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Integrated Modeling of Causes and Consequences of Forward-Looking Information Disclosure in Annual Reports

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Abstract

The forward-looking information disclosure presents the information that enables the beneficiaries to evaluate a company's future that might involve financial forecasts and uncertainty. This affects the company's performance and decreases the stock return volatility. The present research aims at integrated modeling of the causes and consequences of forward-looking information disclosure. This study is an applied descriptive correlational research. The sample included 93 companies listed on the Tehran stock exchange from 2013 to 2019. The impact of all the causes of forward-looking information disclosure and its consequences was extracted by applying the structural equation

modeling method. The consequences include capital cost and informational asymmetry, and the causes of forward-looking information disclosure include macroeconomic features, financial performance, ownership structure, board characteristics, structural properties, and audit. In short, according to the obtained results, the forward-looking information disclosure significantly positively affects the capital cost.
On the contrary, it has no significant influence on informational asymmetry. Further, the results of testing the model revealed that the variables of ownership structure and financial performance positively influence forward-looking information disclosure. In addition, the impact of macroeconomic characteristics is negative, and there is no relationship between the forward-looking information disclosure with the audit, structural features, and the board's characteristics.

Keywords: Forward-Looking Information Disclosure, Capital Cost, Informational Asymmetry, Structural Equations.

Introduction

The forward-looking information disclosure refers to the commercial forecast about the future of commerce status and provides the shareholders with useful information about the future of the company. The shareholders constantly ask the manager about the prediction of the company's future. It is obvious that the management cannot predict the future of the company or provide a certain answer to this question. However, they can estimate the market's last procedure and then explain to the shareholders what the company proposes and decide to do (Alkhatib, 2014). Recently, most of the formal declarations have emphasized the significance of forward-looking information disclosure for the end-users of the company's financial information. It is believed that the extra information about the discussion and analysis of annual report management improves the investors' ability to evaluate future cash flows and prediction of future income. For instance, the Jenkins Committee, the Canadian Institute of Chartered Accountants (CICA), and the Institute of Chartered Accountants in England and Wales (ICAEW) suggest that the financial reports of companies, with a forward-looking perspective should provide more information about the factors which create long-term value to meet the users' needs (Bozzolan et al., 2009).

In addition to the backward information, which is generally provided by the financial statements and annual narrative reports, the shareholders want to know what the managers predict about the future activities of the firm. Investors especially need such information to decide about selling or purchasing specific firms' stock. They tend to invest in firms that indicate high performance in the future (Liu, 2015). Most companies prefer to disclose voluntarily non-financial and historical information. Strategic information refers to the information about the company's plans and strategies. In contrast, the forward-looking information represents the future outlook and predicts the financial and commercial performance of the company (Kim & Shi, 2011). The decrease in capital cost is one of the advantages of reducing informational asymmetry among investors. It can be argued in two ways that the forward-looking information disclosure has a relationship with the reduction of informational asymmetry and imposition of less capital cost: 1) the forward-looking information disclosure increases the stock liquidity and, accordingly, decreases the capital cost by reducing the interaction cost or increasing the demand for company securities; 2) the forward-looking information disclosure decreases the investor's estimated risk of return on asset and distribution of dividend since the investors estimate the actual amount of securities based on the information they received about the company (Hassanein & Hussainey, 2015).

Some studies examined the role of forward-looking information disclosure in predicting a company's future performance. The evidence presented by Wang and Hussainey (2013) indicates that disclosing forward-looking information about well-managed companies improves the stock market's ability to predict future earnings. Moreover, Athanasakou& Hussainey (2014) studied the role of forward-looking information disclosure in the companies' annual reports. The findings reveal that investors need forward-looking information to predict the company's future earnings. Further, previous research has studied the effect of forward-looking information disclosure on the financial analyst's prediction. Barron et al. (1999) found that a higher level of disclosure of forward-looking information about capital costs and operations depends on the accuracy of the analyst's prediction.

Considering what was mentioned and the importance of variables of forward-looking information disclosure, capital cost, and informational asymmetry for the capital market participants, the present research aims to investigate the relationship between forward-looking information disclosure with its causes and consequences. Further, this research attempts to determine the level of forward-looking information disclosure in the companies listed on the Tehran stock exchange and its probable relationship with the companies' capital cost and informational asymmetry. However, forward-looking information disclosure is not constantly accomplished in the companies listed on the Tehran stock exchange, and this condition is mostly observed in developed and developing countries. Different issues, such as managing motivations, corporate leadership, and the impact of internal factors, have been studied in these countries (Li et al., 2008; Hussainey & Al-Najjar, 2011; Bujaki & Zéghal, 1999). This domain of research has not been considerably attended in Iran. Therefore, forward-looking information disclosure is the main factor that should be considered in the economic growth of society. In Iran, regarding the governing economic and political condition and the authorities' decision to transfer state companies to the private sector, the importance of forward-looking disclosure and perception of the behavior of information disclosure level in the companies sounds more important than in the past. Further, this research is one of the studies primarily investigating the causes and consequences of forward-looking information disclosure in Iran by applying structural equations modeling. In other words, the main questions of this research are: 1- What are the effective factors in forward-looking information disclosure? 2- What are the consequences of forward-looking information disclosure? To continue, the research's theoretical foundations, literature, methodology, findings, and conclusion have been presented.

Theoretical framework and conceptual model of research

Considering the previous research and study of different viewpoints about forward-looking information disclosure and its effective factors and consequences, the theoretical framework of research can be modeled as follows:

First section: Forward-looking information disclosure

All the necessities of a narrative report require that the analysis and discussion of narrative reporting should involve a forward-looking orientation. Therefore, the companies should provide such information and recognize the procedures and factors related to evaluating the company's current and future business performance and access to long-term commercial goals. In addition, International Accounting Standard Board (IASB) proposes that the disclosures accomplished by the managers should include forward-looking information disclosure. This information should concentrate on the business entity's liquidity status and performance in the future and the cause of that change. Further, they should include the evaluation of business entity management and outlooks concerning the current period's results.

