positive relationship with market capitalization.

H (3-1-5): voluntary disclosure has a positive relationship with Tobin's Q.

So, for a further clarification, **Figure 1** will summarize this positive relationship.

4. Methodology of Study

4.1. Sample Design & Sources of Data

As a starting point, the existing research sample comprised of Egyptian companies from the list of topmost 46 actively trading firms registered on the Egyptian Stock market within (EGX 70) index during the 2014-2020 period. More specifically, we have selected those companies because they are the first ones, which

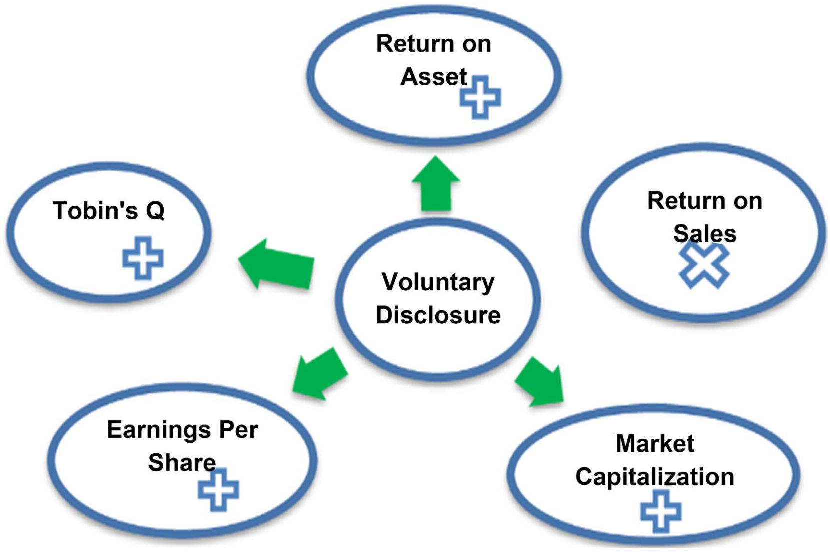

Figure 1. The relationship between voluntary disclosure & firm performance metrics.

keen on applying corporate governance codes, rules and regulations from the scratch. So, within the framework of the Egyptian economy, we prioritize companies that are well-entrenched which, they are regarded as the superior key performers in the Egyptian stock market.

Eventually, content analysis is used to determine the level of voluntary disclosure in this study. Voluntary disclosure that is disseminated in other formats (e.g., the web) is not useful for content analysis since retrieving the publication date is so difficult (Abeysekera & Guthrie, 2005; Haque & Khan, 2009). What's more, in Egypt, online publications containing voluntary disclosures are not widely used in every industry (Abdelsalam & Weetman, 2007) whereas, annual reports are often regarded as the most comprehensive and recognized document for a company's regular communication (Elbannan, 2011; Samaha & Dahawy, 2011).

4.2. Variable Measurement

The unweighted method is more suited for this study, and it has been used to calculate the voluntary disclosure index. For instance, if one thing is revealed, a "1" is given; otherwise, a "0" is given. Resultantly, a business is given a score based on the overall number of disclosures, with a maximum possible score of 20 due to the 20 disclosure elements. So, the voluntary disclosure index (VDI) is determined by taking the percentage of disclosures made by a company and the highest achievable score for that firm. Consequently, the following formula is used to calculate voluntary disclosure:

$$\mathrm{VDI}_t = \frac{\sum_{i-1}^{n} \mathrm{SDI}_{it} + \mathrm{EDI}_{it} + \mathrm{ICDI}_{it}}{N_i}$$

while, on the other hand, in specific, for this analysis, Return on Asset and Return on Sales as accounting metrics, Market Capitalization and Earnings per Share as marketing measures, and Tobin's Q as a mixed calculation are indices of business success. Table 1 shows a summary of each indicator and calculation method used.

