Asymmetric information and financial markets

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Abstract

This paper aims to explore the relevance of the *Asymmetric Information* and the *Theory of Argumentation* **TA** in the complex area of financial crises. Specifically, we investigated the scope of the phenomenon of persuasion in advertising. It examines advertisements in publications notable economic movement in Colombia. The financial communication is important to distinguish how to run the models of behavior based on beliefs of agents. Consequently, investors' beliefs can also change systematically with changes in market prices.

Keywords: Financial crises, Financial markets, economy, theory argumentation, information, advertising

JEL Classification: G1, G14, D8, D81, M3, G1, G11, D1, D85

Introduction

Asymmetric information is part of the broad field of the Theory of Argumentation, TA (Bondarenko, Dung, Kowalski, Toni, 1997). In the model presented by these authors a hypothesis can be defeated (or attacked) if it can be demonstrated that the opposite is more consistency. This phenomenon responds to reasonable dispute that must exist between different views about a particular problem. More concisely, TA is an extension to the classical and modern conception of rhetoric Aristotle / (Perelman, which comes from the semantic and non-monotonic logic, and extends to the accession of arguments in logic programming and Artificial Intelligence (AI). Persuasion suggests a set of hypotheses that adheres to an auditorium capable of confronting conflicting positions. In short, the theory of argumentation is a variant of the pragmatic applied to various fields of social sciences: business, advertising, political campaigns, religious sects and media.

This paper aims to explore the relevance of the Theory of Argumentation TA and asymmetric information in the complex area of financial reporting. Specifically, we investigated the scope of the phenomenon of persuasion in advertising. It examines advertisements in publications notable economic movement in Colombia. The financial disclosure is important to distinguish how to run the models of behavior based on beliefs of agents. Consequently, investors' beliefs can also change systematically with changes in market prices.

The line of analysis proposed is as follows. Section 2 describes, in general, core materials for the state of the problem. Session 2 summarizes the main differences with the traditional rhetoric of persuasion and its effects on the behavior of agents. Later, section 3 processes the data of financial reporting in Colombia and the perception of investors. Section 4, describes a basic model that allows the proposition of hypotheses on the content of financial advertising over the course of changes in dollar prices. Sections 5 and 6 contain some empirical evidence supporting the hypothesis. Section 7 presents some conclusions.

With this delivery we deal only sessions 1 and 2. Consequently, the aim is to give a theoretical framework from the Theory of Argumentation TA. The hypothesis is that financial markets run, taking into account variations in the beliefs of agents. Investors do not behave as rational agents. By contrast, economic decisions are in most cases the result of irrational intuitions. The financial disclosure is essential. And in this sense, persuasion and the media play an outstanding role.

1. Financial Advertising and persuasion

In the dynamics of paramount importance is persuasive message effectiveness but what is a persuasive argument? This article compares conventional models of persuasion associated with different audiences (Bench-Capon, Doutre, Dunne, 2007). Remember, Perelman (1989) is a persuasive argument the audience always adhere to the assumptions that are submitted. In the process of persuasion he informs the audience with objective information. Stigler (1961), the information must have relevance and utility. Stigler persuasion relates the available information on the quality of commodities (Stigler, 1987, p. 243). In these cases, the behavior of audience and persuasion may vary depend on reliable beliefs. Certainly, the nature of a product can be altered with the beliefs of consumers, i.e., there are biases in the advertising of a product; propaganda can be rooted in beliefs that are not true. Moreover, unlike the rational argument against qualified audiences, Perelman (1980) argues that the propaganda is not seeking to convince the audience about the error of your beliefs, but take advantage of them to advantage.

According to Mullainathan, Shleifer (2005), investors have two systems of beliefs about their investments: growth and protection. In the first instance seek to accumulate more wealth. The second is aimed at ensuring the future. When stock prices are rising, the beliefs of the actors to move towards growth, when prices fall, beliefs tend to reinforce beliefs about protection. In our view, investor behavior and changes in its expectations will depend crucially on the trends found in financial advertising and persuasion in the markets. Moreover, the conventional theory of financial supports their predictions in the utility objective risk and information found in the rate of return. Our work will attempt to verify whether this hypothesis is sufficient empirical support in the financial system in Colombia.

Investigations on the *Theory of Argumentation* **TA** with specific applications in Colombia are relatively low (Estrada, 2005, 2007, 2008) and in the general literature there are few studies that have been developed (Dascal, 2003). Although early are intuitive nature Tullock (1967). Posner (1995) makes a distinction between persuasion and information from the classical tradition. Recent analysis hatred (Glaeser, 2005), *mass media* (Mullinathan, Shleifer 2005). Shapiro studied persuasion in politics (2005), especially in the presentation of models in marketing and advertising campaigns. Laibson (2005) extends the analysis to the links between consumer products and key psychological effects. Undoubtedly, the analysis of financial markets requires an extension notice the advantages of analysis proposed by the *Theory of Argumentation* **TA**.

