MACROECONOMIC POLICIES IN THE AFTERMATH OF THE CRISIS: MAINSTREAM AND NEW KEYNESIANISM

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ABSTRACT

The failure of the macroeconomics' mainstream to provide a suitable set of instruments to understand and fight the economic crisis, which started in mid-2007, triggered a debate among the dominant theoretical tendency on its own foundations and on the macroeconomic policy that should be implemented after the crisis. The aim of this paper is to investigate to what extent the crisis will have consequences for the macroeconomic policy guidelines recommended by the mainstream and to identify which school of thought will, more seemingly, provide its pillars. It is argued that the new keynesians, already dominant in the so called New Consensus Macroeconomics, are currently in a process of transformation, adapting their models for some aspects of the observed reality in the referred crisis through the incorporation of new variables and ideas, originally defended by other schools of economic analysis. The main change that can be observed is the recognition of the financial system's non-neutrality, which leads to the acknowledgement that the monetary policy guided by one instrument, the short-term interest rate, and by one target, the inflation rate, is insufficient to simultaneously lead to a stable and near potential output growth and to keep the financial system's stability. Based on these developments, they open up room for new dimensions of macroeconomic policy within the mainstream's theory, particularly the macro-prudential policies.

KEYWORDS: New Keynesians; Macroeconomic Policy; Mainstream; Macroeconomic Theory; New Consensus Macroeconomics.

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1. Introduction

Throughout the economic crisis that started in 2007 in the United States, the governments used various economic policies instruments that, until recently, were considered unsuitable by mainstream economics and, at least, would generate dissatisfaction to financial markets' agents. As a crisis' secondary effect, a debate about mainstream's macroeconomic theory and policy was triggered, even within the dominant tendency.

In February 2010, the IMF published a paper entitled "Rethinking Macroeconomic Policy" (Blanchard, Dell'Ariccia and Mauro, 2010), signed by the chief economist of the institution and two others IMF's staff members, which stated that several of precrisis policy guidelines, usually recommended as a solid macroeconomic policy, had significant flaws or even were not correct. This paper intends to investigate to what extent the crisis will have consequences for the mainstream's theory and its normative aspect, that is, the recommended macroeconomic policies, and to indicate that, among other schools, the new keynesians are a very strong candidate to continue providing its pillars.

We argue that there is evidence that a meaningful change is occurring within mainstream's theory, driven primarily by new keynesians. That is, they, who were already the dominant school within New Consensus Macroeconomics, have stood in front of the reform process of their own models and have already incorporated some other schools' criticisms to their research. In this process of reconstruction, the trend is to reduce the importance of new classical school within New Consensus Macroeconomics and, despite the fact that new keynesians already had a prominent role, they will strengthen their position by comparison with the precrisis framework, reinforcing their dominance. This does not mean that other schools of thought will be satisfied with the changes implemented by them; neither do we defend that the

changes made are sufficient. But the recognition of financial system's non-neutrality within mainstream economics, which will be discussed later, is obviously an advance.

We are less concerned here with explaining the origins of the crisis, as our focus is the changes brought by it within mainstream's macroeconomics. Nonetheless, as these changes are a necessary result of the interaction between the facts and the way one interprets it, we will, whenever needed, discuss aspects of the crisis interpretation from the new keynesian perspective, as we will not cover shifts in other schools of thought.

Besides this introduction, this paper is composed of four sections. In section 2, we present the macroeconomic theoretical framework and the derived policies, which constituted a standard model for policy makers in the precrisis context. We start with a brief description of the New Consensus Macroeconomics ideas, showing that although new keynesians are not the same as New Consensus Macroeconomics, they provided the final form of its models. The description will cover the mainstream monetary policy, within an inflation targeting regime, and fiscal policy, aiming to establish a set of recommendations in order to analyze the recognized flaws and possible changes from a new keynesian point of view.

In section 3, we discuss, by means of a review of some papers published by important new keynesians after the worsening of the crisis, in which the new keynesian normative model flaws are recognized and point to be the possible new dimensions of macroeconomic policy in mainstream's framework. We will show two different crisis diagnoses, which mean two different consequences for the macroeconomic theory discussion, highlighting the main divergences between them for monetary, fiscal and macro-prudential policies. In section 4, an overview of the dominant thinking changes will be made in order to, in the conclusion, discuss the hypothesis that there is a change ongoing within mainstream's theory and that the dominant thinking in this new framework will continue to be new keynesian.

2. New Consensus Macroeconomics policies framework before the crisis

Since the 80's, the research moved towards a compromise between new classical and new keynesian, basically by the use of some new classical theoretical concepts and methodology by the new keynesian, adding microfoundations and some market failure in the models. With this theoretical framework, a set of essentially new keynesian macroeconomic ideas have been composed, from which result some optimal macroeconomic policies, usually recommended by most economists and by a variety of institutions which, in some sense, are part of the economic organization. The resultant set of ideas that became today's mainstream is usually called New Consensus Macroeconomics (NCM).

The NCM is the macroeconomics' mainstream[3], as it dominates the research, is taught in most of the top universities, receives funding from many important research foundations and has been recently awarded the Nobel Prize. The new keynesians, in turn, are the most recent dominant school of thought within the mainstream. In consequence, much of the research and the operational practice of central banks and governments are based on the principles propagated by them, particularly since the 90's.

In general, the new keynesians models are the final form in which models appear within NCM. They were developed from the basic real business cycle (RBC)[4] model into a walrasian general equilibrium with endogenously determined rational expectations[5], but under some alternative assumptions. Instead of starting from a model with perfect competition, without

[3] According to Dequech (2007), the mainstream economics is "that which is taught in the most prestigious universities and colleges, gets published in the most prestigious journals, receives funds from the most important research foundations, and wins the most prestigious awards". On the other hand, orthodox generally refers "to what historians of economic thought have classified as the most recent dominant ,,school of thought"" (Colander, Holt e Rosser, 2004: 490).

[4] In which the fluctuations are mainly explained by technological shocks and transmitted to the economy through real wages and intertemporal substitution in labor supply.

