

Sociology and Semiotics of Financial Markets

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ABSTRACT

The neo-classical framework ignores the interaction between individuals and is not at all interested in the nature of the relationship that links individuals through the market. However, the market is a place for social integration where the individuals necessarily use their interaction abilities. In other words, the integration depends directly on a rationality that we could call, inspired by Habermas¹, “communicative”. There exists no market without exchange and no exchange without interaction. The social interaction is the necessary condition to the building and the spatio-temporal organization of a financial market. In this paper, we propose a semiotic metaphor of the financial market where the fundamental value would be the signified of an asset and where its quotation (exchange value) would be the signifier, i.e. the abstract structure that evokes the signified (use value). This semiotic metaphor of the financial market sustains the idea of a flexible interdisciplinary knowledge that would try to interpret the signs and the meaning of a constantly changing financial reality.

INTRODUCTION

In our contemporary society, financial markets represent a very complex social reality. Studying the working of this reality is the objective that financial economics claims to try to achieve. Despite the fact that financial economics is one of the social sciences where the empirical data are the most numerous, it cannot reduce market to a set of figures. The financial market is a social reality whose complexity takes various forms. Set of figures with esoteric meaning on which it bases its representations, the market has become a unique play performed each day by actors whose behavior seems incomprehensible for a non professional audience but, also, in view of the observed disagreements between professionals, for a very professional audience. This complexity might well be reduced to an explanatory framework either quantitative or qualitative, no comprehension attempt could be considered as satisfactory ... an ultimate explanation of the market does not exist.

From the beginning, financial economics has developed within a particular frame : the neo-classical framework, whose merit has been to have built a certain knowledge of the financial markets. In this theoretical framework, financial behaviors are nothing else than empirical regularities which can be explained and predicted by nomological hypotheses. In this way, the neo-classical authors “objectify” the social behavior of the investors and reduce the intentional action (thus full of meaning) to a pure economic behavior. The neo-classical vision reduces the investor to an isolated homo oeconomicus, independent of the world where he acts and whose perfectly rational behavior only depends on his own selfish interests. The investor is driven by a Walrasian rationality whose main conceptual drawback is that it denies what it is expected to explain : the market. Indeed, based on the hypothesis that all market information is available to all market actors who have identical objectives, behaviors and reactions, the Walrasian rationality denies the concept of market. The market makes sense only if it represents a meeting social area for different actors driven by different objectives. In

¹ Habermas (1987) – Vol. I & II.

the opposite situation, there would be no counterparty to operate the exchanges, in other words, there would be no market at all² ...

In this neo-classical conception of the financial reality, the market perfectly reflects the behavior of the investors, whose action is based on the “objective fundamentals” of the financial reality (intrinsic value of assets, integration of all information in the quotations ...). The main advantage of this scientific "reification"³ is the easy mathematization of the financial behavior.

Ignoring the meaning of the behaviors, financial theory tends to reduce the financial behaviors to an ocean of figures and formulas. This means that the evolution of the financial market can be represented by the evolution of gas molecules characterized by a random walk. According to Frankfurter⁴, in doing this : "Finance has become so disengaged from its cultural meaning that it has little useful to say about society".

The financial theory could take advantage of a collaboration with other study fields in order to better understand the social meaning of the evolution of the quotations. "A quotation is only partly determined by a balance sheet and a P&L account ; it is far more determined by the hopes and the fears of humanity ; by greed, ambition, by the events that men cannot control such as natural catastrophes, by inventions, stress, tensions of the financial world, time, discoveries, fashion and many other causes impossible to list"⁵. Mirror of the social complexity, the social meaning of the quotations evolution is multidimensional. That is why we share the idea of Sauvage when he asserts that "the analysis of financial markets cannot be only left to mathematicians and economists, but must be submitted to sociologists, psychologists, historians, cognitive science specialists etc, in the sense of a real interdisciplinary approach"⁶. The same author underlines that this approach does not exist at all today, that is what explains the “local knowledge” of the contemporary financial economics.

More than a deliberately interdisciplinary inspiration, it is a methodological constraint that would force researchers in financial economics to integrate different models coming from other disciplines in order to better grasp the complexity of the constantly changing financial reality.

The financial discipline cannot dodge the major issue of human sciences i.e. the constant intermingling of the facts interpretation with the theoretical language. Reflecting social complexity, the financial events do not make sense by themselves, they need to be interpreted in the light of a specific point of view to link them to the surrounding social world.

As mentioned by Ardalan⁷ or Bettner, Robinson and McGoun⁸, the neo-classical framework dominating the financial discipline has essentially built an objective knowledge characterizing the functionalist⁹ paradigm in which this framework is developed. The quantitative explanation of the financial market proposed by the authors within this

² Sapir (2003) - p.35 and Sauvage (1999) – p.221.

³ Consideration of human action as non-human things.

⁴ Frankfurter, Haugen, McGoun, Salandro & Philips (1994) – p.135.

⁵ Loeb in Tvede (1994) – p.10.

⁶ Sauvage (1999) – p.9.

⁷ Ardalan (2000) – p.22.

⁸ Bettner, Robinson & McGoun (1994) – p.3.

⁹ Ardalan (2000) – p.22.

framework is a particular point of view which cannot be considered as the unique description of the financial reality. Financial economics is a social discipline and no-one can claim to have the monopoly of knowledge in the interpretation of the social world.

Considering financial economics as a social science, we try to develop in this paper a semiotic metaphor of the financial market. This kind of reflection is in line with the interpretive paradigm presented by Bettner, Robinson and McGoun¹⁰ and can be also considered as an alternative attempt to study the market beside the overall accepted perception proposed by the dominant paradigm.

