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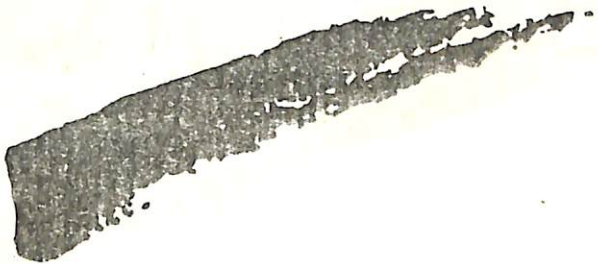
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*The Independence of Central
Banks: A Critical Assessment
of the Arguments*

Fernando J. Cardim de Carvalho

TEXTOS PARA DISCUSSÃO

*Instituto de
Economia
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*Universidade Federal do Rio de Janeiro
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Textos para Discussão

*The Independence of Central Banks: A Critical
Assessment of the Arguments
Nº 318*

Fernando J. Cardim de Carvalho¹

Agosto de 1994

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I. Bancos Centrais. I. Título. II. Série

The independence of Central Banks: A Critical assessment of the arguments

INTRODUCTION

Ever since Friedman's 1968 paper on the role of monetary policy, criticism of Keynesian policy activism has been mounting, among neoclassical academic economists first, and, later, also among conservative politicians and businessmen. Shared by all of them is the idea that a private market-economy is intrinsically stable, in the sense that it is capable of reaching a full-employment equilibrium state by itself. In modern parlance, this kind of economy is supposed to operate, if free of undue interference, at its *natural rate of unemployment*. Private agents are capable not only of recognizing what is best for each one of them but also of coordinating their plans in such a way as to make it possible to use available resources in the best way known. It is furthermore proposed that policy activism cannot change these plans, because government strategies can be read through by private agents that move then to neutralize the measures that could lead them away from their established goals. All the authorities can do is to confuse them for a while, by sending erratic signals, misleading private agents into deviations from their chosen paths for as long as it takes for them to realize the mistake and resume their previous course. Thus, it is said that all that government can do, after all, is to generate oscillations, unable to influence in a durable way the behavior of the economy.² The best policy strategy, from the point of

² In fact, these inefficiency-of-policy arguments are generally applied to monetary policy (see, e.g., Sargent, 1981). For some authors of the same

view of society, would then be to minimize interference, allowing private agents to find their way by themselves. Unavoidable influences of government on the economy should be restricted by *fixed rules*, eliminating discretionary intervention.

In spite of its appeal to conservatives, fixed rules were never, in fact, implemented. Nevertheless, natural-rate-based criticisms were strong enough, in the 70s, to put policy-activists in the defensive and to cause important changes in the way monetary policy was designed and applied in the main capitalist economies of the world.³ The most visible result of the new orientation was the generalized adoption of pre-announced quantitative targets for various concepts of money supply in the mid- to late seventies.

Unexpected changes in money demand and high volatility of interest rates led to an equally generalized abandonment of these practices in early to mid-eighties, even though it was often disguised as a pragmatic argument to the need of considering many indicators and targets for policy formulation.⁴ After these experiments, monetary policy pretty much

persuasion, the thesis could be applied also to fiscal policy (Barro, 1974). In fairness, however, it must be recognized that not all economists who share the natural rate view accept these results (see Lucas, 1981).

³ At the same time, although less strongly and less effectively, debates on the need to adopt mandatory restrictions on the generation of public deficits led to initiatives such as the attempts to impose constitutional curbs on government deficit-spending. In this paper, however, we will limit the discussion to monetary policy matters.

⁴ One of the most interesting sources to follow the arguments for the adoption and for the ultimate abandonment of monetary targets is the seminar on monetary targeting organized by the Federal Reserve Bank of New York in the early 80s, published as Meek (1982). Representatives of the main Central Banks of the (then) capitalist world report their experiences with the new rules, all of them converging to the need of trying to control interest rates as a reason for the *flexibilization* of their policies.

resumed its past practices, recognizing the possibility of discretion that is embodied in a situation where the use of various indicators prevents the establishment of simple automatic rules of behavior in accordance to a specified target.