[5] In the stronger version of rational expectations hypothesis, which derives from Muth (1961), the subjective expectations of economic agents will coincide with the right and objective model of that variables, even if they don't know exactly the "correct" model that describe the economy. It is important to emphasize that this does not mean that the agents can correctly predict the future. Agents can make mistakes in forming their expectations, as this hypothesis allows forecasting with incomplete information. But, with rational expectations, on average, expectations will be correct, i.e., will be equal to the observed value. See Snowdon and Vane (2005: 226).

asymmetric information, externalities and other market imperfections, such as the RBC models, the new keynesians adopt monopolistic competition, nominal price and wage stickiness and they consider the possibility of other market imperfections. So, the new keynesians[6] reject the idea of continuous market clearing, through the incorporation of some market frictions, showing that the new classical conclusion about macroeconomic policies ineffectiveness[7] comes from the adoption of this hypothesis, not from the incorporation of rational expectations.

From the new keynesian model, we can enumerate three relations, according to Blanchard (2008) and Clarida, Galí and Gertler (1999):

i. an aggregate demand relation, as follows

$$y_t - y_n = -\varphi(i_t - E_t\pi_{t+1}) + E_t(y_{t+1} - y_n) + g_t \quad (1)$$

where $y_t - y_n$ is the output gap, E_t represents the expected value in period t for the period t+1, i_t is the nominal interest rates in t, π_{t+1} is the inflation in t+1, $(y_{t+1} - y_n)$ is the expected output gap in t+1 and g_t is a disturbance term that obeys

$$g_t = \mu g_{t-1} + \hat{g}_t \quad (2)$$

where $0 \leq \mu \leq 1$ and $\hat{g}_t$ is i.i.d. random variable with zero mean and variance σ_g^2. In this relation, the output depends on the demand and the demand depends on the anticipation of future output and on the future real interest rate. The real interest rate is important to determine present consumption due to the intertemporal utility maximization, which, in turn, reflects an expected opportunity cost of present consumption in terms of future consumption.

ii. a Phillips curve

$$\pi_t = \lambda(y_t - y_n) + \beta E_t\pi_{t+1} + u_t \quad (3)$$

[6] According to Mankiw (2006), the new keynesian work "was not revolutionary, but it was not trying to be. Instead, it was counterrevolutionary: Its aim was to defend the essence of the neoclassical-Keynesian synthesis from the new classical assault".

[7] Sargent and Wallace (1975, 1976) were the first to propose the ineffectiveness of macroeconomic policy. If the policy makers announce they will make a monetary expansion, firms will raise their prices knowing (expectations rationally formed) that there is no change in relative prices. If the agents are taken by surprise, although, it is possible that the monetary expansion have some temporary effects. However, the recurrent use of this mechanism will only make the authorities intentions less credible and increase the disinflation costs.

where $(y_t - y_n)$, E_t e π_{t+1} defined as in equation 1, π_t is the current inflation and u_t is a disturbance term that obey

$$u_t = \rho u_{t-1} + \hat{u}_t \quad (4)$$

where $0 \leq \rho \leq 1$ and $\hat{u}_t$ is i.i.d. random variable with zero mean and varianceσ_g^2. Thus, the present inflation depends both on the current output and the expected inflation. This relation is valid only for the short-term, since on the long-run the output depends on supply conditions.

iii. a monetary policy relation (Taylor rule), which should be used to find the appropriate interest rate to keep inflation on target, given a particular output gap. The first version of the Taylor rule can be described as below

$$r - r^* = a(\pi - \pi_M) + b(y_t - y_n) \quad (5)$$

where r is the real interest to be pursued, r^* is the neutral real interest rate, $(\pi - \pi_M)$ is the deviation of current inflation relative to the target inflation, a is the coefficient which reflects the sensibility of interest to inflation variations and b is the coefficient which reflects the sensibility of interest to variations in the output gap. The neutral real interest rate and the natural output, which are, actually, estimated variables, are assumed to be known. From the Taylor rule, the inflation targeting regime emerged and imposed itself, as a mean to manage the agents' expectation of inflation.

Although there are a variety of new keynesian models, the main normative aspects are captured in this simplified model. Explicitly and implicitly, the main conclusions about the best macroeconomic policy that should be adopted are included in it.

It is important to note that the new keynesians have very little in common with the keynesian tradition. As stated by Sicsú (1999: 97), the convergence occurs only on the acceptance that "the short-term is the economic context in which there are market failures that may explain the possibility of equilibrium below the full employment". However, from a non-mainstream perspective, they have an advantage over new classical, as they positively pursue

"realism to corroborate their assumptions of rigidity of certain variables". This way, even though the simplification of the model remains noteworthy, the new keynesians try to use, at least in some degree, a certain amount of realism in their hypothesis.

After this brief statement on the theoretical basis which led to the NCM, backed by a model which uses the RBC methodology with alternative hypothesis, namely, the possibility of market frictions, the mainstream's policy recommendations will be discussed.

i) Monetary policy

Assuming that the inflation has many costs[8] and that its stability is a condition to keep output growing by its potential in the long-term, the inflation targeting regime was developed. This theoretical framework leads to the belief that central banks' main target when formulating monetary policy is to keep the prices relatively stable. With that purpose, central banks need to have autonomy in the monetary policy conduction.

The inflation stability, in this model, more than a condition of existence, guarantees an output growth very near to its potential[9]. For the purpose of keeping inflation low and stable, the monetary authorities must act in order to create a nominal anchor, i.e., looking for a convergence in agents' expectations of inflation to a determined point (or target). As the inflation targeting supposes both central bank independence and its focus on the price stability, eventually the inflation expectation of the agents will be the target itself, if the central bank has a history of credible policies. The desirable preconditions to adopt this system are, as reported by Farhi (2007): institutional independence of central banks; well-developed technical infrastructure;

[8] The costs of inflation relates mainly to the non-predictable rising prices; the main costs are the loss of allocation efficiency, distortions on income distributions and on market prices mechanism, as well as increased uncertainty, which lower the investments and the economic growth.

[9] The idea that inflation targeting would be great both for inflation and the output growth were baptized by Olivier Blanchard e Jordi Galí "divine coincidence" (Blanchard, 2008: 215). Blanchard, Dell'Ariccia and Mauro (2010) recognize, however, that it is not empirically proved, as the output gap is an estimated variable.

totally unregulated prices, as well as low sensitivity to commodity prices and exchange rate shocks; the financial system should be healthy and there can be no fiscal dominance.

This model has been adopted in several countries, in some explicitly and in others implicitly. The degree of rigidity inherent to the model, which increases or reduces the potential impact in other macroeconomics variables, depends on some aspects of the implemented model, as suggested by Bernanke and Mishkin (1997): definition of the target as a band and not a fixed point; the kind of price index used as target; and the time horizon to reach the goal.