The managers should present the future outlook information through narrative explanations or quantitative data. Athanasakou & Hussainey (2014) define forward-looking information disclosure as "the information that captures the current plans and future forecasts". This information enables the shareholders and other investors to evaluate the company's future financial performance. In addition, it can be defined as information about the future, such as information about the outlooks and plans that may later be represented as historical information.

The forward-looking information disclosure includes the managers' forecast about the results of predicted operations and financial forecasts such as next year's earnings, expected earnings, and predicted cash flows. Further, it includes information about the risks and uncertainties that can affect the actual results considerably and cause their variation from the predicted results. Evidently, this information is mental, and their preparation requires professional judgment.

Some previous studies, such as (Husseiney et al., 2003; and Li, 2010), represented the forward-looking declarations in the annual reports using keywords such as "forecast", "expectation" "estimation," or similar terms. Some previous studies attempted to explain what encourages companies to disclose forward-looking information. For instance, Kieso & Weygandt (2019) believe that forward-looking information disclosure is necessary because, firstly, the economic environment in which the company works is so dynamic, and the users' need for the information is changing rapidly; therefore, in addition to the historical information, the other type of information (such as forward-looking ones) is required to provide the users' needed information. Secondly, disclosing forward-looking information may be helpful in the investors' decision-making about the beneficial investment. Thirdly, the loss of forward-looking information may make the investors base their predictions on wrong information obtained from other resources.

Further, Bujaki & Zéghal (1999) argue that the disclosure of forward-looking information is useful for reducing informational asymmetry between the managers and the investors in the annual reports, and this, consequently, helps reduce the actual cost of external financing.

From the theoretical perspective, the signaling theory may explain other viewpoints toward the use of forward-looking information disclosure. According to this theory, companies with weak performance may disclose forward-looking information that represents their power to eliminate losses in the future. For instance, Schleicher et al. (2007) argue that the managers of loss firms most probably disclose forward-looking information to attract investors. Regarding terrible news such as loss, the managers discovered that the stock price was probably affected negatively. To conclude, the managers intend that the information affect the bad news or even reverse its effect on the stock return. This guarantees foresight for the investors in the case of future durability. From the empirical perspective, the disclosure of forward-looking information is associated with 1) prediction of future performance, 2) accuracy of analysts' predictions, and 3) prediction of stock price based on future earnings.

This research calculates the index of forward-looking disclosure according to the model developed based on the content analysis approach. Considering this model, the forward-looking disclosure includes the dimensions of managers' forecast and analysis (11 components), future objectives and strategies (16 components), and future financial and non-financial information (21 components) (Fotouhi Khankahdani et al., 2021). The mentioned index has been calculated by the non-weighted method through Equation 1.

$$FLD = \sum_{j=1}^{n} \frac{dj}{n} \tag{1}$$

Where FLD is the score of forward-looking disclosure in a cumulative form, dj would be equal to 1 if the j is disclosed. Otherwise, it would be equal to zero. Further, n is the maximum score every company can obtain.

Second section: Effective factors on forward-looking information disclosure

If the manager reports low-quality information, it will not improve the financial decision-makers and other shareholders' judgment. Therefore, the managers should disclose forward-looking information with high quality in order to help the users to decide on the investment. Some factors should be considered in the case of forward-looking information disclosure. In the present research, institutional ownership is one of the factors effective on the forward-looking information disclosure that is equal to the percentage of shares outstanding held by the legal (private) persons of total capital stock (Bashirimanesh et al., 2016; Anwar et al., 2021). The institutional owners are regarded as the leading suppliers of funds in the financial markets. Such owners often play an essential role in supervising management performance.

Moreover, companies with a high concentration on institutional ownership are considerably motivated to disclose the information voluntarily to show investors' trust (El-Gazzar, 1998). Therefore, previous studies, such as the one by Mitchell et al. (1995), expect that institutional ownership has a positive relationship with voluntary disclosure. Similarly, Karamanou &Vafeas (2005) perceived that when institutional investors own more shares in American companies, they probably represent the management earnings forecast. However, the increase in institutional ownership level may reduce the company's need for information disclosure (Schadewitz & Blevins, 1998). The institutional owners, especially the blockholders, can get more exact forward-looking information through one-on-one meetings with the management (Barker, 1998). The companies with big block-holders trust less on the smaller investors and demand less for the voluntary disclosure of large states (2008) that have reported a negative relationship between institutional ownership and alternative disclosure. When there are many institutional shareholders in the company, disclosing forward-looking information to all the institutional investors through direct meetings can be costly for a company. The voluntary disclosure of forward-looking statements in the annual reports can be more effective, while many institutional investors invest in the companies(Holland, 1998).

Managing ownership is the other factor that affects forward-looking information disclosure. The management surrounding theory and agency theory predicts the contradictory relationship between the manager's ownership and voluntary disclosure. According to the management theory, concentrated managing ownership can be unfavorable for the company's long-term value since the managers can maximize their private control by reducing the voluntary disclosure of benefits (Morck et al., 1988). Therefore, a negative relationship between the manager's ownership and voluntary disclosure is expected, and the level of managing ownership can adapt the management benefits to the other shareholders' benefits (Jensen, 1993).

Companies with a high level of manager ownership have less informational asymmetry between the management and the shareholders. Therefore, they can present forward-looking information in their annual reports. The empirical evidence reveals that the management entrenchment theory has more influence than the agency theory regarding the relationship between managing ownership and voluntary disclosure. Managing ownership has a negative impact on forward-looking voluntary disclosure, mental capital disclosure, and public, voluntary disclosure (Li & Zhao, 2008).

The boards with many managers are likely to need to be more effective. They are less involved in decision-making, including the decision about increasing or non-voluntary disclosure (Goodstein et al., 1994).

Communicative and coordination-related problems may exist in the large panels; therefore, the efficiency of these panels may be less than the small panels. Jensen (1993) and Yermack (1996) argue that the small panels are more effective in supervising the companies' managers. However, no empirical evidence in the literature supports the negative relationship between board size and information disclosure (Cheng & Courtenay, 2006). There are two reasons for the positive relationship between the forward-looking statements and the board size. First, large boards can involve diverse expertise, including financial reporting expertise. Therefore, more forward-looking information disclosure is expected. Second, the large boards are less influenced by the insider and may reveal more tendency to disclose further information about the forward-looking statements to the foreign investors in order to represent their future performance (Lakhal, 2005).

