BASE – Revista de Administração e Contabilidade da Unisinos
20(2): Abril/Junho 2023
Unisinos - doi: 10.4013/base.2023.202.02

Voluntary Disclosure and Equity Financing in Brazil

Divulgação Voluntária e Financiamento Patrimonial no Brasil

Paulo Henrique Amaral Rody[1]
Universidade Federal do Espírito Santo – UFES
paulohrody@gmail.com

Valcemiro Nossa[2]
FUCAPE Business School - FUCAPE
valcemiro@fucape.br

Silvania Neris Nossa[2]
FUCAPE Business School - FUCAPE
silvanianossa@fucape.br

Nádia Cardoso Moreira[2]
FUCAPE Business School - FUCAPE
nadiacmoreira@fucape.br

Abstract: The objective of this study was to verify whether, in the Brazilian market, voluntary disclosure is able to increase the amount of equity financing through shares issuance of nonfinancial companies listed on the Brazilian Securities, B3 (Brasil Bolsa Balcão S.A.). Using an unbalance panel data with 1,953 firm-year observations of 290 nonfinancial companies, from 2010 to 2017, we estimated using an econometric model estimated with GMM method. The results indicate that higher levels of voluntary disclosure implicate on higher equity financing, on average. The relevance of this study is to provide empirical evidence of the possibility of increasing the volume of financing through issuing shares by means of voluntary disclosure. Social implications, on the other hand, are the use of empirical results to help investors and regulators in decisions about the market's reaction to voluntary information.
Keywords – Voluntary Disclosure; Financing; B3.

Resumo: O objetivo deste estudo foi verificar se, no mercado brasileiro, a divulgação voluntária é capaz de aumentar o valor do financiamento por meio da emissão de

[1] Universidade Federal do Espírito Santo — Goiabeiras – CEP 29075-910 – Vitória (ES) – Brasil
[2] FUCAPE Business School – Boa Vista – CEP 29075-505 – Vitória (ES) – Brasil

patrimônio de empresas não financeiras listadas na B3 (Brasil, Bolsa e Balcão S/A.). Utilizando-se de um painel não balanceado com 1.953 observações de 290 empresas não financeiras, relativos ao período de 2010 a 2017, nós estimamos utilizando um modelo econométrico com o método GMM. Os resultados indicaram que alto nível de disclosure voluntário implica sobre o financiamento mais alto em média. A relevância deste estudo é fornecer evidências empíricas da possibilidade de aumento de volume de financiamento por meio de ações por intermédio do disclosure voluntário. Implicações sociais, por um lado, são o uso de resultados empíricos para ajudar investidores e reguladores na decisão sobre a reação do mercado à informação voluntária.
Palavras-chave – Divulgação Voluntária; Financiamento; B3.

Introduction

The search for new investments is an essential factor for the growth of a company. In this decision-making process, choosing an inefficient investment is detrimental to the performance of companies and investors. Therefore, investors make decisions based on the information disclosed by these companies, thus, it is necessary to disclose data with high informational content so that investors can make efficient decisions and with the lowest degree of risk. (Chiu, Jiu, Yu, 2022).

The usefulness of accounting is not restricted to recording, interpreting and disseminating data on existing business processes, but also providing information to support the main activities inherent to the decision-making of companies and investors. In this environment, a company's progress depends on the continuous improvement of its competitiveness, mainly through attracting investors. (Mihaylova & Papazov, 2018). Therefore, the disclosure of good quality financial information is associated with a better representation of companies' performance and value creation. (Chiu et al., 2022; Minutiello & Tettamanzi, 2022).

Voluntary disclosure, which is the public announcement of accounting, financial and economic information by companies beyond what is required by law or exchange rules, serves to reduce information asymmetry, and thus facilitates the understanding of investors and analysts of the accounting and financial reports (Consoni & Colauto, 2016; Almeida & Rodrigues, 2017; Alipour, Ghanbari, Jamshidinavid, & Taherabadi, 2019; Tulvinschi, 2019; Rossi, Festa, & Chouaibi, Fait, Papa, 2021; Chiu et al., 2022). In this context, information asymmetry can generate distortions in the interpretation of accounting numbers and financial reports. This asymmetry can be reduced by voluntary disclosure (Scott, 2015; Wardhani, 2019; Lima, Araújo, & Múrcia, 2021).

To define the research object, this article was based on the definition of disclosure based on the discretion of its classification, as proposed by Verrecchia (2001) and Botosan and Plumlee (2002). In this scenario, for Shi, Kim and Magnan (2014) voluntary disclosure is able to reduce information asymmetry and improve the performance of an entity. Thus, this reduction in information asymmetry reduces investors' uncertainties, and may increase funding for an entity (Chung, Goh, Ng, & Yong, 2017; Souza, Lima, Vendramin, & Pereira, 2021).

The high competitiveness of the global stock market, including in Brazil, can prompt firms to adopt various strategies to reduce the cost of capital and attract more financing, to enable them to compete better against rivals. It is logical to assume that reduced information asymmetry through the voluntary disclosure of more information than required will tend to diminish the risk perceived by investors and attract more funding (Chung et al., 2017; Guttman & Meng 2021; Chiu et al., 2022). This is borne out by Gong, Li and Zhou (2013), Allee and Deangelis (2015), Allaya, Derouiche and Muessig (2018), Ofoegbu e Odoemelam, (2018) and Sethuraman (2019), who found that the reduction of information asymmetry achieved via voluntary disclosure tends to increase the confidence of investors. In the same line, according to D’Angelo, El Gazzar and Jacob (2018), Li (2017), Lima et al. (2021); Md Zaini, Samkin, Sharma and Davey (2018) and Rouf and Akhtaruddin (2018) and, through voluntary disclosure a firm can attract more external financing by reducing information asymmetry.

Information asymmetry is one of the assumptions of agency theory. This theory emphasizes the importance of a harmonious and balanced relationship between the company and investors, so that their interests do not conflict. (Jensen & Meckling, 1976). Thus, identifying mechanisms capable of reducing information asymmetry can minimize these conflicts of interest between the company and investors. In this environment, voluntary disclosure is inserted as a tool to reduce both asymmetry and conflicts of interest.

