Financial instruments' duality and public policies – The Tulipmania case

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Abstract. *The purpose of the research – of which this text presents only a first part – is to show that the duality specific to financial instruments – positive role in market growth and counteracting risks, respectively negative role through speculative massification – is influenced by public policies. Assuming the crises as moments of truth, I analyse various data for Tulipmania, Great Depression and Great Recession and how they evolve under the impact of public policies. My hypothesis is that with the development of capitalism, the public policies have an increasing impact on the duality of financial instruments, namely a negative one. Here I present only a few methodological aspects and the Tulipmania case – the other two cases I will present at the FIBA session – where public policy intervention has been minimal: both the previous one, regulating the financial instruments and the tulip market, and the later one, for liquidating the crisis and its consequences. The impact of the crisis on the Dutch economy and society at the time was relatively small; bubbles and similar crises did not occur later in the Netherlands. The analysed data highlight the following stage results: a). the free market is not immune to the effects of the duality of financial instruments, but b). it has the capacity to educate market players, to avoid moral hazard and, in the long run, to reduce risks. The lesson is that minimal market intervention does not distort its operation, it does not introduce additional negative elements.*

Key words: Market, Financial Instruments, Duality of Financial Instruments, Public Policies, Crises.

''The tulip is arguably the most elegant and exotic object of speculation in the colourful history of financial crises'' (Bilginsoy, 2015, p. 14).

Introduction

In economics there are two generally accepted truths as they were formulated by Adam Smith. Firstly: „ It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest'' (Smith, 1998, p. 30); secondly: „ every individual... intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention...by pursuing his own interest he frequently promotes that of the society'' (Smith, 1998, pp. 593-594).

The first quotation expresses the fact that we are producing goods from our interest for profit, not for moral considerations; accordingly, the economics is a science like any other, a descriptive one, free of moral. Considering this character of the economics science the positions expressed in this text are neutral; any analysis tries not to be normatively evaluative, but an assessment of the internal coherence of various theories or standpoints; we will analyse if the assumptions, the logical derivation and the conclusions are consistent, e.g. one can not be in the same time pro regulations and pro free market, or if you sustain a bail out you have to assume that prior to this moment there were regulations which have been respected; otherwise the decision to bail-out a bank would be an incorrect one, a contradictory one with the internal logic of the economy. The second quotation from Smith is a very important one, at least for the classical and

neoclassical liberal economics; it highlights that our interests are opposing in a space where offer and demand meet and each one wants to make a profit; here the resources are to be distributed by an invisible hand. This tool which manages the exchange on the free market has a very impressive career not only in the economics, but in the economy at large; bankers, entrepreneurs and liberal theorists all swear on the invisible hand, on the free market as an engine of economy and social welfare.

Considering this background, it is of most importance for the capitalist economy not only to obtain profit, but to assure a growing mass of it and if it is possible for long time; there is a tension between higher amounts of profit and its sustainability. Today the decision in this matter pertains to the management interested in bonuses depending of profits' amount. Therefore, financial instruments as futures, forwards contracts, derivatives, all devices constructed with a positive intent, to assure the protection against future risks, arrive to a negative action when they serve speculation and are massively utilised in order to enhance the profit; capitalism's logic becomes contorted.

Following this remark, I intend to discuss the dual nature of such financial instruments and lacking the possibility to clearly separate the positive and the negative aspects of them (because such separation is always contextual) I will study that duality in order to formulate and answer to a question concerning the public policies' influence on it. I hypothesise that to many times public policies are aggravating the negative side of financial instruments' action. However, in the market in itself the duality is present beside any intervention, but *a la longue* the market can make a selection of the viable firms, reducing the moral hazard.

Literature review

Given the numerous aspects involved in research, the literature of the subject is overwhelming. Being under various constraints, I will highlight only a few titles¹ with a double purpose: on the one hand, to show where there are grounds for my claims, and on the other to understand why my study is a novelty.

Olivier Blanchard and David Johnson *Macroeconomics* is arguably the best monograph to day of macroeconomics; it presents the nowadays theory of macro-economy and the relevant concepts to understand it; verbal, graphical and quantitative arguments are put at work in order to best understand the functioning of the economy on short, medium and long run and the influence of public policy on this functioning with special attention to the main tools of public policies, the fiscal and monetary policies. The authors highlight the importance of the Central Bank interest rate, quantity of money and inflation for the economic cycles. Despite the fact that in the analysed case of Tulipmania such elements like a Central Bank are lacking, the concepts and the theory presented in the book are essentially in order to understand the mechanism of the case that I have studied.