The (independent) board composition is specified based on the percentage of its non-executive members that is estimated regarding the ratio of non-executive (independent) members of the board to total members of the board (Mahboub, 2019). The literature indicates that board independence decreases informational asymmetry and increases companies' information disclosure. Further, American companies probably forecast earnings when their board is more independent than the management influence (Karamanou & Vafeas, 2005). The findings are different in other fields. For instance, Lakhal (2005) does not represent any relationship between the board's independence and the earning forecast disclosure in France.

Hussainey & AlNajjar (2011) perceived that the relationship between these two variables had been revealed in England regarding the regression model. It is believed that the board composition is an interesting variable that should be noticed since it reflects the role of non-executive managers. As the independence theory implies, the non-executive managers link the companies with the external environment through their expertise, validity, and communication. According to agency theory, non-executive managers may play an important role in supervising the managers' performance and restricting their opportunism (Fama & Jensen, 1983).

These external managers who are less compatible with the company's managers can persuade the management team to disclose more forward-looking information to external individuals such as investors and financial analysts. Therefore, more voluntary disclosure might occur if the non-executive managers perform supervision roles. In addition, if the non-executive managers master the board of directors, they might force the management team to disclose further forward-looking information to external investors. Therefore, a high percentage of non-executive managers on the board probably causes less informational asymmetry and a higher level of forward-looking information disclosure in the companies (Lang& Lundholm, 1993).

This research uses the company size and financial leverage as the factors of forward-looking information disclosure. The company size is calculated as the natural logarithm of a firm's stock market value at the end of every year (Sadidi et al., 2015; Mousa & Elamir, 2018). The firm size determines the firm's disclosure, which has been widely studied. Considering this matter that large companies tend to attract financial analysts and demand more value-related information, the signaling theory represents a positive relationship between the firm's disclosure and its size (Fama & Jensen, 1983). Furthermore, large companies can pay the information production cost to the annual reports' users.

On the other hand, small companies suffer from competitive disadvantages resulting from an increase in voluntary disclosure (Firth,1979). The empirical studies done, for instance, by Adams& Hossain (1998), Debreceny et al. (2002), and Kelton& Yang (2008) reveal a positive relationship between the level of information disclosure and the firm size, while Hoitash et al. reported a negative relationship. According to these results, the relationship between the firm size and forward-looking information voluntary disclosure is an experimental issue that needs further research. To conclude, this study investigates the firm size as an influential factor in forward-looking information disclosure.

Financial leverage is the ratio of debt obtained by dividing the book value of total debts by total assets (Fotouhi Khankahdani et al., 2021; Li & Li, 2020). According to signaling theory, leverage is expected to have a positive relationship with corporate disclosure. For instance, Jensen (1976) believes high-leverage firms have further supervision expenditures. One of the probable solutions that helps firms with high leverage to reduce these costs is to report forward-looking information in their annual reports to transfer the value-relation information to fulfill their creditors' needs. The empirical studies show different results in terms of effective factors of companies' information disclosure. Barako et al. (2006) discovered that the high leverage ratio leads to additional risk. Therefore, companies with high leverage levels are expected to increase their information disclosure to reduce the costs of financial provision and required risk insurance premiums by the rate of intended return. Gul& Leung (2006) perceived that the low leverage level is related to information disclosure. Accordingly, the relationship between the leverage ratios and the forward-looking information voluntary disclosure is an experimental issue discussed in this research.

In this study, the dividend is one of the leading causes of forward-looking information disclosure obtained by dividing the paid dividend by the total assets (Kent& Ung, 2003; Bashirimanesh et al., 2016). The relationship between the dividend policy and the forward-looking information disclosure has been considered in recent years. For instance, Hussainey& Walker (2009) found that the forward-looking information disclosure and tendency toward dividends replace the transfer of value-related information for the investors. Their results correspond to the signaling theory, but it does not correspond to the pecking order theory. Signaling theory indicates that the firms with higher informational asymmetry (lower level of forward-looking information) most probably pay a further dividend to represent their future foresight to the current and potential investors. However, the pecking order theory reveals that the firms with a higher level of informational asymmetry suffer from a lower investment rate and reduce their dividend to control this condition. Deshmukh (2005) and Li & Zhao (2008) found out that the dividend of American companies with a higher level of informational asymmetry is low.

Similarly, Basiddiq & Hussainey (2012) perceived that the Britain companies with lower informational asymmetry (measured by many analysts) pay more dividends. This finding shows that the firms with a higher level of information disclosure pay more dividends. In addition, Hussainey & Al-Najjar (2011) have found a positive relationship between the dividend and the forward-looking information disclosure in the Britain annual reports. Therefore, it is expected that there is a positive relationship between the dividend and the forward-looking information disclosure. Profitability is another effective factor in the firm's information disclosure that is obtained by dividing the firm's net profit by its total assets at the end of the year (Hussainey& Walker (2009). Especially, signaling theory indicates that the profit firms are more motivated to disclose further information to show their desired results to the stock market participants. Therefore, it is probably predicted that the profit firms disclose their forward-looking information in their annual reports. Some empirical studies support this positive relationship. Haniffa& Cooke (2005), Li et al. (2008), Celik et al. (2006), and Hoitash et al. (2009) have reported a negative relationship between information disclosure and profitability, while Mangena & Pike (2005), and Barako et al. (2006) argued that there is no relationship between these two variables. The research done about forward-looking information disclosure reveal different contradictory findings. For instance, O'Sullivan et al. (2008) have found no relationship between profitability and forward-looking information disclosure. Hussainey and Al-Najjar (2011) reported a negative relationship between the mentioned two variables, but the significance of this relation radically depends on the regression model used.

