FINANÇAS

RELATION BETWEEN THE MARKET RISK AND THE QUALITY OF ACCOUNTING INFORMATION FOR THE BRAZILIAN FINANCIAL INSTITUTIONS

RELAÇÃO ENTRE O RISCO DE MERCADO E A QUALIDADE DA INFORMAÇÃO CONTÁBIL DAS INSTITUIÇÕES FINANCEIRAS BRASILEIRAS

Fernando M. Ramos
Universidade do Contestado e Universidade do Vale do Rio dos Sinos

Renan Caramori
University of Contestado

ABSTRACT

Abstract: The study aimed to analyze the relationship between the market risk and the quality of accounting information of Brazilian financial institutions. The variables used in the study were: (i) volatility of the stock; (ii) quality of information accounting index through disclosure; (iii) size, profitability and debt. The survey sample consists of 55 organizations belonging to the financial segment of the BM&FBovespa. The results of multiple linear regression analysis demonstrated a significant compared to the proposed model with a power of explanation of 52.10%. The results converged to explain the study's assumption, resulting in a significant negative correlation between volatility and quality of accounting information, as well as volatility and size, and profitability. Starting from the main point, it is concluded that companies with a higher level of disclosure have lower volatility of stock returns, effecting thus cited and presumed importance attached by the market to the accounting information.

KEYWORDS

Quality of Accounting Information. Disclosure. Market Risk. Volatility. Transparency.

FERNANDO M. RAMOS, RENAN CARAMORI

RESUMO

O estudo teve como objetivo analisar a relação entre o risco de mercado e a qualidade das informações contábeis das instituições financeiras brasileiras. As variáveis utilizadas no estudo foram: (i) volatilidade das ações; (ii) índice de qualidade da informação contábil por meio da evidenciação; (iii) tamanho, rentabilidade e endividamento. A amostra da pesquisa é constituído por 55 organizações pertencentes ao segmento financeiro da BM&FBovespa. Os resultados da análise de regressão linear múltipla demonstrou-se significativo em relação ao modelo proposto, com um poder de explicação de 52,10%. Os resultados convergiram para explicar o pressuposto do estudo, resultando em uma significativa correlação negativa entre volatilidade e qualidade da informação contábil, bem como a volatilidade e tamanho, e rentabilidade. Partindo do ponto principal, conclui-se que empresas com maior nível de evidenciação possuem menor volatilidade do retorno das ações, efetivando assim, a importância citada e presumida que é atribuída pelo mercado as informações contábeis.

PALAVRAS-CHAVES

Qualidade da Informação Contábil. Divulgação. Risco de Mercado. Volatilidade. Transparência.

INTRODUCTION

In view of glottalization, Carvalho, Trapp and Chan (2004) state that the financial market is gradually becoming more dynamic and volatile. As a consequence of that, came the need for more relevant information, raising the value of transparency in financial statements, which is intrinsically related to the risk assigned to an organization due to the reduction of the level of uncertainty.

Only based on a satisfactory transparency standard and consequent diffusion of reliable information will the information users have condition to precise evaluate the financial performance of a particular entity, the business progress, and the risks linked to its activities (BANCO CENTRAL DO BRASIL, 2002). According to Diamond and Verrechia (1991), a greater amount of investors are attracted by a scenery in which the reliable information is known, and as a result has an improved liquidity and reduced volatility.

On this matter, studies like the ones performed by Fortunato, Teixeira and Aquino (2004); Neto and Riccio (2008); e Diamond and Verrecchia (1991) show that organizations that have a further dissemination of transparent information present an inverse relationship to the risk of their traded financial securities.

Taking into account the circumstances, the issue of the study consists of identifying what the existing relationship is between the market risk of financial institutions listed by BM&FBovespa and the quality of accounting information released. In this context, the study aims the identification and analysis of the relation and influence

between the quality of accounting information of financial institutions from BM&F-Bovespa and their market risk, provided by day-to-day market prices.

This research is justified by the need to emphasize the the quality of accounting information released by financial institutions matching them to the market risk, in order to confirm if a better quality accounting information contribute or influence on a lower volatility of the shares negotiated at BM&FBovespa.

As regards the theoretical contribution, even its an issue that is constantly discussed in the scientific environment, this study aims to contribute with the discussion on the use of metrics related to the quality characteristics on accounting information. From a social point of view this study intends to identify the importance of transparent information in a scenery designed by large entities. In addition, in the empirical field, taking into consideration the international context and the great variability of investment options, seeks to identify new application opportunities, since this market seems to have restricted access.

The present article is organized in five sections. The first section describes the preliminary aspects that characterize the issue, the objectives as the justification of the research. Subsequently a theoretical review was made, including approaches related to the subject of study. Afterwards are the methodological aspects followed by the analysis of collected data. At the end the main findings obtained from the study are going to be presented.

THEORETICAL FRAMEWORK

This section deals with a brief conceptual discussion about the main topics of the present study. This section is divided into two subsections dealing with the theoretical aspects of the market risk and the quality of accounting information. Some of the main authors mentioned are Goulart (2003), Malacrida and Yamamoto (2006), Duarte Júnior (2008), Cunha and Ribeiro (2008), Martins and Paulo (2007), Murcia and Santos (2009), Neto and Riccio (2008) Fortunato, Teixeira and Aquino (2004), among others.