Just as voluntary disclosure can influence the volume of financing, firms with a greater amount of equity capital can decide to increase their voluntary disclosure level. As pointed out by Elfeky (2017), companies with greater financial stability tend to disclose more information voluntarily. Therefore, among companies with good economic and financial performance, higher market capitalization can enhance the credibility of the information revealed, and consequently can cause them to disclose more information voluntarily (Silva & Onusic, 2014). Furthermore, voluntary disclosure can also be used by managers to mitigate the negative effects of bad news in financial and accounting reports (Cheng, Cho, & Kim, 2021; Dayanandan, Donker, & Karahan, 2017; Guay, Samuels, Taylor, 2016; Pereira, Stocker, Mascena, & Boaventura, 2020; Souza, Flach, Borba, & Broietti, 2019).

Various studies in the international literature can be mentioned in this respect, such as Chung, Goh, Ng and Yong (2017), who identified that voluntary disclosure reduces the level of uncertainty among investors and increases the funding of companies in Ukraine. In this same line, according to Bourveau and Schoenfeld (2017), voluntary disclosure can attract more equity financing to companies in the United States due to the reduction of information asymmetry and the corresponding lesser risk perceived by investors. For China, Li (2017) also found that voluntary disclosure tends to attract more financing to firms by reducing information asymmetry and increasing investors’ confidence.

Most studies in the Brazilian literature have focused on the relationship between the level of voluntary disclosure and the cost of capital, such as Lima (2009), who found evidence that greater voluntary disclosure tends to lower the cost of debt capital. On the other hand, Fernandes (2013) found that the voluntary disclosure of positive or negative information did not influence the cost of debt of Brazilian firms. However, Alsharari and Alhmoud (2019); Louie, Ahmed and Ji (2019); Aly, El-Halaby and Hussainey (2018) and Rufino and Machado (2017) found that the voluntary disclosure of information on social responsibility influenced the cost of capital of listed Brazilian firms, while Consoni, Colauto and Lima (2017) did not find any influence of voluntary disclosure on the earnings management of listed Brazilian companies.

Corroborating this scenario, Jankensgard (2015) mentioned that firms that obtain new external financing (equity or debt) in general have a higher level of voluntary disclosure than firms that obtain less financing, i.e., there is a positive correlation between the volume of external financing and voluntary disclosure level. Mention can also be made of the studies of Kilincarslan, Elmagrhi and Li (2020); Karajeh, Ibrahim and Lode (2017) and Egbunike and Tarilaye (2017), indicating that good economic and financial performance measures can increase firms’ level of voluntary disclosure, so that firms that have more external financing tend to have greater propensity for voluntary disclosure.

Therefore, as indicated previously, the literature from Brazil and other countries generally has found that voluntary disclosure can attract more financing to companies because of the lower risk perceived by investors. In this literature, particular mention can be made of Li (2017), focused on the benefit of voluntary disclosure on the projection of future profits in relation to obtaining financing; Bourveau and Schoenfeld (2017), examining the relationship of voluntary disclosure and forecasts of future sales with respect to external financing; and Chung et al. (2017), analyzing the relationship of the quality of the information voluntarily disclosed and the obtainment of financing.

However, none of these researchers performed an in-depth investigation of the influence of voluntary disclosure on the obtainment of financing, or used the issuance of shares as a proxy for the dependent or independent variable to measure the raising of funds, to identify its relationship with voluntary disclosure.

In this respect, we aim to add to the literature by providing evidence about the relationship between voluntary disclosure and equity financing, highlighting the role of voluntary disclosure as a tool to reduce information asymmetry and thus diminish the risk perception and raise the confidence of investors, using share issuance as a proxy. In this line, the voluntary revelation of accounting information has the main goal of reducing information asymmetry between managers and stakeholders, to optimize the performance of firms by increasing the volume of financing (Lima et al., 2021; Bourveau & Schoenfeld, 2017; Oluwagbemiga, 2014).

Based on this panorama, we formulated two research questions: (1) Does the level of voluntary disclosure influence the amount of equity financing of companies? (2) Does the amount of equity financing influence the level of voluntary disclosure of companies?

Therefore, this study examines whether the voluntary disclosure of accounting information can increase the volume of equity financing of firms, and conversely, whether higher equity financing prompts firms to increase their voluntary disclosure. In other words, we investigated whether greater voluntary disclosure has a positive influence on the volume of equity financing and whether having higher equity financing has a positive influence on firms' voluntary disclosure.

In a highly competitive global stock market, companies need strategies to maximize their economic and financial performance, to enable them to compete effectively with their rivals. In this scenario, the existence of information asymmetry reduces the confidence and increases the risk perception of investors (Horvat & Mojzer, 2019; Dawd, 2018; Li, 2017). To counteract this lower confidence and higher risk perception, it is necessary to use mechanisms to reduce the information asymmetry between managers and investors. Voluntary disclosure can serve this purpose, thus attracting more financing and maximizing firms' economic and financial performance.

As a theoretical contribution, the results of this study, both in the national and international contexts, complement the existing empirical data about the relationship between voluntary disclosure and equity financing. And as a practical contribution, the results provide useful empirical evidence to companies and investors that voluntary disclosure is a tool able to increase the volume of equity financing and optimize firms' economic and financial performance.

The results are based on a sample composed of all the nonfinancial firms listed on the B3 Exchange (290 companies) between 2010 and 2017 (eight years), for a total of 1,653 observations in the initial sample. The main results were that: (i) the greater the level of voluntary disclosure, on average, the higher was the amount of equity financing of the nonfinancial companies listed on the B3; and (ii) the greater the amount of equity financing, on average, the greater was the level of voluntary disclosure of the nonfinancial companies listed on the B3.

Theoretical Framework

Voluntary Disclosure and External Financing

Stock market companies that have undervalued shares disclose voluntary information to a lesser extent. In this regard, the stock market reacts positively to the high level of voluntary disclosure and the low asymmetry of information. (Benlemlih, Ge, & Zhao, 2021). Along the same lines, for Chiu et al. (2022), companies that have a higher level of voluntary disclosure are more likely to obtain new financing than those with a lower level of voluntary disclosure.