It is in this picture that the proposal of independence for central banks gathered political and academic momentum in the late 1980s and early 1990s. In a completely different argument in comparison to the defense of fixed rules, it was now stated that monetary authorities, free from the shackles that connect them to the general government, would be able to pursue their *true* goals, that is, price stability. The problem with monetary policy thus would not be that men in power in the Central Bank were free to play havoc in money markets, as before, but that potentially responsible central bankers had too frequently to bend to political pressures that forced them to deviate from their natural function: to defend the purchasing power of money. To liberate central bankers would allow them to pursue their natural goal, to fight inflation.

In contrast to the adoption of fixed rules, that were never seriously considered an alternative of policy, the independence of central banks had the advantage of seeming much more politically realistic. When compared to fixed rules, the independence was to be given to *existing* institutions, just by removing from their charts the provisions that were not compatible with their "true" nature. Studies were produced to show that independence, in the degrees one could already observe in some countries, correlated positively with price stability, strengthening the argument in its favor. In many countries, political movements were formed to push the thesis of independence through the competent political chan-

nels. The willingness to concede independence to monetary authorities was transformed into a test of political maturity. The European Monetary System was designed to include a strong version of independence.

The theoretical basis for the thesis, however, is much more fragile and ambiguous than its defenders seem or want to recognize. Its validity is also much more specific to certain particular theoretical approaches than those who defend it on empirical grounds seem either conscious of or willing to make explicit. In this paper, a critical view of the independence proposal is developed. In the next section, we will discuss the theoretical foundations for the expectation that independence of the central bank and price stability are two sides of the same token. Next, we check on the historical and empirical adequacy of the thesis, examining in some detail how independence is conceived and measured. The section that follows develops theoretical arguments that would point to a different way to consider the role of monetary authorities. Finally, a concluding summary is offered.

2. Independence of the Central Bank and Price Stability: Theoretical Arguments

A common trace in the current flood of papers proposing independence for central banks (hereafter referred to as ICB) stands in stark contrast with the rules versus discretion literature. While the latter was conducted as an essentially theoretical debate, to be decided on the basis of a rigorous examination of the properties of specified *models* of the economy, the literature supporting central bank independence consists almost entirely

of empirical propositions perfunctorily supported by fragmentary references to theoretical concepts, such as the natural rate of unemployment and the neutrality of money. This feature is particularly striking⁵, since it seems counter-intuitive that the very same theoretical arguments that were used to support the adoption of non-discretionary rules of monetary policy appear now to justify what could be seen as a means to maximize the discretionary power of the monetary authorities.

In fact, as we will see, the idea of independent central banks relies on an even more restrictive set of assumptions than we find in the usual theoretical debates in macroeconomics, which should explain why some important supporters of rules, like Milton Friedman, do not seem equally enthusiastic with respect to the liberation of central bankers. The theoretical views supporting ICB could be summarized as follows. It is assumed that private economic agents decide on their strategies and make their choices by balancing⁶ their individual interests with the costs their pursuit requires. They are supposed, thus, to maximize some objective function subjected to perceived constraints, that represent material limitations to which agents have to adapt. Private agents are rational, caring only for what gives them satisfaction. Devoid of any kind of irrational illusions, they seek to amass the greater volume possible of goods that can satisfy some perceived need.⁶ Thus, preferences for goods and services and material constraints that limit the satisfaction of those preferences, forcing agents *to evaluate* the alternatives and *choose among them*, are the driving forces of

⁵ Cukierman, Webb and Neyapti (1992) are more careful in presenting some theoretical arguments in support of their view. Burdekin and Laney (1988) also present very briefly their theoretical assumptions.

⁶ Taking *need*, of course, to be entirely subjective.

the economy, no matter what *kind* of economy are we talking about. Money is ultimately just a means to reach desired goals, not an end in itself. It is a *convenience*, allowing to trade more easily and safely, but it does not satisfy consumer demands nor represents any effective restriction on choices (since its *real* value, that is what matters, is endogenously determined). In sum, only real forces matter, determining the *relative prices* that orient individual agents because they concentrate information about conditions of trade. Money is neutral because, ultimately, it changes neither preferences nor possibilities.

The natural rate hypothesis, today associated with Lucas, is nothing but the proposition that there is a unique, stable equilibrium in this kind of economy⁷, given preferences and resources, and the proposition that modern capitalist economies can be adequately represented, in their essentials, by such a model. If one can accept it, follows that private agents can only be prevented from reaching such an equilibrium state by government or any other kind of intervention based on persuasion rather than compulsion if they are misinformed or misled. In any case, wrong information is ultimately dispelled by experience, dissipating when confronted with reality. Thus, *in the long run*, no interference can be effective if it means to prevent agents from seeking what corresponds to their preferences, including the desired allocation of time between work and leisure that is supposed to determine the *natural rate of unemployment* of labor in this kind of economy.