MARKET RISK

The risk can be summed up as a probability of a result that is different from the one initially expected, however the concept of risk tends to emphasize the possibility of negative results, once they represent results inferior than the expected (GOULART, 2003). The behavior of stocks in a specific period in the financial market, determines the investment risk. According to Malacrida and Yamamoto (2006), the investment in stocks includes the acceptance of a certain level of risk linked to the oscillation of its daily market prices, among other inherent risks.

In a related area, Assaf Neto (2001) identifies two kinds of risks connected to the stock investment: market risk and invested company risk. The invested company risk refers to the risks associated with the operation of the organization, the characteristics of the market and capacity to liquidate financial commitments (MALACRIDA; YAMAMOTO, 2006).

The market risk can be identified through the variability of the return of a security in reference to its average value, in other words, the bigger the variation of the stock is, the higher the risk of the security will be and also lower will be the trust of the investor in the investment (ASSAF NETO, 2001).

Duarte Júnior (2008) explains that recurrent variations in stock prices can be defined as a market risk. This risk is described as a measure of uncertainty related to the expected returns from an specific investment due to variations on its price.

According to Goulart (2003), the market risk is expressed when the value of an specific security fluctuates due to variation that occurs in the price of the financial instrument. In this regard Thiele (2000) considers that the market risk implies the uncertainty of future results, because of changes in the market conditions, as the price of a stock.

To put it succinctly, one can understand risk as volatility of return of an specific asset or portfolio, that is usually measured by the standard deviation, therefore, the bigger the dispersion due to the expected return is, the bigger the risk of the security will be (GOULART, 2003).

The standard deviation is one of the most used statistical indicators since it can be used as dispersion metrics for any security or portfolio around the expected return value (ARRUDA, 2003). Likewise, Morais and Portugal (1999) mention that the standard and simpler way to measure the volatility of an asset is through estimating the standard deviation of its returns, which is usually defined as historical volatility.

As a result, it is concluded that studies show the validity of methodological use of standard deviation in measuring the market risk of the organizations (GOULART, 2003; MALACRIDA; YAMAMOTO, 2006; ARRUDA, 2003; MORAIS; PORTUGAL, 1999).

QUALITY OF ACCOUNTING INFORMATION

For Iudícibus et al. (2010) the main objective of accounting is based on the disclosure of information to its users bringing the possibility to evaluate the financial situation of the organizations. In accordance with Dias Filho (2000), the basic function of accounting consists in measurement and communication of information aiming the easing of the decision-making process.

For that matter, according to CPC 00 (2011), for the accounting information to be useful to the decision making process it needs to be relevant and reliable to what it is committed to represent, besides its utility also depends on the characteristics of information improvement, which are: comparability, verifiability, timeliness and comprehensibility. All these quality characteristics are orientated to the utility of accounting information, essential for its users in making pertinent decisions.

Hendriksen and Van Breda (1999) clarify that accounting information needs reliability, that is to say that there must be integrity of representation and significance in being appropriate and represent feedback value. Yet according to Santos, Schmidt and Machado (2005), the first objective of financial statements is providing useful information to their users.

The disclosure of accounting information is one of the major communication tool between managers and market. This communication tool plays an essential role in decreasing the asymmetry of information between the administrators and their investors (CUNHA; RIBEIRO, 2008).

To disclosure means clearly and objectively present certain information without allowing doubts or inaccuracy of interpretation, this is to inform something in a way that people promptly assimilate what is being communicated (AQUINO; SANTANA,

R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa) 89

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201

1992). One of the mechanisms for reducing the asymmetry of information, according to Bushman and Smith (2001), is disclosure. Companies with a better level in this point tend to reflect a higher expectation in their users by virtue of transparency, besides the market tends to better value their assets.

Regarding reducing the asymmetry of information, disclosing contributes for the improvement of capital market in relation to market risk and for a better understanding of accounting information by its users (SOARES, 2010).

When measuring the quality level of accounting information many concepts on the issue can be presented. In this context an information can be considered as low quality when the financial reports present lack of transparency in financial disclosure, even when they are considered in accordance with the current accounting principles (MARTINS; PAULO, 2007).

Levitt (1998) emphasizes that in the capital market it is necessary a significant quality of accounting and of the disclosing system, denoting relevant indicators to its considerable success.

In this circumstances, studies show that the level of disclosure is positively related to the size and practices of corporate governance (MURCIA; SANTOS, 2009); that better levels of quality in accounting information represent negative relation regarding stock risk (MARTINS; BOENTE; MÓL, 2013; NETO; RICCIO, 2008); positive relation with the size of the organization and to *BITDA* (FORTUNATO; TEIXEIRA; AQUINO, 2004); a positive relation with the liquidity of the shares (DIAMOND; VERRECCHIA, 1991); and also a negative debt-to-equity ratio (IMHOFF, 1992).

Thus, it is noticeable that the quality of accounting information is constantly being measured and connected to variables (risk, liquidity, size) that are capable of reaffirming the contribution that the quality exerts on several indicators. Besides, the disclosure is used as a way to analyze the quality of accounting information, once it is through its diffusion that the qualitative characteristics, as accurate representation, relevance, timeliness, comprehensibility and others, can be observed.

METHODOLOGY

Regarding several existing studies, it is understood that they can be classified according to their aim, logic, process and results obtained (COLIS; HUSSEY, 2005).

About the method used in the present study, it is characterized by being performed with the inductive method, once it starts with a minor approach growing to an inducted result to lager organizations. Marconi and Lakatos (2009) support saying that the inductive method is the one in which the approximation of the phenomena is usually spread to increasing extensions, creating an ascendant connection.