Structure of the paper

The first part of this paper is dedicated to financial interaction. Considering recent sociological studies, we present the financial market as an arena for financial interaction. We focus on the investors non economic motivations pointed out by sociologists in order to underline the social character of financial interaction. Moved by a rationality that we call communicative, the investors view the market not only as an arena to make profit but also as a place where they can become integrated into the surrounding social world. Communication and its two configurations (verbal and non verbal) play a key-role in the financial activity because it determines the day to day quotations. In line with the works of the french "Ecole des conventions", the quotations will be presented as an intersubjective consensus. In this heterodox analysis of financial behavior, we emphasize the influence of the social world on interaction. The market is then presented as a cultural subsystem of the surrounding world, a kind of cultural reflection of the actors' perception.

The sociological dimension of the first part of this working paper allows us to introduce in the second part a semiotic metaphor of the market. First of all, we had to recall the essential role of human interaction in the financial reality in order to consider each market as a particular language and the interaction as the sign of social intersubjectivity. The quotations themselves represent the visible part of interaction, that is why we consider them as the market signifier. The second part of this paper is a semiotics of financial markets aimed at analyzing in a pluralistic way the link between financial interaction and quotations. To do this, we must study the different characteristics (historical, sociological and even informatical) of the financial markets in order to better determine the culture that characterizes each market. In this context, financial interaction and the resulting quotations can be viewed as the result of a social configuration of the surrounding cultural world.

The objective of this semiotics of the market is to show that the market himself, apparently a simple concept whose description is claimed to be mastered by the neo-classical framework, is subtly built by the surrounding culture and society. Trying to go beyond evidence by analyzing quotations in the light of a new point of view is this paper modest object.

¹⁰ Bettner, Robinson & McGoun (1994) – p.3.

PART I : Financial Activity and Social Interaction

1) Financial and social activity

The social activity results from the community life of the individuals. By its multiple configurations, the social activity represents the different forms of life in the society. The concept of "social activity" integrates directly the interaction and meeting idea between the individuals, this idea is an essential condition of any social reality. Weber says that "action will be called "social" which, in its meaning as intended by the actor or actors, takes account of the behavior of others and is thereby oriented in its course"¹¹.

Such a definition refers to the meaning problem : what is an action meaning ? Inspired by Toulmin¹², an action meaning is for us what one might say about this action according to an intelligibility schema. Particular view of a constantly changing reality, this hermeneutic conception¹³ of an action meaning is culturally situated and changes with the social evolution.

Despite the fact that the contemporary financial economics is often viewed as an operational tool, it reflects the social life in a more or less biased way through the economic facts and the interpretation of these facts by the market actors. Financial economics is a social science and cannot only be reduced to a mathematical analysis of financial phenomena.

The neo-classical theory focuses exclusively on the allocative dimension of the financial behaviors (supposed perfectly rational). However, the financial discipline, considered as a social science, has many things to teach us about the society it is supposed to study. Indeed, the theorists of finance have the difficult task of investigating the possible meanings of the financial phenomena. Investors cannot act in the way that is presupposed by the neo-classical finance. Investors are human and thus imperfect. Psychologically biased, culturally situated, the investor is easily influenced by what determines the very condition of his existence : the world where he lives.

2) Financial interaction

In his decision making and in the events that result, the individual cannot ignore the surrounding world. He becomes aware of "Alter"¹⁴ and undergoes his influence. When the action orientations of participants are reciprocally related to one another¹⁵, we call it interaction. Interaction, considered as a mutual relationship between the actors, is a prerequisite of any social activity¹⁶. Granovetter¹⁷, pointing out that the individuals' choices often depend on previous choices made by other individuals, underlines the importance of reciprocity in the social action.

In the social world, the interaction situations between individuals are numerous. Whether they relate to social roles (example : family or professional roles) or are institutional (example :

¹¹ Weber, *Economy and Society*, Roth & Wittich, eds., Vol. I, Berkeley, (1978) – p.4

¹² See Toulmin (1990) in Frankfurter, Haugen, McGoun, Salandro & Philips (1997).

¹³ See Frankfurter & McGoun (1996) – p.212

¹⁴ Habermas : Ego and Alter : me and the other. When he interacts, Ego enters an interpersonal relationship which allows him to adopt Alter's perspective – Habermas, (1985) - p.352

¹⁵ Habermas (1998) – p.113

¹⁶ Weber, *Economy and Society*, Roth & Wittich, eds., Vol. I, Berkeley, (1978) – p.4 and Habermas (1987) - Vol. II – p. 233.

¹⁷ Granovetter (1988)

wedding, market), these different kinds of interaction can be thought as many different social areas where people can meet and develop mutual relationships. Each social area dictates the rules of the interaction. Delimited according to a theme, each interaction situation represents a particular segment of the social world and determines at the same time the context, the rules and the horizon of the interaction¹⁸.

Unlike the neo-classical vision, the investor's behavior not only depends on his selfish interests but also on the behavior of the other actors playing a role in the social arena created by the market. The market is inserted in the social fabric...there exists no neutral analysis of the market as supposed by the neo-classical authors when defining the "fundamentals" of the market. In this way, the financial behaviors cannot be explained and even less predicted, they can rather be interpreted ...

The financial market is a social arena with investors meeting each other and exchanging assets. Behind each quotation, there is a great number of transactions linked with sale and purchase orders. Each of these transactions is a successful meeting of histories, individualities, rumors, habits, ...

