"The impact of financial risks disclosure level on the cost of debt: An Empirical study on Egyptian Listed Companies"

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The impact of financial risks disclosure level during firm`s life cycle on the cost of debt: An Empirical study on Egyptian Listed Companies

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Abstract

This study aimed to measure the impact of the level of accounting disclosure of financial risks on the cost of debt. To achieve this, the study was applied to companies listed on the EGX100 index. The sample consisted of 63 companies, after excluding banks and financial institutions due to their unique nature, over the period from 2019-2023. An index was constructed to measure the level of financial risk disclosure, comprising 22 items, after reviewing relevant accounting standards and prior studies. As for the cost of debt, it was estimated using the ratio of financing expenses to total debt. The study found a high level of risk disclosure in the financial reports of EGX100 companies listed on the Egyptian Exchange, indicating a commitment from a significant portion of these companies to risk disclosure. This may be attributed to the desire of many companies to achieve high levels of transparency out of concern for stakeholders. The study also found a significant inverse relationship between the level of risk disclosure and the cost of capital. Furthermore, the results indicated a significant negative impact of both company size and profitability as control variables on the cost of debt.

Key words: Level of Financial Risk Disclosure, Cost of Debt, Company Size.

المستخلص

هدفت الدراسة إلى قياس أثر مستوى الإفصاح المحاسبي عن المخاطرالمالية على تكلفة الديون، ولتحقيق ذلك تم التطبيق على الشركات المدرجة في مؤشر EGX100 ، وبلغت عينة الدراسة ٦٣ شركة بعد استبعاد الشركات المتعلقة بالبنوك والمؤسسات المالية لما لها من طبيعة خاصة، خلال الفترة من ٢٠١٩- ٢٠٢٣. وقد تم بناء مؤشر لقياس مستوى الإفصاح عن المخاطر المالية يتكون من ٢٢ بند وذلك بعد الاطلاع على المعايير المحاسبية والدراسات السابقة ذات الصلة، وبالنسبة لتكلفة الديون تم تقديرها باستخدام نسبة المصروفات التمويلية الى اجمالي الديون. وقد توصلت الدراسة إلى ارتفاع مستوى الإفصاح عن المخاطر في التقارير المالية لشركات (١٠٠ (EGX) المسجلة في البورصة المصرية، مما يشير إلى التزام جزء كبير من الشركات بالإفصاح عن المخاطر ؛ ولعل ذلك يرجع إلى رغبة العديد من الشركات في تحقيق مستويات عالية من الشفافية حرصا منها على الأطراف ذوي المصلحة. كما توصلت الدراسة إلى وجود تأثير عكسي معنوي لمستوى الإفصاح عن المخاطر على تكلفة رأس المال. كما أشارت النتائج إلى وجود تأثير معنوي سلبي لكل من حجم الشركة والربحية كمتغيرات رقابية على تكلفة الديون.

الكلمات المفتاحية: مستوى الافصاح عن المخاطر المالية، تكلفة الديون، حجم الشركة

1. Introduction:

Corporate risk disclosure (CRD) has been, and remains to be, a significant issue of concern to the global community and has gained significant attention from stakeholders, policymakers and regulators (Lombardi et al., 2016). From a business perspective, risk disclosure assists corporations to manage changes and instruct the path for the future (Abraham and Cox, 2007). CRD provides information about the company's material risks that help stakeholders understand and evaluate the interrelated risks, the effect of risks and the company's risk management strategies. Compared with ill-informed investors, the confident and well-informed investor can assess more accurately the worth of a company's stock (Deumes and Knechel, 2018).

Recently, narrative disclosures have attracted the attention of accounting scholars (Hossain et al. 2019). Less readable narrative disclosures may reflect opportunistic behavior in managerial reporting (Hossain et al. 2019). Some managers may use less clear disclosures to hide the unfavorable outcomes of their firm (Loughran and Mcdonald 2011; Bloomfield 2008; Ertugrul et al. 2017). Prior research indicates that users of financial reports find narrative disclosures beneficial (Ertugrul et al. 2017; X. Huang, Teoh, and Zhang 2014; Loughran and Mcdonald 2011, 2014). Some researches documented significant investors' response to word choice (Allee and Deangelis 2015). Recent research tries to find evidence whether managers communicate additional private information via their narrative or textual disclosure (Campbell et al. 2020).

The cost of capital has been considered as a critical factor in decisions about investment, capital budgeting, working capital management, the establishment of an optimal financial structure, performance assessment, and the firm value by helping to reduce cash flows. Nowadays, one of the primary human needs is how to express and meet information needs. According to the previous studies, factors such as the level of corporate financial risk disclosure determine the cost of capital. Financial risks directly affect corporate profitability and can even bankrupt a company. Variations in financial prices raise the financial risk. Given the

changes caused by financial risks in all fields, it can also affect the cost of capital (Azarberahman, 2021).

2. Research problem:

Financial reporting plays a crucial role in the financial and capital markets, where the disclosed information could reduce information asymmetry, and agency costs, improve the market discipline and monitoring of the agents, and direct the available capital to the most profitable investment opportunities. Extant literature argues that a lower COC is an expected economic benefit to firms improving their disclosure quantity and quality. RD provides risk information to help assess the financial and growth prospective of firms and sources of risk and uncertainty. Moreover, with the duality perspective of risk as both positive and negative, RD gains more importance to facilitate the understandability of financial information (Beretta & Bozzolan, 2004.(

In addition, the recent crises such as COVID-19 and the Ukrainian War support the importance of providing information on various sources of risk and how to manage it.

Furthermore, risks are one of the categories of information that suffer from a lack of disclosure. Many academic studies and accounting professional organizations have indicated the need for more risk disclosure (Semper and Beltrain, 2014)

It helps information users predict the company's future performance. Also the balance between return and risk represents the focus of the decision-making process. Therefore, providing sufficient information about the risks facing companies has become essential for information users (Desouki, 2014.)