4.3. Methodological Model

In line with the research question aforementioned before, some control variables firstly are included in the model, which are: Firm Size, Leverage (S.T.D), Leverage (L.T.D) and Industry. Secondly, various firm performance metrics are considered as the dependent variable, which is measured using five dimensions, which are: ROA, ROS, Market cap, earning per share and Tobin's Q. Data was collected and analyzed for 46 companies for the period 2014 to 2020 using EViews-version 10. Therefore, our overall regression model equation can be written as follows;

$$\begin{aligned}&\text{Various Firm Performance Indicators}\\&= \alpha + \beta_1 \text{F.S} + \beta_2 \text{S.T.D} + \beta_3 \text{L.T.D} + \beta_4 \text{INDUS} + \beta \text{V.D}\end{aligned}$$

Furthermore, based on the above, the hypotheses under study are tested using the correlation and regression analysis model. A descriptive analysis is conducted firstly as standard deviation, minimum and maximum values. After that, the researcher tested the normality distribution for the research variables to be able to decide the method of regression analysis to be used in testing the research hypotheses. The correlation analysis is conducted using Spearman's correlation while the regression is conducted using the GLS technique.

Additionally, in our regression analysis model, we use two main indicators to test our hypotheses; long term leverage and the short-term leverage. We have selected these two indicators in accordance with what have been shown at the above subsection of descriptive statistical data, in order to test the relationship among various variables, in which, most of our sample of Egyptian companies

Table 1. List of firm performance variables, control variables, measurement process & references.

Variable	Measurement	References
Return on Asset	Net Profit after Tax Book/value of total asset	(Aerts et al., 2008; Eng & Mak, 2003)
Return on Sales	Net Profit after Tax/Total Sales	(Chen & Wang, 2011; Chen et al., 2016).
Market Capitalization	Multiplying total common share outstanding with the current value of common stock	(Abdolmohammadi, 2005; Anam et al., 2011).
Earnings per Share	Earnings after tax/Total number of outstanding shares at the end of each financial year	(Kwanbo, 2011; Nor et al., 2016; Oeyono et al., 2011)
Tobin's Q	(MV Equity + BV Debt + BV Preferred Stock)/BV Assets	(Agrawal & Knoeber, 1996; Rashid et al., 2010; Rashid, 2009)
Firm Size	Natural logarithm of total Assets	(Haji, 2013; Li et al., 2008; Patten 2002; Stanwick & Stanwick, 1998)
Leverage (Short/Long term)	S.T.D/Total Assets & L.T.D/Total Assets	(Cheng & Courtenay, 2006; Ho & Wong, 2001)
Industry	Dummy variable (value 1 = firm belongs to financial industry, value 0 = otherwise)	(Alsaeed, 2006; Cooke, 1992; Qiu et al., 2016)

are depending on using the indicator of short-term leverage as a main source of their finance. Moreover, in regression model, we apply the Hausman test to determine whether of the fixed and random tests is appropriate.

4.4. Testing the Hypotheses

First of all, at the preliminary analytical phase, descriptive statistics encompass the essential characteristics of the acquired information for the research as well as provide a brief description of the data set. Furthermore, it is critical to provide descriptions or elaborations about a data set (Tabachnick & Fidell, 2007). Accordingly, the descriptive statistics is a tool in which it explains and gives a distinct understanding of the features of certain data set, by giving short summaries about samples and how to measure the data. Secondly, in order to check the normality for the data, two types of tests are conducted; formal and informal tests. As a result, Table 2 shows the skewness and kurtosis values for the research variables, where it could be observed that some of the skewness and kurtosis values are beyond the acceptance level of ±1, which means that the data under study are not normally distributed. Consequently, regression used to describe the relationships between the research variables is conducted using Generalized Least Square (GLS) technique.

Thirdly, we test the effect of Voluntary Disclosure on the various firm performance metrics using the three preliminary steps upon the usage of two main indicators; long term leverage and the short-term one. In the first step, we show the Spearman's correlation matrix between Control Variables which are: Firm

Table 2. Descriptive analysis & normality testing of research variables.