In the present research, macroeconomic characteristics such as exchange rate, profit rate, and gross domestic production (GDP) are regarded as the factors that influence forward-looking information disclosure. They were extracted from the time-series data of the Central Bank of Iran. The forward-looking report is regarded as one of the most important sections of management reporting. Especially in unsustainable economic condition, the investors need related and reliable information since the uncertain disclosure or absence lead to the loss of trust and the attraction of supervising entities' attention. The firms change their disclosure behavior when they encounter severe uncertainty, which complicates the prediction during the economic crisis. In critical conditions, the severe uncertainty decreases the quality of forward-looking disclosure reported by the company. However, this decrease in quality is not accompanied by a decrease in quantity. The considerable changes in the companies' forward-looking reports during the crisis lead to a considerable decrease in quality. In their study, Krause et al. (2017) concluded that the quality of companies' forward-looking information decreases during economic crises, but the quantity of such information increases.

The audit and auditor's opinions quality is another effective factor in the forward-looking information disclosure. If the audit company is one of the companies listed in group A, the audit quality would equal 1. Otherwise, it would be zero. The auditor's opinion is a qualitative variable based on the type of opinion. If the score of 1 is accepted, the number would be conditional. Otherwise, a score of zero is considered (Kent & Ung, 2003; Bashirimanesh et al., 2016). In agency theory, it is expressed that the audit helps the reduction of interests conflict between the management and the investors. Therefore, big audit firms are highly motivated to retain their independence to maintain their reliability and reputation. Further, they adopt harder and broader disclosure standards. Generally, the big firms' managers probably select a big audit firm since the managers are aware of great auditors' motives of demand for disclosure with higher quality, and employing such auditors apprises the investors that they have accepted the auditors' demand for high-quality disclosures (Kelton& Yang (2008).

Liquidity is another effective factor in the forward-looking information disclosure calculated based on the cash conversion cycle, i.e., a period between the payment of debts and receipt of cash from collections receivables (Menicucci, 2013). The relationship between the liquidity and the narrative report might be explained based on the agency and signaling theories. The agency theory indicates that managers with weak liquidity can disclose further information to reduce agency costs and justify their liquidity status. In comparison, the signaling theory reveals that firms with high liquidity are encouraged to disclose more forward-looking to signal their desirable results (Bravo, 2016). Few studies have investigated the relationship between the firm's liquidity and forward-looking information disclosure.

Third section: Consequences of forward-looking information disclosure

The developers of accounting principles and capital market regulations make the firms disclose their information to support the investor' interests. One of the main causes of the development of information disclosure regulations in the accounting field is the asymmetry of information and capital cost between the management and others (Uyar et al., 2013).

In this research, the weighted average method is used for calculating the capital cost that is obtained from the percentage of increase of capital plus stock price at the end of the current year plus the dividend minus the stock price at the end of last year, dividing by the final price of last year.

Capital cost is based on the assumption that the firm's goal is to maximize the shareholders' wealth. Therefore, if the firm does not fulfill the capital cost or the investors' expected rate, the firm's stock value would be decreased. So, the management team attempts to bring the investors' expected stock return closer, at least to the capital cost level, to preserve the business entity's value. The firms' managers control the weighted average cost of capital to obtain the minimum capital cost as well as to fulfill a fixed profit acceptable to the shareholders (Gray et al., 1990).

The direct costs of the disclosure include all the costs of production, preparation, and disclosure of information. These costs consist of all the costs related to the collection of the required information, their processing, and presentation, auditing the financial information, information technology equipment, and management time spent to disclose activities information (Cooke, 1992).

Some firms may have enough resources to employ a reliable external auditor, while other firms may need help to employ an external auditor. Therefore, the direct costs of information disclosure may restrict the managers' ability to disclose forward-looking information over time (Li, 2010).

In this research, the informational asymmetry is measured by a model proposed by Venkatesh et al. (2003) to determine the range of bid-ask price differences. According to this model, the more significant the difference between the bid and stock prices, the greater the informational asymmetry would be. In forward-looking information disclosure and informational asymmetry, informational asymmetry occurs when company insiders have valuable and related information unavailable to outsiders. In other words, informational asymmetry occurs when some investors have private information about the company that is unavailable to other investors. This issue develops an undesirable problem in the selection, where the informed investor's trade, to the detriment of uninformed investors, by their private information.

The economic theory predicts that forward-looking information disclosure decreases informational asymmetry. The disclosure of value-related information decreases the uncertainty about the company, reducing the informational asymmetry. Whereas informational asymmetry can influence the stock returns volatility, applying the agency theory indicates the relationship between stock volatility and the disclosure of forward-looking financial information (Brown & Hillegeist, 2007).

In the domain of signaling theory, Rahimian & Rasouli (2016) referred to this theory that implies that the business entity has more information than the investors in a potential interaction between the company and the shareholders. Further, there is informational asymmetry, which decreases with the firms' disclosure of extra information. The firms aim to distinguish between themselves and the competing firms, and the managers of these firms present valid signals to the market. Regarding the composition of factors and consequences of forward-looking information disclosure, the research theoretical framework is presented in Figure 1.