Based on the foregoing, the focus of this paper complements the earlier analysis and highlights the contributions found in the analytical tradition. Significantly, our findings may offer novel approach in psychology of preferences for financial markets. For example, describe how changes in the designation of investment funds have an important influence on business. Political news may trigger expectations in consumption or investment. However, these expectations and their effects are relatively quickly vanishing. Found that when a fund changes its name, becoming popular, receive greater influx of investors. That is, the advertising campaign for companies to gain visibility on the Internet, affirmative effects. In particular, the authors sustain that financial advertising is often incompatible with the standard of rationality of the investors. In other words, analysts controvert advertising because, they say, leads to miscalculation.

The celebrated work of Nassim Nicholas Taleb: *The Black Swan* (2007) has presented an explanation of the limited features of rationality in financial markets. The appearance of black swans is not a regular occurrence in business, certainly, but when present, variable conditions of nature unleashed on the beliefs of agents. Taleb calls this phenomenon the *triplet of opacity*:

> **1.** The illusion of understanding, or how we all think we know what happens in a world that is more complicated (or random) than we think.

2. The hindsight bias, or how we test things only after the fact, as if reflected in a mirror (history seems clearer and more organized in books than in empirical reality) and

3. The overstatement of factual information and the disadvantage of those scholarly and authoritative, especially when they create categories, when "platonifican"[1].

The three components relate to the feeling that they have investors. However, conventional tradition takes opposite conditions. That is, markets have no place of doubt, but certainty. The beliefs of intermediaries play in a world of Cartesian geometry. The explanations of market failures are more reasonable when people have lost their investment. Finally, an over-reliance on data and ability of the professionals is the best choice for the general collapse.

In this research there is a significant body of materials that check the changing trend of investors (Delong et al. 1990, Barberis, Shleifer and Vihny, 1998). It has been found that investors extrapolate the past, following proven earlier styles by themselves or their closest (Barberis and Shleifer, 2005). In practical terms, means that investors found a positive relationship between the later stages of the cash flows on their earlier states (Chevalier and Ellison 1997, Sirri and Tufano 1998). Summarizing the analytic version accepted that all beliefs have a progressive role, however, stressed that the persuasiveness of a message depends on the variations on the set of beliefs. In summary, to make greater persuasive force in financial markets should see the conditions under which change the beliefs of their agents.

A key issue, the contents of the persuasive arguments have in mind that advertisers, such as business, maximize profits, and choose the messages that may have an impact on consumers. There is no presumption that firms behave like animals or are vulnerable to sustain advertising messages that do not reach the people. Nor is that advertising has purely practical interest (Jain and Wu (2000) or are only related to disclosure. The financial advertising is effective when there is a greater influx to the funds. In sum, the argumentative approach is related to the effectiveness of persuasion in the conduct of professional investors.

2. Asymmetric information and markets

In the classical theory of the market, since the time of Smith or Ricardo, persuasion objectively communicates valuable information about the characteristics of the products. That is, consumers use these facts to update their beliefs, compare the value of the goods and decide whether to buy. In addition, consumers do not have direct access to the causal chain of the original prices, so give confidence to the information provider provides them. In the market sellers have information that can engage the buyers to make right decisions under (Akerlof, 1970, Grossman and Hart, 1980).

Question; what does this with respect to financial advertising? First, it suggests that advertisers should give information on options and possible benefits of investors as pointed out in Stigler. Second, mutual funds rarely updated, because the returns are not repeated. Upgrades when the returns, they tend to be relative. Third, mutual funds must give information on risks. And finally, the tradition suggests that these data should be included in financial advertising. As we see and Shleifer, Mullainathan, a fund that does not

[1] Taleb extends the influence of a skeptical tradition that comes from Sextus Empiricus and has reach critical Montaigne, Hume, Popper and Benoit Mandelbrot (Taleb, 2007)

show the relative rate of return is a bad player on the market, a fund that does not show its revenue is implying expansive character and nature[2].

Get different types depending on the forecasting models. There are different forms of persuasion. In general, the models emphasize the importance of cognitive and emotional response to the messages presented (Kahneman and Tversky, 1982). As a result, people often ignore relevant data and process data and information with Bayesian logic. A seller can pass incomplete information persuasive showing no interest in the consequences of the decisions people take. As Schopenhauer wrote: “a persuasive process can be effective without the information provided is true” (*for fas and nefas)*. Or you can find opinion polls that show emotional states affected by biased information (Carpenter, et. al., 1994).