	Mean	Median	Maximum	Minimum	Std.Dev	Skewness	Kurtosis
Auditor Type	0.319	0.000	1.000	0.000	0.467	0.772	1.597
Average VD	0.576	0.550	0.700	0.400	0.087	−0.266	2.255
Board Composition	0.730	0.777	1.000	0.000	0.184	−1.279	4.859
Board Size	8.040	8.000	16.000	3.000	2.673	0.885	3.737
CEO Duality	0.685	1.000	1.000	0.000	0.462	−0.804	1.659
EPS	−0.706	0.127	128.580	−391.030	27.621	−10.433	145.90
Firm Size	20.074	20.424	24.510	13.822	1.994	−0.966	4.2787
Industry	0.934	1.000	1.000	0.000	0.247	−3.522	13.403
L T D/Assets	0.168	0.045	7.919	0.000	0.621	9.279	99.984
S T D/Assets	0.354	0.331	1.750000	0.000	0.242	1.970	10.592
Market Cap	19.765	19.706	23.609	17.111	1.326	0.333	2.982
Tobin's Q	0.528	0.429	9.391	0.041	0.775	8.151	79.875
ROA	0.019	0.028	0.324	−1.440	0.160	−5.28	42.422
ROS	−0.035	0.060	5.860	−8.182	0.973	−3.088	31.746

Size, Leverage (S.T.D) and Industry, voluntary disclosure and various firm performance metrics (i.e., ROA, ROS, MCAP, EPS and Tobin's Q). In which (P-value is greater or less than 0.05) and the corresponding coefficient (Coefficient is considered greater or less than 0). While the second one, the regression model is conducted for the effect Control Variables and voluntary disclosure on the FP metrics. Finally, we apply the Hausman test in order to know which one of fixed test and random test is appropriate. Table 3 will present the results of all these preliminary steps in an appropriate manner.

Moreover, as per data appeared in Table 3, we can deduce the following results; firstly, the relationship between the average VD and ROA is insignificant positive (P-value = 0.567, Coeff. = 0.032). Secondly, the relationship between the average VD and ROS is insignificant negative (P-value = 0.754, Coeff. = −0.033). Thirdly, the association among the average VD and MCAP is considered significant positive (P-value = 0.000, Coeff. = 0.253). Fourthly, the association among the average VD and EPS is appeared as insignificant positive (P-value = 0.198, Coeff. = 0.072). Finally, the association among the average VD and Tobin's Q is deemed as insignificant negative (P-value = 0.056, Coeff. = −0.107).

Furthermore, as per viewed in Table 4, we can deduce the following results. Firstly, there is a significant effect of Average VD on ROA, as the corresponding P-value is 0.0007 (P-value < 0.05). Also, there is a negative effect of

Table 3. The Spearman's correlation matrix of research variables (ROA, ROS & MCAP) by using STD.

		Using S.T. Leverage														
		ROA					ROS					MCAP				
		ROA	Firm Size	S.T.D/ Assets	Indus	VD	Firm Size	Indus	Aver. V. D	ROS	S.T.D/ Assets	MCAP	Firm Size	S.T.D/ Assets	Indus	Aver. V. D
R		1					0.122*	−0.018	−0.033	1		1				
P-Value	Firm Perform. Var.	.					0.028	0.754	0.553	.		.				
N		322					322	322	322	322		322				
R		0.1	1				1					0.618**	1			
P-Value	Firm Size	0.07	.				.					0	.			
N		322	322				322					322	322			
R		−0.174**	0.194**	1			0.194**	−0.072	−0.143*	−0.239**	1	0.007	0.194**	1		
P-Value	S.T.D/ Assets	0.002	0	.			0	0.195	0.01	0	.	0.896	0	.		
N		322	322	322			322	322	322	322	322	322	322	322		
R		0.112*	−0.04	−0.072	1		−0.037	1				0.041	−0.04	−0.072	1	
P-Value	Ind.	0.044	0.507	0.195	.		0.507	.				0.464	0.51	0.195	.	
N		322	322	322	322		322	322				322	322	322	322	
R		0.032	0.358**	−0.143*	0.436**	1	0.358**	0.436**	1			0.253**	0.358**	−0.143*	0.436**	1
P-Value	Aver. VD	0.567	0	0.01	0	.	0	0	.			0	0	0.01	0	.
N		322	322	322	322	322	322	322	322			322	322	322	322	322