In most of the countries, as stated by Blanchard, Dell'Ariccia and Mauro (2010), there was some flexibility in the applied inflation targeting. That is, beyond the rate of inflation, other socially relevant goals had been considered when managing the monetary policy, such as output and employment. Conventionally, the developed countries established a 2% inflation target.

The short-term interest rate (usually the overnight rate) was considered the only monetary policy instrument. Its transmission occurs, as defended by the inflation targeting theorists, through the banks and financial markets interest rates and through the asset prices, not by the monetary aggregate (Blanchard et al., 2010: 5). In theory, the assets were linked through arbitrage, so the risk remuneration was negotiated in each contract. In this case, because of the arbitrage, it makes sense to have a short-term interest rate as the sole instrument of monetary policy.

ii) Fiscal policy

As regards the theoretical arguments about fiscal policy, there is less convergence in NCM's framework by comparison with monetary policy, even though we can find some common elements. In a broader sense, the norm was to defend a neutral fiscal policy, trying not to interfere in the monetary policy (which would reduce its effectiveness), avoiding fiscal

dominance. For Blanchard, Dell'Ariccia and Mauro (2010), there are a number of arguments used to neglect[10] its role as a central policy instrument. The main ones are:

- Skepticism about its effectiveness based on Ricardian equivalence arguments. This hypothesis states that the fiscal policy is not able to produce effects on economic activity, in the short-term, as it does not affect the households' permanent income. A tax reduction financed by debt does not affect households' permanent income, as the debt payment flows present value that are expected to be equal to the value of the bond, which is, in turn, the same value as the tax reduction (there is no change in income) (Blinder, 2004: 9);
- The monetary policy is able to keep stable output growth, so there is no reason to use another instrument;
- The time gap for fiscal policy to take place is high compared to the short duration of recessions (high internal lag). Although, as Blinder (2004) says, fiscal policy may have an advantage compared to the monetary policy, the shorter external lag, which means that, after its implementation, it has a faster effect to stimulate the output;
- Fiscal policy, much more than the monetary policy, is subject to political distortions;

Based on these arguments, the NCM ignored the fiscal policy as a convenient instrument of countercyclical policy. On one hand, they accepted the possibility of creation and operation of mechanisms within the public account, which could work as a countercyclical tool – the automatic stabilizers. On the other, they found it useful to turn to expansionary fiscal policy in case of a great shock, when monetary policy reaches its limits, in economies with difficulties in growing and escaping from deflationary risks.

Three aspects of the NCM's fiscal policy theoretical framework should be noted. First, one feature of the new classical revolution consisted in denying the discretionary fine tuning

[10] Nevertheless, Blanchard (2008: 216) acknowledged that the model's structure may have influenced the way the fiscal policy theories were constructed: "Because the model is clearly well designed to look at monetary policy, and also perhaps because central banks are rich institutions, with large research departments and conference money, there has been substantially more work on monetary policy than on fiscal policy."

defended by the neoclassical synthesis until mid-70's, then the mainstream of economics. No doubt this historical element contributed for today's refusal of fiscal policy in the NCM. The second point is that, unlike monetary policy, about which it is possible to create a technical rule to theoretically free the policy makers from political constraints, as regards the fiscal policy it is much harder to develop a mechanism that meets the need to break the discretionary character that prevails in public spending. And, finally, the third point is, as stated by Blanchard (2008), that the DSGE model's structure makes it difficult to work with fiscal policy without stepping outside of this specific kind of model.

iii) Financial Regulation

Under the assumption that the short-term interest rate is linked with other asset prices through the principle of arbitrage and that the real effects of monetary policy take place through the interest rates and the asset prices, financial intermediation would have no macroeconomic relevance, exception made for the credit channel of commercial banks (Blanchard, Dell'Ariccia e Mauro, 2010). Some aspects, such as the agents leverage or excessive exposure to one type of market would not have been taken into account when managing the monetary policy.

Therefore, financial regulation was not considered a macroeconomic policy tool and focused on banking institutions (micro-prudential), not on the markets (macro-prudential), with the aim to correct flaws that comes from the information asymmetry or other imperfections.

In the next section, we will show that the crisis was essential to trigger a new debate within mainstream economics about those earlier propositions. Although the NCM had for a long time been criticized by other schools of thought, the new keynesians only intensified the search for new dimensions to their models after the eruption of the subprime crisis, which allowed the serious flaws within the architecture of their models and the policies that derives from them to become clearer and to be criticized.

3. Crisis' lessons and the post-crisis New Consensus Macroeconomics policy framework

The NCM models could not provide proper policy tools to avoid the crisis outbreak. More than a statement of historically critical schools of thought, new keynesians themselves recognized many flaws in their models. In this section, we intend to show, from the new keynesian perspective, in which aspects the models failed, what lessons could be learned and discuss whether and how these lessons are being incorporated in macroeconomic theory.

The crisis began in mid-2007 after the increase in subprime mortgages default in the United States and has been spreading worldwide, in particular after Lehman Brothers' bankruptcy, causing restrictions in the interbank market and a sharp increase in risk aversion in global financial markets. Productive sector was soon affected due to deterioration in expectations, credit crunch, effective demand contraction and raise in unemployment. From then on, the crisis acquired systemic features and the policy makers used more creative and incisive measures, exposing a cleaner cut rift between mainstream theories and macro policy.

Raising questions and lessons about the crisis for the macroeconomic theory, Blanchard, Dell'Ariccia and Mauro (2010) assert that, although many flaws could be found, the main elements and conclusions of the pre-crisis consensus still hold. Thus, the natural rate notion should remain and the policy makers should not assume a long-term trade-off between inflation and unemployment. Nevertheless, they recognize that inflation (or core inflation) stability, as well as the output gap, may be necessary – and should also remain as final targets of macro policy – but are insufficient to design monetary policy.

Otherwise, the crisis has shown three essential problems within the new keynesian macroeconomics. First, with the inflation established around 2% in developed countries, nominal

short term interest rate[11] is settled at a very low level. In this case, if there is a need to ease monetary policy, as in the recent crisis, the nominal interest rate rapidly meets its zero lower bound, a liquidity trap[12] situation. If the inflation and nominal interest rate levels were raised, the scope of monetary policy is increased. So, a solution would be to set up a higher inflation target, around 4%, as a way to keep nominal interest rates higher. However, this new framework would potentially bring a new kind of problem, namely, a higher volatility of inflation and wage indexation (Blanchard, Dell'Ariccia e Mauro, 2010: 11), which, in turn, increases the output growth and reduces the monetary policy power.