As my analysis concerns the first bubble in the capitalist economy, we have to consider some relevant contribution to the subject. Charles Kindleberger and Robert Aliber *Manias, Panics and Crashes* is classical in this respect; the authors make a systematic analysis of the types of crises, bubbles etc. manifested along the capitalism's evolution and they exemplify with historical events. In their opinion the Tulipmania is an euphoria generated by the boom specific to the economy of Netherlands after 1630. We have to retain that even from the beginning of the capitalist economy, the economic cycles were present and in boom there is an important risk of bubbles. By comparison with this classic, Cihan Bilginsoy *A History of Financial Crises* is the most recent

¹ Some of the titles mentioned here are lacking in the final bibliography where only the quoted titles are listed.

professional treatment of the crises topic with a special look to the financial instruments. In analysing the first capitalist bubble, the Tulipmania, Bilginsoy makes a detour on financial instruments like forward and futures contracts. As you can see below in the Tulipmania case we can find for the first time, not only the advantages of these contracts, but also their perils.

There are a few monographs on Tulipmania. Mike Dash *TulipoMania* offers a very valuable note on the prices and revenues in the years of the Netherlands' economy boom, after 1630. Such a note is very useful in order to understand how important was the bubble of the tulips. Dash makes also a poignant description of the bubble's burst started in February 1637. Obviously, the theory of the economic cycles wasn't yet formulated, but the conceptual tool is appropriate in order to describe the succession between the boom and the burst, the evolution of the tulips bubble. Another book, Anne Goldgar *Tulipmania*, more sociological in content has as first merit the description in detail of many contracts between the florists. And it offers data on contracts which continues to be realized even in March and April 1637 after the burst of the bubble, it is a very interesting information about the behaviour of the florists and about their perception of the bubble.

As it is proved in this article the intervention through public policies in the Tulipmania was minimal. But in order to discover that fact we have to master the analysis of public policies. *Handbook of Public Policy Analysis*, edited by F. Fischer, G. Miller and M. Sydney gives us the concepts and the theory of public policy and also makes an incursion in the analysis of the monetary policy. Despite that such an incursion is more suited for the recent evolution of the economy it can be relevant also, by comparison for the Tulipmania case. *The Oxford Handbook of Public Policy*, edited by M. Moran, M. Rein and R. Goodin offers also a perspective on public policies and their technicalities, but the most interesting topics of it concerns the influence that the economy has on public policies, that is a perspective inverse to that adopted in this article.

There must be mentioned two articles one of Peter Garber, *Tulipmania* from 1989 and the other of Earl Thompson, *The Tulipmania: Fact or Artifact ?* from 2007; each one rejects the idea that Tulipmania was really a bubble. Garber arguments that prices of the tulips' bulbs have a normal evolution, a cyclical one in the next decades. Thompson argues that in fact the market worked by converting the futures contracts in option exercise prices. My text is more in line with Thompson position at least insofar public policies neutrality is concerned.

In this context – which goes from the economic background to the Tulipmania case – what is missing is a link between the various aspects involved in the market game and regulation in the case of the duality of financial instruments; this is what I am trying to offer.

Methodology

I describe the many aspects implied in the case study that I developed.² It is important to be sketched the case picture with all its variables and parameters no matter its complexity. Mastering the complexity is our most challenging task.

Despite the fact that finance is a relatively recent science (a hundred years or so) historically speaking many of its component, tools etc. are present from ancient times in various philosophic or economic works (Rubinstein, 2006). That fact is of outmost importance for my research because we find the financial tools that I investigate along with all the evolution of the capitalism and even before; such tools are constructed in order to assure the profit (its growth and sustainability) and they display the dual character which interests us.

² I highlight that a case study is a collection of approaches which in this case implies quantitative data.

Because these instruments - when they are excessively used with a speculative purpose- are the main contributors to economic crises, to "manias – especially macro manias – [which] are associated with economic euphoria; business firms become increasingly up-beat and investment spending surges because credit is plentiful" (Kindleberger and Aliber, 2005, p. 9), we can say that crises are an excellent research domain in order to study the duality of financial instruments. Here I study only a local crisis, the Tulipmania, but the results that I obtain have to be read in an integrated manner with the results that I have obtained in another study, concerning The Great Recession, respectively The Great Depression, a study that I will present at FIBA³.

