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Investment decisions in the stock market: analysis of potential investor trust

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Abstract

The number of individual investors Stock Market has remained basically stable since the 2008 economic crisis, in a level relatively low when compared to other countries. In this context, where is necessary to resume the growth of investors' number in a stock market relatively hostile, the variable *trust* can play a relevant role in the market dynamics. The present work aimed to contribute to this agenda by analyzing the potential investors' trust concerning to information, regulatory structure and Brazilian stock market institutions. Thus, it was developed a descriptive and quantitative study, employing a survey questionnaire to data gathering. Notably, the findings revealed a mean trust level for the dimensions analyzed, indicating that potential investors can lack reliability in the Stock Market, and configure so, still only as "potential". Moreover, analysis of variance revealed significant differences related to gender and ages groups, highlighting the importance to consider such variables in Financial Decisions Making's research.

Key words: Trust; Stock Market; Investment decisions; Potential investors.

Decisões de Investimento no Mercado de Ações: Análise da Confiança de Investidores Potenciais

Resumo

O número de investidores pessoa física do mercado de ações mantém-se praticamente estável desde a crise econômica de 2008, permanecendo em um nível consideravelmente baixo quando comparado ao de outros países. Nesse contexto, em que faz-se necessária a retomada do crescimento do número de investidores em um mercado de ações relativamente hostil, a variável *confiança* pode revestir-se de importância expressiva nas dinâmicas de mercado. O presente estudo descritivo quantitativo buscou contribuir com essa agenda, analisando a confiança de investidores potenciais concernentes às informações, regulamentação e instituições do mercado de ações brasileiro. Notavelmente, os resultados de pesquisa revelaram um nível de confiança médio para todas dimensões analisadas, indicando que investidores potenciais podem carecer de maior confiabilidade no investimento no mercado de ações, e por isso se configurem, ainda, apenas como potenciais. Além disso, a análise de variância apresentou diferenças significantes relacionadas às variáveis gênero e faixa etária, evidenciando a importância de considerarem-se tais variáveis na investigação da tomada de decisões de investimento.

Palavras-chave: Confiança; Mercado de ações; Decisões de investimento; Investidores potenciais.

Decisiones de Inversión en el Mercado de Acciones: Análisis de la Fiabilidad de los Inversores Potenciales

Resumen

El número de inversores persona física en el mercado de acciones se mantiene prácticamente estable desde la crisis económica del 2008, permaneciendo en un nivel considerablemente bajo si comparado al de otros países. En este contexto, en donde se hace necesaria la retomada del crecimiento del número de inversores en un mercado de acciones relativamente hostil, la variable fiabilidad puede revestirse de importancia expresiva en las dinámicas de mercado. El presente estudio descriptivo cuantitativo buscó contribuir con esta agenda, analizando la fiabilidad de inversores potenciales concernientes a las informaciones, reglamento e instituciones del mercado de acciones brasileño. Notablemente, los resultados de la investigación han revelado un nivel de fiabilidad medio para todas la dimensiones analizadas, indicando que inversores potenciales pueden carecer de mayor fiabilidad respecto a la inversión en el mercado de acciones y, por ello, aparezcan, todavía, solamente como potenciales. Además, el análisis de varianza presentó diferencias significativas relacionadas con las variables género y franja de edad, evidenciando la importancia de considerar tales variables en la investigación de la toma de decisiones de inversión.

Palabras clave: Fiabilidad. Mercado de acciones. Decisiones de inversión. Inversores potenciales.

1 Introduction

Although the Brazilian population is approximately 203 million people, distributed between 27 Federative Units (IBGE, 2014), only about 550,000 individuals invest in the stock market, that is, 0.25% of the total population (BM & FBovespa, 2014).

When confronted with the evidence from other countries, this number shows an alarming situation. Chile, for example, has about 600,000 investors, representing 3.8% of the total population, of about 16 million inhabitants. Considering the American market, where approximately 29% of the population invests in stocks (Medeiros, 2013), this discrepancy shows up even higher.

Despite this relatively low participation, the São Paulo Stock Exchange, together with government support institutions, has been active in the "democratization" of the stock market, by means of the persuasion and education of

potential investors (Magliano, 2014). Programs like "Bovespa Vai até Você", directed to visit target potential investors to explain stock market basic dynamics, helped to increase the number of individual investors of about 85 thousand to about 530 thousand, growth of 629% in the period 2002-2008.