		EPS					Tobin's Q				
		EPS	Firm Size	S.T.D/ Assets	Industry	Average V.D	Tobin's Q	Firm Size	S.T.D/ Assets	Industry	Average V.D
R	Firm Perform. Var.	1					1				
P-Value		.					.				
N		322					322				
R	Firm Size	0.198**	1				0.251**	1			
P-Value		0	.				0	.			
N		322	322				322	322			
R	S.T.D/ Assets	−0.118*	0.194**	1			0.750**	0.194**	1		
P-Value		0.034	0	.			0	0	.		
N		322	322	322			322	322	322		
R	Ind.	0.041	−0.04	−0.072	1		−0.066	−0.037	−0.072	1	
P-Value		0.461	0.507	0.195	.		0.234	0.507	0.195	.	
N		322	322	322	322		322	322	322	322	
R	Aver. VD	0.072	0.358**	−0.143*	0.436**	1	−0.107	0.358**	−0.143*	0.436**	1
P-Value		0.198	0	0.01	0	.	0.056	0	0.01	0	.
N		322	322	322	322	322	322	322	322	322	322

Table 4. The regression model of research variables (ROA, ROS& MCAP) by using STD.

Using S.T. Leverage															
	ROA					ROS					MCAP				
Variable	C	Std. Error	t-Statistic	Prob	Effect	c	Std. Error	t-Statistic	Prob	Effect	c	Std. Error	t-Statistic	Prob	Effect
C	−0.3	0.077	−3.953	0.0001		−2.68	0.572	−4.700	0		12.	0.7	17.7	0	
FIRM_SIZE	0.029	0.003	7.498	0	Insignificant Positive	0.17	0.028	6.066	0	significant Positive	0.30	0.0	8.5	0	significant Positive
Leverage	−0.4	0.029	−13.89	0	significant Negative	−0.77	0.216	−3.596	0.00	significant Negative	−0.	0.2	−1.	0.12	Insignificant negative
INDUSTRY	0.0	0.034	2.855	0.00	significant Positive	0.27	0.255	1.0705	0.2	Insignificant Positive	−0.07	0.3	−0.	0.822	Insignificant negative
AVERAGE_VD	−0.3	0.102	−3.409	0.00	significant Negative	−1.35	0.756	−1.793	0.07	Insignificant negative	2.0	0.9	2.20	0.028	significant Positive
R-squared	0.4	Mean dependent var		0.0		0.12	Mean dependent var		−0.03		0.2	Mean dependent var		19.77	
Adjusted R-squared	0.4	S.D. dependent var		0.1		0.11	S.D. dependent var		0.97		0.25	S.D. dependent var		1.326	
S.E. of regression	0.1	Akaike info criterion		−1.31		0.91	Akaike info criterion		2.6		1.14	Akaike info criterion		3.125	
Sum squared resid	4.8	Schwarz criterion		−1.2595		266	Schwarz criterion		2.739325		416.	Schwarz criterion		3.184	
Log likelihood	217	Hannan-Quinn criter.		−1.2		−426	Hannan-Quinn criter.		2.704113		−498.1	Hannan-Quinn criter.		3.149	
F-statistic	54	Durbin-Watson stat		0.934		11.0	Durbin-Watson stat		1.596898		28.29	Durbin-Watson stat		0.57	
Prob(F-statistic)	0			0		0					0				