In relation to the objective of the study, it is classified as a descriptive research, since it has the intention to describe a result. According to Pereira (2010), the descriptive research points out and describes a particular phenomenon or population, or defines connections among variables using standard techniques.

Besides, the study is a documentary research once it consists in collecting and analyzing financial reports. The documentary research is supported by the use of all kinds of documentary sources, which is any information concerning to the analysis (FACHIN, 2003).

The very same, this research is characterized as quantitative, after all, this kind of research makes use of statistical methods along with wide samples and numerical information (MARCONI; LAKATOS, 2010).

The population of this study consists of all companies belonging to BM&FBovespa financial segment. However, considering that some companies don't negotiate their own shares in this market, the selection criterion was defined as all the companies that had shares negotiated in 2014. Therefore there was the exclusion of the organizations that didn't negotiate own shares or that had only one negotiation in 2014, or also the ones that released incomplete financial reports.

Therefore, the research sample includes 55 organizations working with real state, diverse holdings, banks, credit and financing companies, insurance brokers, insurance companies, financial and investment managers and general financial services. That way the sample was chosen due to the accessibility of data and it is considered as non-probabilistic since it avoids the use of random selection (MARCONI; LAKATOS, 2009).

The collection of data happened in three stages. The first stage sought the measurement of the quality of data provided by the sample companies. Subsequently the measurement of the market risk was calculated and finally, control variables were collected.

In the chart number 1 are presented the variables used in the study, as well as their classification operationalization and theoretical background.

CHART 1 – Used variables

Variables	Classification	Operationalization	Author (es)
Market risk - Volatility (VOL)	Dependent	Measured by standard deviation = DP(R), in which the return (R) of the share is: $Rt= ln(Pt / Pt-1)$, where: Pt= Price in day t; $Pt-1$=Price in day $t – 1$; and ln= Napier's logarithm.	Malacrida e Yamamoto (2006); Goulart (2003).
Quality of financial information index (QICI)	Independent	Check list composed of 12 questions, adapted from Gabriel e Siveira (2011).	Gabriel e Silveira (2011).
size (logSIZ)	Control variable	Measured by the log of the Total Asset Value	Cruz (2010); Ramos e Klann (2015);
Profitability (PROFIT)		In which: PROFIT is profitability; OP is Operating Profit ; e NE is Net Earning.	Kayo, Teh e Basso (2006).
Indebtedness (INDEBT)		Where: INDEBT is General Indebtedness; PC is Current Liability; ELP is Long-term liability or Non-current liability; and AT is Total Asset.	Catapan e Catapan (2005).

Source: Research data (2015).

R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa)   91

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201

When measuring the market risk was defined that it would be evaluated through the volatility of the security, which is calculated by the standard deviation of its returns in the period. In this regard, the higher are the variation rates in the average return, higher is the risk of the asset.

Concerning the risk calculation, historical end-of-day quotations were collected from 55 companies during 2014 for a total of 248 observations of possible shareholder marketing. For the companies that had more than one kind of shares traded, it was determined that the one whose shares had been more often traded in the year would be chosen, providing higher reliability to the measurement of the company risk.

About the measurement of the quality of financial information was used a questionnaire composed and proposed by Gabriel and Silveira (2011) with the aim of identifying the quality of accounting information. The Quality of Accounting Information Index (QICI) that was used is composed by 12 questions attributing 1, 0 or 0.5 point to the answers depending on the judgment. Thus the companies can achieve an QICI from 0 to 12, a higher punctuation representing a higher quality of accounting information.

The data were analyzed with the help of Statistical Package for Social Sciences (SPSS) software, from IBM©. The analysis happened in three stages using univariate and multivariate statistic techniques. In the first stage the institutions were characterized through descriptive statistics (averages, minimum, maximum and average deviation).

In the second stage the quality of accounting information from the companies was measured through disclosure index, resulting in an indicator that was also analyzed through descriptive statistics.

The third stage used the Pearson's correlation and multivariate linear regression techniques. For this purpose were conducted tests of regression assumptions. To check the data for normality the Kolmogorov-Smirnov test was conducted, to analyze the multicollinearity of data the Variable Inflation Factor test was applied; to analyze the homoscedasticity was used the Levene test. Finally, the autocorrelation of residuals was verified using the Durbin-Watson test.

For the multivariate linear regression an equational model was chosen, using VOL as a dependent variable and other variables as predictors: (QICI) and control (logSIZ, PROFIT, INDEBT), therefore the equation of regression used was the following one:

$$VOL = \beta 1^*QICI + \beta 2^*logSIZ + \beta 3^*PROFIT + \beta 4^*INDEBT \qquad (1)$$

The collected data and their corresponding analyses that enabled the final considerations of the research will be presented in the following section.

RESULTS

In the present study the objective was to analyze the relation among variables that are highly relevant in the analysis of the stock market. The table 1 shows the descriptive statics related to the dependent variable volatility (VOL).