However, the number of individual investors shows stable since the 2008 economic crisis, which began in the United States, affecting countries in the five continents. Since then the Brazilian Securities Commission (CVM) and the Federal Government of Brazil is joining efforts to attract a larger number of investors, by adopting, for example, measures to stimulate development in the capital market, as the simplification of operations on the Stock Exchange implemented in June 2014 (Bronzatti, Decloedt & Travaglini, 2014). However, despite the efforts, the participation of investors in the stock market appears to be fairly inert.

Among the reasons offered in the explanation of this inertia is the low financial literacy rate of the population, a factor capable of inhibiting the participation of potential investors, given the lack of knowledge and experience to operate in the recognized risky stock market. According to the Financial Education Indicator - index computed by Serasa Experian, over 50% of the population is below the average level (Serasa Experian, 2013).

Besides the low level of financial education, it can be infered as aggravating factors the complexity inherent to the stock market, the low rate of savings of the population economically active and unwillingness to allocate their financial resources in investments with substantially uncertain profitability, especially regarding the stock market returns since the crisis. In fact, many Brazilian investors incurred substantial losses on their investments, canceling, in many cases, the positive feedback received in the boom period between 2002 and 2008, remaining, thus, with the "bitter taste" of the risk of investing in the stock market (Bronzatto, 2011).

Notably, some of the considerable losses of the post-crisis period is also due to the companies involved in fraud scandals, corruption and insider trading, as in the case of Petrobras and OGX companies, both with thousands of domestic and foreign investors. Such events can significantly affect the *trust* of both, potential and active investors in the financial market, thereby inhibiting the participation of new investors in the capital market, since *trust* configures as an essential condition to financial intermediation.

Notwithstanding the investors trust is regarded a relevant variable in the investment decision-making literature, there is a lack of studies concerning its dimensions and effects in judgment process and investors choice (Pevzner, Xie & Xin, 2013). In this sense, the present study aimed to describe and analyze the *trust* of potential investors, claiming that the growing in the number of investors in the stock market participants must take into consider, as well, the influence of this variable.

The rest of the paper is organized as follows: the second section presents the literature review. The third section presents the methods and research techniques employed, while the fourth section is the presentation and the discussion of research findings. Finally, the fifth section presents the final considerations, limitations and suggestions for future studies.

2 Literature Review

The influence of social factors is virtually disregarded by the Modern Finance Theory, and even in the field of Behavioral Finance, that has renounced assumptions about absolute rationality and market efficiency, the focus on individual behavior remains largely intact (Thaler, 1992). Therefore, the analysis of the role of trust in the context of investment decisions requires a literature review out of the main finance theoretical streams.

Social factors as trust, for instance, are unreachable by ordinary control mechanisms of the financial market, which may cause greater fluctuations than those of essentially economic nature (Gonzalez, Bastos & Perobelli, 2011).

Opportunely, it's possible to observe in the last decade studies aimed at investigating the effects of social variables on the dynamics of the stock market, which have been grouped under the title of *sociological perspectives on the financial market* (Preda, 2007). However, regardless of the potential of these perspectives on contributing to the analyses of the trust role in the stock market, the literature review shows that this agenda hasn't been enough explored. Next, it presents the literature on trust in the context on financial decisions.

2.1 Trust

The most of the changes related to regulation and corporate governance was developed from the *Enron* and *WorldCom* scandals in the early 2000s, in order to restore investor *confidence* in the information and economic and financial reports released by companies. Thus, it is surprising the negligence in investigating the relevance of this variable in information and pricing dynamics (Pevzner, Xie & Xin (2013).

Tonkiss (2009) emphasizes the importance of trust in reducing transaction costs and hence to economic efficiency. Besides the risk, lack of trust in transactions can cause higher associated costs, or even cripple businesses.

Opportunely, Pevzner, Xie e Xin (2013) observe that countries with a higher level of social trust, investors attach less likely to fraudulent actions by managers of organizations (such as match-fixing), which would result in increased credibility in the information published. This credibility is a determining factor in the stock market, leading to greater efficiency and swiftness in the investor reactions to the disclosure of relevant facts (Bottazzi, Rin & Hellmann, 2011).

Lintari (2011) highlights that one way to increase trust in the market refer to the development of *awareness* (level of knowledge, science) of individuals. In this sense, the greater the *awareness* on the market dynamics, the greater the propensity of trust in the organizations' information. According to the author, investors demonstrate a bias in investing in shares of companies with which they are most familiar, being the market capitalization and the volume of business reinforced so, for social learning and the trust of investors. The author also notes that the investor *awareness* tends to be higher when they have a greater interrelationship with their pairs without the interference of intermediaries in communication.