	EPS					Tobin's Q				
Variable	C	Std. Error	t-Statistic	Prob	Effect	C	Std. Error	t-Statistic	Prob	Effect
C	28.49	17.22	1.654355	0.099		1.111	0.328645	3.380528	0.0008	
FIRM_SIZE	−0.949	0.854	−1.1112	0.2673	Insignificant negative	−0.089	0.016296	−5.457785	0	significant negative
Leverage	−6.47	6.5109	−0.994682	0.3206	Insignificant negative	2.394	0.124227	19.26833	0	significant Positive
INDUSTRY	1.582	7.6895	0.205788	0.8371	Insignificant Positive	−0.237	0.146713	−1.61777	0.1067	Insignificant negative
AVERAGE_VD	−16.2	22.771	−0.711715	0.4772	Insignificant Positive	1.003	0.434479	2.308706	0.0216	significant Positive
R-squared	0.0126	Mean dependent var		−0.70627		0.544	Mean dependent var		0.528979	
Adjusted R-squared	0.0001	S.D. dependent var		27.62165		0.539	S.D. dependent var		0.775733	
S.E. of regression	27.61	Akaike info criterion		9.490304		0.527	Akaike info criterion		1.572034	
Sum squared resid	2418	Schwarz criterion		9.548915		88.03	Schwarz criterion		1.630645	
Log likelihood	−1522	Hannan-Quinn criter.		9.513704		−248.1	Hannan-Quinn criter.		1.595434	
F-statistic	1.014	Durbin-Watson stat		1.499682		94.65	Durbin-Watson stat		0.857801	
Prob(F-statistic)	0.400					0				

Average VD on ROA, as the corresponding coefficient is −0.349180 (Coefficient < 0). Secondly, there is an insignificant effect of Average VD on ROS, as the corresponding *P*-value is 0.0739 (*P*-value > 0.05). Also, there is a negative effect of Industry on Average VD, as the corresponding coefficient is −1.356261 (Coefficient < 0). Thirdly, there is a significant effect of Average VD on MCAP, as the corresponding *P*-value is 0.0283 (*P*-value < 0.05).

Also, there is a positive effect of Average VD on MCAP, as the corresponding coefficient is 2.081041 (Coefficient < 0). While, there is an insignificant effect of Average VD on EPS, as the corresponding *P*-value is 0.4772 (*P*-value > 0.05). Also, there is a negative effect of Average VD on EPS, as the corresponding coefficient is −16.20710 (Coefficient < 0). Ultimately, there is a significant effect of Average VD on Tobin's Q, as the corresponding *P*-value is 0.0216 (*P*-value < 0.05). Also, there is a positive effect of Average VD on Tobin's Q, as the corresponding coefficient is 1.003085 (Coefficient > 0).

Whilst, Table 5 refers to the fixed versus random effect in regression analysis for firm performance indicators. It could be observed that there is no significant effect of variables in fixed effect. It could be observed that there is no significant effect of variables in random effect. Applying Hausman test to know which one of fixed test and random test is appropriate, it was found that the *P*-value of Hausman test is greater than 0.05, which means that the fixed effect is not supported in favor of the random effect for the all-firm performance variables.

4.5. Discussion of Findings

This subdivision presents the findings related to our study question. In particular,

Table 5. Fixed versus random effect of voluntary disclosure on the firm performance metrics by using STD.