In relation to the VOL, according to the table 1, there is a considerable high average of 9.96% for all sectors, significantly influenced by average VOL in Holdings sector that was 58.06%; besides, the Holdings sector presented the maximum VOL percentage of 382.96% resulting in a standard deviation of 132.65%

In the same context it is necessary to emphasize the sectors that had low VOL

92   R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa)

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201

TABLE 1 – Descriptive Statistics of the Variable VOL

Panel A – Descriptive Statistics VOL				
	MIMINUM	MAXIMUM	MEAN	STANDARD DEVIATION
VOL	1.24%	382.96%	9.96%	51.79%
Panel B – Descriptive Statistics VOL in each sector of activity				
Real estate	1.66%	3.16%	2.17%	0.49%
Diverse Holdings	1.69%	382.96%	58.06%	132.65%
Banks	1.50%	6.84%	3.20%	1.32%
Credit and Financing Companies	2.59%	10.81%	6.70%	4.11%
Insurance brokers	5.31%	5.31%	5.31%	0.00%
Insurance companies	1.69%	2.87%	2.16%	0.49%
Financial and Investment Managers	1.67%	2.45%	1.97%	0.34%
General Financial Services	1.24%	3.58%	2.44%	0.96%

Caption: VOL = Volatility.
Source: Research Data (2015).

percentage, which are Real Estate, Insurance Companies, Financial Investment Managers and General Financial Services. In all mentioned sectors appeared companies with the lowest VOL percentage (under 2.5%), considerably low for the segment average, assisting in explaining the results.

Mentioning the QICI according to table 2, remarkable QICI percentage (88%) is present in the sectors of General Financial Services and Insurance Companies. In relation to the lower QICI numbers it is noticeable that the sectors of Holdings, Banks and Insurance Companies presented results of 58.33%, 58.33% and 50% respectively. The sector of Insurance Companies

was significantly influenced by the lower QICI numbers previously mentioned, which resulted in a lower QICI average, although it includes one of the companies with highest QICI among the study objects.

In the field of averages, the sectors of Real Estate, Financial and Investment Managers, General Financial Services and Banks presented the higher QICI, 77.50%, 73.67%, 85% and 74.13%, respectively.

The entities belonging to the mentioned sectors appeared among the lower VOL percentage in the analyzed organizations, excluding the Banks, that presented a higher VOL, however their QICI average can be explained by the predominance

TABLE 2 – Descriptive Statistics of the Variable QICI

Panel A – Descriptive Statistic QICI				
	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
QICI	50.00%	88.00%	73.75%	8.98%
Panel B – Descriptive Statistic QICI in each sector of activity				
Real Estate	70.83%	83.33%	77.50%	3.82%
Diverse Holdings	58.33%	87.50%	67.26%	9.56%
Banks	58.33%	87.50%	74.13%	7.61%
Credit and Financing Companies	71.00%	75.00%	73.00%	2.00%
Insurance Brokers	67.00%	67.00%	67.00%	0.00%
Insurance Companies	50.00%	88.00%	68.40%	14.26%
Financial and Investment Managers	63.00%	79.00%	73.67%	7.54%
General Financial Services	79.00%	88.00%	85.00%	4.24%

Caption: QICI = Quality of Accounting Information Index .
Source: Research Data (2015).

and relevance of these institutions in this segment. When comparing the VOL and QICI numbers, it is evident that the organizations with higher oscillations in their stocks returns are coincidentally the ones that presented lower QICI. The Holdings, the ones with the highest VOL percentage, presented the second lowest QICI result, 67.26%.

Similarly, it is noticeable that the average of the segment was 73.75%, in comparison with the studies of Gabriel and Silveira (2011) that obtained a result of 61.17% using the same index, it can be considered a relatively good result, showing that in a general way the organizations are constantly improving the disclosure of their accounting statements.

Concerning the control variables the table 3 presents an excessive disparity in the size of organizations belonging to the same sector, outlining the clear significant difference between the minimum and maximum value in the SIZ of the companies, emphasized by the expressive results in the standard deviation of the sectors.

In this variable, it is important to note that the bank sector presented the highest average and the maximum value found in SIZ, showing a great economic potential and domination of the segment. Following the SIZ variable, the best variables were the ones in the Financial and Investment Managers, General Financial Services, Insurance Companies and Real Estate, together they

presented the lower VOL percentage, previously mentioned.

About the financial entities PROFIT, the higher the index is, it is understood that the performance of the organization is better, that way we can notice that the best PROFIT number found was in the banking sector, with the result of 164.57%. The minimum PROFIT value was present in the Holdings sector with -273.58%, and also had the lowest PROFIT average with -26.77%.

The best PROFIT mean were the ones from the Real Estate and Diverse Financial Services with the results of 62.94% and 49.22%. Comparing to the previously analyzed results it is noticeable that these entities figured among the lowest VOL averages and the highest QICI, it helps the explanation of the study objectives.

Analyzing the INDEBT variable, it is considered that the higher the index is, worse is the situation of the organization in relation to its general indebtedness. Thus, the segment obtained the INDEBT average of 62.03%, with the INDEBT highest value (124.24%) in the Holdings sector. About the averages, the Real Estate and Diverse Financial Services obtained the lowest averages in this market (45.55% e 48.09%, respectively), complementing what was presented in the preceding paragraph.

Regarding the Banks and the Credit and Financing Companies that figured among the highest End averages in the sector (in the order of 76.34% and 86.10%), Pedro

TABLE 3 – Descriptive Statistic of Control Variables

	MINIMUM	MAXIMUM	MEAN	STANDARD DEVIATION
SIZ (R$)	42,535.00	1,437,485,512.00	87,445,145.45	287,116,111.24
PROFIT	-273.58%	164.57%	24.71%	59.28%
INDEBT	0.77%	124.24%	62.03%	29.26%

Caption: TAM = Size; LUCRAT = Profitability; END = Indebtedness
Source: Research Data (2015).