2.1.1 Trust and confidence

Trust and confidence are two constructs that are often used interchangeably in the literature. Thus, it is necessary to discuss the conception of both in order to distinguish them and contribute to a better understanding of the present work.

Earle (2009) shows that although the terms are used several times for the same purpose and present the same literal translation, the words *"trust"* (treated here as trust) and *"confidence"* (treated here as security), are different constructs. According to the author, trust refers to the willingness to make yourself vulnerable to another based on judging similarity of intentions or values, expecting to obtain the expected outcomes, which make trust a social and relational construct. In turn, *confidence* refers to the belief based on experience or evidences (past performance, for example) that certain future events will occur as expected, assuming, thus, an instrumental and calculative nature.

Dailami e Masson (2009) identify four dimensions to the *confidence* (security) investors. The first is based on the influence of unusual market volatility, especially when that volatility spans several asset classes, signaling a climate of uncertainty and risk aversion. The second dimension of confidence relates to the performance of investments, measured by the increase or loss of the investor's wealth, while the third refers to the wide range of dissemination of macroeconomic data that shape their perceptions about the future state of the economy. Finally, investors' confidence would be associated with the attitude of government policy makers (regulators) and the continuous assessment of the credibility of their actions.

The dimensions identified above assume a more relational character in Tonkiss (2009), which describes three variables based on *trust* related to investment decisions: trust in the information provided by financial instruments and institutions; trust in the market regulation based on the law applied to it, and trust in the regulatory market institutions that are responsible for making effective regulation.

Economists, economic sociologists and others interested in the social organization of economic life, argue that both, *trust* and *confidence,* are crucial to the effective economic operation of the market, not only in the negotiating level of specific values among the actors of the market, but also in terms of a general basis that the *trust* holds a socioeconomic system even broader (Tonkiss, 2009).

2.1.2 Trust in the stock market

Trust affects market regulation, regulatory institutions and information (Tonkiss, 2009). However, much information considered as key to the market were

proved false, wrong or absent. The main one, for instance, is the information provided by financial instruments. There is a deep irony in the fact that the financial instruments, originally designed to manage risk, are being worked to make risk measuring almost impossible to be computed.

Tonkiss (2009) observes that contracts are the basic forms of regulation in market economies and that market systems depend on regulation to work effectively. Notwithstanding, the United States has produced a regulatory environment that allowed the explosion of credit risk due to the absence of systems to make that risk measurable, fact acknowledged by the US Federal Reserve, but not knowledge by investors.

Besides public authorities, public and private agents, bankers, securities commissioners, pension fund managers, boards of directors, auditors and credit rating agencies also should actively participate in market regulation. The financial crisis of 2008 signaled the importance of central banks in regulating and supervising markets. A large financial crisis strongly incentives regulation to avoid a detrimental competitiveness in the international financial sector (Dailami & Masson, 2009).

Trust Indicators

The analysis of trust is fundamental for understanding and monitoring the capital market (Sequeira, 2011), since more confident investors usually have more optimistic views of the future and, consequently, greater willingness to invest, even in times of crisis.

In this sense, Sequeira (2011) emphasizes the need to develop a set of indicators to measure the trust of investors, which constituted an important basis for assessing the current and future economy. Opportunely, the confidence indices developed in the European Union in recent years have gained importance in enabling access, not only the economic and financial situation of households, but also to allow viewing of the expectations of market participants on the evolution of the economy.

Investor confidence indicators can be considered a kind of synthesis of the available economic information, whose variations could be explained partly based on other economic indicators such as GDP, the unemployment rate and the prime rate, for example (Roberts & Simon, 2001). Indicators of this nature allow earning expectations of investors about the economic situation, running the trust as a link between economic development and the market share in the capital market.

One of the key ratios used to measure investor confidence is the Investor Confidence Index, developed by US company State Street and its subsidiary State Street Global Exchange, responsible for research in investment decisions, risk analysis and management of portfolios credit. The Investor Confidence Index measures investor confidence and their inclination to risk through analysis of buying patterns and sale of assets by institutional investors (Qiu & Welch, 2006).

The International Financial Center at *Yale School of Management*, developed the indices *US One Year Index*, *US Buy-On-Dips Index* and the *US Crash Index*. The first, *US One Year Index*, refers to people's confidence that the market will rise in the year following the year of the survey. In December 2003, for example, 92.52% of institutional investors believe that the market would rise over the next year. The *Buy-On-Dips* index measures investor confidence in a recovery of the stock market after a day of sharp decline, having peaked in July 2001, with 71.93%. Finally, the *Crash Index* measures investor confidence that there will be no stock market crash in the six months following the completion of the research.