The second one refers to the potential relevance of fiscal policy as a countercyclical tool, from the moment that monetary policy and quantitative easing reaches their limits and the crisis is expected to last. In this circumstance, the internal lag of fiscal policy would be not a barrier to public spending expansion. On the other hand, another fiscal question that arose after States' actions to avoid financial markets meltdown is linked with the strong rise both in public deficit and debt. The lack of fiscal space prevented the expansionary measures from going further, so it would be largely desirable to address this problem after the crisis, in order to create fiscal space. That means that fiscal policy should be countercyclical over both expansion and contraction, creating room to use this anti-crisis tool without excessive deterioration of public accounts.

The third problem that became clear is the assumption of non-neutrality of financial regulation in macroeconomic terms. The removal of legal limitation to financial institutions

[11] Though an inflationary shock was occurring in 2007 and 2008, mainly caused by increasing commodity prices, the developed countries' central banks were beginning to ease the monetary policy to address the problems raised on mortgage market. When the crisis worsened, the short-term interest rate was already in a low nominal level, which left less room for traditional countercyclical instruments.

[12] The precrisis discussion in the dominant thought did not find the zero lower bound a real problem. In their theoretical framework, if the nominal interest rate beats its lower value, the central bank should increase the level of inflation implementing a monetary expansion (quantitative easing) – or even announce a credible one. The announcement of a monetary expansion would raise future expected inflation and, as the current inflation depends on expected future inflation (equation 3), will cause the current inflation to be higher. In this case, with the same nominal interest rates, the real interest rates are lower than before. I.e., the central bank credibility could, indeed, "manipulate" agent expectations, according to the monetary policy needs. That would be desirable, but the crisis showed that in a world with large shocks, the deflationary pressure is much greater than central banks' capacity to anchor the expectations of inflation.

action offered incentives to regulatory arbitrage and the creation of Special Investment Vehicles and other financial conduits (seemingly independent companies with off-balance sheet results), allowing them to avoid some prudential rules and leading to excessive risk taking and leverage. Based on that experience, Blanchard, Dell'Ariccia and Mauro (2010) admit to consider non-commercial banks financial institutions as relevant agents to determine or spread financial crisis. This opens room for central banks to act as a lender of last resort in the case of lack of liquidity, in order to avoid deflationary spiral or financial system's infection.

Thus, to deal with problems such as agents leverage and deviations of prices of assets' fundamentals, the short-term interest rate is not the more appropriate instrument, as it negatively affects the output gap. Whereas the regulation should no more be seen as macroeconomically neutral, the solution would be to combine interest rate policy with the regulatory one, the former addressing aggregate variables and the latter, specific problems. This combination would increase the typical monetary policy range with the flexibility of regulation.

In this potentially different theoretical framework, a major problem to design the macroeconomic policy will be the need to have many targets (Blanchard, Dell'Ariccia e Mauro, 2010: 10). The recent discussions are organized around this multiple targets.

As regards the monetary policy, none of the changes of inflation target, suggested by Blanchard and his colleagues, were actually carried out – even because the focus now is the resumption of growth and the fiscal problem issue. The most recent mainstream economists' publications still keeps the standards observed in the precrisis structure. Main issues are the effectiveness of monetary policy on keeping inflation and output gap in stable and optimal levels, using the same dynamic stochastic general equilibrium (DSGE) models for simulation of alternative macroeconomic policies.

On monetary policy, some new keynesians incorporated some of the criticism of Blanchard, Dell'Ariccia and Mauro (2010). A more conservative approach can be represented by

Taylor (2009a, 2009b, 2010a, 2010b), for whom the government interventions, both after and during the crisis, "did more harm than good". Even though he recognizes a flaw in the precrisis consensus to ignore the financial dimension in the normative model, he considers that the policy errors worsened the crisis. The basic argument is that before the crisis, the real interest rates were kept for a long time below the one required by the Taylor rule, which lead the agents to a greater need of leverage – to keep their profits levels – and worsened the negative effects of United States' housing market boom. The agents took more risk and the increased foreclosures intensified the financial institutions' balance sheet deterioration.

During the crisis, the policies were more interventionist, which combined with a misdiagnosis of the problem's nature, led to inadequate action. According to Taylor, the problem that arose in the financial market, especially in the interbank market, was not a liquidity problem, but a counterparty risk, caused by large amount of junk bonds in financial institutions' portfolio and the consequent loss of equity. In the financial system, only after the announcement that the Troubled Asset Relief Program (TARP) funds would be used to inject equity in banks, rather than just buying bad assets, the spread in interbank reversed its upward trend – which corroborates Taylor's thesis that the counterpart risk was causing markets dysfunction[13].

In short, imbalances were caused because macroeconomic policy deviated from the optimal scenario, as the policies became more interventionist, less rule-based and less predictable than before (Taylor, 2010a: 166). From a normative point of view,

> For monetary policy, it means [...] returning to a policy with four basic characteristics (Taylor, 2010b): "First, the short-term interest rate (the federal funds rate) is determined by the forces of the supply and the demand in the money market. Second, the Fed adjusts the supply of money or reserves to bring about a desired target for the short-term interest rate; there is thus a link between the quantity of money or reserves and the interest rate. Third, the Fed adjusts the interest rate depending on economic conditions: The interest rate rises by a certain amount when inflation increases above

[13] But it must be noted that the Taylor (2010a) critique is restricted to immediate effects on observed interbank market spread, ignoring that a lot of banks had in fact liquidity problems. The U.S. government's program to buy junk bonds improved the quality of banks' balance sheet, which opened room for the perception of a lower counterparty risk. Therefore, this contributed both for the spread reduction and, especially, for the return of liquidity in the interbank market.

> its target and the interest rate falls by a certain amount when the economy goes into a recession. Fourth, to maintain its independence and focus on its main objectives of inflation control and macroeconomic stability, the Fed does not allocate credit or engage in fiscal policy by adjusting the composition of its portfolio toward or away from certain firms or sectors (Taylor, 2010a: 175)

John Taylor is a leading example of a new keynesian author that insists on maintaining the precrisis paradigm for macroeconomic policy, with the monetary policy based on rules combined with a non-active fiscal policy. However, in the crisis peak, he also suggested to introduce the spread of the financial system into Taylor rule, which therefore would affect the short-term interest rates in a distinct manner, if we consider the traditional Taylor rule[14] (Taylor, 2008: 4)

In a less conservative way, as it does not try to blame the interventions and policies as a cause for the crisis, Cúrdia and Woodford[15] (2010) also admit a failure to not take into account the financial system while formulating monetary policy and, from that, they redesign the new keynesian model.