In addition, Risks are one of the basic features of economic activity in our current era, as the business world is characterized by many risks that surround it, and the success or failure of any company depends on its ability to manage those risks and avoid their negative effects as much as possible (Shamis, 2020).

There is also an information gap between the actual information and the information required in the capital markets, which in turn has contributed to increased volatility in the stock markets, as the risks facing companies are not disclosed to allow stakeholders to make effective

decisions, as the lack of risk disclosure has led to an increase in the financial crisis (Carmona et al (2016).

However, by extrapolating and presenting previous studies that dealt with the relationship between risk disclosure and the cost of capital, it was found that there is a discrepancy in the results that were reached, despite the finding of a study by (Rajab, 2009) that the level of risk disclosure works to reduce information asymmetry between management and stakeholders, but it did not find any impact on the cost of equity financing. While (Nahar et al. 2016) found a negative relationship between the level of risk disclosure and the cost of equity financing. The study justified this by saying that risk disclosure works to reduce information asymmetry, reduce the information gap between management and investors, and enhance their confidence, thus obtaining Money at the lowest cost.

On the other hand, the (Semper and Beltrain, 2014) study found a positive impact of the level of financial risk disclosure on the cost of capital.

As a result, the interest of researchers in accounting thought has grown in studying the relationship between disclosure, information asymmetry, and the cost of capital, where the general idea is, according to agency theory, that companies tend to disclose more information in financial reports, in order to reduce information asymmetry between management and stakeholders, and between investors and each other, (Cuadrado et al., 2016). The existence of an information gap between management and investors or between investors and each other leads to a loss of confidence in the company, and thus investors will demand a higher return to invest in companies that suffer from information asymmetry, which means an increase in the cost of capital (Al-sayed, 2021).

In the light of the above discussion, the research problem can be concluded in the following question:

"Is financial risks disclosure level affects the cost of debt?"

3. Research objective

“The main objective of this research is to study the impact of financial risks disclosure level during firm`s life cycle on cost of debt”.

4. Research importance:

There have been many academic studies that have focused on the subject of risk disclosure, because of its significant impact in reducing the degree of uncertainty associated with the decision-making process. This study is an extension of the accounting thought literature, which has been concerned with the subject of risk disclosure, as this study analyzes the content of companies' financial reports registered on the Egyptian Stock Exchange (100 EGX) and investigating the extent to which the level of financial risk disclosure affects the cost of debt, as well as an explanation of the modified role of the company's life cycle on the relationship, which contributes to analyzing the extent of their ability to meet the needs of stakeholders.

Also, this study contributes practically to the emerging debate about the importance of the level of risk disclosure, and provides empirical evidence on the implications of the level of risk disclosure and the cost of debt. As well as explaining the modifying role of the company's life cycle in that relationship, the study provides information and practical evidence that may work to motivate companies to increase the level of disclosure of the risks surrounding them, or encourage standard setters to issue a mandatory accounting standard for risk disclosure , as happened in Germany, Standard No.(GAS-5),which increases the level of transparency in financial reports, which leads to reducing information asymmetry, and thus improving the efficiency and effectiveness of decision-making.

5. Research Hypothesis:

In light of the research problem, and striving to achieve its objective, and based on the extrapolation and analysis of relevant previous studies related to the research variables, the research hypothesis can be theoretically derived as follows, which will be empirically tested later:

H1: there is a significant relationship between financial risks disclosure and cost of debt.

6. Research limitations:

The research limitations could be presented as follows:

- The research will applied to financial risks only, and exclude from this application other types of risks (non-financial risks)
- The research will use a sample of the Egyptian non-financial companies listed on the Egyptian stock exchange only

- The research will not include banks and insurance companies as they have special nature
- The study will not include all Egyptian listed companies but will be conducted only for a sample of the Egyptian listed companies

7. Research plan

To achieve the research objective, address its problem, and within its scope, the research will proceed as follows:

7.1 Risk concept and Risk disclosure definition
7.2 The concept of cost of debt (COD) and its measurement
7.3 The relationship between financial risks disclosure level and cost of debt
7.4 Research methodology
7.5 Research results and recommendations

7.1 Risk concept and Risk disclosure definition:

To determine whether a certain sentence or paragraph is a risk disclosure or not, it is important to identify and define the risk meaning first. The concept of risk has developed from covering only the negative outcomes of events to covering both the negative and positive outcomes

The literature provides several concepts of risk that can be classified into two categories, that are, one-side definitions as well as two-side definitions. For example: Lupton (1999) identifies risk as a hazard, threat, or harm, while Horcher (2005) defines risk as the possibility of loss. These authors consider the risk as a loss or uncertainty with negative outputs.

Some disclosure regulations define risk as loss as well. For example, the SEC defines risk in FRR No. 48 in terms of loss (Hodder, Koonce, & McAnally, 2001).

Also, German Accounting Standard (GAS 5) defines risk as the possibility of a negative influence on the economic position of the firm (Elshandidy et al., 2015).

However, the risk may cover the potential of either gain or loss (Hodder et al., 2001; Mokhtar & Mellett, 2013; Schrand & Elliott, 1998; Solomon et al., 2000) and therefore, it should be defined to carry the positive and negative prospects.

Linsley and Shrives (2006) state that the modern perspective of risk contains both the negative and positive outcomes of events . Moreover, the

Institute of Chartered Accountants in England and Wales (ICAEW) ٢٠٠٢ states that risks have a range of different outcomes that could be upside or downside and therefore the institute argue that risk disclosure should cover business risks, threats, and opportunities as well.

Furthermore, according to the international risk management standard (ISO 31000:2009), risk is defined as the impact of uncertainty on a company's objective that could be positive or negative.

In addition, Elshandidy et al. (2015) apply a definition for risk that covers potential gains or opportunities as well as potential losses. One of the early studies, Solomon et al. (2000, p. 449), defines the risk according to the modern view as "Risk may be defined as the uncertainty related to potential gain or loss".

However, the risk could be defined also as a variation. Abraham and Cox (2007) and Elshandidy (2011) examined the risk as a variation. Elshandidy (2011, p.34), state "risk can be defined as the variations or fluctuations around a target value at a specific time horizon.