The neo-classical framework ignores the interaction between individuals and is not at all interested in the nature of the relationship that links individuals through the market. The only selfishness of the agents is sufficient to lead them to exchange assets. In the financial theory, one is considered rational when he tries to maximize his utility according to his preferences. Even though these abstract notions seem to be respectable, they carry the vision of a one-dimension agent, totally foreign to the surrounding social world where he plays a role. The neo-classical approach assumes that the social relations have no impact on the economic exchanges¹⁹. This means that this vision of the investor is a sub-socialized²⁰ one where the atomization results from the closely utilitarian pursuit of his own interests²¹.

Recent sociological surveys over financial interaction allow us to consider the market as a "meeting-market"²² where individuals are linked with one another through a voluntary relation which involves them and mutually determines them. Two kinds of interaction can be distinguished : the first one occurs between professional agents (traders) and the second one occurs between non professional agents for whom finance rather represents a "curiosity"²³.

The actors on the market do not exclusively pursue their own interests, they also feel the need to merge into the social world (these two objectives are often interlinked²⁴). The individual, willing to become integrated into the surrounding social and cultural world, has at his disposal so many integration areas as they are interaction arenas. In our contemporary societies, the financial market represents a particular public arena in our social reality. As we will see, the main motivations of the agents playing in the financial market cannot be summarized to the pursue of financial interests.

¹⁸ Habermas (1987) p.137 et 136 – Vol. II.

¹⁹ Granovetter (2000) – p.79.

²⁰ Sub-socialization corresponds to the Rawlsian and Hobbesian condition of the individual where, isolated, he orientates its action independently from the social structures – see also Levesque Bourque & Forgues (2001) – p.131 and Granovetter (2000) – p.81.

²¹ Granovetter (2000) – p.81.

²² Berthoud (1992)

²³ Lepinay et Rousseau (2000) in Politix (2000) – p.93.

²⁴ Levesque Bourque & Forgues (2001) – p.129.

The professional agents, in spite of their privileged position, pursue also in their everyday practice the construction and confirmation of a professional and social identity²⁵ and a "symbolic valorization"²⁶ from their peers. In that way, the market represents also, according to the traders, an arena of social interaction where the unofficial rules established by the market actors ("local rules"²⁷) are as important as the institutional rules ("global rules"²⁸). In a recent article, Hassoun²⁹ emphasizes the importance of the social interactions and the reciprocity (immediate or differed) of the relations between traders. The author also mentions the existence of a social non-coded sanction for the traders unable to become integrated in the market social place.

The financial market determines also a public place which allows the non professional actors to become integrated into the social world. From militancy to entertainment and from curiosity to the "excitement to take part in the hot activities of the society", Lepinay and Rousseau³⁰ list the non strictly economic motivations of the non professional investors. Moreover, the authors recall the fact that these investors do not calculate profits because, without any rule, they are simply unable to do it.

From these sociological surveys, we learn that the individual (Ego), to favor his social integration, searches intentionally interaction with an other individual (Alter). The decision making in the financial market is also determined by social motivations. The market is a place for social integration where the individuals necessarily use their interaction abilities. In other words, the integration depends directly on a rationality that we could call, inspired by Habermas³¹, "communicative".

Habermas defined rationality as the disposition of actors, capable of speech and action, to assimilate and to apply a fallible knowledge³². The communicative rationality of an individual can be defined as the abilities that people have to interact with one another. This kind of rationality can be measured by the ability of responsible individuals, taking part in an interaction, to orientate themselves according to validity requirements which are based on an intersubjective recognition³³. When the neo-classical theory only takes into account the theoretical and rational objectives of the agents, an analysis of the investors communicative rationality focuses more on the rational means used by the agents to achieve their personal and social goals. Resulting from social interactions, quotations can be considered as intersubjective³⁴ and stabilized conventions reflecting the opinions of the market.

3) Market and lifeworld

The financial interaction takes place inside a particular institutional area : the financial market, which, by itself, can be considered as a subsystem of the "lifeworld". Emphasizing its cultural dimension, we use here the Habermasian concept of lifeworld. The lifeworld represents the cultural background of the social reality in which the interaction is possible.

²⁵ Godechot (2000) in Politix (2000) – p.19.

²⁶ Ibidem – p. 20

²⁷ Hassoun (2000) in Politix (2000) - p.107.

²⁸ Ibidem

²⁹ Hassoun (2000) in Politix (2000)

³⁰ Lepinay et Rousseau (2000)

³¹ Habermas (1987) – Vol. I & II.

³² Habermas (1985) – p.371.

³³ Habermas (1985) – p.372.

³⁴ Tadjeddine (2000) in Politix (2000) – p.65

“The lifeworld is formed from more or less diffuse, always unproblematic, background convictions. This lifeworld background serves as a source of situation definitions that are presupposed by participants as unproblematic”³⁵. The lifeworld is thus what allows the individuals of a society to define some interaction areas.

The financial activity is a possible interaction place, "a segment of the lifeworld of the participants in interaction"³⁶. Financial activity is nothing but "natural" and is not more "given" than any relation between members of a society. The financial market is inserted into the social world where it develops, it represents a cultural subsystem³⁷ of the surrounding social reality. "The social factors and the market are merged into one another ; the market is a social construction ; the market limits are related to its social dimensions ; the exchange is socially and historically determined"³⁸.

Part of the lifeworld, the market represents the horizon and the background of all financial representations. It defines the financial interaction arena in the actual society and constitutes the ground of intelligibility of the financial dimension of the social reality. The market is not a "natural" concept, it is a representation that dominates the theoretical developments only since modernity³⁹. The market remains a cultural image so well integrated into our occidental representations of the social world that it is a very often evoked solution to our social problems⁴⁰. "At the same time, social institutions, economic forms and cultural entities, the fairs and markets are above all original systems of social relations"⁴¹. Di Maggio⁴² presents culture as an abstraction that not only reflects the economic practices and institutions but also as an abstraction that contributes to their development. Reflection of a particular dimension of the social reality, the financial market cannot avoid the influence of the cultural world where it takes place⁴³.