As I said due to the impossibility to universally separate between the positive and negative sides of financial instruments I concentrate my attention on the influence upon these of public policies – "public policies are considered to be any actions taken by governments that represent previously agreed responses to specified circumstances" (Mintrom and Williams, 2013, p. 4) – with the intent to demonstrate that such policies are not neutral, they substantially influence the economy and its results; in fact they are introduced exactly in order to orientate the economy in conformity with the political goals.

The hypothesis that I have formulated is a strong one because we can confirm it by a simple historical investigation where we will find that there are many moments nowadays in the developed capitalist economies or a few hundred years ago in an incipient capitalist economy, as the Dutch one, when the positive side of financial tools is paramount and in the nearest neighbourhood of such positive moments, even birthed from them, we find – generated by excessive speculation – the negative moments, the negative side of financial instruments' functioning⁴. Such findings are sufficient to confirm my hypothesis; this duality has a history which repeats itself almost unchanged. It is an illusion the fact that this duality will cease to manifest in the nowadays and future cases. That duality it is rooted in our human nature, in the fact that our interest for gain is dominant over the lessons of our prior failures; and to a great extent that interest is positive, but all excess finishes in negativity.

More interesting is the fact that the above-mentioned duality of financial instruments has another root in the nature of the capitalism which it "has been... permanently unstable and in flux" (Streek, 2016, p. 1); the capitalism is a permanent process which has in its centre the market, the exchange on the market; this process develops itself in a cyclical manner; the economic cycles exist because of this market process. Certainly, in order to analyse such a process, the macroeconomics works with the notion of equilibrium – "equilibrium output is determined by the condition that production be equal to demand" (Blanchard and Jonson, 2013, p. 51) – in fact, the equilibrium is only momentaneous. However, we can interpretate the economy as a whole which in its very complicated phenomena and processes is in search of its equilibrium; and we can say that most of the time the financial instruments are strongly contributing to this search, therefore they have a positive contribution; but there are also very important moments when, as I said these instruments show their negative side and contribute to generating crises. Such moments of crisis have very important negative consequences not only on the economy, but on the society at large; however, from an epistemological point of view they are privileged moments which permits us to know

³ Finance and Banking Conference.

⁴ Nowadays we can see striking examples of consequences entailed by these duality: "in 1983, the financial sector generated 5 per cent of the United States' GDP and accounted for 7.5 per cent of total corporate profits; in 2007, the United States financial sector generated 8 per cent of GDP and accounted for 40 per cent of total corporate profits" (UNCTAD Task Force, 2009, pp. 21-22).

better the capitalist economy and society and, in our case, to know better the duality of the financial instruments.

At first view the interest for the impact of public policies on the economy can appear as exaggerated, because such policies are entirely controlled by the politicians therefore it seems that it is easy to deal with these policies. And at the technical level, however extended and various is the literature, it seems that concerning the economics cycle and the crises there are only two simple rules to be applied: a). the perils being overheat in expansion and drying in recession, we have to act counter-cyclically, b). accordingly, when the economy is in crisis we have to introduce stimuli and help it restarting.

So theoretically things are simple; in fact they are much more complicated; many times we wonder why the politicians doesn't adopt such simple rules, why they hesitate or even are incoherent. Moreover, too often we find that the public policies adopted are contradictory with these simple rules and the question *cui prodest?* becomes unavoidable; and the answer uncomfortable. When you see that the economy overheats due to excessive speculation and the regulator does not intervene you can say that the free market is respected; but when you see the same regulator adopting a bail-out policy when financial institutions are in crisis you wonder if such an intervention is respecting the free market; it doesn't respect the free market; moreover such a position is contradictory with the previous one; it is obvious that the politicians support the internalisation of the profit and the externalisation of the losses by the financial institutions under the pretext of *too big to fail*.