Moreover, Abraham and Cox (2007) examine the risk as a variation, uncertainty, and opportunity. This found to be consistent with the International Financial Reporting Standard (IFRS 4) "Insurance contracts" that defines the financial risk as: "The risk of a possible future change in one or more of a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices rate, credit rating or credit index or other variable".

However, it is obvious from the literature review that when researchers study risk disclosure, they consider the negative view of risk more than the positive one or a variation. This is consistent with the assumption of the prospect theory that people react to losses more severely than their reaction to gains (Hodder et al., 2001).So, the researcher can conclude that: Researchers seem to recognize and examine risk disclosure as dissemination of threats and dangers that face the companies rather than viewing some risks as opportunities.

The ICAEW (2011) report "Reporting Business Risks" states that most risk disclosure practices focus on the risk in the negative sense and that people recognize risk as the possibility of suffering losses or reduced profits or something else inappropriate.

Therefore, and In light of the previous definitions the researcher agrees with the unilateral definition of risk, because it is likely that those interested in financial reports recognize risks as losses or decreased profits, more willingly than opportunities and gains, and this go along with (Ibrahim and Hussainey, 2019, P130) which accepted the pre-modern view of risks as losses and measures the RD as negative outcomes only.

Prior literature and regulating bodies classified the Corporate Risk Disclosure (CRD) into different types (e.g., Cabedo & Tirado, 2004; Lindqvist, 2016; Chen, 2019; Maverick, 2019). A study by Cabedo & Tirado (2014) indicated that the classification of CRD involves two categories, namely, non-financial risks involving business and strategic risks, and Financial Risks (FRs) that include market, liquidity, and credit.

Also, FRs were classified by IFRS (7) into four categories: market, credit, liquidity, and price risks (Dicuonzo et al., 2017). It was noted that FRs consists of market, liquidity, and credit risks where market risk arises due to some factors, such as interest rate, foreign exchange, and commodity price-sensitive revenues or expenses (Vandemele et al., 2009).

Moreover, a study by (linsley&shrives,2006), indicated that the classification of CRD involves six categories ,that are, financial risks, operational risks, strategic risks, technology risks, integrity risks, and empowerment risks.

The Institute of Chartered Accountants in England and Wales has also classified it into external risks, which are the risks associated with the external environment in which the company operates, which are difficult or impossible to control. External risks are referred to as environmental risks. These risks arise from uncontrollable events and actions. Examples of these risks include changes in public opinion and price wars between competitors. Therefore, these risks are mostly due to economic, social and political factors. Internal Risk: These are the risks that arise from the company's practice of its activities, and can be defined into two types: operational risks and decision-making information risks (ICAEW, 2011).

According to (Cabedo & Tirado 2004), companies are essentially exposed to two types of risks: non- financial risks, which are not directly related to monetary assets and liabilities, although they will have an effect on future cash flow losses (business risk and strategic risk) and financial risks, which do have a direct influence on the loss of value of monetary

assets and liabilities (market risk, credit risk, liquidity risk and operational and legal risks).

Beretta and Bozzolan (2004) classified risk into three risk factors, namely, company strategy, company characteristics and the environment surrounding. Cabedo and Tirado (2004) have classified the risk into two groups, namely, non-financial and financial. Lajili and Zéghal (2005) grouped risk into 11 components, namely, financial, political, technology, environmental, weather, government regulations, seasonality risk, operational, cyclicality, suppliers and natural resources. Abraham and Cox (2007) disaggregated into three components, namely, business, financial and internal control.

Deumes (2008) grouped the risk into eight components, namely, macro-environmental sources, industry sources, internal sources, other sources, loss and probability of loss, variance, lack of information and lack of control. Ali and Taylor (2014) categorized risk disclosure into the following four major categories: operational risk, environmental risk, strategic risk and financial risk.

Therefore, and according to the above discussion risks can be classified as follows(Cabedo & Tirado 2004):

Financial Risks: financial risks are those which directly affect company net cash flows (Cabedo & Tirado 2004). **And it includes:**

- **Credit Risks:** Credit risk can be defined as the possibility that over time, a decrease in the real value of a company's client portfolio may occur as a result of credit quality deterioration suffered by those making up the portfolio. A particular case of credit risk is that known as insolvency risk.
- **Liquidity risk:** is understood as the possibility for potential losses due to a lack of sufficient cash resources to meet assumed short-term payment obligations. The failure to attend to current liabilities brings with it a series of consequences which undermine the company image and can even lead to situations of such disequilibrium that a process of insolvency might arise.
- **Market risks:** Market risks are those resulting from a variation in the price of certain economic magnitude. They are generally divided into four large categories:

- **Exchange risk:** that resulting from variations in exchange rates.
- **Interest risk:** this risk derives from variations in the interest rate, or, put another way, variations in the "price of money".
- **Risk of price variations** in financial assets other than fixed income assets.
- **Risk of commodity price variations:** from this risk, a loss occurs as a consequence of an unexpected variation in commodity prices.

Non- financial risks:

Risks which are not directly related to monetary assets and liabilities, although they will have an effect on future cash flow losses (Cabedo & Tirado 2004). It includes:

- **Business risk:** As Jorion(1997) states, business risk is that which the company assumes in order to create competitive advantages and added value for its shareholders. It is therefore considered as an internal company skill employed to deal with the competitive environment in which it is located. Hence, this risk refers to the possible impact that the loss of these company competitive skills might have, with the consequent influence on the possible future loss of company wealth.
- **Strategic risk:** This risk is associated with basic changes in the economy. The evolution of the economic environment generates a high level of uncertainty, which affects the performance of the company and consequently, the creation of wealth. In this way, any disturbance in the economic environment in which the companies are competing will affect them according to how sensitive a company is towards each of the factors that defines the environment.
- **Empowerment Risks:** These are the risks related to the human element and are represented by the risk of leadership, which refers to the inability to lead the human elements within the company. It also includes the risks associated with the lack of clarity in the lines of authority and responsibility, as well as the risks associated with the failure of external parties to complete the tasks assigned to them, in addition to the company's loss of the skills capable of Keeping pace

with technology changes and the dangers of exceeding authority (Hassan, 2013).