The traditional new keynesian model used to consider a sole representative household to obtain the aggregate demand relation (equation 1). In this case, the financial intermediation would have no influence on the determination of equilibrium, since individuals were not differentiated as savers and borrowers. The first change proposed by Cúrdia and Woodford (2010) consists in a model extension to the case where there is heterogeneity in the preferences. The model keeps being constructed in a simplified manner, as it considers only two kinds of households: one more impatient that prefers to consume more now than in the future and other which prefers to save now to consume more in the future. There is, thus, an important space for

[14] The interest rate remains the only monetary policy instrument, despite the need for macro-prudential regulation. But if the central banks observe an increase in interbank spread, they should, through a clear and transparent rule, prevent financial institutions to bankrupt opening an exceptional credit channel (Taylor, 2009a: 25-27).

[15] Michael Woodford, new keynesian economist, wrote "Interest and Prices" in 2003, one of the most important mainstream's inflation targeting manuals.

financial intermediation through the credit market interest rate in the determination of aggregate demand. The heterogeneity incorporation has some implications for the monetary policy.

Monetary policy continues to be built in an inflation targeting regime, with the main focus on the stability of inflation (on target), but gains new dimensions. The interbank spread is included on the model, although not exactly in the same way as proposed by Taylor (2008)[16]. Similarly, the central bank balance is also incorporated into the model. The central bank's reserve policy (quantitative easing) should be based on a simple rule: financial "intermediaries should be satiated in reserves at all times, by maintaining an interest rate on reserves at or close to the current target for the policy rate" (Cúrdia and Woodford, 2010: 261-2)[17]. In turn, central bank credit policy should only be used in less common situations, when credit frictions are noted. In this framework, in normal times, the short-term interest rate remains the main monetary policy instrument and the financial variables need not to be taken as primer monetary policy target, but should be monitored. In short, the authors argue, in agreement with Blanchard, Dell'Ariccia and Mauro (2010), that

> One of our most important conclusions is that these issues can be addressed in a framework that represents straightforward extension of the kind of model often used for monetary policy in the past. (Cúrdia e Woodford, 2010: 261)

The new ideas inserted in the new keynesians models reach some very similar conclusions to the idealized by Blanchard, Dell'Ariccia and Mauro (2010) and keeps within new keynesian guidelines. The monetary policy, even into its new dimensions, still works as a technical instrument (non-discretionary), but they found a way to express a role for a monetary policy in a non-neutrality of financial system context. It remains a policy to deal directly with aggregates, leaving more specific questions to another level (regulatory policy), although this point does not appear homogeneously in the new keynesian recent papers.

[16] See Cúrdia and Woodford (2010: 249:252).
[17] That contradicts the theory of money exogeneity, on which most of new keynesians would agree.

The inflation targeting regime, as before crisis, is still seen as an efficient way to anchor expectations. Though, as remembers Blanchard,

> One reason for worry is, for example, the central role given to the anchoring of medium-term inflation expectations by central banks. The basic New Keynesian model implies that if the central bank is able to credibly anchor medium-term expectations of inflation, then the trade-off between inflation and output will be more favorable. The formal argument relies heavily on the Calvo-like specification of price setting, which implies that inflation today depends nearly one for one on inflation next year, which in turn depends on inflation in the more distant future. One may reasonably ask, however, whether price setters, choosing prices for the next month or the next quarter, will change their decision depending on what their expectation of inflation is in, say, five years. *Put another way, although we very much want to believe that monetary policy can anchor inflation expectations, I am not sure we actually understand whether and how it can actually achieve it*. (Blanchard, 2008: 222, our italic).

Moreover, the new keynesian's monetary policy new dimensions are only an attempt to repair what the model did not explain in the last crisis, but not a try to improve it structurally – such as defining endogenously more variables. Just as the precrisis models were insufficient to explain the crisis that was revealed in the financial system, there may be other forms of manifestation of crisis which the model will not essentially contain. That is, while making this "reform" of the theory on monetary policy formality, some structural issues remain outside the model.

Once the crisis began, it quickly became clear that it was much more intense than their predecessors after the Second World War. Monetary policy was soon eased, but stumbled at the zero bound. It then became clear that it was necessary to resort to expansionist fiscal policy in order to strengthen aggregate demand. For example, still in 2008, the U.S. offered a tax rebate, as a mean to increase available personal income – innocuous fiscal policy attempt, according to Taylor, since almost no effect was felt in consumption (Taylor, 2010a: 69).

Despite the great evolution in econometric methods since the early days of keynesianism, economists still find difficulties to empirically assess the fiscal policy effectiveness, hampering the recommendation of what measures should be adopted. For this reason, the great debate that

has taken place was no longer whether the fiscal policy should be implemented or not, but whether it should focus on increasing public spending or offering tax cuts.

Spilimbergo et al. (2008), members of IMF's research department, published in December, just after the Lehman Brothers bankruptcy, a paper in which they discussed the possible shapes that the fiscal policy should assume in that moment, highlighting also what should be its goals. They noted the prominent need to recover financial system's health, a *sine qua non* condition to stimulate and restore the aggregate demand recovery. Also, the fiscal stimulus should be

> Timely, (as there is an urgent need for action), large (because the drop in demand is large), lasting (as the recession will likely last for some time), diversified (as there is uncertainty regarding which measures will be most effective), contingent (to indicate that further action will be taken, if needed), collective (all countries that have fiscal space should use it given the severity and global nature of the downturn), and sustainable (to avoid debt explosion in the long run and adverse effects in the short run). (Spilimbergo et al., 2008: 3).

As well as Blanchard, Dell'Ariccia and Mauro (2010), they diagnose the crisis as a strong and potentially lasting one, hence rejecting the classical internal lag argument. By the time the text was published, the great majority of developed countries were already at the lower bound interest rate, indicating the need for fiscal policy.

In practice, Spilimbergo et al. (2008) recommend that the public spending should seek, first, to guarantee financing to the already started projects; quickly resume delayed or interrupted projects and also implement the projects originally rejected due to lack of funds. To stimulate consumption, since consumers lost wealth, suffered with credit rationing, besides the strong uncertainty environment in which they are inserted, policy makers should cut taxes or transfer wealth, especially for those who encounter difficulties in the credit market. At the same time, the authorities ought to show commitment to avoid the economy to get into a depression, in order to reduce uncertainty. Other kind of measures would be more uncertain and possibly would have a

lower multiplier effect[18]. On the firms' level, a lot of them may also find some funding problems, including cases in which the firm would have to declare its bankruptcy due to the lack of liquidity. In such a case, governments should act as a lender of last resort, to prevent the companies from failing.