The matched analysis of such indexes enables the development of interesting inferences about volume and price movements in the stock market, constituting an important factor in analyzing the attitude and behavior of individual investors, institutional, foreign and financial institutions.

5.1 Regulation, corruption and fraud in the capital market

The development of the financial system and the economy of a nation have close connection, noting that less developed economies and low growth rates are often linked to deficiencies in the financial system. In this sense, the necessary evolution of financial systems should aim to fit distortions and inconsistencies in the regulation and control mechanisms (Dubeux, 2005).

The Brazilian stock market was controlled and regulated by the Central Bank of Brazil (BCB) until 1976, when the Law 6385 created the Securities and Exchange Commission (CVM), institution which holds the jurisdiction and regulation of the Brazilian capital market. The CVM is a federal authority that regulates the securities operations, authorizes the issuance and trading of corporations' securities, and supervise both institutions and market agents. The institution has independent and

free administrative authority from the Ministry of Finance, although directors are nominated directly by the President of the Republic (Lage, 2011).

Despite improvements provided by the creation of the CVM and other devices of the legislation, the Law 6385 presented gaps that allowed the crimes against the capital market, at not specifying what actions would admittedly inadequate in financial intermediation dynamics. Only in 2001 illegal practices were considered as crime with the enactment of Law No. 10,303, known as the "new law of corporations" (Santana, 2012).

Opportunely, in addition to restricting the gaps, the new law of corporations strengthened the CVM, not only by providing greater regulatory powers, but also to make it a self-financing agency, instituting the use of its revenues for the balance of their spending. Although this change may seem just a detail of an administrative nature with the CVM, this fact constitutes a key point in strengthening the regulation of the Brazilian market (Yazbek, 2009).

In the US, the world's leading financial market, before the creation of the *Security Exchange Commission* there was not federal regulation to the stock market, only state laws known as *blue sky laws,* that have proved insufficient given the break of the New York Stock Exchange in 1929, and evidenced the need for a unified and federal legislation to ensure stability in the stock market and force companies to disclose economic and financial information (Proença, 2006). In this context, the US federal legislation progressed in order to firmly protect investors against the biased interests of managers and partners of the companies, adopting over time the principle of *full disclosure*, directed to transparent and responsible disclosure of corporate information (Bastos, 2013).

Notwithstanding the updating of extant legislation and the efforts of developing mechanisms of control and regulation by the government, there were some events with negative effects of great magnitude to the market derived from fraud, corruption and inadequate corporate governance practices (Litvak, 2007). A substantial example of these occurrences is the Enron scandal in the US market, giant company that went bankrupt after the discovery of fraud in their annual balance sheets, causing harm to millions of investors. Notably, this scandal has led to creation of the *Sarbanes-Oxley Act of 2002* or, simply, SOx, which was a milestone for the market practices.

The complexity of financial products, stratospheric volume of transactions, and the power of corporations and institutions involved are factors that help to explain, not only the relevance, but, also, the difficulty in settling-regulatory mechanisms that allow at the same time the necessary free trade and compliance with the legal requirements directed to the investor protection. Tonkiss (2009) notes that often information considered key to the market prove to be false, erroneous or missing, especially information provided by financial instruments. According to the author, there is a deep irony in the fact that financial instruments originally designed to manage and reduce risk are employed to make it almost impossible to measure. In this context, Tonkiss (2009) argues that market regulation is not responsibility just of public authorities but, also, of public and private agents, bankers, employees of the securities commission, pension fund managers, boards of directors, auditors and rating agencies credit risk, which should actively participate in market regulation. The 2008 financial crisis signaled the importance of continuously supervising the capital market, regardless of the level of evolution of the regulatory and control mechanisms.

The occurrence of fraud in the capital market reveals itself more common than it would be desirable. Harrington (2012) distinguishes three aspects of fraud: identity, interaction and institutions. The author observes that, to be successful, "swindlers" pretend to be an honest and trustworthy people, being able to use social positions to establish a trusting relationship with their "victims".

In a recent example, Bernard Madoff used his religious position to have the support of the Jewish community, which helped philanthropic way to mount a scam of over 50 billion dollars, known as "Ponzi scheme" or " pyramid scheme ".