- **integrity risks:** These are losses resulting from management and employee fraud and impermissible actions that negatively affect the public perception of the company's performance, leading to damage to reputation (Radwan 2020).
- **Technology Risks:** The risk that the infrastructure of technological systems, including software, equipment and networks, will not meet the current and future needs of the company's business (Hassan, 2013).
- Some companies are subject to FRs that arises from financing activities (Taylor et al., 2010). Therefore, the FRs is the main concern of this current study.

Factors affecting risk disclosure practices:

Accounting studies have focused on analyzing the factors affecting the level of accounting disclosure of risks. These factors can be classified into three groups:

Firm characteristics:

Large-sized companies are associated with an increased level of complexity and diversity in operations, which may make them face a high level of risk, and with increasing pressure on these companies from stakeholders, they tend to meet their expectations of risk information to reduce agency costs and information asymmetry (Tauringana and Chithambo, 2016)

Also, highly profitable companies also have the possibility of investing in internal control and risk management systems because of their positive impact on their stock prices, as they reduce the degree of uncertainty associated with future cash flows and contribute to improving the company's reputation (Khlif, and Hussainey, 2016)

Although this inconsistent with the study of (Skinner, 1994), that poor performance may provide an incentive for managers to disclose risk-related information to avoid Litigation Risks.

Furthermore, from the perspective of agency theory, companies with high financial leverage tend to disclose risks to reduce agency costs, as well as sending a signal to investors and debt holders to indicate the company's

ability to pay short-term obligations, which is consistent with signaling theory (Elzahar and Hussainey, 2012)

As for liquidity, it is considered an essential factor in assessing bankruptcy risks. Therefore, companies with high liquidity disclose more risk-related information in order to send a signal to stakeholders about their outstanding performance in managing liquidity risks (Mokhtar and Mellett, 2013)

Also, companies registered on other stock exchanges are more likely to disclose risk information, as this enables them to access alternative sources of financing (Elzahar and Hussainey, 2012)

Finally, the types of risks that a company faces are closely related to the business environment and may vary depending on the nature of the industry (industry type), so companies may tend to disclose more risks in their annual reports to avoid political costs and to give legitimacy to their activities (Mokhtar and Mellett, 2013)

Good Corporate governance Practices:

Good governance practices have an effective role in improving risk disclosure, as the large size of the Board of Directors) BOD) is characterized by diversity of experiences and differences of opinions, which enhances the strength of oversight and the company's disclosure policy, which positively affects the quantity and quality of risk disclosure, even if this conflicts with the agency theory, which believes that Large board may be ineffective compared to the size of small boards (Saggar and Singh,2017,Elshandidy et al.,2013)

In addition, signaling theory suggests that gender diversity among members in terms of gender, age, professional experience, and education may be an incentive to disclose risks to build a good image of the company and enhance its performance (Saggar and Singh, 2017)

Also, separating the positions of Chairman of the Board of Directors and CEO reduces opportunistic management practices and supports the transparency of risk disclosure (Moumen et al., 2016)

The presence of an effective audit committee also contributes to reducing conflicts between owners and management, and reducing oversight costs by disclosing more risk information (Elshandidy et al., 2013)

External factors:

Competition is considered one of the main determinants of risk disclosure, and consistent with prediction from the perspective of cost of ownership, there is a positive, statistically significant relationship between competition and risk disclosure, (Mokhtar and Mellett, 2013). Although some studies see a decrease in the company's motivation to disclose risk information with increased competition for fear of exploitation of this information by competitors (Laidroo, 2009)

Also, the legislative and regulatory environment and social, economic and political conditions also affect the level of risk disclosure, as some business environments are characterized by secrecy in information in the presence of ineffective legal systems (Dobler et al., 2011).

7.2 The concept of cost of debt (COD):

In financial literature, the cost of debt is one of the basic concepts, which plays a vital role in financing and investment decisions. The company's manager must specify the cost of capital and its effects on the company's risk and return in order to determine appropriate financial resources (Jalal et al., 2021).

The cost of capital is a very important concept in financial accounting. It is used by managers as a tool to assess investment opportunities. It is also an important funding source. Moreover, investors are interested in the cost of capital appreciation because it represents the expected return on invested capital in companies (Gitman & Zutter, 2012).

The cost of capital is considered one of the most influential concepts in the investment decision-making process, as it is used as a basic criterion that can be achieved to maintain the current level of the company's value. If the company achieves a return greater than the cost of capital, it is expected that the market value of its shares will increase (Abdul Ghani, 2001).

It should also be noted that there is a difference between the financing structure and the capital structure, as the financing structure includes a mixture of long-term financing sources in addition to short-term financing sources, while the capital structure includes only long-term financing sources, which are long-term loans and bonds. Common stock, preferred stock and retained earnings (Massad, 2017, p. 51; Brealy at el, 2006, p4 88).

Also (Okegbe et al, 2019) states that the optimal capital structure means a low weighted average cost of capital and thus Increasing the value of companies.

Botosan (1997) defines the cost of capital as the minimum rate of return expected to be paid by investors who are willing to provide their funds to the company. Fund providers are investors (shareholders) and creditors. The financial costs paid to investors are referred to as the cost of equity; while the costs paid to creditors are called the cost of debt. Financing through debt is funding that comes from external parties. Creditors are willing to provide funding to the company in the hope of receiving appropriate rewards. From the company's side, these rewards are the costs that must be incurred to obtain this funding. In the concept of financial management, this cost is called the cost of debt (Karsana, 2024).

According to Egyptian Accounting Standard No. (14) "Borrowing Costs", the cost of borrowing: is the interest incurred by the company as a result of borrowing money.