Disclosure is classified as mandatory or voluntary, the first originated by virtue of a set of rules and legal obligations and the second, based on information that is not required by law and stems from the company's discretionary decision (Souza et al., 2021). Voluntary disclosure can enable a firm to attract more external financing (Bourveau & Schoenfeld, 2017). This effect operates because voluntary disclosure enhances the credibility of the information revealed, as pointed out by Chung et al. (2017); Allee and Deangelis (2015) and Gong, Li and Zhou (2013). In other words, voluntary disclosure of more information than required increases the perceived reliability of financial reports among users of accounting information.

According to Li and Yang (2016) and Consoni and Colauto (2016), the adoption of International Financial Reporting Standards (IFRS) increased the level of voluntary disclosure of information by companies. Therefore, in a market characterized by constant changes in the economic scenario, more firms decide to disclose information voluntarily because they perceive this as a way to gain a competitive advantage (Zarb, 2015). According to Shroff, Sun, White and Zhang (2013) and Sun, Yi and Lin (2012), voluntary disclosure reduces the level of information asymmetry. In this context, for Lima et al. (2021); Shi, Kim and Magnan (2014); Balakrishnan, Billings, Kelly and Ljungqvist (2014) the reduced information asymmetry due to voluntary disclosure can improve firms' performance, by diminishing the uncertainties of investors, and thus can increase external financing (Chung et al., 2017).

According to Frenkel, Guttman and Kremer (2020) and Chen, Srinidhi, Tsang and Yu (2016), firms that have their accounting reports audited regularly have a higher level of voluntary disclosure. In other words, higher quality of the accounting information is associated with a larger quantity of information voluntarily disclosed. In this respect, for the information voluntarily disclosed to be useful to the users of that information, it must have relevant content, able to affect the decision-making process of stakeholders (Chen, Gavios, & Lev, 2017; Nelson & Pritchard, 2016).

According to Wen (2013), by conveying value-relevant information to the market, voluntary disclosure leads to more accurate pricing, since the market is able to price in the benefit of the investment, which enables a firm to obtain more external financing. With respect to the relationship between the financial capacity of firms and their level of voluntary disclosure, Jankensgard (2015) found that financially strong companies tend to reveal more information voluntarily than do firms that are financially weaker, and companies that obtain new financing (debt or equity) tend to have higher voluntary disclosure than their peers that do not obtain new financing.

Nevertheless, although the voluntary disclosure of information can positively affect the obtainment of external financing, not all companies use this tool to maximize their economic performance. In particular, voluntary information disclosure is not always seen as important by Brazilian companies (Consoni, Colauto, & Lima, 2017; Voges, Broietti, Rover, 2021). Although, many companies use voluntary disclosure as a source of competitive advantage among competitors, as highlighted by Lima et al. (2021), maximizing the levels of voluntary disclosure of companies can promote the reduction of information asymmetry between market agents and, consequently, increase the levels of confidence for investment by these companies.

Voluntary Disclosure and Performance Measures

With respect to the relationship of voluntary disclosure with accounting measures of organizational performance, Abdi, Kacem and Omri (2018), Consoni and Colauto (2016), Egbunike and Tarilaye (2017), Haddad, Shibly and Haddad (2020), Karajeh, Ibrahim and Lode (2017), Lan, Wang and Zhang (2013), Said, Abdul Rahim and Hassan (2018) and Wardhani (2019) and all found evidence that greater financial leverage and larger size are positively related with voluntary disclosure. In turn, Egbunike and Tarilaye (2017) found a positive relationship between voluntary disclosure and earnings per share and corporate governance level. In other words, firms with greater voluntary disclosure tend to have higher earnings per share and better corporate governance. In this same context, voluntary disclosure has also been found to be positively related with return on assets (Lan, Wang, & Zhang, 2013; Rufino & Machado, 2017).

According to Schoenfeld (2017) and Consoni and Colauto (2016), voluntary disclosure increases the liquidity of a firm’s shares. This means to say that through voluntary disclosure of information, a firm can increase the value of its assets. In this same panorama, for Balakrishnan et al. (2014), firms actively seek to shape their information environments by voluntarily disclosing more information than required, and those efforts improve the liquidity of their shares, and as a result maximize the results and raise the firm valuation.

Larger firms tend to provide more information on corporate governance to the market (Silva & Onusic, 2014). Likewise, companies recognized for adopting the best corporate governance practices supply more voluntary information to stakeholders (Consoni & Colauto, 2016; Lima et al., 2021; Silva & Onusic, 2014).

Besides studies indicating the effect of voluntary disclosure on determined variables, the literature also brings evidence about the variables that influence voluntary disclosure. In this context, Costa, Santos, Gomes and Guimarães (2021) and Elfeky (2017) reported a significant positive correlation between firm size, profitability and financial leverage on the one hand and voluntary disclosure on the other.

Development of the research hypotheses

To attain the objectives of this study, of investigating if voluntary disclosure tends to increase the volume of equity financing of firms, and conversely, whether firms that have higher levels of equity financing tend to disclose more voluntary information, we formulated two hypotheses referring to the independent variable of interest, (H1) described below, preceded by the theoretical justification.

By means of voluntary disclosure, a company can attract greater external financing (Bourveau & Schoenfeld, 2017; Li, 2017). Further in this context, according to Chung et al. (2017), voluntary disclosure, by reducing information asymmetry, can make firms more attractive to investors, thus increasing the amount of equity financing. Hence, the expectation is that voluntary disclosure will tend to increase the amount of funding obtained by firms via stock issues.

H1. The level of voluntary disclosure influences positively the amount of equity financing obtained by firms.

Methodology

Sample

We started the sample with all nonfinancial firms listed on the B3 Exchange, we excluded firm-year observations with negative book-value due to the fact that companies with negative book-value could distort the data, generating a biased result, different from the real result that is intended to be achieved. Then we eliminated firm-year observations with missing information of the variables needed to estimate the econometric model. To eliminate estimation bias due to influence of outliers, all variables were winsorized at 1% level on both sides.

The final sample contains 1,953 firm-year observations, it is an unbalanced panel data of 290 nonfinancial companies, from 2010 to 2017. The panel data of all nonfinancial companies with available data from Economatica allows a panel analysis, which makes a more detailed analysis on the subject and raise the level of statistical inference, increasing the robustness of the results.