Results and discussions

I discuss the Tulipmania; there are two preliminary problems concerning this first bubble of the capitalist economy; the first one concerns even the fact if the Tulipmania was a bubble; the second one concerns the fact if - in the case that Tulipmania was a bubble – that bubble generated a crisis, also the first in the history of capitalism. I want to highlight once again that my main problem regards the influence of public policies on an economy, especially when that economy is in crisis or knows a bubble, in order to discover the consequences for the duality of financial instruments. At the first preliminary question the dominant answer is that the price of tulip bulbs evolved as a bubble "some analysts, especially those with a strong commitment to rationality and market efficiency, have questioned whether the use of the term bubble is appropriate... did the decline in the prices of tulip bulbs lead to a decline in economic activity? The answer is yes." (Kindleberger and Aliber, 2005, p.99-100). I adopt that position. There is a contrary one expressed by Peter Garber which supported by an inventory of bulbs prices on medium run affirms that there is no a bubble generated by tulips: "Individual bulbs then could still command high prices six years after the collapse... Even from the peaks of February 1637, the price decline... over the course of six years was not unusually rapid" (Garber, 2000, p. 64). Concerning the second preliminary question the dominant position is that the tulips bubble didn't create a crisis, it was no more than a local crisis: "the tulip crisis of 1637 had an adverse effect on the Dutch economy as wealth declined...but the bulb trade was marginal to the economy. Most florists were dealing in bulbs as a side activity, and the collapse of bulb prices did not necessarily mean widespread bankruptcies and suspension of their usual economic activities" (Bilginsoy, 2015, p.27) I share this position. Therefore, I discuss the bubble, its financial tools, their duality and the existence and influence of public policies.

With the Tulipmania we are in the capitalism's commercial phase in the most developed country, United Provinces, which as its name indicates is a federal structure made of Dutch provinces; there were organized as an entity governed by provinces' representatives; it was a

government which stimulated commercial activity. Between 1600-1750 the country was the most important commercial force in the world, “the Dutch merchant fleet around 1670 was larger than that of the rest of Europe put together” (van Zanden, 2001, p. 79). That fleet operated in America and in Asia extracting an important profit based on differences between prices and this profit encouraged the local production of goods and the participation in the trade of a significant size of citizens. Moreover, the capitalist behaviour spreads in the Dutch community and has a determinant role in the evolutions discussed here.

We can add that to this development contributed other factors; e.g., in line with Weber’s explanation of capitalism, one affirms that “the great economic dynamism of the United Provinces sprang from the capitalist spirit that lay deep in the Protestant ethic... [and] the decisive role played by natural resources and technological factors” (Guenzi, 2006, p. 71). In the explanans of Dutch development we can include – besides the republican government and the protestant religion which both stimulate freedom – various categories of immigrants: Southerners with technical know-how attracted by the Dutch welfare, Jews with financial knowledge (they were determinant in the activity of the first stock exchange in the world, that from Amsterdam where Saturday worked less than a half of investors) and Jesuits excellent in organizing the education (these two last categories were expelled from Spain). As a consequence, one can say that „the Dutch were to seventeenth-century trade and finance as the British were to nineteenth-century trade and finance” (Garber, 2000, p. 22).

This is the essence of the economic development, but due to this growth which permeates all the economy and the actors involved in it the change of the Dutch society at large is remarkable. For the first time in history, we can see capitalism at work: entrepreneurship, free market, very specific labour division, an important number of employed workers in manufactories, but also in agriculture, alongside with crafters and merchants, even welfare and a growing amount of resources distributed to a large extent among citizens. As it is normal such an evolution comes also with not so good capitalist phenomena as excessive speculation and concurrence with profit as main driver. Against this background we can see how “the scarcity of tulips... is central to a proper understanding of the bulb craze” (Dash, 2000, p. 102) and we have the occasion to see for the first time at work the duality of the financial instruments which are present in the most developed capitalist society of the epoch.

Relative prices tell us very much about the preferences in a society and according to the institutionalist school of economic thinking are determinant in explaining the change of institutions. Let’s see some numbers; first of all, the annual earnings: 250 guilders a carpenter, 750 a university professor in Leiden, 1500 a merchant; then a very striking price for comparison *The Night Watch* of Rembrandt was sold for 1600 guilders; now the other term of comparison, as it is attested the most expensive tulip bulb was sold for 5200 guilders (Dash, 2000).

As I said the positive side of financial instruments mainly consists in the fact that they are shields against uncertainty. If we look at the tulips, their blooming is short in the summer and the one who buys the bulbs takes a risk because he doesn’t know the quality of the flowers; he buys in the summer the bulbs and plant them a few months later and expects for a year to see the result, undoubtedly “the high level of uncertainty surrounding the transactions” (Dash, 2000, p.19). As long as the cultivation of and commerce with tulips remained in a very small circle of specialists, even though the prices on the market were high, there was no mania, no bubble; at the beginning of the XVII century the risks were low because in this trade were involved only the specialists, a few traders. But the success of this trade becomes after 1630 more and more attractive because the demand for tulips in all Europe was growing; therefore the nature of the trade changed: initially,

the cultivators were the traders; now we see the persons who have another occupation intervening in tulips trade; frequently craftsmen take the opportunity to make some additional profits; these are the florists, the *bloemisten* which implies themselves in cultivating the tulips, or they intervene in the trade as middlemen (Dash, 2000).