Some previous studies also believe that the cost of debt is the actual rate of return on loans or bonds that the entity pays to lenders or creditors - banks, financial institutions and bondholders - after taking into account the tax impact of interest. The interest on loans or bonds is considered a current expense that the establishment pays to lenders or creditors and generates tax savings from it, which necessitates taking the tax impact into account when calculating the cost of financing by borrowing.While the cost of equity financing does not bring any tax benefits; The dividends paid by the company to shareholders or owners are considered a use of profit and not a burden on it (Gray et al., 2009; Hindi, 1999; Abdel Wanis, 2017).

Also, Karsana (2024), defines cost of debt (COD) as the rate of return expected by creditors or debt providers.

In light of the above, it is clear that there is no unified concept of the cost of debt, and the researcher concludes the following:

1) An investment with a rate of return above the cost of capital can increase the value of the Company, and conversely, an investment with a rate of return below the cost of capital will reduce the value of the Company.
2) The definition of the rate of return can be seen from two sides

- From the investor side: The rate of return required by creditors or debt providers to provide funds to companies
- From the perspective of a company that needs funds: the high or low level of profit requested by creditors or debt securities holders is a cost that must be incurred to obtain the debt funds and is referred to as the cost of debt.

Therefore, the researcher can define the cost of debt (COD) as: The rate of return expected by creditors or debt providers in order to provide funds to companies according to the risks surrounding these companies, and it represents burdens to these companies as a result of borrowing money.

7.3 The relationship between financial risks disclosure level and cost of debt:

A study by **(Semper and Beltrain, 2014)** explore the relationship between the level of risk disclosure and the cost of equity financing. To achieve this, the researcher built an index to measure the level of risk disclosure. The study sample included non-financial companies listed on the Madrid Stock Exchange for the period from 2007 – 2009.

The study found that there is a weak relationship between the level of disclosure of risks and the cost of equity. The study also found that there is no relationship between the level of disclosure of non-financial risks and the cost of equity, but there is a positive relationship with statistical significance between the level of disclosure of financial risks and the cost.

While, (Handayani &Sumardani, 2019) examine the effect of corporate risk disclosure on cost of equity capital and firm value. The sample was taken using a purposive sampling method, with the total sample of 99 companies. The data were analyzed using multiple regression analysis to test the hypothesis.

The results indicate that corporate risk disclosure has a negative effect on the cost of equity capital but corporate risk disclosure has a positive effect on firm value.

In addition, (Yuniarsih, & Triyonowati, 2020) examine the effect of Corporate Risk Disclosure on Cost of Equity Capital and to determine whether Firm Performance moderates the relationship between Corporate Risk Disclosure and Cost of Equity Capital. Using a sample of 86

manufacturing companies listed in Indonesia Stock Exchange in the period 2017-2019.

The results indicated that Corporate Risk Disclosure negatively affects Cost of Equity Capital.

But, (Cabedo, and Tirado, 2020) examine the relationship between risk information disclosure and the cost of equity of companies in the Spanish capital market. The results show that cost of equity and disclosed risk information are not related if a broad view of the latter is adopted. However, a positive relationship between financial risks and the cost of equity occurs when risk information is divided into financial and non-financial risks.

Consequently, the researcher can formulate the research gap in the following points:

- The lack of studies that focused on the effects of risk disclosure (within the researcher's knowledge) as previous studies recommended further research into the effects of the level and quality of risk disclosure, such as its impact on the cost of equity financing, borrowing financing, information asymmetry, the value of the company, as well as examining disclosure about risks before and after adopting international financial reporting standards(IFRS), (Ibrahim et al., 2019; Elamer et al., 2019).
- Through reviewing previous studies regarding the research variables, it became clear that there is a difference in the findings of these studies, as some studies found a positive relationship between the level of risk disclosure and the cost of debt such as: (Saleh, 2020) and (David Cabedo, et al, 2020). While, some other studies found a negative relationship between the financial risks disclosure level and the cost of debt such as: (Ibrahim, et al., 2023). Furthermore, some other studies have found that there is no relationship between the financial risks disclosure level and the cost of debt such as: (Jalal, 2021).
- The discrepancy in the findings of these studies can be attributed to the difference in the application environment or the difference in the methodology, which requires conducting more research with regard to the relationship between the financial risks disclosure level and the

cost of debt to test the nature of this relationship especially in the Egyptian environment.

So, and in the light of the previous presentation of previous studies and the study problem, the study hypothesis can be formulated as follows:

H1: there is a significant relationship between financial risks disclosure and cost of debt.

7.4 Research method:

This part discusses the selection process of the research sample, the criteria that affect the sample selection process. Also, it includes the sources of data that are used in this research. In addition, it contains the main research variables and how to measure these variables as well as the research models applied to test the hypotheses in order to achieve the research objectives.

7.4.1 Data and sample selection

The study population consists of the EGX100 companies listed on the Egyptian Stock Exchange, as it includes the most active companies on the Egyptian Stock Exchange (EGX 30 and EGX 70), totaling 100 companies. After excluding companies related to banks and financial institutions, the number of companies in the index reaches 63 (from 2019 to 2023). These companies were excluded to maintain sample homogeneity due to their special nature.

Table (1): Sample structure.

Industry sector	No. of firms	No. of observations	%
Food, Beverages, and Tobacco	**13**	**65**	**20.63%**
Contracting & Construction Engineering	**7**	**35**	**11.11%**
Industrial Goods, Services and Automobiles	**3**	**15**	**4.76%**
Travel & Leisure	**5**	**25**	**7.94%**
Real Estate	**5**	**25**	**7.94%**
Chemicals	**3**	**15**	**4.76%**
Basic Resources	**9**	**45**	**14.28**
Textile & Durables	**4**	**20**	**6.35%**

IT & Communication Services	**5**	**25**	**7.94%**
Trade & Distributors	**4**	**20**	**6.35%**
Healthcare	**5**	**25**	**7.94%**
Total	**63**	**315**	**100%**

7.4.2 Variables' measurement

7.4.2.1 Dependent variables

The dependent variable in this research is **Cost of Debt (COD)**, in the **main analysis** we Measure the cost of debt depends on the interest rate required in financial markets for borrowing, such as money borrowed from banks and financial institutions, and the central bank usually announces a specific interest rate for those borrowed funds. Therefore, the cost of debt is measured through the following equations:

(Horne and Wachowicz, 2008; Bliss and Gul, 2012a; Gitman and Zutter, 2012)

$$K_d = K \times (1 - T)$$

7.4.2.2 Independent variables

The independent variable is the **financial Risks disclosure level (FRD).** This variable is measured by dividing the number of actual risk disclosure items by the number of standard risk disclosure items. These disclosures are determined based on an index developed by the researcher according to accounting standards and various professional pronouncements, including Egyptian Accounting Standards No. (40), (13), (47), (15), (7), and relevant prior studies (Moumen Haj-Salem et al., 2020; Moussa, 2020; Linsley and Shrives, 2006, 2015 et al.; Al-Qulayti, 2019; Mulaiji, 2017). The index consists of 22 items. "This index relies on a binary basis, where a score of (1) is given for each item disclosed clearly and specifically in the company's reports and a score of (0) if the item is not disclosed or if the disclosure is general and insufficient."

7.4.2.4 Control variables

The researcher control for a set of variables that have previously been found to affect **cost of debt**, namely firm size (has been one of the main

variables that had a significant on cost of debt), firm profitability (It is an important measure of firm's financial performance because it reflects the firm's ability to generate profit that will be used to finance profitable investment opportunities thereby, enhancing the firm growth), firm leverage (shows the firm's ability to meet its long term liabilities), (Graham et al., 2008; Zhu, 2014; Raimo et al., 2021;).

7.4.3 The study models

This section focuses on introducing the research model that is presented to examine the research hypotheses (illustrated in Figure 1) thus this research includes one model is developed to test the association between FRD and COD. In this study, multivariate regression analysis using the Ordinary Least Squares (OLS) method is employed. The models utilized for the main analysis are presented as follows:

Research model:

Linear regression model focuses on testing the first hypothesis H1 which investigate the association between FRD and COD. The research model is developed as follows:

$$\mathbf{COD_{it} = \beta_0 + \beta_1 FRD_{it} + \beta_2 Size_{it} + \beta_3 LEV_{it} + \beta_4 ROA_{it} + \varepsilon_{it}} \quad \textbf{(Model 1)}$$

Where:

COD_{it}, cost of debt of firm (i) at year (t);

FRD_{it}, disclosure of information related to financial Risks disclosure of firm (i) at year (t);

ROA_{it}, profitability of firm (i) at year (t);

LEV_{it}, leverage of firm (i) at year (t);

$Size_{it}$, firm size of firm (i) at year (t);

ε_{it}, error term.

Research model:

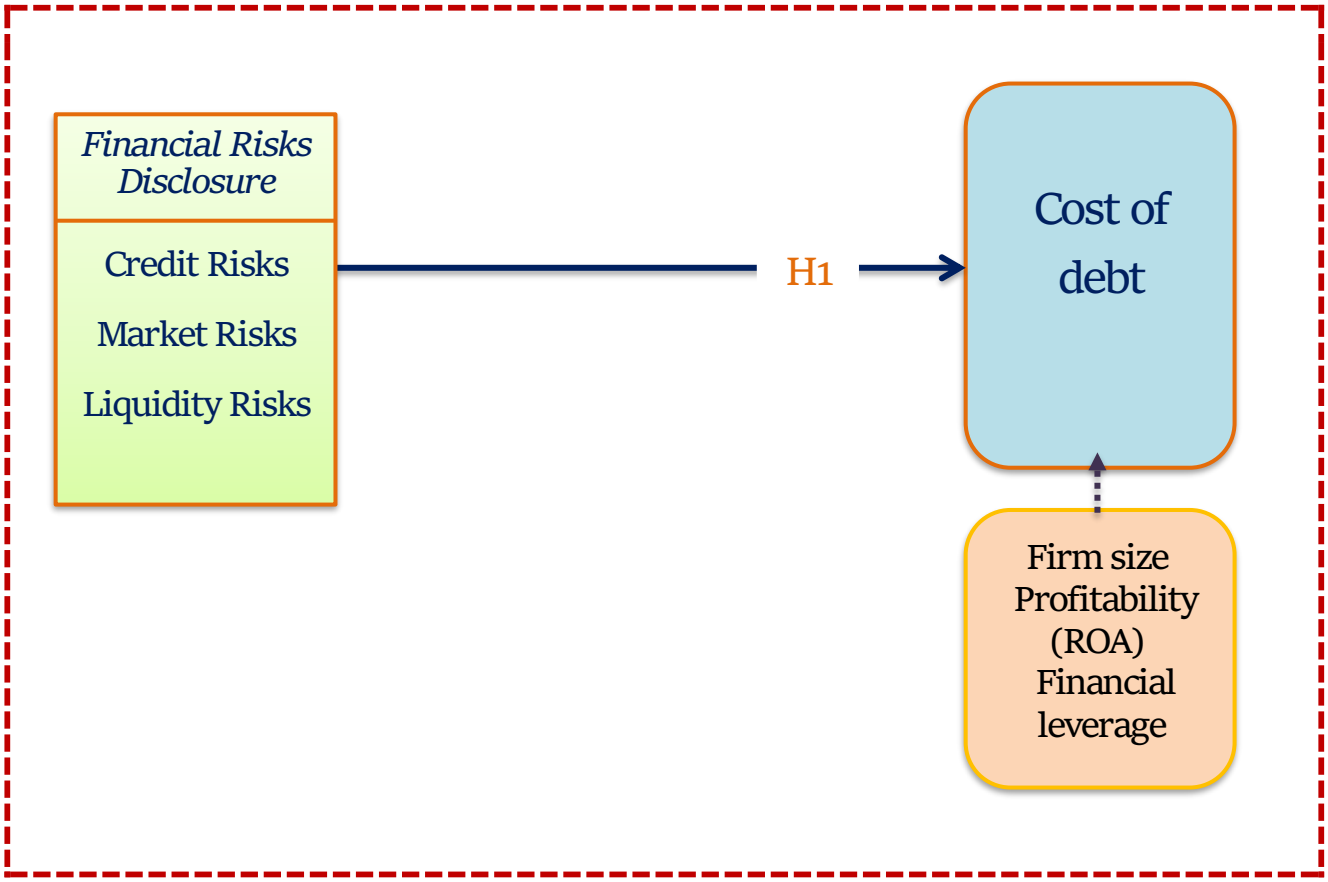

Figure (1): Research model
Source: personal work

7.4.4 Data analysis and Hypotheses testing

Table (3): Descriptive statistics

Variables	*n*	Min.	Max.	Mean	Std. Dev
COD	315	0.000	0.173	0.034	0.038
FRD	315	0.364	0.955	0.770	0.137
Size	315	14.016	23.961	20.720	1.245
LEV	315	0.023	1.129	0.468	0.264
ROA	315	-0.260	0.359	0.065	0.114