As well as fraud, corruption also employs social position to succeed. Although the extant literature present various concepts and definitions from different areas of knowledge, the most widespread concept of corruption is the "misuse of public position to obtain private gain" or "practice of committing unlawful acts seeking to obtain financial advantage or power "(Schwartzman, 2008).

Although the occurrence of fraud and corruption can be avoided by hiring audit firms, the scandals in large multinational companies such as Enron, Lucent, Tyco and Parmalat, opened a new line of discussion on the efficiency and integrity of independent audit firms (Miari, 2011).

In the next section are presented the methods employed in this study.

3 Methods

To investigate the dimensions of trust relating to the potential investor, this descriptive and quantitative study employed a survey in the data gathering. The non-probability sampling used in the survey provided suited questionnaires from 189 respondents.

Data collection was developed by means of the application of printed questionnaires distributed to students of undergraduate courses in a higher education institution and, also, by means of electronic questionnaires in a WWW-survey approach. The questionnaire consisted of sociodemographic and assertive questions on trust dimensions in the context of investment decisions, the latter associated with Likert measurement scale from 1 to 5, where 1 indicates the lowest level of trust and 5 the highest level.

The review of the extant literature led to identification of five (5) trust dimensions, namely, trust in information, intermediaries, regulatory framework and investment in variable income and awareness of stock market. Trust dimensions were analyzed individually and then globally, based on the sum of the scores of the 5 dimensions, which we called *overall trust index*. Matters relating to trust involved 24 questions, as presented on Table 1.

Table 1
Assertions and Dimensions

Assertion	Dimension
It is possible to obtain relevant information about the listed companies on the stock exchange before they become public.	Information**
The economic, financial and social statements of the companies reflect their real situation.	Information **
I understand how operations occur in the stock market.	*Awareness**
I know the basic financial instruments available in the capital markets, for example, stocks and mutual funds, etc.	*Awareness**
I know what are the necessary conditions for a company to have its shares listed on the stock exchange.	*Awareness**
Investors are not afraid to invest in the stock market.	*Awareness***
I trust the suggestions and advices of professional analysts.	Intermediaries**
The brokerage firms can encourage business with “bad” actions to earn brokerage fees, and eventually pass their own losses to third parties.	Intermediaries**
I would be extremely surprised to find that a particular action indicated by a brokerage analysts submit a negative return.	Intermediaries**
The existence of a commission of small individual investors with the power to participate in the regulation of the financial system would become more confident in investing in the stock market.	Regulatory framework**
Financial frauds in the stock market (e.g. use of insider information, omission of	Regulatory

material facts of companies, etc.) are investigated, prosecuted and punished in due form in Brazil.	framework**
The easiest way to be successful investing in the stock market is knowing the right people in the right companies.	Information**
I feel more secure now to invest in the stock market compared to the recent past, because I believe that government initiatives have generated changes that have made the financial system more secure.	Regulatory framework**
The operations carried out in the stock market occur in a transparent and honest manner.	Regulatory framework**
Investing in the stock market offers returns higher than fixed income.	Investment in variable income*
The biggest risk of investing in the stock market is offset by higher return expectations.	Investment in variable income **
Brazilian law inhibits the practice of fraud and contributes to the proper functioning of the stock market.	Regulatory framework**
Stock prices in the stock market reflect the fair value of companies.	Information**
I believe the stock market will rise next year by providing earning opportunities.	Investment in variable income [1]
I believe the stock market recovers after a day or short period of sharp decline.	Investment in variable income[2]
I believe that the stock market will not enter in crisis in the next six months.	Investment in variable income [3]
I trust in financial information that has been audited.	Information**
Audit firms have priority commitment to fidelity and transparency of information, regardless of pressure exerted by companies who pay for their services.	Regulatory framework**
I considered that the Central Bank, the Securities Commission and the Stock Exchange have fulfilled efficiently control of transactions in the stock market.	Regulatory framework**

Source: * Lintari (2011); ** Elaborated by the authors; [1] *One Year Confidence Index;* [2] *Boy on Dips Confidence Index;* [3] *Crash Confidence Index.*

After tabulating the data, we used the *Statistical Package for the Social Science* (SPSS version 22) in the statistical analysis. Since the *Shapiro-Wilk* and *Kolmogorov-Smirnov* tests indicated the non-normality of the data, the analysis of variance based on the groups formed from the sociodemographic variables was performed employing the *Kruskal-Wallis* test.

In the next section are presented the sample description and the research findings.