The year 2010 was chosen as the starting year because it was the first year when the Brazilian Securities Commission (CVM) required listed companies to publish the Reference Form (Formulário de Referência), which was used as the source of data to construct the voluntary disclosure index, while 2017 was the last year the form was available. The data were collected with the support of the Economatica software.

Financial companies were excluded from the sample because they have very specific characteristics (including different accounting rules) that set them apart from other companies, so their inclusion would have biased the results. The exclusion of companies from the financial sector from the sample due to the peculiarities of their operations, distinct financial structure and special accounting and governance procedures, is a method widely used by research in the area of finance, a procedure which is in line with research by Lima et al. (2021); Costa et al. (2021) and Murcia and Santos (2009).

Econometric model and method

To test the research hypothesis, that the level of voluntary disclosure influences positively the amount of equity financing obtained by firms, we use the econometric model presented at Equation (1). The model was estimated by the Generalized Method of Moments (GMM) with robust errors and year fixed effects. The choice to use the GMM method is due to the possible simultaneous relation between the level of voluntary disclosure and the amount of equity financing obtained by firms, that can cause endogeneity problems.

$$EF_{it} = \beta_0 + \beta_1 VDISC_{it} + \sum \beta_k Controls_{it} + Year\ Fixed\ Effects + \varepsilon_{it} \qquad (1)$$

EF_{it} it is the equity financing of firm i at year t and $VDISC_{it}$ it is the level of voluntary disclosure of firm i at year t. According to the research hypothesis H1, it is expected that β_1 is positive, indicating that higher levels of voluntary disclosure generate higher equity financing.

According to Li (2017), one of the main motives for companies to reveal more information is the need to obtain financing from the capital market, such as by issuing shares. Therefore, EF_{it} is measure as the natural logarithm of the issuing shares of firm i at year t.

The level of voluntary disclosure was measure based on the amount of information voluntarily disclosure in the Reference Form of the companies available at the Brazilian Securities Commission (CVM) website. We chose the Reference Form to measure voluntary disclosure because, besides containing the information required by the CVM, it is the main vehicle used by firms for voluntary disclosure of additional information.

The measure of voluntary disclosure was calculated based on the index created by Murcia and Santos (2009). Murcia and Santos (2009)'s index was created based on 92 types of information divided in two dimensions: social-environment (49) and economic (34). In this study we focused only on the economic dimension.

The economic dimension of Murcia and Santos (2009)'s index is divided in 6 categories and 34 subcategories: business environment (8), operating activity (8), strategic information (8), financial information (7), financial ratios (4) and corporate governance (8), as shown at Table 1. Therefore, $VDISC_{it}$ is the percentage of the economic subcategories disclosed by the firm i at the year t.

Subcategory No. 16: Accounting information in US GAAP or IFRS was maintained to measure the Voluntary Disclosure proxy. Because, despite the mandatory adoption of the IFRS standard for Brazilian companies, since 2010, an attempt has been made to capture the discretion of companies that voluntarily adopt the US GAAP standard.

To control for other factors that can influence equity financing and avoid omitted variables endogeneity problems and assure a robust estimated model, we included five control variables (those most often used in the previous literature) as shown at Table 2.

Table 1.

Voluntary disclosure categories and subcategories

Category	No.	Subcategory
Business Environment	1	Discussion of the firm's sector of activity.
	2	Relationship with suppliers.
	3	Relationship with customers
	4	Market share
	5	Identification of business risks.
Operational Activity	6	Narrative of the firm's history.
	7	Technological aspects of operational activity.
	8	Productive capacity.
	9	Units sold.
Strategic Aspects	10	Future objectives, plans and targets of the firm.
	11	Main markets.
	12	Policy on reinvesting profits.
	13	Research and development.
	14	Main products or services of the firm.
	15	Social and/or environmental information.
Financial Information	16	Accounting information in US GAAP or IFRS.
	17	Detailed information on the costs of all the products and/or services (cost of products or goods sold).
	18	Price of shares (common, preferred)
	19	Market value.
	20	Projections (cash flow, sales, profits).
Financial Ratios	21	Profitability indicators (ROE, ROA).
	22	Liquidity indicators (current liquidity, quick ratio).
	23	Debt indicators (net equity – liabilities; current liabilities – long-term liabilities).
	24	EBITDA.
Corporate Governance	25	Main corporate governance practices.
	26	Relations with investors.

Source: Adapted from Murcia and Santos (2009).

Table 2.

Variables

Abbreviation	Description	Metric	Source	Expected Sign	Literature
Dependent Variable					
EF	Equity Financing	Natural logarithm of the quantity of shares issued by each company.	Economatica		Chung et al. (2017).
Independent Variable of Interest					
VDISC	Voluntary Disclosure	Ratio between number of subcategories disclosed and the total of subcategories.	CVM	(+)	Li (2017)
Control Variables					
SIZE	Size of the Company	Natural logarithm of the total assets of each company.	Economatica	(+)	Elfeky (2017); Teixeira, Nossa & Funchal (2011); Peixoto (2012); Peixoto, Pains, Araújo & Guimarães (2016).
ROA	Return on Assets	Ratio between the net profit and total assets of each company.	Economatica	(+)	Haniffa and Cooke (2005); Teixeira, Nossa & Funchal (2011)
LEV	Financial Leverage	Ratio between the current plus long-term liabilities and total assets of each company.	Economatica	(+)	Lan, Wang and Zhang (2013).
SLIQ	Share Liquidity	$100\left(\frac{Z}{P}\right)\sqrt{\left(\frac{n}{N}\right)\left(\frac{Y}{V}\right)}$	Economatica	(+)	Consoni and Colauto (2016).
CLIQ	Current Liquidity	Ratio of current assets over current liabilities of each company.	Economatica	(+)	Assaf Neto (2006).

The subjectivity in the process of building the proxy for voluntary disclosure should be taken into account, since the selection criteria, although scientifically established by previous research, is done through the judgment of the researchers. It is also noteworthy that the equity financing variable (issuance of shares) used in this study is capable of capturing financial resources for an entity, through the use of the company's own resources. In other words, the research did not consider the relationship between voluntary disclosure and financing through third-party resources, such as loans, for example.