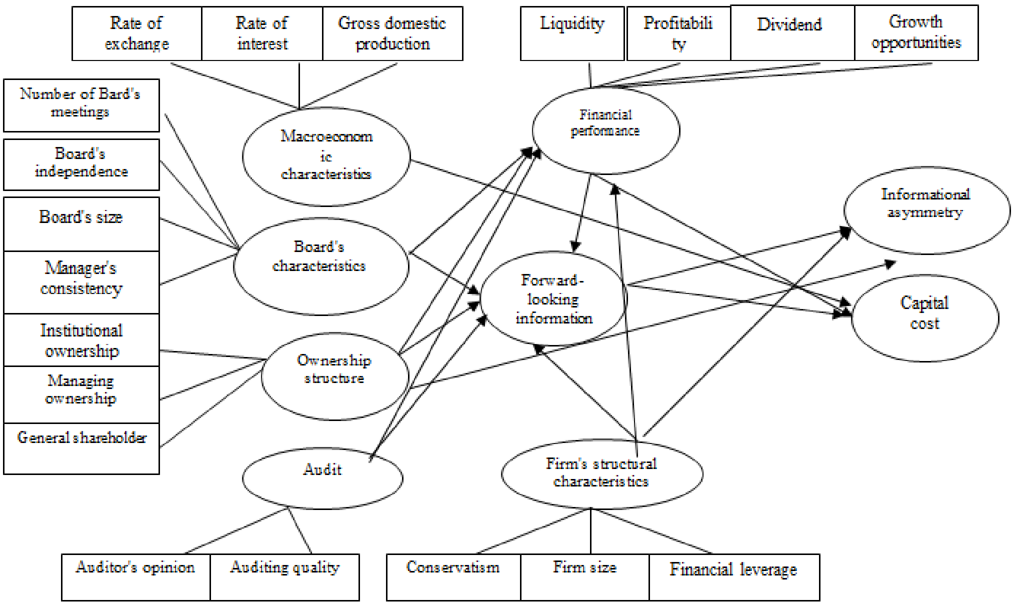

Figure 1. Conceptual model

Literature Review

In their study entitled "level of forward-looking information disclosure in firm's stock return: the moderating role of ownership structure," Anwar et al. (2021) investigated the influence of information disclosure level and forward-looking quality on the firm's stock return. They studied whether or not the firm's ownership structure can play a moderating role in weakening or improving the relationship between the information disclosure and the forward-looking quality. The research results reveal that the level of disclosure and quality of forward-looking information disclosure is positively related to the firm's stock return regarding the profit-return model. Further, the ownership structure is vital in moderating the relationship between the forward-looking information disclosure quality and the firms' stock return or improvement of this relationship.

In their research entitled "when the firms are prosecuted for qualitative reporting? By creating a safe condition by forward-looking information disclosure", Cazier et al. (2020) have studied the forward-looking qualitative statements of firms against the prosecution risk. The results reveal that using positive or negative terms has a relationship with prosecuting firms in the future. Ultimately, they state that the information disclosure with a positive tone in forward-looking information reporting preserves the firm against the risk of prosecution in the future.

Mousa & Elamir (2018) attempted to study the factors that might influence forward-looking information disclosure. They investigated a sample of companies listed in Bahrain from 2010 to 2013. They used 56 disclosures to measure the level of forward-looking information disclosure. They found that the firm size and leverage are significantly related to the level of forward-looking information disclosure. In contrast, the relationship between profitability, liquidity, and industry type with the level of disclosure could be more considerable.

In their research entitled "Determinants of forward-looking disclosure: Evidence from Bahraini capital market," Mousa & Elamir (2018) investigated the factors that may affect the extent of forward-looking corporate disclosure. The backward regression analyses show that financial leverage and firm size are significant; however, sector type, profitability, and liquidity are found to have an insignificant association with the level of forward-looking corporate disclosure.

Kent & Ung (2003) examined the effect of four factors (i.e., competition, external financial provision, earnings volatilities, and auditor quality) and firm size (control variable) on Australian companies' decision to disclose forward-looking information. They found that the earnings volatilities and firm size are related to the forward-looking information disclosure, while there is no such relationship among the other factors.

In their study entitled "Evaluating the Impact of the Categories of the Forward-Looking information disclosure pattern", Taftiyan et al. (2021) investigated the effect of the forward-looking information disclosure model on the context of structural equation modeling. The study's result indicates a significant relationship in the causal structure of the model in such a way that the causal, underlying, and intervening conditions have a significant positive effect on the central category phenomenon. Finally, strategies have a significant positive mediating effect on the relationships between the axial categories and consequences.

Research Methodology

The present study applied descriptive-correlational research. This study aims at integrated modeling of factors effective on forward-looking information disclosure and its corresponding consequences. Therefore, it is required to examine the theoretical framework extracted and designed in the previous section. Applying PLS software, variance-based structural equation modeling was used to analyze the data and study the relationship between the factors of forward-looking information disclosure and its consequences. Considering the spatial and temporal scope of the research, the statistical population included the companies listed on the Tehran stock exchange from 2013 to 2019.

Table 1. Sampling

Description	**Number**	**Number**
All the companies listed in the database until the end of 2019		474
Companies that were suspended or delisted from the Tehran stock exchange during the research period	(68)	
Companies whose financial year does not end on March 20 or have changed their financial year.	(52)	
Companies that work on financial intermediation, investment, holdings, leasing, insurance, and banking.	(35)	
Companies whose stock has not been actively transacted in the exchange	(88)	
Companies that have not presented their financial statements for the years 2013 to 2019 during the research period	(92)	
Companies that their information has not been sufficient to extract some research variables	(46)	
Total measurable statistical samples concerning the assumptions		93

Findings

After explaining the research conceptual model and data collection, the most crucial step in modeling structural equations is to validate the measurement model. In this section, first, descriptive statistics are presented. Next, the validity and reliability of the model are examined. Finally, the fitness of the structural model is presented. The researcher aims to answer this question: Is there any relationship between the factors and consequences of forward-looking information disclosure? Therefore, in this stage of statistical analysis, the data fitness for the conceptual research model is expected to be acceptable based on the scientific criteria.

Descriptive statistics

The descriptive statistics of all the research variables in terms of statistical indexes are presented as follows:

Table 2. Descriptive statistics of variables

Variable title	Variable symbol	Average	Mean	Maximum	Minimum	Standard deviation
Forward-looking disclosure	FLD	28.947	29.48	45.48	10.48	5.598
Firm size	SIZE	14.542	14.339	19.156	10.533	1.46
Financial leverage	LEV	0.564	0.568	1.343	0.047	0.207
Conservatism	MACRO	-0.074	-0.057	0.748	-1.791	0.182
Profitability	PROFIT	0.131	0.111	0.622	-0.4	0.136
Liquidity	LIQ	0.071	0.037	0.6	0.000	0.093
Dividend	DIV	591.691	200.000	8000.000	0.000	1044.383
Growth opportunities	MB	0.356	0.328	0.95	0.001	0.206
Board independence	Out direct	0.656	0.6	0.86	0.4	0.144
Board size	Size direct	5.072	5.000	7.000	5.000	0.313
CEO consistency	CEO Change	0.221	0.000	1.000	0.000	0.415
Number of board meetings	Board meeting	12.175	12.000	27.000	11.000	1.266
Audit quality	Audit	0.687	1.000	1.000	0.000	0.464
Auditor's opinion	opinion	0.439	0.000	1.000	0.000	0.497
Institutional ownership percentage	INST	58.35	88.25	92.98	0.000	647.31
Managing ownership percentage	SO	43.763	38.63	97.77	1.18	29.355
Informational asymmetry	SPREAD	-0.024	-0.011	0.404	-0.955	0.084
Capital cost	WACC	0.427	0.273	10.721	-9.95	1.596