(2014) suggests that one of the crucial factors for the banking sector indebtedness is its dimension, the same way do the Perressim, Santos and Lucente (2014) studies. In this research, this justification can be taken into consideration based on the high TAM index in the mentioned sector.

For the purpose of identifying the existing correlation among the variables of the study the Pearson's correlation statistical method was used, as showed in table 4.

Through an individual analysis of the variables according to the tests performed, the volatility variable obtained a significant and negative relation with the quality of accounting information, size and profitability. It still got a positive relation with the indebtedness, though not significant.

In relation to the objectives of the study, it is noticeable that the negative correlation found between the volatility of the traded shares and the quality of the accounting information confirms the consideration that the organizations with lower volatility value in their shares are the ones who present a better quality in the accounting information, assuming that the lower is the market risk of the organizations, lower will also be the quality of the accounting information disclosed by the same entities.

This result brings an understanding that is in harmony with some previously performed studies, showing that entities with a better quality in the accounting information tend to present lower volatility numbers in their shares, what is explained trough the higher level of accounting disclosure, use of complementary financial statements, or else, disclosure of financial instruments (FORTUNATO; TEIXEIRA; AQUINO, 2004; MALACRIDA; YAMAMOTO, 2006; NETO; RICCIO, 2008; QUINTEIRO; MEDEIROS, 2005; MALAQUIAS; LEMES, 2015).

In the same area a negative and significant correlation between volatility and size can be observed, as well as between volatility and profitability. Facing that, we can affirm that the entities assessed with a higher volatility in their shares tend to have a smaller organizational size and lower profitability index. The size, according to Rogers, Securato and Ribeiro (2008), can be essential to short and long-term volatility, once the smaller companies are less protected against the market movements than the bigger organizations.

Regarding the variable of quality of accounting information, we notice that there is a positive and significant correlation to the size of the companies. Acording to Fortunato, Teixeira and Aquino (2004), bigger companies that already present good operational results communicate better with the market, once they have a system that

TABLE 4 – Pearson's Correlation Test

	VOL	QICI	logSIZ	PROFIT	INDEBT
VOL	1				
QICI	-,596**	1			
logSIZ	-,287*	,386**	1		
PROFIT	-,159*	,224	,036	1	
INDEBT	,163	,021	,454**	-,335*	1

**. The correlation is significant in the level 0.01 (2 extremities).
*. The correlation is significant in the level 0.05 (2 extremities).
Caption: VOL = Volatility; QICI = Quality of Accounting Information Index; logSIZ = log of the size; PROFIT = Profitability; INDEBT = Indebtedness.
Source: Research Data (2015).

R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa)   95

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201

supports the cost of providing information and take advantage of that.

Some researches support the previous idea, concluding that there is a positive relation between the quality of accounting information and the size of the entities (BRANDÃO et al., 2013; MALAQUIAS, LEMES, 2015; MURCIA; SANTOS, 2009), justified by the higher need of information, a greater variety of stakeholders, reduction in political costs, complexity in business and consequent need of high transparency. Therefore, the results suggest that the largest organizations tend to disclose better quality account information.

In relation to the size variable, the statistical result obtained show a positive and significant relation with the indebtedness, in other words, the bigger is the dimension of the organization, higher will be its indebtedness level. This statement is certified by some studies that prove the positive relation of higher indebtedness levels for companies with larger sizes, explained by the complex existing transaction flow (PROCIANOY; SCHNORRENBERGER, 2004; BRITO; CORRAR; BATISTELLA, 2007; PERRESSIM, SANTOS, LUCENTE, 2014).

About the profitability variable, the conclusion is that there is a negative and significant correlation between the indebtedness variable, raising the understanding that the higher the profitability of the organization is, its indebtedness index tends to be lower. For that matter, studies like the ones performed by Procianoy and Schnorrenberger (2004); Couto ang Ferreira (2010) confirm this result, based on the fact that the higher is the probability of the organization, lower will be its need of resources funded by external sources.

After the Pearson's correlation tests were performed, multiple linear regressions were used. The results of the test are explored in table 5.

The results of the multiple linear regression proved to be significant (p<,000) in relation to the proposed model, with an explanation power of 52.10% (R^2 = .521). It determines that the variables that compose the model (QICI; SIZ; PROFIT; INDEBT) are able to explain in 52% the market risk fluctuations (VOL) in the financial institutions analyzed in the study.

Also about the test result, the SIZ and PROFIT variables presented significant and

TABLE 5 – Multiple Linear Regressions

Variables	Beta	T	Sig.	VIF
Constant (VOL)		1.914	.061	
QICI	-.159	-1.576	.121	1.112
LogSIZ	-.241	-2.229	.030	1.267
PROFIT	-.707	-7.106	.000	1.076
INDEBT	.044	.410	.684	1.,230
ANOVA				
R	.722[a]			
R²	.521			
Sig.	.000[b]			
Durbin-Watson	1.619			
N	55			

Source: Research Data(2015).

negative influence over VOL, confirming the Correlation test findings, while the QICI didn't show significance, but with a negative influence over VOL. Besides, INDEBT presented a positive influence over VOL, but the same way as the Correlation test it showed no significance in this model.

Acording to the described results, though the QICI result showed no significance in the regression test, it is noticeable that it resulted in a negative intervention due to the VOL, the same way some studies testify the negative relation between the quality of accounting information and volatility or market risk (MALACRIDA; YAMAMOTO, 2006; NETO; RICCIO, 2008; QUINTEIRO; MEDEIROS, 2005; MALAQUIAS; LEMES, 2015). These studies confirm such hypothesis based on the disclosure, this means that companies that present a better level of disclosure of accounting information tend to exhibit a lower market risk than other institutions.