However, it is understood that the scope of the equity financing variable (obtained through own resources) that was used by this study is greater than the variable that was not considered by this study (obtained through third-party resources), because equity financing variable used in this study can reach all investors and other stakeholders, something that financing from third-party resources would do in smaller proportions.

Results

Table 3 presents the descriptive statistics of the variables used to estimate the model presented at Equation (1). *VDISC* presents an average of 60.28% showing the firms on our sample disclose more than 50% of the economic subcategories, on average. The maximum disclose is 88%, thus no firm in our sample disclosed all subcategories. Even after a 1% level winso,rization the variable ROA presents a high standard deviation, probably due to outliers.

Table 3.
Descriptive statistic

	N	MIN	Q1	MEAN	MEDIAN	SD	Q3	MAX
EF	1,953	4.88	10.33	11.42	11.83	2.32	12.93	17.77
VDISC	1,953	23	50	60.28	62	15.17	73	88
SIZE	1,953	5.10	13.18	14.27	14.69	2.18	15.70	17.82
ROA	1,953	-184.48	-0.67	-1.21	3.17	25.70	7.40	23.73
LEV	1,953	-31.97	0.65	1.24	1.52	5.69	2.29	24.10
SLIQ	1,953	0	1.06E-06	0.16	0.0032	0.33	0.13	1.65
CLIQ	1,953	0.05	1.03	3.31	1.53	7.93	2.38	60.13

Table 4 presents the Pearson correlation between the variables. All correlations are statistic significant but the correlation between LV and CLIQ. The correlation between VDISC and EF is positive and statistic significant at 1% level, indicating a positive relation between these variables, that is a positive relation between the level of voluntary disclose and the equity financing. There is no indication of collinearity problem since there is no high correlation (<-0.7 or >0.7) between the control variables.

Table 4.
Correlation

	EF	*VDISC*	*SIZE*	*ROA*	*LEV*	*SLIQ*	*CLIQ*
EF	1						
VDISC	0.4873***	1					
SIZE	0.6086***	0.6245***	1				
ROA	0.1499***	0.2495***	0.4574***	1			
LEV	0.0445**	0.0489**	0.0564**	0.0672***	1		
SLIQ	0.3878***	0.4077***	0.4744***	0.1056***	0.0651***	1	
CLIQ	-0.0855***	-0.2367***	-0.3642***	-0.1630***	-0.0228	-0.0875***	1

Note. ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

Table 5 presents the estimation results of the econometric model presented at Equation (1). The model was estimated using the GMM method, with robust errors and year fixed effects. The number of observations decreased to 1,953 because we used the lag of the dependent variable as an independent variable to control other non-observed factors that could be affecting the Equity Financing (*EF*). *VDISC* estimated coefficient it is positive and statistic significant at 5%, indicating that higher levels of voluntary disclosure implicate on higher equity financing, on average. Confirming our research hypotheses.

The estimated coefficient value $\widehat{\beta_1} = 0{,}0081$ implies that 1% voluntary disclosure increase implicates on a 0,81% increase on the number of issuing shares.

Table 5.
Results From Gmm Estimation

	EF	
	Coef.	**t Stat.**
VDISC	0.0081	(2.73)***
SIZE	0.1118	(1.72)*
ROA	-0.0030	(-1.71)*
LEV	0.0013	(0.40)
SLIQ	0.1241	(1.54)
CLIQ	0.0066	(1.61)
EF(t-1)	0.8194	(9.69)***
Constant	-0.1056	(-0.46)
N	1,953	
Year Fixed Effect	Yes	

Note. ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

This result corroborates the evidence found by Lima et al. (2021), Bourveau and Schoenfeld (2017), and Chung et al. (2017), who concluded that by increasing voluntary disclosure companies can attract more external financing, due to the reduction of information asymmetry and corresponding increased trust of investors. In this same line, according to Li (2017) investors perceive a lower risk of investing their capital due to the lower information asymmetry brought by voluntary disclosure. The evidence observed by Sethuraman (2019) and Allee and Deangelis (2015) also supports the hypothesis that the reduction of information asymmetry due to voluntary disclosure tends to increase the confidence of investors.

As shown in Table 5, the variable *SIZE* coefficient is positive and statistic significant at 10%. Indicating that the firm size has a positive effect on equity financing. This supports the results reported by Haddad et al. (2020) and Consoni and Colauto (2016), who found that the larger the size of a firm, the greater the amount of equity financing tends to be.

The coefficient of the variable ROA was negative and statistic significant at 10%, indicating that the Return Over Assets has a negative influence on Equity Financing, meaning that greater the profitability of the firms lower is the amount of financing obtained by issuing shares. The result runs contrary to the evidence reported by Félix Júnior, Oliveira, Miranda, Lagiola and Galvão (2018) and Haniffa and Cooke (2005), who found that more profitable firms tend to have higher levels of equity financing.

Finally, the variables *LEV*, *SLIQ* and *CLIQ* did not present statistical significance.

Conclusion

The goal of this study was to investigate whether voluntary disclosure increases the amount of equity financing of firms (H1). To test this research hypothesis, we estimated an econometric model with GMM method using a sample of 1,953 firm-year observations od nonfinancial firms listed on B3 Exchange from 2010 to 2017. Due to the inclusion of the lag of the dependent variable as a control variable in the GMM estimation, the sample size went down to 1,953 firm-year observations (2010 was dismissed).

The results found indicate that a higher level of voluntary disclosure implicates in more equity financing, on average. Confirming our research hypothesis (H1). This result indicates the importance of raising the level of voluntary disclosure to stakeholders, because this reduces the information asymmetry between managers and investors, raising their confidence and reducing their risk perception, thus increasing the amount of equity financing.

Overall, the results of this study are relevant to the literature by providing empirical evidence about the positive influence of voluntary disclosure on obtaining funding by issuing shares of nonfinancial firms listed on the B3. Among the practical contributions for companies and investors is that voluntary disclosure is a tool able to increase the amount of equity financing, by reducing information asymmetry and raising the confidence of investors, which tends to boost the economic and financial performance of companies.

There are elements related to a certain subjectivity in the process of measuring the proxy of voluntary disclosure, since the selection criteria, although scientifically established by previous research, this process is done through the researcher's judgment. Thus, it is suggested that future research uses automated mechanisms to measure this proxy, thus reducing the subjectivity of measurement. Since this study only used issuance of shares as a variable of outside financing, other studies could be conducted using different measures of the capital structure of companies, such as the amount of debt financing, to compare the results against those of this study.