The average of each variable represents the equilibrium point and center of gravity of distribution. It is a good indicator of data centrality. For example, the mean value for the variable of forward-looking disclosure is %28, indicating that most of the data are centered on this point. Further, the average variable of capital cost is 0.427. Mean is the other central indicator that represents the status of society. As observed, the mean of the forward-looking disclosure variable is 29.48, indicating that fifty percent of data are less than this value, and the other fifty percent are not.

Model validity and reliability

The PLS method calculates the reliability of all the latent variables in the research model. Cronbach's alpha index is used to evaluate the reliability of latent variables of the research. This index gives the same weight to the variables related to the measurement of a structure. The reliability of the variables would be desirable if it is more significant than 0.70. The reliability of research variables has been presented in Table 3. As observed, Cronbach's alpha for all the variables is more significant than 0.7, which indicates the desired reliability of research variables and the appropriateness of the model.

The average Variance Extracted (AVE) indicates the average variance shared between the component and its indicators. In simple terms, AVE represents the level of correlation between the component and its indicators. The higher the correlation, the greater the fitness (Barkley, 1995). Fornell and Larker (1981) have determined the critical value as 0.5. Table 3 indicates that the AVE value of all the variables is more significant than 0.5. In general, all the first-order variables have suitable convergence validity.

Table 3. Validity and reliability of research variables

Variable	Cronbach's alpha	AVE value
Forward-looking disclosure	1.000	1.000
Audit	0.943	0.893
Ownership structure	0.787	0.659
Informational asymmetry	1.000	1.000
Financial performance	0.933	0.778
Firm’s structural characteristics	0.776	0.54
Board characteristics	0.881	0.651
Macroeconomic characteristics	0.938	0.884
Capital cost	1.000	1.000

Investigating factor loading of the research model

The factor analysis method assesses the ability to measure research variables by variables. Figure 2 represents a model with factor loading coefficients. The variables with a factor loading of less than 0.4 were deleted from the model. The two variables of the exchange rate (a component of macroeconomic characteristics) and percentage of block holder's ownership (a component of ownership structure) were removed from the model because they had a factor loading of less than 0.4.

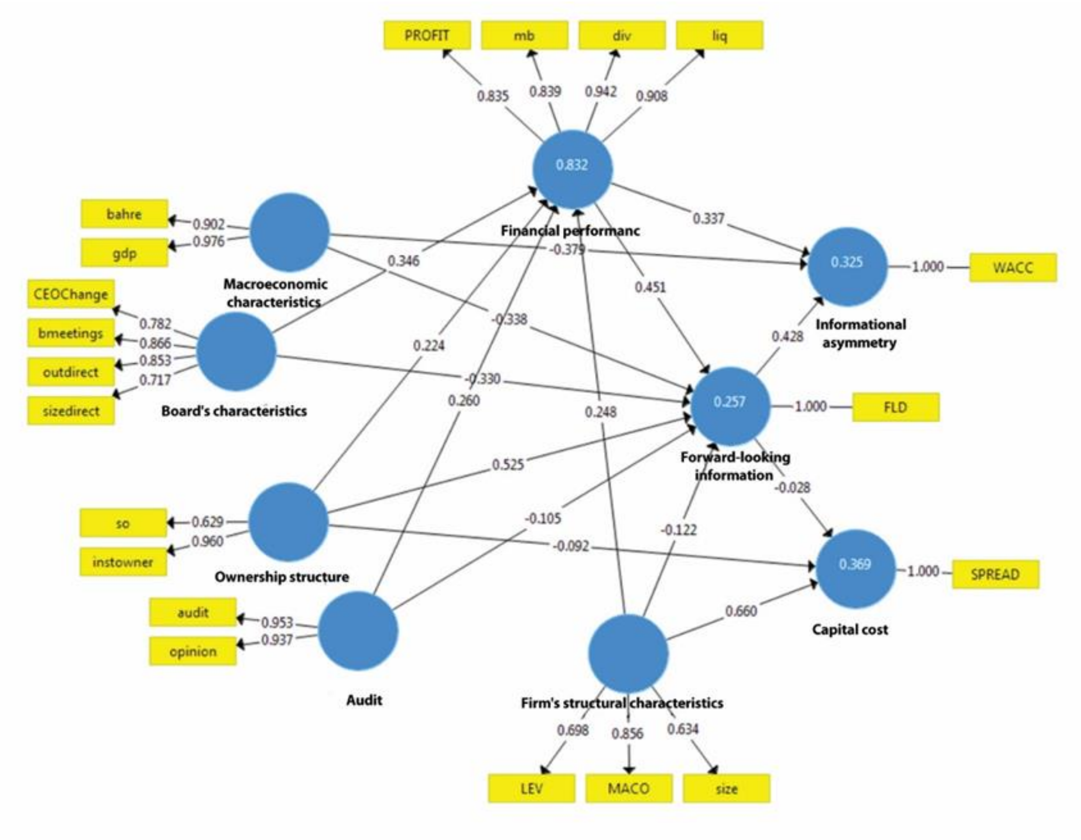

Figure 2. Structural equation model in the case of path coefficients

The model's components' validity is assessed using confirmative factor analysis. The factor loading and t-statistic values of all the components have been presented in Table 4. The t-statistic value of all the subcomponents is more significant than 1.96. Therefore, the measurement model is appropriate, and the subcomponents of variables are acceptable.