From the theoretical debate and the outcome, it is clear that the disclosure is the substantial aspect in the quality of accounting information and decision-making processes. Companies that disclosed their information in an inaccurate way result in an idea that their results, or any other relevant value, were manipulated. Therefore, the quality of accounting information can be the variable that influences the market risk of the organizations, once it's from relevant information disclosed that the stakeholders will make their decisions, based on the concordance or not of their information.

To continue, it is noticeable the significant influence of variable size over the market risk, supported by the studies of Rogers, Securato and Ribeiro (2008), that match with the notion that bigger companies en-

joy higher reliability, transparency and reputation, reacting in a less intensive way to market fluctuations, and consequently absorbing faster negative information. Thereby, authors mention that smaller companies are more exposed to market fluctuations once they present a less significant image to the public, less monopoly power and more difficulty in accessing credit, this way becoming less attractive to investors.

Concerning the image, Cruz (2010) addresses that period of experience and size are characteristics used to measure the reputation of an entity. In addition to this idea Crescitelli, Mattar and Silva (2005) state that good reputation and prestige, besides strengthening of the brand, don't happen automatically in the market, on the other hand, demand a lot of resources and operating time, dictated by organizational dimension.

Seen in these terms, the larger companies are more resistant to negative information, as well as usually value good reputation in addition to transmitting a more reliable and transparent image to investors. The reliability in front of organizations and solvency are attractive investment aspects in large organizations, which consequently present them as less volatile in the stock market.

In the context of PROFIT variable, the same way that the result obtained in the correlation, there is a negative correlation with VOL. That way the results suggest, as exposed by Fraletti and Famá (2003), that the measurement of the risk usually demands the capture of adverse effects of profitability.

This way, it is understood that the profitability, associated to other variables, offers the prospect of good future results and consequently constant growth of the entity. The perspective of positive results provides higher security and confidence in the appli-

R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa)   97

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201

cation of resources, leading the volatility of entity's securities to lower levels.

Based on the above considerations, it is noticeable that the results converge to the explanation of the study premise, oriented by statistically evidenced results that suggest the influence of variables (QICI, SIZ, PROFIT, INDEBT), with distinct significance levels, in the market organization risk (VOL). In the next section, the final considerations of the study are presented, as well as suggestions for new researches.

CONCLUSIONS

The accounting disclosure and the quality of disclosure of accounting information denote relevance in the context of financial institutions, facing the constant competitiveness and the need of a clear disclosure of information to investors. In this context the study had as its main objective to analyze the relation and influence exiting between the market risk and the quality of accounting information from the financial institutions listed by BM&FBovespa. Contributing to the results some elementary characteristics of the organizations were analyzed (size, profitability and indebtedness), which assist for the research purpose.

For such purpose, a quantitative study of documental nature was performed on 55 institutions, seeking to analyze the existing correlation among the mentioned variables. In this regard, the used tests were Pearson's Correlation and Multiple Linear Regression, complemented by descriptive statistics of the variables

From there, it was possible to notice that the statistical tests showed a significant and negative correlation between volatility and quality of accounting information, as well as volatility and size and also volatility and profitability. About the indebtedness, both tests showed no significant correlation.

Starting from the main focus (quality of accounting information), the results suggest that companies with higher levels of disclosure show lower volatility in the return of stocks, confirming the presumed and cited importance that the market attributes to these information. However, from the perspective of size and profitability, it is assumed that the higher they are, they are considered as trusted and thriving sources that produce positive expectation for the investor.

The limitations of the study referred to the analysts of the researches in relation to the accounting statements from the considered index, making the attribution of the punctuation relatively subjective in certain situations. Besides, it is necessary to consider the failure to use other variables that can influence the risk of organizations. About the sampling it is important to emphasize that in face of a non probabilistic sample, the analyses and considerations must be limited to the group of studied organizations.

Concluding the research, it is recommended the carrying of new studies, based on a higher number of observations, using other relevant variables that may contribute with new results. It is also suggested the use of different methodologies to measure the marketing risk and quality of accounting information, that may assist in the comprehension of the influence and importance of information mentioned above.

REFERÊNCIAS

AQUINO, W.; SANTANA, A.C. Evidenciação. **Caderno de Estudos**, n. 5, p. 01-40, 1992.

ARRUDA, D.R. **Análise de Risco e Efeitos da Incerteza na Carteira de Investimentos**. Brasília, 2003. Disponível em: <http://www.matematica.ucb.br> .Acesso em 24 Out. 2015.

ASSAF NETO, A. **Mercado financeiro**. 4ª ed. São Paulo: Atlas, 2001.

BANCO CENTRAL DO BRASIL. Relatório de Estabilidade Financeira. Novembro de 2002. Disponível em: <http://www.bcb.gov. br>.Acesso em 25/08/2015.

BRANDÃO, I.F; ASSUNÇÃO, R.R.; PONTE, V.M.R.; REBOUÇAS, S.M.D.P. Fatores determinantes do disclosure de guidance das companhias listadas na BM&FBOVESPA. **Revista Contemporânea de Contabilidade,** v. 10, n. 21, p.87-114, 2013.