	Using S.T. Leverage														
	ROA					ROS					Market Cap.				
Variable	Fixed Effect		Random Effect		Hausman Test	Fixed Effect		Random Effect		Hausman Test	Fixed Effect		Random Effect		Hausman Test
	C	Prob	C	Prob		C	Prob	C	Prob		C	Prob	C	Prob	
Constant	−0.31	0.0001	−0.308	0.0001		−2.718	0	−2.689	0		12.72	0	12.699	0	
Firm Size	0.029	0	0.0289	0		0.1735	0	0.172	0		0.303	0	0.3035	0	
S.T.D	−0.4	0	−0.406	0	0.999	−0.765	0.0005	−0.778	0.0004	0.999	−0.463	0.083	−0.447	0.0937	0.634
Industry	0.099	0.0043	0.0989	0.0045		0.276	0.2815	0.273	0.286		−0.074	0.814	−0.073	0.816	
Average VD	−0.35	0.0007	−0.35	0.0007		−1.366	0.0724	−1.356	0.0744		2.084	0.026	2.0831	0.0256	

	EPS					Tobin's Q				
Variable	Fixed Effect		Random Effect		Hausman Test	Fixed Effect		Random Effect		Hausman Test
	C	Prob	C	Prob		C	Prob	C	Prob	
Constant	27.68	0.1091	28.496	0.0986		1.1313	0.0007	1.111	0.0009	
Firm Size	−0.9	0.2938	−0.949	0.2667		−0.09	0	−0.089	0	
S.T.D	−6.52	0.3178	−6.476	0.32	0.999	2.3869	0	2.394	0	0.999
Industry	1.712	0.8237	1.5824	0.8369		−0.239	0.1055	−0.237	0.1085	
Average VD	−16.7	0.4621	−16.21	0.4766		1.0112	0.0213	1.003	0.0223	

how does voluntary disclosure of social, environmental, and intellectual capital affect firm performance among Egyptian-listed companies? Thus, the hypotheses were developed in view of the foregoing related topics. To determine whether voluntary disclosure influences firm performance, several appropriate statistical tests and five indices of firm performance, including ROA, ROS, MCAP, EPS, and Tobin's Q, were utilized. Upon this, previous empirical studies recommend that voluntary disclosure has a significant effect on the firm performance (Abdolmohammadi, 2005; Griffin & Mahon, 1997; Orlitzky et al., 2003; Qiu et al., 2016).

First of all, the minimum, maximum, mean, and standard deviation of the independent and dependent variables in this investigation are shown in **Table 2**. According to the data, the average level of voluntary disclosure in the 46 Egyptian publicly listed companies is approximately equal to 57 percent, with a minimum of 40 percent and a maximum of 70 percent.

As a result, there are extremely limited voluntary disclosures by corporations, and the majority of these are minor. In addition, the average for the dependent variables, which include ROA, ROS, MCAP, EPS, and Tobin's Q, is 0.019, −0.035, 19.76, −0.70, and 0.52, with a median of 0.028, 0.060, 19.70, 0.127, and 0.429. All these mean and median scores show that the majority of the businesses are performing below the average.

Secondly, the data that are viewed in **Table 3** and **Table 4** shows the Spearman's correlation matrix, in which, Spearman rank correlation is a non-parametric test that is used to measure the degree of association between two variables (i.e., voluntary disclosure with the various firm performance metrics). The findings among them show that the results are seemed to be mixed. Thirdly, by adopting the regression analysis on our variables in **Table 5**, we have found that various firm performance variables are statistically related to the level of voluntary disclosure by the 46 publicly traded companied listed in the Egyptian Stock Market. But, the majority of results are seemed to be mixed with a negativity trend among them.

When we compare our findings to the associated literature, we may conclude that our findings are consistent with the section of research hypotheses. As, this section has a variety of results. On one hand, substantial past studies with regard to our research hypotheses section imply that voluntary disclosure seems to have a typical positive impact on a company's performance. Because of this positive result, the following is an explanation for that finding. Firstly, by contemplating voluntary disclosure, a company may openly demonstrate its adherence to the social compact. Achieving compliance may build a favorable image, adding value to the enterprise and so favorably improving corporate performance. Also, extra information, according to agency and signaling theory, reduces information asymmetry and the cost of funding. This, in turn, encourages global investment.

Moreover, businesses could also generate productivity improvements, that might result in increased yields. Secondly, corporations may choose to disclose greater information in order to promote social concerns, which may improve operational efficiency (Brine et al., 2007).