We have to distinguish between the specialists and the *bloemisten*; the discussion I make on financial instruments' duality concerns the florists because on one side their actions are quantitatively significant and on the other side the specialists didn't enter in the analysed mechanism (maybe the statistics advanced by Garber concerning the perpetuation of high prices on the medium run are explained by this behaviour of the specialists) because they work with varieties⁵. We can see the importance of the florists and commons from the measure taken in 1634 to standardize the commons and to measure them through a unit named *ace* which is 1/20 g. Such standardisation facilitates the application of financial instruments.

The forward contract⁶ was the most frequently used financial instrument in the florists' trade. In the trading process the spot market implies an immediate exchange between the seller and the buyer; each one executes instantly the contract supposed by the exchange. The economic process develops in time, some goods are delivered sometime in the future; in order to guarantee to the buyer the delivery of a good at a settled price and to the seller a demand for his product also to the contractual price, the two parties make a contract concerning this delivery in the future; such a contract has provisos concerning the quality of the good, the quantity, the price etc. In fact, it is a shield against risk, but it implies gain and loss (due to difference between the settled price and the market price at the moment of the delivery). We already have seen the presence of the duality because on the positive side the forward contract tackles the risk, on the negative one it stimulates the speculation on the difference between prices. When the florists adopted the forward contract they had as a model Amsterdam stock exchange where futures⁷ are already present; but we have to say that since 1610 Amsterdam's authorities allowed the trade of the futures only between the owners of the shares at the instant when the contract was sealed (Garber, 2000). Unlike the contracts traded on the stock exchange there is no regulation for the forward contracts between the florists. The forward contracts were very attractive for the florists due to the life cycle of the tulips with bulbs planted in the fall and blooming in the summer; in the absence of any guarantee that the new flower has the qualities of the previous one the forward contract stipulates the termination of the contract if the bulbs failed to produce the expected flowers; otherwise, the buyer is compelled to respect the forward contract. It is important to observe that most of forward contracts are based on credit offered to the buyers by the sellers backed by a promissory note⁸ of the buyer; but, in a smaller measure, credit of banks was used by the buyers (Bilginsoy, 2015).

There is a positive behaviour of different firms to leverage their financial resources in order to invest and produce more goods and to obtain a bigger profit. The leverage as such is not a financial instrument, it is more a class of financial instruments that leverage is based on. It has to be said that leverage is a positive device characteristic to the capitalist economy, it is even an essential contributor to economic growth. In order for the leverage to not imply significant risks it must be in a health ratio with one's own funds; under Basel Agreement III this ratio must be 1/1.

⁵ *Varieties* refers to very rare and highly priced bulbs, while *commons* refers at lower priced bulbs cultivated in significant quantity.

⁶ Unlike futures forwards are not traded on an (stock) exchange.

⁷ Here we speak of futures.

⁸ In fact in early XVII century the terms were not settled; the content of such documents was somewhere between nowadays formal promissory note and informal IOU; a primitive form of accounts receivable.

In Amsterdam stock exchange in the XVII century leverage is already massively present under the form of credits offered by banks. Given the context of growing demand for tulips the florists wanted to trade more and more quantities of commons; therefore, it was natural for them to resort to leverage having as a model the stock exchange. As I said, leverage is a class of financial instruments; the florists which were interested in realising more and more forward contracts used in the first place the promissory note and secondary the credit from banks in order to augment their disposable cash (Bilginsoy, 2015).

I consider the cascading forward contracts as a third financial tool used by the bloemisten in their trade with bulbs. An initial forward contract can be speculatively used by the buyer by selling his rights to a new buyer at a higher price than that which he paid initially; and this new buyer can also sell his rights and so on. Obviously, all persons included in this chain of selling and buying wants to make a profit from the prices' difference along the intermediary sequence of the chain and the last buyer hopes that his paid price will be lower than the price for the bulbs at the moment of the delivery by the initial seller. This tool is positive when it produces profit or when it assures the exit from the business of a florist in difficulty (Bilginsoy, 2015). But its negative consequences are unavoidable when too many cascading forward contracts fail to obtain the final profit.