BRITO, G.A.S.; CORRAR, L.J.; BATISTELLA, F.D. Fatores determinantes da estrutura de capital das maiores empresas que atuam no Brasil. **Revista de Contabilidade e Finanças da USP,** São Paulo, v. 18, n. 43, p. 9-19, 2007.

BUSHMAN, R.M.; SMITH, A.J. Financial Accounting Information and Corporate Governance. **Journal of Accounting and Economics**, v. 32, p. 237-333, 2001.

CARVALHO, L. N.G.; TRAPP, A.C.G.; CHAN, B.L. Disclosure e risco operacional: uma abordagem comparativa em instituições financeiras que atuam no Brasil, na Europa e nos Estados Unidos. **Revista de Administração,** v. 39, n. 3, p. 264-273, 2004.

CATAPAN, A.; CATAPAN, E.A. Rentabilidade e endividamento do setor elétrico brasileiro: um enfo-

que sobre sustentabilidade organizacional. In: ENCONTRO NACIONAL DE ENGENHARIA DE PRODUÇÃO, 26, 2006, Fortaleza. **Anais eletrônicos...** Fortaleza: ABEPRO, 2006. CD-ROM.

COLLIS, J.; HUSSEY, R. **Pesquisa em administração: um guia prático para alunos de graduação e pós-graduação**. 2. ed. Porto Alegre: Bookmann, 2005.

COMITÊ DE PRONUNCIAMENTOS CONTÁBEIS. Pronunciamento conceitual básico: estrutura conceitual para elaboração e divulgação de Relatório Contábil-Financeiro, de 02 de dezembro de 2011. Disponível em: <http:// www.cpc.org.br>. Acesso em: 22/08/2015.

COUTO, G.; FERREIRA, S. Os determinantes da estrutura de capital de empresas do PSI 20. **Revista Portuguesa e Brasileira de gestão**, v. 9, n. 1-2, p. 26-38, 2010.

CRESCITELLI, E.; MATTAR, M.; SILVA, A. O efeito das ações de patrocínio sobre o top of mind: um estudo exploratório do mercado brasileiro. **Revista Eletrônica de Gestão de Negócios**, v. 1, n. 2, p. 1-15, 2005.

CRUZ, C.O.A. **A relevância da informação contábil para os investidores sociais privados de entidades do terceiro setor no Brasil:** uma investigação empírica. 2010. 165 f. Tese (Doutorado em Controladoria e Contabilidade) – Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, 2010.

CUNHA, J.V.A.; RIBEIRO, M.S. Divulgação voluntária de informações de natureza social: um estudo nas empresas brasileiras. **R. Adm. Eletrônica**, v.1, n.1, 2008.

DIAMOND, D.W., VERRECCHIA, R.E. Disclosure, Liquidity, and the Cost of Capital. **The Journal of Finance**, n. 46, p. 1325-1359, 1991.

DIAS FILHO, J.M. A linguagem utilizada na evidenciação contábil: uma análise de sua compreensibilidade à luz da teoria da comunicação. **Caderno de Estudos**, n. 24, p. 38-49, 2000.

DUARTE JÚNIOR, A.M. A importância do Gerenciamento de Riscos Corporativos. **UNIBANCO–Global Risk Management**. Disponível no site http://www. risktech. com. br/. Acessado em, v. 11, n. 09, 2008.

FACHIN, O. **Fundamentos da Metodologia.** 3 ed. São Paulo: Saraiva, 2003.

FORTUNATO, G.; TEIXEIRA, A.; AQUINO, A. Relação entre transparência e o valor de mercado das empresas brasileiras de Capital Aberto. In: CONGRESSO USO DE CONTROLADORIA E CONTABILIDADE, 4, 2004, São Paulo. **Anais eletrônicos...** São Paulo: FEA-USP, 2004. CD-ROM.

FRALETTI, P.B.; FAMÁ, R. Gestão de Riscos de Mercado: elemento diferenciador na administração de empresas não financeiras. In: SEMINÁRIO DE ADMINISTRAÇÃO, 6, 2003, São Paulo. **Anais eletrônicos... São Paulo: FEA-USP, 2003. CD-ROM**.

GABRIEL, F.; SILVEIRA, A.D.M. Qualidade da informação contábil e análise de sua relação com a estrutura de governança corporativa das firmas no Brasil. In: CONGRESSO USP DE CONTROLADORIA E CONTABILIDADE, 11, 2011, São Paulo. **Anais eletrônicos...** São Paulo: FEA-

USP, 2011. CD-ROM.

GOULART, A.M.C. **Evidenciação contábil do risco de mercado por instituições financeiras no Brasil**. 2003. 202 f. Dissertação (Mestrado em Controladoria e Contabilidade: Contabilidade) - Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, 2003

HENDRIKSEN, E.S.; VAN BREDA, M.F. **Teoria da contabilidade**. 5 ed. São Paulo: Atlas, 1999.

IMHOFF, E.A. The relation between perceived accounting quality and economic characteristics of the firm. **Journal of Accounting and public policy**, v. 11, n. 2, p. 97-118, 1992.

IUDÍCIBUS, S.; MARTINS, E.; GELBCKE, E.R.; SANTOS, A. **Manual de contabilidade societária**: aplicável a todas as empresas de acordo com as normas internacionais e do CPC. São Paulo: Altas, 2010.

KAYO, E.K.; TEH, C.C.; BASSO, L.F.C. Ativos intangíveis e estrutura de capital: a influência das marcas e patentes sobre o endividamento. **Revista de administração**, v. 41, n. 2, p. 158-168, 2006.