The complex rules leading the financial market give evidence of the heavy institutionalization of the financial interaction. This institutionalization phenomenon of the market corresponds to a rationalization that, in fixing the rules and norms related to this public place, reduces the communicative interaction area⁴⁴. The control processes that define what is an accepted behavior in a given social place lead to a reduction of the communicative area of financial interaction. However, the market remains a place for intentional exchanges and for motivated interactions culturally situated and carrying the historical contingencies of the market itself. Indeed, there exists no market without exchange and no exchange without interaction. The social interaction is the necessary condition to the building and the spatio-temporal

³⁵ Habermas (1984) – p.70 – Vol. I

³⁶ Habermas (1998) – p.111

³⁷ We follow here the embeddedness thesis proposed by the New Economic Sociology. This thesis assumes that the economy and its components remains embedded in the social relations which guarantee its functioning. - see Granovetter (1982), (1985) and (1988) or Shalins (1976). See also Berger & Luckman (1966) who show that, despite their apparent objective existence, the institutions are bred by human history and are submitted to historical contingency.

³⁸ Levesque Bourque & Forgues (2001) – p.141

³⁹ We share here the idea of Pirenne (1969) and Shalins (1976): all scenes presenting goods circulation before modernity do not illustrate the concept of market as it is understood today for the simple reason that the economy did not exist. It is also useful to mention the opposite position of Karl Polanyi : the market institution exists since the end the Stone Age. (Polanyi, *The Great Transformation*, 1944)

⁴⁰ McGoun, Allen & Kester (2000) – p.426.

⁴¹ Chiva, « Les places marchandes et le monde rural », *Etudes rurales*, 78-79-80, 1986, p.11.

⁴² Di Maggio (1994).

⁴³ Concerning the influence of cultural factors on the financial market – see Shiller (2000) – p.99

⁴⁴ Habermas (1987) – p.148 – Tome II

organization of a financial market. "In opposite to the economists conception, the social dimension of economic action is not only an interference with the rationality of maximization : it also constitutes the ground of each economic action"⁴⁵.

4) Lifeworld and communicative rationality

The communicative reason evoked above presupposes the existence of the lifeworld. This reason maintains a mutual relation with the lifeworld. In delimiting the horizon of the social interaction, the lifeworld determines the possibility conditions of the communicative reason⁴⁶ which, through interaction, guarantees the symbolic and material reproduction of the lifeworld⁴⁷.

In the financial market, the communicative rationality incites the agents to act according to their personal social characteristics but also according to the characteristics related to the considered social place. Godechot⁴⁸ explains that a "one best way" as regards financial interaction does not exist and that the action of the professional actors on the market depends also on the history and the institutional rules of the considered public place. Among the other decision factors, let us mention the abilities acquired by the actors in the course of their basic and professional socialization⁴⁹. It seems that the motivations and the economic rationales of the agents depend on the vision of the world transmitted by the academic world and on the different cultures proper to the agents⁵⁰.

The quotations evolution results directly from the actions of the agents and reflects the opinions and the moods of socially situated actors whose perception is considerably influenced by the surrounding lifeworld. The communicative rationality presupposes a lifeworld in which it makes sense and that it perpetuates through the social interaction it generates. The financial interactions that determine the day to day quotations ensure the everlastingness and the symbolic and material reproduction of the market.

Driven by individual and social motivations, the individuals show an interaction behavior. Habermas, when he mentions that kind of behaviors, uses the term communicative action, term that he defines as follows : "the communicative action refers to the interaction of at least two subjects capable of speech and action who establish interpersonal relations (whether by verbal or by extra-verbal means)"⁵¹.

The behavior of the investors driven by a communicative rationality remains in line with Granovetter's observations because "in communicative action participants are not primarily oriented to their own individual successes; they pursue their individual goals under the condition that they can harmonize their plans of action on the basis of common situation definitions"⁵². The selfish objective of the investors is subordinated to the necessary accomplishment of a transaction reflecting a mutual agreement between the involved investors. The market concept, in presupposing the existence of an ability to exchange of the agents, presupposes also the existence of a communicative rationality.

⁴⁵ Levesque Bourque & Forgues (2001) – p.129.

⁴⁶ Habermas (1985) – p.385.

⁴⁷ Ibidem – p.381.

⁴⁸ Godechot (2000) in Politix (2000) – p.18

⁴⁹ Ibidem.

⁵⁰ Ibidem – p.31

⁵¹ Habermas (1984) – p.86 – Vol. I

⁵² Habermas (1984) – p.286 – Vol. I

The communicative reason (that not necessarily excludes the pursuit of individual objectives) is merged into the process of social life because it allows investors to find a consensus over a possible state of the world. The day to day transactions on a particular asset reflect the agreements booked during the day concerning this asset. The result of these consensus is an opinion-price which differs very often from the theoretical value.

A financial transaction can be seen as an agreement : the result of a communicative action that use the lifeworld resources and that contributes to the symbolic and material reproduction of the financial market.

The financial market remains a public place of interaction. This thesis seems to be confirmed by the works of Shiller and by some recent sociological surveys over the financial markets. Shiller's works confirm the importance of the interpersonal relations (organized in network)⁵³ in the financial interactions and the sociological surveys show financial markets as an area for social integration. All these works seem to share Granovetter's conceptions concerning the market. The role of the financial discipline does not only limit itself to the analysis of the investment decisions of individuals all supposed to act as perfect "rational fools"⁵⁴ totally isolated from the surrounding world. In a realistic vision, its role is also to understand the actions coordination and the interactions between interdependant heterogeneous actors with limited cognitive abilities⁵⁵.