It is obvious that the main financial instrument is forward contract which is connected with its own cascading application and with leverage (promissory note and credit). The forward contract works very well when it is not excessively used with speculative purposes; even in this case if the forward works without politicians' intervention it affirms its educational force by penalizing the speculation; the loss incurred is a strong stimulus for a good behaviour in the future. By contrast an exogenous intervention from the regulators introduces moral hazard and ruins the merits of competition.

Considering Tulipmania in this context, it is obvious that these financial instruments trespassed their beneficial, positive exercise; they were used in a highly speculative manner and generated a bubble and even a local crisis. Fortunately, the authorities practically didn't intervene and the bubble wasn't augmented. We are in the presence of a rare abstention of the authorities from taking measures when a bubble is created. As I said I am interested in observing the influence of the public policies on the duality of financial instruments; my hypothesis was that the public policies can aggravate the negative side of the duality. By investigating the Tulipmania I have seen that this negative side of financial instruments was generated by the behaviour of the florists, but in the same time I discovered some interesting facts concerning the intervention of the authorities through public policies. First of all, these authorities didn't hesitate to introduce in 1610 a decree forbidding the futures having as object the shares not owned at the respective moment. To adopt such a policy demonstrates that the regulated object is important in itself or by its consequences. Concerning the florists and their activity in the first place it must be said that the authorities despite that they do not prohibit the forward contracts they didn't enforced them; in fact, the public authority refuse to intervene⁹. There were some interventions made by the authorities, but with local or temporary effect: the parliament imposed a temporary suspension of the forward contracts; or in Haarlem the city council decided that the contracts to be liquidated at 3,5% of initial value. The sellers in the absence of the state's intervention decided to terminate the contracts at 10% of their value (Bilginsoy, 2015).

⁹ We can observe that this abstention can be regarded also as a public policy.

In more recent crises we can see a massive intervention of the state in favor of one or another part of crisis' actors. The bail-out policy taken for banks – despite the fact that the first move has to be bail-in – is a measure which externalizes the losses of the financial institutions which previously internalized through their action the gains completely disregarding the risks of crisis. By comparison the state authorities in the Tulipmania acted in a very responsible manner; they didn't adopt policies in favor of the florists, they didn't intervene in the market. We can see that at its debut the capitalist economy and the capitalist society at large were fair ones. Such a behavior was exemplar and avoided future bubbles and crises despite the fact that the price of the tulips varieties was high for a long time.

More important seem to have been the negative consequences of Tulipmania in terms of morals and behaviours of citizens, especially in relation to family life. There are relatively numerous reports of men and even women who lost their honourable behaviour during speculation and immediately after its collapse (Goldbar, 2007). These issues may be interesting for behavioural economics, but are not relevant in our context.

It is useful to make some comparative remarks with the Great Recession in order to have a better reception of the result obtained in the present study (as I said I develop this aspect in another text). The most impressive aspect is that the Tulipmania can be read against the background of the Netherlands' economic cycle where it appears and develops on the boom phase of the early 1630 and fades on the burst phase starting with 1637. Also, we have to highlight that there is no Central Bank therefore there is no monetary policy which can induce inflation by cheap money (low interest rate) or by fiat money, neither is an important addition of gold (like in Spain), therefore the Cantillon effect doesn't apply. By comparison – and I refer only to the core of the capitalist economy, that of the U.S.A – in the '80s was permitted to the banks to combine their deposit and investment purposes and also the Fed stimulated through cheap money (especially after 2000) the banking expansion. This was a monetary policy which substantially contributed to the real estate bubble of 2007-2008. A characteristic of this evolution was the formidable development of the speculative activity of the banks, as I wrote *supra* in note no. 3: the financial industry gains in 2007 a percentage five time bigger from the corporatist profit than its contribution to the GDP. Then, after the burst of the real estate bubble in 2008, the financial industry is the main beneficiary of the monetary public policy of quantitative easing which quadrupled the monetary base, that being a perfect example of Cantillon effect realised through bail-out. This is a major example of how public policies can substantially aggravate the negative side of the financial instrument implied in generating the real estate bubble, mainly CDO and CDS derivatives.

Conclusion

As I said, there is a rich literature on each of the issues addressed in this paper: macroeconomics, financial instruments, crises, public policy, even about the dual nature of financial instruments and the incoherence of public policies in the field; my contribution is connecting these aspects and studying this connection on a case. The scarcity of data and the incipient development of financial instruments and public policies did not prevent us from noticing that the lack of public policies is better than the presence of incoherent public policies. In the absence of state intervention, the market was able to exercise its action of eliminating excesses and educating the actors. Unfortunately, things are essentially different in recent times.

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