References

Abdi, H., Kacem, H., & Omri, M. A. B. (2018). Determinants of web-based disclosure in the middle east. *Journal of Financial Reporting and Accounting*, 16(3), 464-489. https://doi.org/10.1108/JFRA-11-2016-0093

Alipour, M., Ghanbari, M., Jamshidinavid, B., & Taherabadi, A. (2019) The relationship between environmental disclosure quality and earnings quality: a panel study of an emerging market. *Journal of Asia Business Studies, 13*(2), 326-347. https://doi.org/10.1108/JABS-03-2018-0084

Allaya, M., Derouiche, I., & Muessig, A. (2018) Voluntary disclosure, ownership structure, and corporate debt maturity: A study of French listed firms. *International Review of Financial Analysis*.

Allee, K. D., & DeAngelis, M. D. (2015). The structure of voluntary disclosure narratives: Evidence from tone dispersion. *Journal of Accounting Research*, *53*(2), 241-274. https://doi.org/10.1111/1475-679X.12072

Almeida, J. E. F. D., & Rodrigues, H. S. (2017). Effects of IFRS, analysts, and ADR on voluntary disclosure of Brazilian public companies. *Journal of International Accounting Research*, *16*(1), 21-35. https://doi.org/10.2308/jiar-51649

Alsharari, N. M., & Alhmoud, T. R. (2019). The determinants of profitability in Sharia-compliant corporations: evidence from Jordan. *Journal of Islamic Accounting and Business Research*, 10(4), 546-564. https://doi.org/10.1108/JIABR-05-2016-0055

Aly, D., El-Halaby, S., & Hussainey, K. (2018). Tone disclosure and financial performance: evidence from Egypt. *Accounting Research Journal*, 31(1), 63-74. https://doi.org/10.1108/ARJ-09-2016-0123

Assaf Neto, A. (2006). *Estrutura e análise de balanços: um enfoque econômico-financeiro* (8th ed.). São Paulo: Atlas.

Balakrishnan, K., Billings, M. B., Kelly, B., & Ljungqvist, A. (2014). Shaping liquidity: On the causal effects of voluntary disclosure. *the Journal of Finance*, *69*(5), 2237-2278. https://doi.org/10.1111/jofi.12180

Benlemlih, M., Ge, J., & Zhao, S. (2021). Undervaluation and non-financial information: Evidence from voluntary disclosure of CSR news. *Journal of Business Finance & Accounting*, *48*(5-6), 785-814. https://doi.org/10.1111/jbfa.12505

Botosan, C. A., & Plumlee, M. A. (2002). A re-examination of disclosure level and the expected cost of equity capital. *Journal of accounting research*, *40*(1), 21-40. https://doi.org/10.1111/1475-679X.00037

Bourveau, T., & Schoenfeld, J. (2017). Shareholder activism and voluntary disclosure. *Review of Accounting Studies*, *22*(3), 1307-1339. https://doi.org/10.1007/s11142-017-9408-0

Chen, E., Gavious, I., & Lev, B. (2017). The positive externalities of IFRS R&D capitalization: enhanced voluntary disclosure. *Review of Accounting Studies*, *22*(2), 677-714. https://doi.org/10.1007/s11142-017-9399-x

Chen, L., Srinidhi, B., Tsang, A., & Yu, W. (2016). Audited financial reporting and voluntary disclosure of corporate social responsibility (CSR) reports. *Journal of Management Accounting Research*, *28*(2), 53-76. https://doi.org/10.2308/jmar-51411

Cheng, Q., Cho, Y. J., & Kim, J. B. (2021). Managers' pay duration and voluntary disclosures. *Journal of Business Finance & Accounting*, *48*(7-8), 1332-1367. https://doi.org/10.1111/jbfa.12516

Chiu, P. C., Jiu, L., & Yu, P. H. (2022). How do suppliers benefit from customers' voluntary disclosure? the effect of customers' earnings guidance on upstream firms' investment efficiency. *Journal of Accounting and Public Policy*, *41*(1), 01-20. https://doi.org/10.1016/j.jaccpubpol.2021.106880

Chung, S. G., Goh, B. W., Ng, J., & Yong, K. O. (2017). Voluntary fair value disclosures beyond SFAS 157's three-level estimates. *Review of accounting studies*, *22*(1), 430-468.

https://doi.org/10.1007/s11142-016-9384-9

Consoni, S., & Colauto, R. (2016). Voluntary disclosure in the context of convergence with International Accounting Standards in Brazil. *Revista Brasileira de Gestão de Negócios, 18*(62), 658–677. https://doi.org/10.7819/rbgn.v18i62.2242

Consoni, S., Colauto, R. D., & Lima, G. A. S. F. D. (2017). Voluntary disclosure and earnings management: evidence from the Brazilian capital market. *Revista Contabilidade & Finanças*, *28*(74), 249-263. https://doi.org/10.1590/1808-057x201703360

Costa, G. M., dos Santos, B. A., Gomes, M. L. S., & Guimarães, D. B. (2021). A influência das características do conselho de administração na divulgação voluntária ambiental. *Gestão e Sociedade*, *15*(43), 4497-4527. https://doi.org/10.21171/ges.v15i43.3541

D'angelo, T., El Gazzar, S., & Jacob, R. A. (2018). Firm characteristics associated with concurrent disclosure of GAAP-compliant financial statements with earnings announcements. *Journal of Financial Regulation and Compliance*, 26(3), 365-381. https://doi.org/10.1108/JFRC-06-2017-0048

Dawd, I. (2018). Aggregate financial disclosure practice: evidence from the emerging capital market of Kuwait. *Journal of Applied Accounting Research*, *19*(4), 626-647. https://doi.org/10.1108/JAAR-12-2015-0103

Dayanandan, A., Donker, H., & Karahan, G. (2017). Do voluntary disclosures of bad news improve liquidity?. *The North American Journal of Economics and Finance*, *40*, 16-29. https://doi.org/10.1016/j.najef.2017.01.002

Egbunike, A. P., & Tarilaye, N. (2017). Firm's specific attributes and voluntary environmental disclosure in Nigeria: evidence from listed manufacturing companies. *Academy of Accounting and Financial Studies Journal*, *21*(3), 1-9.