In general, the fiscal plans should demonstrate to financial markets the way out of fiscal stimulus and to debt consolidation, to prevent the market from questioning state's solvency in the medium-term. It is important for the measures to be clearly reversible, that implemented policies eliminate distortions, amplify the scope of automatic stabilizers, and show how the deficit caused by present measures should be reverted in the future and to strengthen fiscal governance, increasing spending's transparency.

The measures that were adopted in practice are not far from Spilimbergo et al. (2008) recommendations, as they sought to mitigate the harmful crisis' effects in financial sphere, though huge stimulus packages to financial system (and most of the cash went for it) and to large companies in sectors which generated a great amount of jobs. The public deficit widened in a colossal manner, as well as the public debt. Nevertheless, the main factors that caused the rising deficit were the aid to financial sector and the drop in revenue – and to a much lesser extent, the increasing in investment[19]. In this sense, Taylor's criticism (2009, 2010a, 2010b) to fiscal policy shows only that a multiplier for a tax rebate is small, but greatly ignores the possibility that spending and public investment may have a greater multiplier effect.

> For fiscal policy, this means avoiding further debt-increasing and wasteful discretionary stimulus package, which do little to stimulate GDP. Ten years ago there was near a consensus that such programs were ineffective. Fiscal policy should focus on reducing the deficit and the growth of the debt-to-GDP ratio. (Taylor, 2010a: 175).

As a result of the widespread public account deterioration, global financial markets have responded in a very adverse way, increasing the risk premium over public debt through the credit

[18] Although the likelihood of success of other is not neglected, for example, the temporary, credible and short-term value added tax cut. Brazil is an important example of success in the VAT cut, as it reactivated durable goods consumption during the crisis.
[19] See Ruffing &Horney (2010).

default swaps (CDS). This was specially the case of some euro zone countries[20], particularly because they do not issue the currency in which their debts are denominated.

Despite some arguments against fiscal activism having been revived, Blanchard (2010) argues that, although governments must demonstrate a credible project to withdraw fiscal stimulus and a way to return to a sustainable public debit path, increase growth in the short-term using fiscal spending is necessary. That means that, even recognizing the need to adjust public account in the medium-term, IMF's chief economist admits that a fiscal contraction in order to achieve a public debt consolidation is premature and that fiscal policy contributed in a decisive way to avoid a further worse output fall.

The ideas defended by Taylor (2000), that the fiscal policy should focus on reducing public debt and not to interfere in monetary policy, seems to continue very strong within mainstream economics. Taylor (2009b) defends that fiscal policy, as before the crisis, should be based on fiscal stabilizers, on structural reforms to improve supply conditions and keep a favorable path (decreasing or, at least, constant) of public debt[21]. In this scenario, the view that denies an active fiscal policy will be supported by an important row of new keynesians, which were dominant before the crisis, seemingly without meaningful changes.

Regulatory policies and financial system supervision can be performed in two distinct ways. In the first, the focus is on micro-prudential issues, aiming to force the banks to internalize losses eventually generated, in order to protect the deposit insurance providers and reduce the moral hazard; in the second, from a macro-prudential point of view, the regulation effort is to control social costs associated with the shrinkage and loss of value of multiple financial institutions assets during a systemic shock (Hanson, Kashyap e Stein, 2010: 2-4).

[20] Mainly Greece, Ireland and Portugal, and to a lesser extent, Spain and Italy.
[21] Not even in the case of liquidity trap, Taylor (2009b) believes that discretionary fiscal policy should be used. The author quotes, for example, the Japan case, that only came partially out of its 90's depression after a strong monetary expansion - and not by the use of fiscal policy instruments.

Before the crisis, the regulation was constructed focusing on the micro-prudential dimension, largely based on the idea of the neutrality of the financial system and regulation and intended to avoid financial institutions to go bankrupt. The belief that self-regulation of financial institutions would be sufficient relied on the assumption that the first interested in remaining healthy were these institutions themselves, so they would manage the assumed risks in the best way.

Meanwhile, the huge financial institutions and insurance companies' losses, which assumed a very speculative position using OTC derivatives, and the Lehman Brothers' collapse, caused a halt in the interbank market, which, in turn, has highlighted the financial system non-neutrality (including non-banks financial companies). As we said earlier, new keynesians are seeking to incorporate in their monetary policy models the financial system's non-neutrality. In spite of Blanchard, Dell'Ariccia and Mauro (2010) recognition as regards the return of regulation, the new keynesian academic core[22] is not treating this issue more specifically, nor is giving it the importance highlighted by the crisis. Nevertheless, in the last three years, some of the most important new keynesian has been constantly concerned with a regulatory apparatus reconstruction, which should be consistent with the degree of financial system sophistication and the potential macroeconomic impact it can exert. In particular, it must be emphasized Olivier Blanchard, Ben Bernanke, the Fed chairman, and Alan Blinder, the Fed's vice-chairman in part of Clinton's administration.

Some publications, however, including important new keynesians, made important considerations of what should be the financial regulation for the post crisis. Blinder (2009) suggests some elements that must be present in a post-crisis regulatory framework, identifying precrisis' major failures. The main lessons that should be learned are:

[22] We are considering here the core new keynesians as those who participated preponderantly in the inflation targeting models drawing and have its main activity currently linked with the academia. Among them are John Taylor, Michael Woodford and Jordi Galí.