Table 3 presents the descriptive statistics for the examined variables. The average **cost of debt (COD)** for the entire sample is 0.034 (or 3.4%), indicating that, on average, firms in the sample incur a relatively low cost when borrowing funds. The range of COD spans from 0.000 to 0.173,

suggesting considerable variation across firms, with some enjoying access to nearly free debt financing while others face much higher borrowing costs. The standard deviation of 0.038 further reflects this variability, implying that while the average is low, certain firms bear significantly higher debt costs, potentially due to differences in credit risk, firm size, or market conditions.

In terms of financial risk disclosure (FRD), the average disclosure level across the sample is 77%, which indicates a generally high level of transparency in reporting financial risks. The range of disclosure extends from 36.4% to 95.5%, highlighting a substantial disparity in disclosure practices. Some firms disclose less than half of the relevant risk information, while others come close to full transparency. The standard deviation of 0.137 confirms this spread and suggests inconsistencies in the application or enforcement of disclosure standards. Such variation may be attributed to differences in corporate governance, regulatory environments, or strategic disclosure choices aimed at investor relations and market signalling.

The **firm size** shows a standard deviation of (1.245) which is very small relative to the mean (20.720) due to the use of logarithm which caused smoothing in firm size among firms. The firm size shows a small range between the minimum value (14.016) and the maximum value (23.9621), reflecting the high concentration around the mean and the homogeneity in firm size among the sampled firms. The average **leverage ratio** is approximately 0.468, indicating that, on average, firms finance about 46.8% of their assets through debt. The leverage values range from 0.023 to 1.129, suggesting a considerable variation in debt usage across firms. The standard deviation of 0.264 reflects a moderate level of dispersion around the mean, implying differences in capital structure strategies among the sampled firms. The average **return on assets** is 0.065, or 6.5%, indicating that, on average, firms generate a modest return on their total assets. The ROA values range from -0.260 to 0.359, showing a widespread in profitability levels, the standard deviation of 0.114 confirms this variability, highlighting differences in operational efficiency and profitability among the firms in the sample.

7.4.5 Diagnostic statistics

7.4.5.1. Pearson's Correlation Test

The Pearson's correlation coefficient shows the direction and the strength of the linear association between any two variables included in this research. Moreover, the Pearson's correlation coefficients are used to detect the multicollinearity between any two independent variables included in the same regression model. Table (5) shows the Pearson's correlation coefficients for all the study variables.

The correlation coefficients in the Pearson correlation matrix presented in table (5) are used to detect the multicollinearity between any two independent variables. Where the multicollinearity exists if the Pearson correlation coefficient is greater than 70% between any two independent variables. Hence, there is no multicollinearity detected between independent variables used to test the moderating effect of the firm life cycle on the association between FRD and COD. because the highest correlation coefficient is (-0.449) which is found between the ROA and LEV as shown in table (5).

Table 5. Pearson's correlation Matrix

Variables	COD	FRD	Size	LEV	ROA
COD	**1**				
FRD	-0.297***	**1**			
Size	-0.189***	0.175***	**1**		
LEV	0.177***	0.022	0.040	**1**	
ROA	-0.234***	0.060	0.145**	-0.449***	**1**

Notes: ***, **, and * denote statistical significance at the 1, 5, and 10 % levels, respectively.

Table 5 displays the findings of the Pearson correlation analysis for the models' variables. Cost of debt has a significant negative correlation with financial risk disclosure (FRD) R=-0.297, at 1% significance level. This indicate that firms with higher disclosure of information related to financial risk are expected to have lower cost of debt. Similarly, cost of debt (COD) exhibits significant negative correlations with Size, ROA, and Maturity stage, with correlation coefficients of -0.189, -0.234, and -0.131, respectively, all significant at the 1% level. Furthermore, Cost of debt has a

significant positive correlation with LEV R=0.177, at 1% significance level. Also, the independent variables exhibited a lower correlation, indicating the absence of multicollinearity issues in the sample.

7.4.6 Empirical results and Hypotheses Testing

7/4/6/1 First hypothesis: Financial risk disclosure and Cost of debt:

To testing the validity of the first research hypothesis (H1) concerning the association between FRD and COD, which states That *"**There is a significant relationship between financial risks disclosure level and the cost of debt**"*. begins by conducting a Multivariate OLS regression model as shown in table (7).

Table 7: The relationship between FRD and COD

Dependent variable: COD (Cost of debt) (Model 1)				
Predictor	**Coefficient**	**t-value**	**P-value**	**VIF**
FRD	**-0.269*****	-5.085	**0.000**	1.034
Size	-0.126**	-2.353	0.019	1.064
LEV	0.123**	2.094	0.037	1.272
ROA	-0.144**	-2.421	0.016	1.299
Constant	0.116***	6.479	0.000	---------
R^2	0.159			
Adjusted R^2	0.148			
F-value	14.685	*p=0.000*		
Durbin-Watson	1.723			
Notes: ***, **, and *denote statistical significance at the 1, 5, and 10 percent levels.				

Before accepting the OLS cost of debt model as a reliable model, there is some goodness of fit tests that should be conducted to confirm that the statistical techniques applied in this study best fit the sample data. These tests are the multicollinearity and auto- correlation.