Elfeky, M. I. (2017). The extent of voluntary disclosure and its determinants in emerging markets: Evidence from Egypt. *The Journal of Finance and Data Science*, *3*(1-4), 45-59. https://doi.org/10.1016/j.jfds.2017.09.005

Félix Júnior, L. A., Oliveira, M. R. G. de, Miranda, L. C., Lagioia, U. C. T., & Galvão, K. da S. (2018). Disclosure of information about human resources and the factors that affect its voluntary disclosure in administration's reports. *Enfoque: Reflexão Contábil,* 37(1), 129-146. https://doi.org/10.4025/enfoque.v37i1.33663

Fernandes, S. M. (2013). A influência do disclosure ambiental voluntário no custo da dívida. *RAI Revista de Administração e Inovação*, *10*(3), 165-183. https://doi.org/10.5773/rai.v10i3.922

Frenkel, S., Guttman, I., & Kremer, I. (2020). The effect of exogenous information on voluntary disclosure and market quality. *Journal of Financial Economics*, 2020. https://doi.org/10.1016/j.jfineco.2020.04.018

Gong, G., Li, L. Y., & Zhou, L. (2013). Earnings non-synchronicity and voluntary disclosure. *Contemporary Accounting Research*, *30*(4), 1560-1589. https://doi.org/10.1111/1911-3846.12007

Guay, W., Samuels, D., & Taylor, D. (2016). Guiding through the fog: Financial statement complexity and voluntary disclosure. *Journal of Accounting and Economics*, *62*(2-3), 234-269. https://doi.org/10.1016/j.jacceco.2016.09.001

Guttman, I., & Meng, X. (2021). The effect of voluntary disclosure on investment inefficiency. *The Accounting Review*, *96*(1), 199-223. https://doi.org/10.2308/tar-2018-0749

Haddad, A. E., Shibly, F., & Haddad, R. (2020). Voluntary disclosure of accounting ratios and firm-specific characteristics: the case of GCC. *Journal of Financial Reporting and Accounting*, *18*(2), 301-324. https://doi.org/10.1108/JFRA-04-2019-0055

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of accounting and public policy*, *24*(5), 391-430. https://doi.org/10.1016/j.jaccpubpol.2005.06.001

Horvat, T., Mojzer, J. (2019). Influence of company size on accounting information for decision-making of management. *Naše gospodarstvo/Our economy, 65*(2), 11-20. https://doi.org/10.2478/ngoe-2019-0007

Jankensgård, H. (2015). The relationship between voluntary disclosure, external financing and financial status. *Journal of Business Finance & Accounting*, *42*(7-8), 860-884. https://doi.org/10.1111/jbfa.12120

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

Karajeh, A. I., Ibrahim, M., Yussoff, B., & Bt Lode, N. A. (2017). Impact of Shareholder Structure on Voluntary Disclosure in Malaysian Companies. *Global Business & Management Research*, *9*.

Kilincarslan, E., Elmagrhi, M. H., & Li, Z. (2020). Impact of governance structures on environmental disclosures in the Middle East and Africa. *Corporate Governance, 20*(4), 739-763. https://doi.org/10.1108/CG-08-2019-0250

Lan, Y., Wang, L., & Zhang, X. (2013). Determinants and features of voluntary disclosure in the Chinese stock market. *China Journal of Accounting Research*, *6*(4), 265-285. https://doi.org/10.1016/j.cjar.2013.04.001

Li, X., & Yang, H. I. (2016). Mandatory financial reporting and voluntary disclosure: The effect of mandatory IFRS adoption on management forecasts. *The Accounting Review*, *91*(3), 933-953. https://doi.org/10.2308/accr-51296

Li, Y. (2017). Voluntary disclosure and investment in environmental technology. *Journal of Economic Behavior & Organization*, *133*, 331-341. https://doi.org/10.1016/j.jebo.2016.11.002

Lima, G. A. S. F. D. (2009). Nível de evidenciação × custo da dívida das empresas brasileiras. *Revista Contabilidade & Finanças*, *20*(49), 95-108. https://doi.org/10.1590/S1519-70772009000100007

Lima, S. L. L., Araújo, M., & Murcia, F. D. R. (2021). Fatores Determinantes da Probabilidade de Divulgação Voluntária de Informações Financeiras das Empresas. *Revista Evidenciação Contábil & Finanças*, *9*(1), 44-62. https://doi.org/10.22478/ufpb.2318-1001.2021v9n1.51107

Louie, J. Ahmed, K., & Ji, X. (2019). Voluntary disclosures practices of family firms in Australia. *Accounting Research Journal*, 32(2), 273-294. https://doi.org/10.1108/ARJ-04-2016-0042

Md Zaini, S., Samkin, G., Sharma, U., & Davey, H. (2018). Voluntary disclosure in emerging countries: a literature review. *Journal of Accounting in Emerging Economies, 8*(1), 29-65. https://doi.org/10.1108/JAEE-08-2016-0069

Mihaylova, L.; & Papazov, E. (2018). Using Accounting Information for Strategic Decision-Making in a Multi-Segmented Company. *Copernican Journal of Finance & Accounting*, 7(1), 21-33. https://doi.org/10.12775/CJFA.2018.002

Minutiello, V., & Tettamanzi, P. (2022). The quality of nonfinancial voluntary disclosure: A systematic literature network analysis on sustainability reporting and integrated reporting. *Corporate Social Responsibility and Environmental Management*, *29*(1), 1-18. https://doi.org/10.1002/csr.2195

Murcia, F. D. R., & Santos, A. D. (2009). Discretionary-based disclosure: Evidence from the Brazilian market. *BAR-Brazilian Administration Review*, *9*(1), 88-109. https://doi.org/10.1590/S1807-76922012000100006

Nelson, K. K., & Pritchard, A. C. (2016). Carrot or stick? The shift from voluntary to mandatory disclosure of risk factors. *Journal of Empirical Legal Studies*, *13*(2), 266-297. https://doi.org/10.1111/jels.12115

Ofoegbu, N. G., & Odoemelam, N. (2018). International financial reporting standards (IFRS) disclosure and performance of Nigeria listed companies. *Cogent Business & Management*, *5*(1), 1-18. https://doi.org/10.1080/23311975.2018.1542967

Oluwagbemiga, E. O. (2014). The use of voluntary disclosure in determining the quality of financial statements: evidence from the Nigeria listed companies. *Serbian Journal of Management*, *9*(2), 263-280. https://doi.org/10.5937/sjm9-5784

Peixoto, F. M. (2012). *Governança corporativa, desempenho, valor e risco: estudo das mudanças em momentos de crise*. Tese (Doutorado em Administração) – Universidade Federal de Minas Gerais (UFMG) – Belo Horizonte -Minas Gerais.