4 Analysis of Results

4.1 Sample characterization

The sample is composed of 97 (ninety-seven) women and 92 (ninety-two) men, most of them from younger age groups (Table 2), and college students in progress, graduates and post-graduates (Table 3).

Table 2
Subjects by age group

Age	Number	Percentage
Until 25 years	48	25,4
Between 25 and 35 years	62	32,8
Between 35 and 45 years	35	18,5
Between 45 and 60 years	29	15,3
Above 60 years	15	7,9
Total	**189**	**100,0**

Source: Research Data

Table 3
Education level of respondents

Education level	Number	Percentage
Complete Primary	1	0,5
Incomplete High School	1	0,5
Complete High School	11	5,8
Incomplete Higher Education	74	39,2
Complete Higher Education	39	20,6
Postgraduate	63	33,3
Total	**189**	**100,0**

Source: Research Data

Regarding the method used to obtain information about the stock market, 25% of respondents reported that use of newspapers as a primary source, 23% television and 22% seek information on specialized sites. In addition, more than half of the subjects (50.79%) reported seeking information only about the most important events, thus maintaining relatively low frequency in the search for daily information. Notably, among those who follow financial market news frequently (25.4% of the sample) 71% are male, apparently showing a greater interest in the subject and stronger focus on updating and searching for information.

4.2 Trust in investment decisions in the stock market

After the sample description is presented the correlation analysis of trust dimensions, i.e., trust in information, intermediaries, regulatory framework and investment in variable income and awareness on investment decision. Spearman

correlations are shown in Table 4, evidencing statistically significance of correlations between all trust dimensions investigated.

Table 4
Spearman correlations of trust dimensions

Trust Dimensions	Information	Awareness	Intermediaries	Regulatory Framework	Variable income	Overall Trust
Information	1	0,222**	0,327**	0,433**	0,156*	0,667**
Awareness	0,222**	1	0,132	0,290**	0,282**	0,591**
Intermediaries	0,327**	0,132	1	0,169*	0,048	0,413**
Regulatory Framework	0,433**	0,290**	0,169*	1	0,311**	0,775**
Investment in Variable Income	0,156*	0,282**	0,048	0,311**	1	0,579**
Overall Trust	0,667**	0,591**	0,413**	0,775**	0,579**	1

Source: Research Data
Notes: * Significant at 0.05 level
** Significant at 0.01 level

Table 5 presents scores statistics by trust dimension. It is observed that the means of the scores by dimension present values close to 3, which in a scale from 1 to 5, constitutes a neutral level, providing evidences that potential investors may lack the higher reliability in investment matters in the stock market, configure and therefore also only as potential.

In comparing trust dimensions, the lowest mean of trust recorded refers to the regulatory framework, reflecting a possible disbelief on legislation and regulatory and normative institutions in the stock market. On the other hand, the scale concerning the investment in variable income (specially the belief of the possibility of getting higher returns by investing in the stock market) emerged as the most reliable in the perception of potential investors, revealing consistency with assumptions on the importance devoted by individuals in the higher expected returns when investing in stocks (Plano CDE, 2012).

Table 5
Trust level by trust dimension

Trust Dimensions	Mean	Standard Deviation	IC 95%	
			Minimum	Maximum
Information	2,99	0,47	2,93	3,06
Awareness	2,97	0,70	2,87	3,07
Intermediaries	2,94	0,60	2,85	3,02
Regulatory Framework	2,71	0,56	2,63	2,79
Investment in variable income	3,13	0,56	3,05	3,21
Overall Trust	2,93	0,37	2,88	2,98

Source: Research Data

To investigate possible differences between groups defined by socio-demographic characteristics, we used individually the score of each trust dimension and, also, the sum of scores of all five dimensions, coined here as *overall trust index*. Thus, it proceeded to the analysis of variance to identify differences between gender, age and education level groups. The results are shown below.

The *Kruskal-Wallis* test indicated statistically significant differences between male and female groups with respect trust in information and investment in variable income (Table 6).