5) Communicative rationality and financial communication

The social interaction is a reciprocal relation that requires an expression medium of the reciprocity of the agents. This expression medium, that allows the agents to exteriorize their communicative rationality, is the communication that allows individuals to create their social interactions.

In a narrow vision of communication, we will only mention verbal and social exchanges that use the channel of the many different techniques, from newspapers to computers and satellites. Communication thus represents all means and techniques permitting financial interaction. In our contemporary societies, the financial markets adjust to the development of new technologies. Generally speaking, one can distinguish two communication types in financial interaction : interpersonal communication (direct) and indirect communication.

The sociological works we already mentionned and Shiller's works seem to confirm the thesis of Granovetter because they emphasize the importance of interpersonal relationships in the transactions. This interpersonal dimension of financial communication includes the exchanges that allow actors to have verbal contacts : the direct relations between people ("word of mouth") and telephone calls seem to play an important role in the financial decisions⁵⁶.

The indirect financial communication (media, internet, ...) does not allow for a personalization of the exchange. That is why it plays, according to Shiller⁵⁷, a supporting role in the financial

⁵³ Shiller (2000) – p.179 and p.195.

⁵⁴ Amartya Sen, *Choice, Welfare and Measurement*, Balckwell, Oxford, 1983 – p.84 to 109.

⁵⁵ It is also the role that Sapir assigns to the Economics considered as a social science

⁵⁶ Shiller (2000) – p.194 and p.199. See also A.A. Reid « Comparing telephone with face-to-face contact » in Ithiel de Sola Poole (ed), *The social impact of telephone*, Cambridge, Mass :MIT Press 1977, p.386-414.

⁵⁷ Shiller (2000) – p.195 to 198.

decisions. Financial interaction remains a social interaction whose privileged communication medium is verbal exchange.

We cannot discourse on communication and financial interaction without tackling the influence of automatic trading on the financial exchanges. In the nineties, the greatest stock exchanges has been automated so that the auction has been replaced by a quotation determination algorithm⁵⁸. This incorporation of the informatical progress into the financial market has resulted in deep transformations of the financial interaction. With the suppression of all negotiation, a whole dimension of financial interaction has disappeared : Being able to estimate in the gestures and faces of the negotiators the signs of a strategy, organizing a certain solidarity beyond the market rules. All this has been replaced by a more abstract sociability⁵⁹. Even if it is true that automatic trading has considerably reduced one dimension (negotiation) of the interaction, the interaction itself has not disappeared. The role of the informatical interface is mainly situated in the ultimate phase of the quotation process. The different purchase and sale orders placed by the agents remain decisions that depend directly on the financial interaction situated earlier in the asset evaluation process.

Automatic trading reduces direct interaction between the actors but it cannot totally "dehumanize" financial interaction. The interaction remains the prerequisite of the market existence. In response to automatic trading, financial interaction concentrates earlier in the quotation process. Muniesa explains that, at the time of interpersonal negotiation, the order errors could be corrected thanks to a certain collaboration between professionals. Since the achievement of automatic trading, when an order is placed, it is impossible to turn back time, that is why financial interaction must be more supervised before definitively placing orders.

PART II : Market semiotics

1) Financial interaction and semiotics of the market

Even though the quotations seem objective for investors, they remain social constructions, resulting from the actors perceptive consensus. Assuming the existence of an asset intrinsic value, the fundamentalist conception of the market considers that a "real value" exists independently of the transactional exchange concerning the assets. This conception presupposes a mechanical action of the isolated investor. The intrinsic value of an asset is equal to the sum of the discounted future cash flows that this asset is expected to generate in the future. Such an estimation requires the knowledge of an adequate discount rate for this asset. Unfortunately, this rate depends directly on the risk of the future cash flows which remain uncertain.

McGoun⁶⁰ explains that the theoretical estimation of the intrinsic value is systematically biased by the high degree of uncertainty characterizing the financial markets. In front of this uncertainty, the agents cannot be seen as "rational fools". Only social interaction can stabilize

⁵⁸ « An algorithm is a set of finite and recurrent rules or instructions which can be executed by a machine. A quotation algorithm executes the orders according to an auction process and in accordance with a set of priorities » in Muniesa (2000) in Politix (2000) – p.122.

⁵⁹ Ibidem – p.127.

⁶⁰ McGoun (1997)

the uncertainty of a particular public place⁶¹. Orléan⁶² emphasizes the importance of the convention (consensus on the price) as a relevant solution (and the only compatible one) to cure the incapacity of the financial markets to solve some problems raised due to uncertainty.

Inspired directly by McGoun's article⁶³, we can consider the intrinsic value of an asset as its use value, i.e. its natural property to satisfy wishes and desires. The use value of an asset can be considered as what it is supposed to generate in terms of financial cashflows. The author points also out the notion of the exchange value which, in a Marxist conception, corresponds to a quantitative attribute which allows the ex-ante immeasurable objects to be measured and compared.

Reflection of the sum of the actions, the particular quotation of an asset represents the exchange value of this asset. In a modernist conception of the financial asset, the exchange value depends directly on the use value which can be reduced to the fundamental value of the asset. Such a vision uses the intrinsic value as an objective value independent of the social place where it is situated and considers this fundamental value as a true reference for the financial discipline.