LAKATOS, E.M.; MARCONI, M.A. **Fundamentos de metodologia científica.** 7. ed. São Paulo, SP: Atlas, 2010.

LEVITT, A. The importance of high quality accounting standards. **Accounting Horizons**, v. 12, p. 79-82, 1998.

MALACRIDA, M.J.C.; YAMAMOTO, M.M. Governança corporativa: nível de evidenciação das informações e sua relação com a volatilidade das ações do Ibovespa. **Revista contabilidade e finanças**, v. 17, p. 65-79, 2006.

MALAQUIAS, R.F.; LEMES, S. Evidenciação e volatilidade: testes com equações estruturais. **Base,** v. 12, n. 2, p.96-109, 2015.

MARCONI, M.A.; LAKATOS, E.M. **Metodologia do trabalho científico:** procedimentos básicos, pesquisa bibliográfica, projeto e relatório, publicações e trabalhos científicos. 7 ed. São Paulo: Atlas, 2009.

MARTINS, T.J.; BOENTE, D.R.; MÓL, A.L.R.A relação entre os níveis de divulgação das práticas de gestão de risco e a oscilação do preço das ações das companhias listadas na bovespa. **Registro Contábil**, v. 4, n. 3, p. 1-18, 2013.

MORAIS, I. A. C; PORTUGAL, M. S. Modelagem e Previsão de Volatilidade Determinística e Estocástica para a Série do Ibovespa. **Estudos Econômicos**, v. 29, n. 3, p 303-341, 1999.

MURCIA, F.D.R.; SANTOS, A. Fatores determinantes do nível de disclosure voluntário das companhias abertas no Brasil. **Revista de Educação e Pesquisa em Contabilidade (REPeC)**, v. 3, n. 2, p. 72-95, 2009.

NETO, O.R.M.; RICCIO, E.L. A qualidade da informação contábil e o risco de liquidez de mercado. **Organizações em contexto**, ano 4, n. 8, p. 100-120, 2008.

PAULO, E.; MARTINS, E. Análise da qualidade das informações contábeis nas companhias abertas. In: ENCONTRO NACIONAL DOS PROGRAMAS DE PÓS GRADUAÇÃO EM ADMINISTRAÇÃO, 31, 2007, Rio de Janeiro. **Anais eletrônicos...** Rio de Janeiro: ANPAD, 2007. CD-ROM.

PEDRO, C.M.P. **Estudos sobre a solidez do sistema bancário da OCDE: crises bancárias, endividamento e incumprimento no período 1991 a 2009**. 2014. 243 f. Tese (Doutorado em Gestão) – Instituto de Investigação e Formação Avançada, Universidade de Évora, Évora, 2014.

PEREIRA, J.M. **Manual de metodologia da pesquisa científica**. Atlas, 2010.

PERRESSIM, W.S.; SANTOS, D.F.L.; LUCENTE, A.R. Estrutura de Capital e Desempenho Financeiro no Setor Bancário Brasileiro Entre 1998 e 2006. **Seget 2014: XI Simpósio de Excelência em Gestão e Tecnologia,** Resende/RJ, 22, 23 e 24 out. 2014.

PROCIANOY, J.L.; SCHNORRENBERGER, A. A influência da estrutura de controle nas decisões de estrutura de capital das companhias brasileiras. **Revista Brasileira de Economia**, v. 58, n. 1, p. 122-146, 2004.

QUINTEIRO, L.G.L.; MEDEIROS, O.R. Evidenciação contábil e volatilidade dos retornos das ações no Brasil. In: ENCONTRO NACIONAL DA ASSOCIAÇÃO NACIONAL DOS PROGRAMAS DE PÓS-GRADUAÇÃO EM ADMINISTRAÇÃO, 29, 2005, Brasilia. **Anais eletrônicos...** Brasília: ANPAD, 2005. CD-ROM.

RAMOS, F. M.; KLAN, R. C. Relação entre Qualidade da Informação Contábil e as Características Organizacionais das Entidades do Terceiro Setor. In: CONGRESSO USP CONTROLADORIA E CONTABILIDADE, 15, 2015, São Paulo. **Anais eletrônicos...** São Paulo: FEA-USP, 2015. CD-ROM.

ROGERS, P.; SECURATO, J.R.; RIBEIRO, K.C.S. Comportamento e estrutura a termo da volatilidade de empresas de grande e pequeno porte. **REGE Revista de Gestão**, v. 15, n. spe, p. 47-61, 2008.

SANTOS, J.L.; SCHMIDT, P.; MACHADO, N.P. **Fundamentos da teoria da contabilidade**. São Paulo:

Atlas, v. 6, 2005.

SOARES, L.V. A contribuição da evidenciação de informações nas demonstrações contábeis, no âmbito do mercado de ações da BM&FBOVESPA. **SIMPÓSIO DE EXCELÊNCIA EM GESTÃO E TECNOLOGIA**, 7, 2010, Resende. **Anais eletrônicos…** Resende: AEDB, 2010.

THIELE, M. **Gerenciamento de risco de mercado: aplicação ao mercado brasileiro de renda fixa**. 2000. Dissertação (Mestrado em Administração) – Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, 2000.

R. Adm. FACES Journal Belo Horizonte v. 16 n. 4 p. 85-101 out./dez. 2017. ISSN 1984-6975 (online). ISSN 1517-8900 (Impressa)   101

http://dx.doi.org/10.21714/1984-6975FACES2017V16N4ART4201