For example, through fostering customer loyalty, improving labor quality, lowering expenses through fewer lawsuits from employees and environmentalists and encouraging customer advocacy and favorable word-of-mouth.

Finally, interested parties may appraise a firm's future based on value-related disclosures (intellectual capital). As a result, numerous diverted arguments support widely these positive effects (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorn et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016; Anam et al., 2011; Uyar & Kılıç, 2012; Chen & Wang, 2011; Cheng et al., 2016; Aerts et al., 2008; Cormier, Magnan, & Aerts, 2007; Cormier, Ledoux, & Magnan, 2011; Qiu et al., 2016; Summermatter & Siegel, 2009; Alshannag et al., 2017; Elzahar et al., 2015; Garay et al., 2013; Kim & Sung-Choon, 2013; Uyar & Kılıç, 2012).

On the other hand, with respect to our research hypotheses section, many investigations have found a negative relationship between voluntary disclosure and firm performance. To clarify such finding, it has been proposed that shareholders might value financial success more than voluntary disclosure, and that putting too much focus on voluntary activities can diminish corporate profitability (Li & Yang, 2016; Crisóstomo et al., 2011). It is also suggested that voluntary disclosure incurs additional expenditures, reducing a firm's competitiveness as well as financial success (Grimely & Friedman, 1970; Mathuva & Kiweu, 2016). Furthermore, some stakeholders might place low value on social information; as a result, voluntary disclosure may have a detrimental impact on corporate performance (Crisóstomo et al., 2011) due to the additional expenditures involved.

Although the exact explanation is unknown, an inconsequential outcome is consistent with prior studies (Aras et al., 2010; Brine et al., 2007). Aras et al. (2010) came to the conclusion that the cause for the negligible outcome is unknown but is related to variable selection. Brine et al. (2007) also stressed the importance of variable measurement and the need for lag-year in future studies. As a result, in similar instances, it is therefore asserted that voluntary disclosure incurs additional costs, resulting in a decrease in firm productivity. Thus, a negative association between voluntary disclosure and firm performance are widely found in many prior investigations (Griffin & Mahon, 1997; Margolis & Walsh, 2003; Molina-Azorn et al., 2009; Orlitzky et al., 2003; Elmagrhi et al., 2016; Li & Yang, 2016; Crisóstomo et al., 2011; Mathuva & Kiweu, 2016).

Furthermore, several earlier investigations have identified that there is no significant effect between voluntary disclosure and the firm performance. This result is similar to the findings of a large number of earlier investigations (Aras et al., 2010; Brine et al., 2007; Alshannag et al., 2017; Elzahar et al., 2015; Garay et al., 2013; Kim & Sung-Choon, 2013; Uyar & Kılıç, 2012). Accordingly, the effects of voluntary disclosure on firm performance can be judged powerful and rigorous based on the prior various results of several statistical investigations. On the ground of this, the study's findings can help policymakers and regulatory authorities to gain a deeper understanding. Therefore, in line with these various findings and analyses in the section of hypotheses development, the results of our study are seemed to be mixed in the same way as follows.

Finally, **Table 6** demonstrates the Hausman test between the voluntary disclosure with the various firm performance indicators in order to the fixed effect versus the random effect of the voluntary disclosure on the firm performance metrics. The Hausman test results for the dependent variables, which include ROA, ROS, MCAP, EPS, and Tobin's Q, are 0.999, 0.999, 0.634, 0.999 and 0.999 respectively. In which, this fixed effect is not supported.

Table 6. The summary of results amongst the average VD and various firm performance metrics.