If any of the aforementioned problems (multicollinearity and auto-correlation) are evidenced, they should be considered while estimating the final firm value model. Thus, the goodness of fit should be proved first before accepting the final firm value model.

Table (7) shows that there is no multicollinearity among the regressors of the firm value model. As, the multicollinearity exists when the variance inflation factor (VIF) of any independent variable exceeds 10. Therefore, there is no multicollinearity among the explanatory variables included in the audit quality model because, all explanatory variables show a VIF coefficient ranges from 1: 2 it was less than 10.

Table (7) illustrates also the statistic of Durbin-Watson test that is used to test the presence of autocorrelation in the residuals. The Durbin-Watson statistic ranges between 0 and 4. A statistic value near to 2 reflects that there is no autocorrelation detected in the sample. A value approaching zero reflects positive autocorrelation, while values toward 4 indicate negative autocorrelation. Table (7) shows that the value of Durbin-Watson is (1.723) which is close to 2, indicating that there is no serial correlation in the residuals of the model. Therefore, the null hypothesis is accepted which states that the residuals from the regression are not auto-correlated.

Table 7 shows the **findings of the OLS regression analyse** to examine the association between financial risk disclosure and cost of debt. From above table (table 7), the value of calculated F was 14.685 at a significant level 0.000 less than the approved level of significant 0.05 which indicated that the model was deemed fit and statistically significant. This value suggested that the cost of debt model was statistically valid, was suitable for interpreting the relationship between dependent variable (COD) and independent variables (FRD) and Control Variables (Firm size, profitability, and Financial Leverage).

And Adjusted R^2 (14.8%) was used to measure the ability of independent variables to interpret the dependent variable, which indicated that the variations in the independent variables explain almost 15% of the variation in the dependent variable (cost of debt).

The results presented in **Table (7)** indicate a **significant negative relationship** between the level of **financial risk disclosure (FRD)** and the **cost of debt (COD)**. Specifically, the regression coefficient (β) for FRD is **-0.269**, with a corresponding **t-value of -5.085** and a **p-value (Sig) of 0.000**, which is well below the conventional significance threshold of 1%. This statistical evidence confirms that higher levels of financial risk disclosure are significantly associated with **lower borrowing costs** for firms. These findings provide empirical support for the study's **first**

hypothesis (H1), which posits a **significant negative association between financial risk disclosure and cost of debt**. As a result, **H1 is accepted**, indicating that enhanced transparency regarding financial risks can effectively reduce a firm's financing costs.

This outcome aligns with the theoretical expectation that greater disclosure reduces information asymmetry between firms and creditors. When firms provide more comprehensive and reliable information about their financial risks, lenders can better assess the firm's creditworthiness, which reduces perceived uncertainty and leads to more favourable lending terms. Moreover, the current finding is consistent with prior research that has similarly documented a **decline in cost of debt in response to improved financial risk disclosure**. These studies suggest that transparent disclosure not only signals sound risk management but also fosters trust among debt holders, ultimately reducing risk premiums demanded by lenders. (Handayani &Sumardani, 2019, Yuniarsih, & Triyonowati, 2020, Nahar et al., 2016, and Ibrahim, et al., 2023).

With regard to the control variables, the results show that, with reference to the first control variable, the cost of debt (COD) is negatively related to the firm's size (Size) (β= **-0.126**). This negative association is consistent with previous studies arguing that larger firms benefit from a lower cost of debt financing thanks to easier access to external financing, less information asymmetry, lower monitoring costs, higher resilience to negative shocks and greater economies of scales in debt costs (Graham et al., 2008; Raimo et al., 2021).

Similarly, our results confirm the negative association between firm profitability (ROA) and the cost of debt (COD) (β= **-0.144**). as high profitable firms are generally considered less risky, more able to generate resources and more capable of servicing the debt than not profitable ones (Graham et al., 2008; Raimo et al., 2021).

At the same time, the cost of debt (COD) is positively related to the financial leverage (LEV) (β= **0.123**). And this finding is prompted by the positive association between the level of indebtedness and the default risk (Zhu, 2014; Raimo et al., 2021).

7.4.7 Research results and Recommendations

7.4.7.1 Research results

The study aimed to analyze and test the impact of the level of financial risk disclosure on the cost of debt, through a theoretical and applied study of a sample of 63 non-financial companies listed on the Egyptian Stock Exchange during the period from 2019 to 2023, with a total of 315 observations.

The most important findings of the study can be summarized as follows:

- From the perspective of investors and lenders, risks are shaped by psychological factors based on fear and uncertainty about the company's potential losses. Therefore, disclosure and transparency of the risks to which a company is exposed are a mechanism for managing these risks. They also reduce information asymmetries between management, investors, and lenders.
- The average risk disclosure rate in the financial reports of (100) EGX companies listed on the Egyptian Stock Exchange is approximately 77%, indicating a high level of risk disclosure for the companies listed in the study sample.
- The results show that there is a negative and significant relation between financial risks disclosure level and cost of debt. Moreover, the current finding is consistent with prior research that has similarly documented a decline in cost of debt in response to improved financial risk disclosure. These studies suggest that transparent disclosure not only signals sound risk management but also fosters trust among debt holders, ultimately reducing risk premiums demanded by lenders (Handayani &Sumardani, 2019, Yuniarsih, & Triyonowati, 2020, Nahar et al., 2016, and Ibrahim, et al., 2023).
- Also, the results show that the cost of debt (COD) is negatively related to the firm's size and firm profitability
- Furthermore, the cost of debt (COD) is positively related to the financial leverage.

7.4.7.2 Research Recommendations

In light of the study's findings, the researcher recommends the following:

- Companies should increase their accounting disclosure of risks and how they are managed, so that investors and creditors can assess the company's ability to generate future cash flows.
- Standard setters should be encouraged to issue an accounting standard for risk disclosure, as was done in Germany with Standard No. (GAS-5), to serve as a primary reference for companies on how to prepare risk disclosure reports

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