We should stop considering finance as a neutral actor whose only function would be to calculate and publish values that would precede it⁶⁴. The concept of intrinsic value characterizes a particular vision of the economic world (a possible equilibrium⁶⁵). More than a reference, the fundamental value appears to be a "signified". The reference is not really the reality, it is the image of the reality that we have. It is a signified determined by an oriented intention⁶⁶. This intentionality is presented as "an act of spirit that denies its reality, that makes it a fiction, a social construction". It is thus a meaningful intentionality. That is why, inspired by Baudrillard⁶⁷, we consider the concept of intrinsic value (use value) as an intentionality, a signified (and not an objective reference) characterizing the fundamentalist vision of the financial discipline.

In this paper, we propose a semiotic metaphor of the financial market where the fundamental value would be the signified of an asset and where its quotation (exchange value) would be the signifier, i.e. the abstract structure that evokes the signified (use value). The fundamentalist vision supposes that the signifier of the asset refers to its signified and that they together represent the perfect image of a fragment of the objective reality.

The semiotics is traditionally defined as the science of signs⁶⁸ and considers the signified and the signifier as the two components of the sign which, in our metaphor, would be the financial interaction. The concept of sign is defined as "something that represents something else for someone"⁶⁹. Auroux recalls that the nature of the sign is to have a meaning⁷⁰. The sign, as

⁶¹ See also Klamer who underlines the importance of human action in a very uncertain framework

⁶² Orléan (1989)

⁶³ McGoun (1997) : the author proposes an enlightening distinction between use value and exchange value

⁶⁴ Orléan (1999) – p.12.

⁶⁵ The fundamentalist approach of the financial market sustains the traditional Walrasian properties – Orléan (1999) – p.23

⁶⁶ J-M Lefèvre in Baudrillard (1981) – p.189.

⁶⁷ « The referent has no other value than the one of the signified” Baudrillard (1981) – p.188.

⁶⁸ Klinkenberg (1996) – p.21

⁶⁹ Auroux (1996) – p.79.

⁷⁰ Auroux (1996) - p.233

financial interaction, allows to organize and structure reality⁷¹ in dividing it into material and conceptual unities (the quotations). This division of reality (expressed in the transactions) is always related to the cultural perceptions of the actors that constitute this reality⁷².

In a postmodern vision, the intrinsic value (the signified) of an asset does not exist. There is no objective value external to quotation. The fundamental value of an asset is not more outside the sign than the signifier, it is defined by the sign (the financial interaction) and has no other reality than the one determined by the sign. In a semiotic vision of the assets, the signified is reduced to the signifier⁷³. Created by a modernist rhetoric, the naturalizing concept of intrinsic value represents a signified abstraction carrying by a particular theoretical argumentation of the financial market. There is nothing beyond the relation interaction-quotation.

The financial interaction is the basis of a possible interpretation of the financial reality. Indeed, if the quotations of the asset are very often the starting point of any reflections on the market, these quotations partly determine the financial interaction. In a transaction, it is not the quotation of an asset that is interpreted but the interaction that this asset have raised. In the phenomenon of speculative bubbles, for instance, it is not the price of the asset that influences the mimetic behavior but well the interpretation of the financial interaction by the investors. In this sense, an asset quotation, as signifier, represents the visible part of the financial interaction that we could consider as the sign. Indeed, the interaction is the true source of the different possible interpretations of the market. The quotation does not summarize the actors communicative action, it is only a reflection of it, an institutional symbol. Full of meaning, the financial interaction, viewed as the market sign, is directly influenced by the lifeworld. Indeed, it is through financial interaction (and the interpretation of it) and not through its signifier (the quotation) that the actors lifeworld becomes apparent.

The financial interaction never ends. In their decisions, the actors presuppose the market continuity and contribute directly to it through their actions. The sign formation process is never finished. Each quotation generates some new interactions which, in turn, determine the quotation evolution. The market sets the collective opinion as a reference norm for financial interaction⁷⁴. The financial market organizes the clash of the investors personal opinions in order to create a collective judgement considered as a benchmark evaluation⁷⁵. The quotations determined in such way are unanimously recognized by the financial community. The quotations fixed by the exchanges are only a “fair” opinion⁷⁶, a day to day basis for a constantly renewed interaction.

Financial interaction, considered as the market sign, goes beyond the arbitrariness problem of the sign⁷⁷. A particular interaction (the sign) cannot by itself determine the signifier (quotation) of an asset. Each day, through the quotation (signifier), the sign is reinterpreted and the new interactions, which will constitute the new sign of the new quotation, will determine a new quotation for the following days ad infinitum.

⁷¹ Klinkenberg (1996) – p.42

⁷² Ibidem – p.39.

⁷³ Baudrillard (1981) – p. 185.

⁷⁴ Orléan (1999)

⁷⁵ Ibidem – p.32

⁷⁶ Henochsberg (2001) – p.85

⁷⁷ « What is arbitrary is that this sign and not that other sign is applied to this element of the reality and not to that other element. » Baudrillard (1981) – p.183.

The market exists through the communicative action. However, if the interaction determines the quotation, this quotation represents only the visible part of the interaction. A financial interaction without any quotation is possible while a quotation without any interaction is not conceivable. There is a superiority of interaction because it is through it that investors express their individual objectives and their will for social integration. Reflection of the socio-cultural characteristics of the world where the market takes place, financial interaction largely goes beyond the simple institutional conventions expressed in the quotations. That is the reason why we consider in this paper financial interaction as the sign of the market (or of a particular asset) and the quotations as the signifier of the market (or of a particular asset).

Assuming the superiority of interaction on quotation, we acknowledge the superiority of the sign on the signifier. The quotation used in financial interactions evolves directly in function of these interactions. The sign depends on the signifier which is the effect of the sign...the signifier and the sign are interdependent.