Hypothesis	Description	Results
H1-1	The relationship between Average VD and ROA	Negative Significant
H1-2	The relationship between Average VD and ROS	Negative Insignificant
H1-3	The relationship between Average VD and MCAP	Positive significant
H1-4	The relationship between Average VD and EPS	Negative Insignificant
H1-4	The relationship between Average VD and Tobin's Q	Positive significant

4.6. Conclusions

Since the objective of this study was to investigate the relationship between the voluntary disclosure level in annual reports and the overall firm performance indicators of actively 46 Egyptian publicly traded firms listed on the Egyptian Stock Exchange. This study attempts to extend previous research on the determinants of voluntary information disclosure in a different data environment and an increased investment market, Egypt, which varies from those of developed countries in that emerging markets have high-growth potential, a relatively weak regulatory environment, poor corporate governance structure leading to expropriation of minority shareholders, and a low information disclosure level, resulting in a high information gap between the businesses and investors.

On this account, this study uses a large number of variables and evaluates five hypotheses to give evidence on Egyptian firms' disclosure policies. As a result, the study presents empirical evidence about the influence of these variables on the amount of voluntary information sharing.

Thus, the current study revealed that Egyptian publicly listed enterprises' disclosure level is at an approximately moderate degree. As, for each firm, a disclosure index was created and tested.

According to the findings, firms report 57 percent of voluntary information on average. The relatively moderate disclosure level is most likely due to the fact that this sort of information is optional, and no current regulations established by Egyptian's official accounting and reporting organizations oblige public corporations to show such information. In other terms, voluntary disclosure is left to management's discretion. As, majority of the Egyptian listed firms are relatively small enterprises that are not keen on the matter of disclosing their information voluntarily. Also, this moderate degree gives empirical evidence that large firms have more desire to disclose its information voluntarily in their annual reports than other small ones, in order to gain the investors' confidence and to boost widely its image across the Egyptian stock market.

Further, based on these mixed results of our findings, we can observe the followings. On one hand, in the beginning, our paper reports that the following firm performance measures ROA, ROS and EPS have a negative relationship with an average voluntary disclosure. Firstly, ROA is regarded as an accounting-based firm performance assessment, as seen, that has a negative significant relationship with an average VD. While, ROS is deemed as an important financial ratio that has a negative insignificant association with an average VD. Finally, EPS which is considered an important financial measure that indicates the profitability of a firm, has also a negative insignificant association with an average VD.

These negative results amongst the pre-mentioned firm performance indicators with the level of the voluntary disclosure within Egypt settings, may be interpreted due to several reasons. In general, the majority of Egyptian firms in all sectors especially after the year of 2013, has suffered a lot from the instability of their economic situations and several financial crises. As, Egypt was subjected to various monetary collapses as a result of revolutions and political events such as the revolutions in 2011 and 2013 in addition to the liberalization of the Egyptian exchange rate by the year of 2016, which had a detrimental impact on Egypt's economic status, necessitating the need to advance this situation. Therefore, it can be concluded that when a firm is in financial difficulties, it will have terrible news that sends a negative signal to investors, and this will impair management's openness in making disclosures.

Whilst, on the other hand, voluntary disclosure level in this paper was found to have a significant positive influence on both indicators the Market capitalization as well as the Tobin's Q.

These positive results demonstrate that there are somehow a few numbers of the large Egyptian firms which attempt to disclose more information voluntarily in their annual reports in order to gain the confidence of various investors. Within the indicator of MCAP, this conclusion is compatible with the legitimacy and signaling theories of perception.

For the first moment, this study finding contributes to the Egyptian context. Market capitalization is a market-based firm performance measuring indicator, and a favorable result might be due to the following factors. Originally, as implied by agency and signaling theory, voluntary disclosure supports the elimination of information asymmetry since interested parties may see it as a positive signal. As a result, by taking into account extra information, businesses may justify the potential for value generation through intangible assets. Furthermore, especially, for the large firms in the Egyptian Stock Market, Tobin's Q, as a mixed measure of firm performance with a positive influence on the level of voluntary disclosure, supports the notion of signaling and legitimacy theory, in which interested parties see voluntary disclosure positively, resulting in a favorable impression.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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