Table 4. Factor loading of model variables

Component	**Subcomponent**	**Factor loading**	**t-statistic**
Audit	Auditor's opinion	0.937	41.226
	Audit quality	0.953	110.854
Financial performance	Profitability	0.835	22.095
	Liquidity	0.908	43.122
	Dividend	0.942	58.864
	Growth opportunities	0.839	24.314
Firm's structural characteristics	Conservatism	0.856	19.805
	Firm size	0.634	5.824
	Financial leverage	0.698	7.549

Board characteristics	Number of board meetings Board independence Board size CEO consistency	0.866 0.853 0.717 0.782	37.842 18.847 6.972 9.637
Macroeconomic characteristics	Gross domestic production Rate of interest	0.976 0.902	8.025 6.712
Ownership structure	Percentage of institutional ownership Percentage of managing ownership	0.960 0.629	42.992 3.767
Forward-looking information disclosure	Forward-looking disclosure	1	-
Informational asymmetry	Informational asymmetry	1	-
Capital cost	Capital cost	1	-

Structural model fitness

As it is observed in Table 5, the Forward-looking information disclosure has a positive and significant influence on the capital cost. According to the path coefficient, per unit change in the level of forward-looking information disclosure increases the capital cost by 0.428 units. Forward-looking disclosure has no significant effect on information asymmetry. Moreover, the results reveal that the variables of ownership structure, financial performance, and macroeconomic characteristics significantly influence forward-looking information disclosure. The effect of ownership structure variables and financial performance is positive, while the impact of macroeconomic characteristics is negative.

Further, the variable of a firm's structural features positively and significantly affects information asymmetry. The variable of ownership structure has no significant impact on information asymmetry. Findings reveal that all four audit variables, the firm's structural features, board characteristics, and ownership structure, positively and significantly affect financial performance. Further, the two variables of macroeconomic characteristics and financial performance significantly influence the capital cost. The macroeconomic characteristics variable has a negative effect, and the financial performance variable positively affects capital cost.

Table 5. Estimating model coefficients

Relationship between variables	**Impact factor**	**t-statistic**	**Significance level**	**Existence of relationship**
Audit ⟶ forward-looking information disclosure	-0.105	0.972	0.332	Not exist
Ownership structure ⟶ forward-looking information disclosure	0.525	3.085	0.002	Exists
Financial performance ⟶ forward-	0.451	2.161	0.031	Exists

looking information disclosure				
Firm’s structural features forward-looking information disclosure	-0.122	1.090	0.277	Not exist
Board characteristics → forward-looking information disclosure	-0.330	1.870	0.063	Not exist
Macroeconomic characteristics forward-looking information disclosure	-0.338	1.996	0.047	Exists
Forward-looking information disclosure → informational asymmetry	-0.028	0.530	0.596	Not exist
Ownership structure informational asymmetry	-0.092	1.182	0.238	Not exist
firm’s structural features informational asymmetry	0.660	6.133	0.000	Exists
Audit → financial performance	0.260	2.811	0.005	Exists
firm's structural features and financial performance	0.248	4.731	0.000	Exists
Board characteristics of financial performance	0.346	6.044	0.000	Exists
Ownership structure → financial performance	0.224	2.932	0.004	Exists
Forward-looking information disclosure → capital cost	0.428	3.490	0.001	Exists
Macroeconomic characteristics of capital cost	-0.379	2.528	0.012	Exists
financial performance → capital cost	0.337	2.916	0.004	Exists

As it is observed in Table 5, concerning this matter that the significance level of the relationship between the level of forward-looking information disclosure with the informational asymmetry, firm's structural features, board characteristics, and audit is more significant than 0.05 ($p \geq 0.05$), with the assumption of being fixed of other factors, it can be said with a confidence level of %95 that the forward-looking information disclosure has no significant relationship with the informational asymmetry, firm's structural features, board characteristics, and audit. Further, considering this matter that the significance level of the relationship between the forward-looking information disclosure with the capital cost is less than 0.05 ($p \leq 0.05$), with the assumption of being fixed of other factors, it can be said at a confidence level of %95 that the forward-looking information disclosure has a significant relationship with the capital cost. Moreover, concerning this matter, the impact factor of forward-looking information disclosure on the capital cost is positive (0.428); it is concluded that there is a positive relationship between the level of forward-looking information disclosure and the capital cost. In addition, regarding this matter that the significance level of the relationship between the forward-looking information disclosure with the financial performance is less than 0.05 ($p \leq 0.05$), with the assumption of being fixed of other factors, it can be said with confidence level of %95 that the level of forward-looking information disclosure has a significant relationship with the financial performance. Further, concerning this matter, the impact factor of financial performance on the forward-looking information disclosure is positive (0.451); it is concluded that there is a positive relationship between the level of forward-looking information disclosure and financial performance.

Further, considering this matter that the significance level of the relationship between the forward-looking information disclosure with the ownership structure is less than 0.05 ($p \leq 0.05$), with the assumption of being fixed of other factors, it can be said with a confidence level of %95 that the forward-looking information disclosure has a significant relationship with the ownership structure. Moreover, regarding this matter, the impact factor of ownership structure on the forward-looking information disclosure is positive (0.525); it is concluded that there is a positive relationship between the level of forward-looking information disclosure and the ownership structure.

In addition, considering this matter that the significance level of the relationship between the forward-looking information disclosure with the macroeconomic features is less than 0.05 ($p \leq 0.05$), with the assumption of being fixed of other factors, it can be said at a confidence level of %95 that the forward-looking information disclosure has a significant relationship with the macroeconomic characteristics. Further, regarding this matter, the impact factor of macroeconomic characteristics on the forward-looking information disclosure is negative (- 0.338); it is concluded that there is a negative relationship between the level of forward-looking information disclosure and the macroeconomic characteristics.