Financial interaction thought as the sign of the market or of a particular asset, is, as we have already seen, guaranteed in the financial reality by two kinds of communication : the interpersonal communication and the indirect communication. A semiotic study of the relation sign-signifier of the financial assets would deserve according to us a particular attention in the understanding of the financial phenomena. Indeed, a multidisciplinary study of the relation interaction-quotation would allow theorists to better understand the phenomenon of the opinions crystallization and the factors that determine the financial interaction in a given market.

The semiotic perspective of the market is partially evoked by Godechot when he explains that in the market places, the economic analysis of the ordinary operators is more an almost unconscious semiotic research of the meaning of the terms of economics and economic politics than a rigorous development of macroeconomic rationales⁷⁸. This semiotics mentioned by the author can be extended according to us to the financial market theorists whose task is to propose possible meaning of the financial reality.

The financial reality is multidimensional, only an interdisciplinary knowledge can give sense to this reality which is not yet fully understood by theorists. The economist, the sociologist, the psychologist but also the anthropologist, each of them can provide an interesting vision useful to a better understanding of the financial phenomena. These phenomena depend directly on individual behaviors dictated by socio-cultural influences characterizing the trade traditions related to each market. The financial quotations evolution is a complex process involving different characteristics of human nature. The economist tends to summarize the market to its quotations, leaving to the other specialists in human sciences the study of the non economic factors. In this way, the economist becomes limited by an unrealistic knowledge. An interdisciplinary semiotics of the relation sign-signifier would allow each specialist to integrate in his developments results from different disciplines to try to give sense to these social phenomena that are speculative bubbles or financial crashes ...

⁷⁸ Godechot (2000) – p.38.

2) Semiotic analysis of the relation sign-signifier

A semiotic analysis of the relation sign-signifier assumes a multidisciplinary study of the quotations and above all of the opinions crystallization process, which leads the market to attribute a value to an asset in a given day. The theorists cannot be satisfied with the quotation, they must also study the background that determines the quotation. We have already seen that this background appears through financial interaction. The market is not a black box that determines objectively the value of the financial assets. The market is above all a social institution directly situated in a cultural world that determines it.

A semiotics of the relation sign-signifier assumes that we analyze the quotation and its meaning in a particular surrounding world. It means studying the factors that determine the quotations in a particular financial market. This "contextualization" of financial theory assumes a psychological, sociological, historical, cultural but also informatical (in the case of the automatic trading) analysis of the different stock exchanges to try to better grasp the "culture" that characterizes them. For each financial market, a pluralist study of the interaction structure would deserve to be carried out. This sign structure (of the interaction) which can immediately be filled with meaning determines directly the communication system dominating the entire social exchange and necessarily the signifier (the quotation) that results. The financial market and its functioning in a broad sense depend directly on the cultural and technical surrounding world.

Money, risk and stock exchange are not interpreted in the same way in the different countries. The representation of the economic interaction can vary according to the cultural and sociological origins of the actors of the market⁷⁹.

It is mainly through what people call the "feeling" that these cultural differences appear. Godechot defines the term "feeling" as a non explicit mixture of different reasonings with heterogeneous sources, of market habits, of recognition of market configurations and of more tangible intuitions⁸⁰. The author underlines the importance of feeling for financial professionals who use it as a mean to maintain their autonomy in front of the growing domination of informatics and mathematics⁸¹. In his article, Godechot analyzes the influence of the cultural factors in the economic rationales but also their predominance in the decision makings of the traders.

The cultural and sociological factors influence also the choices made by the non professional investors. Lepinay and Rousseau explain in an article the social motivations of the "small stockholders". The influence of the surrounding cultural world is here very clear. While some of them only want to buy ethical stocks, others only buy the stocks of firms that produce familiar products. Shiller⁸² also mentions that the firm employees often want to buy the stocks of their own firm despite any diversification rule. Let us also mention the existence, in some markets, of the nationality effect⁸³: the non professional investors want to buy stocks emitted by firms whose head office is situated in their country. According to Lepinay and Rousseau⁸⁴, the investors proceed from their strongest basic links with the economy, their professional

⁷⁹ For a study of the cultural influence on the financial markets see Grinblatt & Keloharju (2001).

⁸⁰ Godechot (2000) – p.50.

⁸¹ Ibidem – p. 51.

⁸² Shiller (2000) – p.179.

⁸³ Lewis (1999) and Grinblatt et Keloharju (2001).

⁸⁴ Lepinay et Rousseau (2000) – p.89.

fabric or their material environment, to determine by which way they are going to enter the stock exchange.

The organization of automatic trading proves the existence of a certain ideological image⁸⁵ of the market presented in the famous Black article⁸⁶ concerning the exchange automation in the financial markets. As underlined rightly by Muniesa⁸⁷, this automated conception of the market corresponds to the neo-classical idea of a perfect market in which the prices adjust quickly to information in order to prevent arbitrage. The configuration of the informatical algorithm supposed to calculate the closing price can vary significantly from one market to another, this phenomenon creates a kind of specific informatical structure for each market⁸⁸. The communication systems have their own mechanisms which carry a particular communicative value.

As a common interface for different human disciplines⁸⁹, a semiotics of the financial market assumes an interdisciplinary study of the quotation determination process. The quotation, thought as the asset signifier, cannot summarize by itself the financial interaction of this asset. It only represents its visible face. Financial interaction is directly inserted into the complexity of the social world. According to the market, the type of actors involved or the informatical algorithm used, financial interaction reflects differently the representations of the financial world, that actors create. Each market is a language and the interaction that defines this market forms its signs. The quotations, considered as the visible and official results of the interaction, play, according to us, the role of signifiers of the market.