- The need for a systemic regulator: consists in identifying and preventing risks, which are big enough or growing enough to cause systemic risks, from extending between different classes of institutions or markets and are big or growing enough to cause systemic risks. The problem, as pointed out by Blinder (2009), is to realize *ex-ante* that the problems are not restricted to one institution, but refers to the system. Still, there is a lack of a more adequate methodology to this aim;
- A need for a solution for the too-big-too-fail and too-interconnected-to-fail institutions: these institutions were criticized for the moral hazard engendered by them, since the government will, most likely, not let them collapse in the case of huge losses. For this reason, they put at risk a great volume of taxpayer funds, besides the fact that they are in a unique position from the competitive point of view (access to cheaper funds). Two options are considered more interesting: first, to recognize that, inevitably, there will be too-big-to-fail institutions, but charge them for that benefit; a second solution would be to create a new mechanism to allow authorities to close broken financial institutions orderly, similar to the Federal Deposit Insurance Corporation (FDIC) actions for small institutions;
- Reform the regulatory institutions and cover potential regulation gaps – as, for instance, the case of virtually no regulation on OTC markets, in the Special Investment Vehicles (SIV's) and in the conduits that were left out of financial institution's balance sheet;
- Rationalize CEO's compensation, in order to avoid the incentives to excessive risk taking, as provided in the current remuneration scheme;
- Rewrite the rules to the financial institution's required equity, looking for a solution to the main problems within Basel agreements: the required level of capital is low and procyclical[23]; the regulation model out too much weight in the rating agencies and on the bank

[23] The required provisions for losses are lower in expansion periods and higher in recessive ones (due to a greater percent of bad debts). Thus, in periods with typically higher losses, the banks are obligated to worsen their results by increasing their reserves.

risk management, combined with the existence of off-balance sheet entities allowed in the precrisis regulation framework.

From another standpoint, Gertler, Kiyotaki and Queralto (2010) give a typically new keynesian approach to the micro-prudential regulation. They include in the model, in one of the simulated conjectures about bank markets and society welfare, the possibility of macro-prudential policy to counterbalance the incentive for excessive risk taking by the banks. An important conclusion of theirs is that macro-prudential regulation increases society's welfare, which in the new keynesian theoretical framework corresponds to an endorsement to new research in this area.

A relevant feature that remains unclear as regards macro-prudential policy theories is whether it will be treated as a distinct branch of study, not intended to be constructed necessarily into a DSGE framework, as done by Blinder (2009), or will be restricted to the incorporation of financial intermediation into the models, leaving aside the more specific problems related to the financial system's architecture. Additionally, it is also unclear whether the lesson of financial system's non-neutrality will remain on theoretical and rhetorical level of some economists and politicians or indeed there will be government actions to implement the necessary macro-prudential measures. Unfortunately, what we observe is that, from a political point of view, as soon as we had an advance on the recuperation of economic and financial activities, it became more complicated to carry out measures to limit the activity of financial entities. Therefore, even if a fragile economic recovery and with an increased risk of a double-dip recession, the political movements against reforms became stronger in the political arena.

4. An overview of mainstream's macroeconomic thought change

The process of conformation of a new set of macroeconomic policy is still far from being consolidated. But what Blanchard, Dell'Ariccia and Mauro (2010) tried to do is to guide the macroeconomic research in a reformist way, not revolutionary.

> This crisis was not triggered primarily by macroeconomic policy. But it has exposed flaws in the precrisis policy framework, forced policymakers to explore new policies during the crisis, and forced us to think about the architecture of postcrisis macroeconomic policy. (Blanchard, Dell'Ariccia e Mauro, 2010, pp. 16).

The gist of dominant thought in macroeconomic policy recommendations was, and remains so, to avoid discretion of any policy, trying to increase its predictability. This is clearly the concern of those who puts in the heart of theory the ideas that expectations are formed rationally, that there is potentially an inflationary bias of policy makers and macroeconomic policy should be guided (and is capable of doing so) to anchor agent's expectations.

Much research in this direction has already been published by new keynesians, most of them following the broad outlines of what recommends Blanchard, Dell'Ariccia and Mauro (2010). But even within new keynesian school, there are still two diverging lines in relation to what directions should be taken by macroeconomic policy, specially concerning fiscal and macro-prudential ones.

Some of the new keynesians who were directly involved on the rise and spread of inflation targeting are working on the reform, assuming that the models did not explain the crisis. Cúrdia and Woodford, for example, by publishing a paper reformulating the models that underlie the inflation targeting and include financial intermediation and bank spread as a determinant factor on macroeconomic equilibrium and, ultimately, deserves policy makers' attention.

Notwithstanding it has not been consolidated as a school of thought argument´s, in the sense that it has not reached its full normative potential, the monetary policy advances has been close enough to the heart of Blanchard, Dell'Ariccia and Mauro (2010) conclusions. For these

authors, the crisis showed that the pursuit of stable inflation is insufficient to guide monetary policy, but this does not mean that inflation targeting was completely wrong, as it helps to anchor expectations and to reduce disinflation costs. But, in this case, it opens up the possibility of criticism to the use of short-term interest rate as the only monetary policy tool, which, in turn, makes it possible for new instruments to enter in mainstream's theory, namely, the macro-prudential and regulatory policies as a macroeconomic instrument.

Other group of new keynesians, more conservative and headed by John Taylor, insists that the models were not wrong, but the policies, especially the monetary one, "got off track". This deviation led to the housing bubble and forced financial institutions into huge leverage. Although Taylor recognized, after the crisis eruption, that financial intermediation matters, his diagnosis of misconduct in the policy front makes it harder to support, even for new research within new keynesian structure, a major reform in the models. So, there is a point of divergence between Blanchard, Dell'Ariccia and Mauro (2010) and Taylor: while the former state that the crisis was not generated by policy errors, the latter says that the deviation of optimal policies caused the crisis.

Taylor (2010a) affirms that "we should get back on track", that is, we should return to the monetary policy's *modus operandi* adopted since the beginning of the 2000's. It is implicit that the instruments would remain basically the same which, therefore, means that the short-term interest rates should continue to be the sole monetary policy. In the same sense, fiscal policy was not successful because it did not generate a significant increase in consumption, as expected within the permanent income or life cycle theories. Thus, fiscal policy should focus, again, on stabilization or, if possible, reduction of public debt. Notably, the Ricardian equivalence remains between the lines of this group's statements.

As regards regulation, Taylor incorporated into the models the possibility that policy aims interbank spread reduction in the case of a crisis, which means that he recognizes the

possibility that the financial system negatively interfere with macroeconomic equilibrium determination. But the focus of macro-prudential regulation is reduced here to the intervention on interbank market, hence not including reforms to manage systemic risks and to remodel financial markets' architecture.

On the other hand, the other group of new keynesians, especially formed by members who have or had a strong connection to national and international policy making, is moving towards a less conservative position (but still so shyly, in face of the dimension of the underlying factor that is causing this process of "rethinking macroeconomics"). For obvious reasons, academic publications of these members are scarcer, but, both in the published articles and in the speeches, they show more commitment with changes. This group is led by Olivier Blanchard, but has other important members, such as Ben Bernanke and Alan Blinder. They are more tolerant with expansionist fiscal policy and supporters of the scope enlargement of macro-prudential regulation, which, combined with inflation targeting monetary policy, would provide a wider range to macroeconomic policies.