The diagram of the state of the significance of t-value

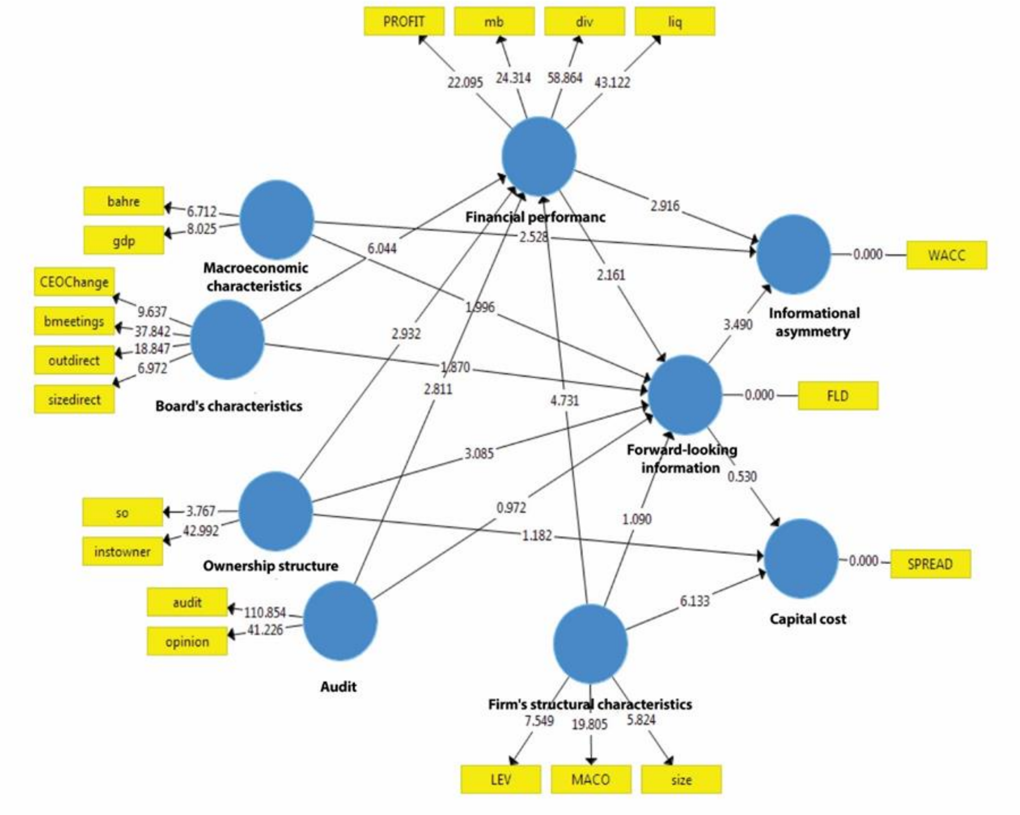

Figure 3. Structural equation model in the case of significant coefficients t value

Discussion and Conclusion

The subject of disclosure and incredibly forward-looking disclosure and the effective factors and its consequences is one of the issues that need to be considerably taken into account in Iran, and its different aspects can be studied. Accordingly, preparing and disclosing forward-looking information by the business entity would have practical consequences, including reducing capital provision costs, informational asymmetry, and agency costs (Celik et al., 2006). According to the results of data analysis, gross domestic product has been recognized as the most important effective factor in forward-looking information disclosure. Further, the other factors that affect forward-looking information disclosure in the following priorities are the institutional ownership percentage, audit quality, dividend, auditor's opinion, liquidity, rate of interest, number of board meetings, and conservatism. In addition, different studies have reported the effectiveness of financial performance on forward-looking disclosure. For instance, Mahboub (2019) considers liquidity and low profitability as the causes of not disclosing forward-looking information in the companies. Moreover, the research findings indicate that capital cost is another necessary consequence of forward-looking information disclosure.

Considering the research findings, the significant direct relationship between ownership structure and financial performance with forward-looking information disclosure corresponds to the results of research done by Wang & Hussainey (2013) and Al-Najjar & Abed (2014), while Uyar et al. (2013) reject in their study the influence of forward-looking information disclosure on the variables of audit, financial performance, firm's structural features, and board characteristics. Moreover, they state that there is weak evidence about the effectiveness of profitability changes on the forward-looking information disclosure. In other words, the direct relationship between capital costs and forward-looking information disclosure has been confirmed in this research, which corresponds to the results of Menicucci's study. Further, he argues that the variable of legal necessities is effective in forward-looking information disclosure, and this finding corresponds to the present research. Biddle et al. (2009) state that forward-looking information disclosure has a significant relationship with informational asymmetry. Further, it has a positive relationship with macroeconomic characteristics that do not correspond to the present research.

Regarding research findings, the firm's managers are proposed to pay special attention to the strategy of forward-looking information disclosure and attempt to create and preserve good credit. In addition, the banks and other creditors are suggested to consider the firms' forward-looking information disclosure in their loaning projects to evaluate their repayment ability and improve the reporting status in the country. Further, management forecast reports in the financial statements and firms' disclosed information, especially those without mistakes and distortion, can improve the market and its efficiency. On the other hand, they are proposed to reduce agency costs and informational asymmetry by determining the managers' tenure and developing periodic performance evaluations. This causes us to take a firm step against the managerial profit-mined motivations. In the domain of consequences of forward-looking reporting disclosure in predicting a firm's future status, it was revealed that the increase in quality and transparency of presented forward-looking information leads to a decrease in mistrust in the market. Moreover, the investors' incorrect decision-making needs to be revised. The auditors should also increase the users' trust in financial statements by preserving independence and impartiality and auditing based on principles and professional behavior.

The subjects related to information disclosure and especially forward-looking information disclosure is one of the important subjects that the related research findings can help the Financial Accounting Standards Board (FASB) considerably and provide an appropriate platform for wider research. Future researchers should investigate the impact of indexes used in this research based on different subcategories of forward-looking information disclosure, such as financial and non-financial information. Further, they are proposed to accomplish this research by other statistical techniques, different statistical populations, and for different intervals in order to increase the validity of this study not only at the Tehran stock exchange level but also at the level of the country as well as to provide further information. Challenging the economy of developed and developing countries, financial markets, and business entities worldwide, and consequently, the bankruptcy of some large companies and important industries, including the tourism and transportation industries, reveals that research in this area should be developed. Further, financial and economic researchers worldwide, including Iran, should consider the destructive effects of such financial crises on the firms' future status since this would influence the users' decision-making significantly.

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