Table 6
Trust by gender group

Trust Dimensions	Gender	Freq.	Mean	IC 95%		p-valor
				Minimum	Maximum	
Information	Male	92	2,93	2,83	3,03	0,063*
	Female	97	3,06	2,96	3,15	
	Total	*189*	*2,99*	*2,93*	*3,06*	
Awareness	Male	92	3,05	2,91	3,20	0,111
	Female	97	2,89	2,76	3,03	
	Total	*189*	*2,97*	*2,87*	*3,07*	
Intermediaries	Male	92	2,90	2,79	3,02	0,420
	Female	97	2,97	2,84	3,10	
	Total	*189*	*2,94*	*2,85*	*3,02*	
Regulatory Framework	Male	92	2,76	2,65	2,87	0,239
	Female	97	2,67	2,54	2,79	
	Total	*189*	*2,71*	*2,63*	*2,79*	
Investment in Variable Income	Male	92	3,21	3,10	3,32	0,051*
	Female	97	3,06	2,94	3,17	
	Total	*189*	*3,13*	*3,05*	*3,21*	
Overall Trust	Male	92	2,96	2,88	3,03	0,328
	Female	97	2,90	2,83	2,98	
	Total	*189*	*2,93*	*2,83*	*3,03*	

Source: Research Data
Note: * Significant at 0.10 level

Table 6 shows that male group demonstrated trust lower than female group regarding the dimension information, and greater trust in assessing the dimension investment in variable income. These findings evidence a lower level of credibility by male individuals on information available in the media, and, also, a higher level of trust in the ability to obtain higher returns, in line with studies that show the belief excessive (*overconfidence*) of men in comparison with women (Barber & Odean, 2001).

The analysis of age groups revealed higher means of trust for individuals over 45 years old (Table 7), notwithstanding just the dimension awareness of stock market has reached statistical significance. Although the past analysis at medium and long-term evidences that variable-income investments generally offer average returns higher than fixed-income investments, since 2008 Brazilian investors have been facing below-expectations in the stock market, a reality widely disseminated in the media of communication. In this sense, the lower level of confidence shown by respondents of lower age groups could result of the lack of historical by younger potential investors, who would have as "available" or “more easy to retrieval” the most recent negative results of the last years.

Table 7
Trust by age group

Trust Dimensions	Age (in years)	Freq.	Mean	IC 95%		p-valor
				Minimum	Maximum	
Information	Up to 25 years	48	3,00	2,88	3,11	0,354
	Between 25 and 35 years	62	2,97	2,85	3,09	
	Between 35 and 45 years	35	3,13	2,96	3,30	
	Between 45 and 60 years	29	2,92	2,73	3,10	
	Above 60 years	15	2,91	2,61	3,20	
	Total	189	2,99	2,93	3,06	
Awareness	Up to 25 years	48	2,76	2,56	2,95	0,075*
	Between 25 and 35 years	62	3,12	2,93	3,31	
	Between 35 and 45 years	35	2,90	2,65	3,15	
	Between 45 and 60 years	29	3,08	2,87	3,29	
	Above 60 years	15	3,00	2,60	3,40	
	Total	189	2,97	2,87	3,07	
Intermediaries	Up to 25 years	48	2,91	2,77	3,05	0,834
	Between 25 and 35 years	62	2,95	2,79	3,12	
	Between 35 and 45 years	35	2,90	2,68	3,11	
	Between 45 and 60 years	29	3,05	2,82	3,27	
	Above 60 years	15	2,87	2,52	3,21	
	Total	189	2,94	2,85	3,02	
Regulatory Framework	Up to 25 years	48	2,65	2,50	2,80	0,726
	Between 25 and 35 years	62	2,78	2,63	2,92	
	Between 35 and 45 years	35	2,65	2,44	2,86	
	Between 45 and 60 years	29	2,76	2,54	2,98	
	Above 60 years	15	2,70	2,40	2,99	
	Total	189	2,71	2,63	2,79	
Investment in variable income	Up to 25 years	48	3,02	2,87	3,18	0,109
	Between 25 and 35 years	62	3,09	2,94	3,24	
	Between 35 and 45 years	35	3,12	2,93	3,31	
	Between 45 and 60 years	29	3,31	3,14	3,48	
	Above 60 years	15	3,35	3,04	3,65	
	Total	189	3,13	3,05	3,21	
Overall Trust	Up to 25 years	48	2,85	2,75	2,95	0,445
	Between 25 and 35 years	62	2,96	2,86	3,06	
	Between 35 and 45 years	35	2,92	2,80	3,05	
	Between 45 and 60 years	29	3,00	2,87	3,12	
	Above 60 years	15	2,95	2,71	3,18	
	Total	189	2,93	2,88	2,98	

Source: Research Data
Note: * Significant at 0.10 level

In considering respondents' education level, analysis of variance presented significant differences for awareness of stock market, investment in variable income and overall trust (Table 8). Interestingly, individuals with high school and complete higher education showed trust levels superior to individuals of others education level groups.