5. Conclusion

In the previous sections, we have shown some changes observed within new keynesian thought. The transformations on macroeconomic policies' theory can, as a result of the crisis, lead to four distinct scenarios within mainstream economics: a new school of thought arises, guided by a set of macroeconomic policies recommendations, which would be essentially different from the NCM; the NCM does not undergo significant changes, based on an academia and policy makers' satisfaction as regards precrisis mainstream's diagnostic and policies propositions generated by the models; the NCM is reformed, but maintain its previous essence; or, at last, establishes a situation in which no school of thought exert a dominance, an uncommon situation that would be indicated by a greater heterogeneity in cross-country macroeconomic

policies, in the most prestigious universities economics programs and in the most respected journals kind of published papers.

While there is still uncertainty about the direction, it is clear that a change is occurring into macroeconomics' mainstream. Nonetheless, this new wave of change inside mainstream's theory does not show a great distance from new keynesians' old format, for many reasons.

1. The new keynesians were swift to recognize that their models did not explain and provide an adequate treatment for the crisis. The IMF, whose economists' staff is formed essentially by new keynesians, has been offering, since the end of 2008, when the crisis worsened, non-orthodox alternatives of macroeconomic policy. As known, the IMF is an extremely important entity to corroborate economic theory (to put it in practice), in some cases enabling the theory to influence somehow the economic path. Its chief economist, Olivier Blanchard, was fast to head a movement pointing a direction that the theory that supports policies should follow, in a way that creates certain barriers to ideas that suggests greater discretion or more revolutionary changes within the theoretical framework.

2. Broadly, the methodology of recent publications in the most prestigious journals is still the same that has dominated macroeconomics since new classical revolution[24]. The models are still constructed in a dynamic stochastic general equilibrium apparatus, using the natural rate and rational expectations hypothesis, constructing macro models with neoclassical microfoundations. This shows that the convention and the belief in methodology has not been considerably shaken, which allows us to conclude that there is room for the simplicity of traditional macro-models to continue prevailing, which means that the model will keep working with aggregates. We must mention that, although the main lines of methodology were not disturbed, there is a small divergence from traditional new classical methodology when the models include heterogeneity on households' preferences, as done in Cúrdia and Woodford's (2010) model.

[24] See, for example, Cúrdia and Woodford (2010), Gertler, Kiyotaki and Queralto (2010), Blanchard and Galí (2010).

3. There is only an ongoing reform of the theories which backed up the optimal policies recommendation. The main conclusions within theoretical mainstream economics still holds, despite the fact that there are some ideas that originally were out of NCM's models, notably the non-neutrality of financial system and the regulatory and macro-prudential policy dimensions.

4. Inside the current economic thinking, there is no major threat to new keynesians' position as the current dominant school of thought. Those that are usually associated with free market defense, such as new classical, that runs into great trouble to explain the crisis and does not show enough strength to bring back to the theory the idea that financial markets works efficiently. Moving towards those schools that advise greater policy activism, it is even harder to believe that any school of thought can take the new keynesians place. First, because the models with rational expectations dominates the research within U.S. and in most of Europe, without being decisively challenged by the majority of the economists – who are, in turn, in the most prestigious universities and colleges and keeps publishing in the most prestigious journals. To the models with rational expectations, the way to accept some kind of macroeconomic policies' intervention was developed and explored by new keynesians, when they incorporated market frictions that prevent the market clearing. Unless there is a change that pushes rational expectations out of the models, it is more complicated to another school of thought to become the mainstream, since this would have to be made by broadening the market frictions scope. The alternative would be the discovery of a different and more incisive way to demonstrate market imperfections in models with rational expectations, which, in turn, would be in some degree related to new keynesian thinking, and has not yet emerged.

From a political point of view, the financial globalization process does not give consistent signs of shrinkage (or even that it will stop growing). As it is historically coupled with an economic liberalizing tendency, it is hard to believe that will be an inflection without a change in the correlation of political forces. Although we recognize that a change in policy, for example,

a more tight regulation, may change the course of the facts, we are only stating that it is much harder to change in the presence of domination from one side. Finally, the schools that propose wider intervention are, generally, more heterogeneous on their thought and propositions, which makes it harder to derive a relatively uniform consensus among them about what policies should be practiced.

5. Inasmuch as policy makers have moved away from NCM's macroeconomic policies in the immediate crisis exasperation, they did not show that this move would last. On the contrary, they have shown a concern on how to quickly remove the given incentives, especially the fiscal ones. This movement has been headed even by leading new keynesian economists and policy makers. The evidence suggests that in the aftermath of the crisis, there will be much more concern to create fiscal space in the prosperous times, as a reaction to the sovereign debt problems faced recently.

6. The new keynesian thought is, in general, more flexible than the ones of other schools which were mainstream, as they are more concerned about reality, as stated by Sicsú (1999). Demonstrations of worry about changes in models show that a part of the members of this school of thought has no commitment with the past errors in their models, at least the recognized ones.

New keynesians have been changing some of their macroeconomic policies recommendations, incorporating in their models new kinds of imperfections, beyond the price stickiness. We believe that this internal reform will allow them to continue as the mainstream and the main provider of ideas to policy makers, in this sense, having more power to influence future macroeconomic policy, due to the absence of a strong enough groups of economists or, until this moment, any theory capable of dismissing rational expectations hypothesis within dominant thought. Moreover, the correlation between political forces do not demonstrate a movement towards a different framework to conduct macroeconomic policy, as well as the main institutions keeps searching for answers within new keynesian and NCM's framework.

If, on the one hand, as we showed, the crisis presented some impact on the economic thinking, on the other, the economic thinking is also capable of influencing the performance and the economic system architecture. Our conclusion is that the economic theory did not experienced a revolutionary change in its dominant stream until now, which implies that it is much harder to believe that modifications in the macroeconomic policies and financial system standards will be propelled by economic theory.

The bigger question that arises as regards the practice of macroeconomic policy, although, is what direction the regulatory and macro-prudential policies will have. If the crisis eruption has severely compromised the notion that financial institutions would not take excessive risks and would not get, therefore, the system into trouble, the advance of financial system recuperation increases the bargaining power of these institutions in favor of business as usual. That is, although there is some new keynesians encouraging the revival of regulation tools, it is not clear to what extent these measures can be put into practice.

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