Peixoto, F. M., Pains, M. B., Araújo, A. A. de, & Guimarães, T. M. (2016). Custo de capital, endividamento e sustentabilidade empresarial: um estudo no mercado de capitais brasileiro no período de 2009 a 2013. *RACE: Revista de Administração, Contabilidade e Economia, 15*(1), 39-66. https://doi.org/10.18593/race.v15i1.6281

Pereira, A., Stocker, F., Mascena, K., & Boaventura, J. (2020). Corporate Social Performance and Financial Performance in Brazilian Companies: Analysis of the Influence of Disclosure. *Brazilian Business Review*.

Rossi, M., Festa, G., Chouaibi, S., Fait, M., & Papa, A. (2021). The effects of business ethics and corporate social responsibility on intellectual capital voluntary disclosure. *Journal of Intellectual Capital*. https://doi.org/10.1108/JIC-08-2020-0287

Rouf, M., & Akhtaruddin, M. (2018). Factors affecting the voluntary disclosure: a study by using smart PLS-SEM approach. *International Journal of Law and Management*, 60(6), 1498-1508. https://doi.org/10.1108/IJLMA-01-2018-0011

Rufino, M. A., & Machado, M. R. (2017). Relação de dependência entre a divulgação voluntária social e ambiental e as características das empresas de capital aberto no brasil. *Revista Ambiente Contábil*, *9*(1), 344-363. https://doi.org/10.21680/2176-9036.2017v9n1ID8997

Said, R., Abdul Rahim, A. A., & Hassan, R. (2018). Exploring the effects of corporate governance and human governance on management commentary disclosure. *Social Responsibility Journal*, *14*(4), 843-858. https://doi.org/10.1108/SRJ-06-2017-0099

Schoenfeld, J. (2017). The effect of voluntary disclosure on stock liquidity: New evidence from index funds. *Journal of Accounting and Economics*, *63*(1), 51-74. https://doi.org/10.1016/j.jacceco.2016.10.007

Scott, W. R. (2015). *Financial accounting theory* (7th ed.). Toronto: Prentice hall.

Sethuraman, M. (2019). The effect of reputation shocks to rating agencies on corporate disclosures. *The Accounting Review*, *94*(1), 299-326. https://doi.org/10.2308/accr-52114

Shi, Y., Kim, J. B., & Magnan, M. L. (2014). Voluntary disclosure, legal institutions, and firm valuation:

Evidence from US cross-listed foreign firms. *Journal of International Accounting Research*, *13*(2), 57-85. https://doi.org/10.2308/jiar-50842

Shroff, N., Sun, A. X., White, H. D., & Zhang, W. (2013). Voluntary disclosure and information asymmetry: Evidence from the 2005 securities offering reform. *Journal of Accounting Research*, *51*(5), 1299-1345. https://doi.org/10.1111/1475-679X.12022

Silva, W.M., & Onusic, L. M. (2014). Corporate e-disclosure determinants: Evidence from the Brazilian market. *International Journal of Disclosure and Governance*, *11*(1), 54-73. https://doi.org/10.1057/jdg.2012.14

Souza, J. A. S., Flach, L., Borba, J. A., & Broietti, C. (2019). Financial Reporting Quality and Sustainability Information Disclosure in Brazil. *Brazilian Business Review*, *16*(6), 555-575. https://doi.org/10.15728/bbr.2019.16.6.2

Souza, L. A. P., Lima, E. M., Vendramin, E. O., & Pereira, C. A. (2021). Divulgar para quê? Índice de disclosure e a importância atribuída por doadores e gestores à divulgação voluntária de informação. *Administração Pública e Gestão Social*, *13*(3), 01-18. https://doi.org/10.21118/apgs.v13i3.10943

Sun, Y., Yi, Y., & Lin, B. (2012). Board independence, internal information environment and voluntary disclosure of auditors' reports on internal controls. *China Journal of Accounting Research*, *5*(2), 145-161. https://doi.org/10.1016/j.cjar.2012.05.003

Teixeira, E. A., Nossa, V., & Funchal, B. (2011). O índice de sustentabilidade empresarial (ISE) e os impactos no endividamento e na percepção de risco. *Revista Contabilidade & Finanças*, *22*(55), 29-44. https://doi.org/10.1590/S1519-70772011000100003

Tulvinschi, M. (2019). Considerations regarding the role of accurate and significant accounting information in the decision-making process. *The USV Annals of Economics and Public Administration*, *19*(2), 125-132.

Verrecchia, R. (2001). Essays on disclosure. *Journal of Accounting and Economics*, 22, 97-180. https://doi.org/10.1016/S0165-4101(01)00025-8

Voges, C., Broietti, C., & Rover, S. (2021). Disclosure ambiental dos relatórios corporativos da empresa Natura à luz da teoria da divulgação voluntária. *Revista Ambiente Contábil*, *13*(2), 100-120. https://doi.org/10.21680/2176-9036.2021v13n2ID21751

Wardhani, R. (2019). The role of audit quality on market consequences of voluntary disclosure: evidence from East Asia. *Asian Review of Accounting*, *27*(3), 373-400. https://doi.org/10.1108/ARA-03-2018-0083

Wen, X. (2013). Voluntary disclosure and investment. *Contemporary Accounting Research*, *30*(2), 677-696. https://doi.org/10.1111/j.1911-3846.2012.01169.x

Zarb, B. J. (2015). A comparative study of voluntary accounting disclosures between U.S. and non-U.S. airline companies. *International Journal of Business, Accounting, & Finance*, *9*(2).

Submetido: 09/10/2020

Aceito: 02/06/2022