In addition, in psychology of preferences, research suggests particular structures on processes of persuasion. And in these cases are persuasive speeches of a speaker that affect the feelings and beliefs. To illustrate, the study of Mullainathan and Shleifer (2005) summarizes a much body of research on the psychology of collective preferences, beliefs about what people value and enjoy, shared message content. Information biases beliefs are important. First, as described by Dorothy Graber (1984) people often ignore those messages incompatible with their own views. To make impact an agent must adapt their arguments to the prevailing beliefs of the audience (Perelman, 1957). Second, research data show that people tend to believe little data inconsistent with their beliefs (Lord, Ross and Lapper, 1979, Zaller, 1992, Rabin Schrag, 1999). Third, people seek information that confirms preferably priorities (Klayman, 1995).

Again, there is another way to illustrate the relationship between persuasion and collective behavior. Human beings represent the world through a system of related associations (Gilovich, 1981). These mental maps provide both a representation of their experiences and beliefs. That is, a persuasive message is connected to a product resulting from prevailing associations. The difference between approaches with the conventional interpretation is clearer with the famous advertising campaigns. Now, the outstanding success of corporate campaigns is due, among other reasons, the combination of humor and the need to secure savings deposits. By contrast, everyday life situations where people choose the wrong place are shown as a counterexample to the person who makes good decisions. O American Express has sold millions of dollars to their passengers through the idea of taking the precautions most promising investment. In the distance, the image of freedom of the hostages in Colombia, such as, opens a huge market of advertising associated with greater stability for the evolution of the economy.

However, what degree of generality and extent are these examples? In this paper we suggest an affirmative answer to study financial advertising. The case is attractive for several reasons. The financial disclosure is proper to check theoretically the behavior of investors, their beliefs, and the changes that occur in response to changes in market context. Furthermore, models of behavior based on persuasive information content vary with changes in investor behavior and attention to the prevailing beliefs. Moreover, financial advertising exposes components that respond to the need to get information to make immediate decisions when you do not have too much time. In short, analysis is needed to integrate both the empirical dynamics of markets and the observation of cases in a given time.

To guess what type of conduct may be taken by people, we develop hypotheses about their beliefs and changing their behavior over time. In general, operators have different issues in mind when investing. Different belief systems may conflict. These systems can be described as factors of investment (a way to earn money) and protection (a way to make sure its future). The growth is associated with increasing

[2] Just spending money on advertising constitutes relevant information as they reflect signs of confidence and profitability by the advertiser (Nelson, 1970). Although these authors' models of persuasion. As also described by Taleb (2007), predictions are sometimes incompatible with the systematic variation of the content on the beliefs of the agents involved.

wealth, independence and freedom to do what you want. The protection is related to security, risk prevention against poverty and adversity. Both factors are closely linked to emotional states such as greed and fear experienced by humans.

And in these cases, a persuasive speech mobilizes a set of beliefs of agents in a given time (Tversky and Kahneman, 1973). When the seller investment privileges, and relates more income, persuasive communication will fall on growth when there is an atmosphere of uncertainty on investment, sellers favor, over another resource-protection. The bubbles on the Internet give a privileged illustrative material. Precisely because of the flexible nature of belief systems took over a decade. Indeed, in the stock market prices rose and the system of investors' beliefs evolved from the conviction of growth. Conversely, when prices fell in 2001, beliefs moved in another direction, towards the protection. Then it is possible to guess the hypotheses on changes in the content of persuasive messages according to the growth or decline of the markets.

Conclusion

Financial markets do not work with perfect rationality rules. On the contrary, the financial markets have an image resembling "equilibrium in the jungle" (Pissione/Rubinstein, 2007). Furthermore, financial markets use daily with biased information and asymmetric information. In the first case, through the intervention of those privileged information obtained in anticipation of others. In the second case, financial markets distributed power inequity.

The information is relevant to understanding financial markets. But the information is processed and communicated in the computer networks that make up the nervous system of the economy is not just information. The data and financial information depends on the person and collective beliefs. Therefore, the beliefs of financial agents find the so-called information bias (and vice versa). That is, when information is distributed in the markets through advertising, communication becomes persuasive.

Indeed, financial markets express the benefits of communication with some agents over others. Persuasion can be effective, although it is not true. This means, the information in the financial markets depends on the behavior of agents. Therefore, the financial information may or may not have the same persuasive force.

In this context it is important to the *Theory of Argumentation* **TA**. You can help us understand how some agents influencing the financial markets. In addition, persuasion has a variable force. Financial agents (intermediaries, investors and experts) make decisions that depend on information processing. That is, information that circulates in the mass media and specialized magazines. An explanation of the financial markets requires analysis of human behavior, beliefs and the nature of the information it holds. Briefly, The *Theory of Argumentation* **TA** incorporates these aspects of economic psychology, within an analytical framework with practical significance.

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