Table 8

Trust by education level

Trust Dimensions	Education Level	Freq.	Media	IC 95%		p-valor
				Minimum	Maximum	
Information	Complete High School	11	3,15	2,78	3,51	0,143
	Incomplete Higher Education	74	2,92	2,82	3,01	
	Complete Higher Education	39	3,11	2,94	3,28	
	Postgraduate	63	2,98	2,86	3,11	
	Total	187	2,99	2,92	3,06	
Awareness	Complete High School	11	3,25	2,77	3,73	0,033**
	Incomplete Higher Education	74	2,79	2,63	2,96	
	Complete Higher Education	39	3,11	2,91	3,31	
	Postgraduate	63	3,05	2,87	3,23	
	Total	187	2,97	2,87	3,07	
Intermediaries	Complete High School	11	3,24	2,77	3,71	0,130
	Incomplete Higher Education	74	2,91	2,79	3,03	
	Complete Higher Education	39	3,04	2,82	3,27	
	Postgraduate	63	2,85	2,70	2,99	
	Total	187	2,94	2,85	3,02	
Regulatory Framework	Complete High School	11	2,81	2,19	3,42	0,492
	Incomplete Higher Education	74	2,64	2,52	2,75	
	Complete Higher Education	39	2,75	2,62	2,89	
	Postgraduate	63	2,76	2,61	2,92	
	Total	187	2,71	2,63	2,79	
Investment in Variable Income	Complete High School	11	3,31	2,91	3,71	0,014**
	Incomplete Higher Education	74	2,98	2,86	3,09	
	Complete Higher Education	39	3,28	3,09	3,47	
	Postgraduate	63	3,19	3,05	3,33	
	Total	187	3,13	3,05	3,21	
Overall Trust	Complete High School	11	3,1	2,76	3,46	0,007**
	Incomplete Higher Education	74	2,8	2,75	2,90	
	Complete Higher Education	39	3,0	2,93	3,14	
	Postgraduate	63	3,0	2,86	3,05	
	Total	187	2,93	2,88	2,98	

Source: Research Data

Note: * Significant at 0.05 level

These results point out substantial differences in the investigation of trust perceived by potential investors in the stock market. Next, it is presented the conclusions and suggestions for future studies.

5 Final Considerations

Since the economic crisis of 2008, the number of individual investors in the stock market remains practically identical. Such inertia could be partially explained by the low level of financial literacy of the population, the complexity of investment decisions, the low savings rate of the economically active population and the risk aversion in allocating financial resources in investments with uncertain returns.

In this context, where it is necessary to resume the number of investors growth in an relatively hostile stock market, the variable *trust* can be of significant importance in market dynamics. However, despite the recognition of their importance in the decision-making process, the *trust* has been little explored by the relevant literature (Pevzner, Xie & Xin, 2013). This study aimed to contribute to this agenda by analyzing the trust of potential investors concerning the information, regulations and institutions of the Brazilian stock market. Notably, research findings provided evidences that potential investors lack higher reliability in the stock market and, therefore, configure just as potential yet.

Amid recent cases of fraud, corruption and deficient corporate governance practices, the lowest level of trust found referred to the regulatory framework, reflecting a possible disbelief in legislation and in regulatory and normative institutions in the capital market. Interestingly, despite the negative returns of market since 2008, trust in higher returns in variable income was the most signalized by potential investors, an essential assumption to accept the risk of invest in stocks and derivatives.

Statistical analysis revealed significant differences between gender groups, indicating less reliance on the information available in the media, and also greater trust in expectations for higher returns on equity by men, in line with empirical evidence that gender individuals men are more susceptible to *overconfidence* (Barber & Odean, 2001). In addition to gender, age proved to be also relevant, noting that younger individuals showed less trustful in the return of investments in variable income, which could be anchored in the latest negative results of recent years. These results underscore the importance of considering the factors gender and age in the investigation of making financial decisions.

Although a participation of 29% of the population in the US stock market seem unreachable, it would be interesting to achieve, for example, the 3.8% of

participation observed in Chile, which has a number of investors very close to that of the Brazilian market with a population of only 16 million inhabitants. In the present work, we found evidences that to increase the number of individuals in stock market would be necessary to regard and improve the trust of potential investors.

Thus, we encourage new studies concerning the role of trust in investment decisions in variable income options. An interesting possibility refers to the analysis of trust not only perceived by potential investors, but also for active investors, which could contribute to explain the low number of individuals in the Brazilian capital market. Finally, there is also the validity of investigating the trust perceived by other investors groups in the stock market, such as institutional and foreign investors, which account for a significant share in the stock market trading.

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