The financial theory is a complex discipline which can be easily “dehumanized” if we just take into account the figures of the quotations as the neo-classical authors do. These quotations represent decisions that cannot be only explained in terms of profit maximization⁹⁰. A semiotics of the relation sign-signifier try to assign a meaning to the quotation in taking into account the (cultural and technical) local characteristics of financial interaction. Even if the trend seems to be the market globalization, recent studies carried out by Abolafia⁹¹ seem to confirm the fact that each market has its habits, its representations, its collectively interiorized culture sedimented in the social relations. It is the direct influence of this culture specific to each market that the semiotics of financial market proposes to study.

A semiotics of the market works thus in the direction of a “contextualization” of the financial knowledge because each market, considered as a social entity included in a surrounding cultural world, represents an integration and meaning place for all the agents active in this public arena. Each market is a language and if its signifiers, reduced to pure numerical abstractions, seem comparable, the interactions (real sources of the decision meaning) that determine them remain immeasurable because of their socio-cultural nature. The theorists who tries to understand the financial reality cannot ignore the cultural dimension of the exchange, of the market and of the meaning of the quotations. Playing with numerical

⁸⁵ Dupuy considers automatic trading as an ethical and political utopia – see Dupuy (1992) – p.50 in Muniesa (2000).

⁸⁶ Black F. (1971).

⁸⁷ Muniesa (2000) – p.136.

⁸⁸ For a comparative study between the « french » and the « spanish » algorithm, see Muniesa (2000).

⁸⁹ Klinkenberg (1996) – p.9.

⁹⁰ This maximization criterium does not even influence the decisions of non professional investors – see Lepinay & Rousseau (2000) in Politix (2000)

⁹¹ Abolafia (1998)

abstractions without being able neither to predict them nor to explain them is one way, understanding the meaning of the quotations is an other challenge ...

3) Semiotics of the market and communication

At the opposite of the neo-classical conception, a semiotics of the financial market does not neglect the role played by communication in the quotation determination process. Considered as a real interaction instigator, communication is at the center of the material and symbolical reproduction of the financial market.

The efficient market hypothesis, in assuming the perfect integration of information in the prices, carries a mechanical conception of communication. The market is then viewed as a machine whose only role is to let the real value of the assets emerge. In this conception, communication can be summarized to the means and techniques allowing the investor to take “objective” decisions based on an “objective” analysis of the outside social reality. The signified (reference for the neo-classical authors) determines the sign and the signifier. The intrinsic value inspires interaction and quotation through a linear causality where the agents do not play any role.

A semiotics of the financial markets assumes a complete revision of this conception of communication. Far more than a simple medium of convergence towards a consensus, financial communication goes beyond direct exchanges between individuals. Indeed, the financial communication is part of the social reality and cannot be reduced to the result of the action (as the defenders of the efficient market hypothesis propose) but also to the action.

Thought in semiotic terms, communication is the origin and the finality of financial interaction. The agents investments are based on information from their network of interpersonal communication and the result of their communicative action determines the market orientation which in turn represents an information for the investors. This auto-referential characteristic of the market is perceived by the investors in the way explained by Kostolany⁹² : “Generally, the information do not create the quotations but it is the quotations that create the information”. In this conception of the financial market, each investor can be considered as a particle socially situated at the crossroads of interpersonal networks. Each particle is moved by messages (from the two communication types mentioned earlier) which cross it in a perpetual movement of the market reproduction. This continuous movements of individual convictions, insuring the opinion heterogeneity (necessary to financial interaction), are integrated part of the financial social reality.

Communication is the image of the insertion of a complex individual into a complex world. The auto-referential characteristic of financial communication characterizes the agent taking part in the surrounding world and at the same time, the surrounding world influencing the agent. The sign is related to the signifier and takes the form of a circular causality. It is this causality that the market semiotics try to study.

⁹² Kostolany in Tvede (1994) – p.20.

CONCLUSION

The objective of financial theory is the understanding of a particular dimension of the social reality : the financial markets. This reality appears to be changing and multidimensional. However, in their theoretical developments, the theorists of finance are only interested in the quotations. By doing so, they only study the reflection of the market, what we have called the signifier. The attention is not sufficiently drawn on what determines the quotations : the financial interaction, that we have called the sign. In this paper, we have tried to emphasize the importance of this financial interaction in the transactions. To be able to do so, we have first mentioned a series of sociological surveys which replace social interaction at the heart of the financial reality.

Through the semiotic metaphor, we have viewed the market as a particular language whose signs, signifiers and the relation between these two abstractions depend directly on a cultural code, emerging directly from the lifeworld of the actors. The asset quotations represent the signifiers and the financial interaction is perceived as the meaningful structure of the signs of the market. Rejecting the existence of an “objective” value of the quotations, we have reduced the reference and the signified (intrinsic values) to the signifier (quotations) ; reducing at the same time the financial theory to an interdisciplinary analysis of the existing link between the signs (financial interaction) and the signifiers (quotations). It is these arguments for a methodological pluralism that we have called the semiotics of the financial markets. Considered as an interface between the different disciplines useful in the comprehension of the financial markets, the semiotic metaphor of the financial market sustains the idea of a flexible interdisciplinary knowledge that would try to interpret the signs and the meaning of a constantly changing financial reality.

This working paper constitutes more an argument for a more “social” financial theory than a rigorous definition of what we mean by an interdisciplinary analysis of the market. Ignored by the neo-classical framework, the social dimension of the financial reality is still misunderstood. It is true that numerous heterodox studies of the financial markets propose interesting alternatives but there exists no real unified alternative framework. For each searcher, going beyond evidence and keeping the distance with his representations built by a university culture with a neo-classical tendency represent a first step before more prolific researches... This working paper is my first step in this direction...

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