Particularly ineffective, to the proponents of the natural rate hypothesis, is the attempt to use monetary policy to move

⁷The general equilibrium literature is much more cautious in making this kind of statement, stressing the great number of restrictive assumptions required to sustain it. See, for instance, Hahn (1984). Natural-rate macroeconomists, in this respect, seem to share the theoretical carelessness

the economy out of its natural position. As monetary policy is taken as consisting of changes in the stock of money and agents cannot be fooled by such manipulations, because money is just a means of trade and of making calculations, not its end or substance, only unanticipated variations in the stock of money that could be misunderstood as a change in the real conditions of the economy can have real effects. These would last, however, only until private agents could see what really happened. Activist monetary policies, therefore, could generate oscillations around the economy's natural position, but could not change it. A much superior choice for the monetary authority, from the point of view of society, would be not to intervene, allowing private agents to settle in their preferred states.

One could, of course, criticize the reasoning for relying on too simplistic a view of the monetary policy process as consisting merely of manipulations of the money supply. Lucas's reply to such a question (he attributes to Tobin) is uncompromising:

"One wishes to construct a model in which monetary changes are neutral in the sense required by the Friedman-Phelps natural rate hypothesis. Accordingly, one devises a setup in which changes in money are, in effect, currency reforms (so as not to clutter up the discussion with the inflation-tax issues we all know about). One endows the agents in this model economy with enough sense to see a currency reform for what it is (or to be free of "money illusion"). These features, if the details are worked out correctly, produce the Friedman-Phelps conclusion [the neutral-

they often criticize in other schools when they simply transport conclusions supported by special assumptions made in narrowly conceived models to real-world economies.

ity of money] for the "long run". (Lucas, 1981, pp. 561/2)

Let us accept this view, for the moment, for the sake of the discussion. All these arguments are, of course, well known, and were repeatedly used to justify the adoption of fixed rules for monetary policy as a means to prevent monetary authorities to try to misinform and mislead private agents into choices as work and leisure that are supposed to go against their own preferences. How could it be used to support what seems to be precisely the opposite argument, to free monetary authorities from external controls? As a matter of fact, what seems to be an even earlier question, *whom* should the central bank be independent of?

There is only way to see how an independent central bank could be reconciled with the view that policy discretion should be banned: to propose that *monetary authorities should be free to follow fixed rules*. It also responds the second question: it is independence from the government, with its more general objectives, that could force central banks to sacrifice their own goals, that is sought. This seems to be the unavoidable hidden agenda behind ICB literature. In fact, it has to assume that central banks, free from the allegedly illegitimate interference of government, would then pursue its *natural* goal: price stability.

We come here to the main point of fragility pervading ICB literature: the notion that one could assign to central banks an *intrinsic nature*, that is, to sustain the purchasing power of money by controlling its quantity. The central bank is assumed thus to have an objective function much like consumers and firms, in such a way as to postulate that left free to act accordingly to its nature, a central bank will fatally and single-mindedly pursue price stability. We will see in the next section that this view is far from being unanimously accepted.

Some would argue that central banks have also other goals. Some would even argue that central banks *should have* that single goal, implying the need for a change in the way the functions of monetary authorities have been postulated until now. ICB proponents, however, do not see themselves as merely doing institutional engineering, by proposing ideal reforms, but as doing *positive* economics: they try to show that the extent to which existing central banks are allowed some independence corresponds to the amount of effort they put in pursuing price stability to the detriment of other goals, in particular, the increase in employment.⁸ It is not, thus, just normative economics: they are showing that central banks *are* as they assume, not merely that they *should be* so. Naturally, if ICB in the end is adopted and this assumption about its intrinsic nature ultimately proves to be unwarranted, the result may very well be monetary anarchy.⁹

There are, in sum, two fundamental theoretical propositions sustaining ICB: 1. the natural rate hypothesis, in support of the neutrality of money that removes any possibility for monetary policy to durably affect real variables in any direction¹⁰; 2. The assumption that central banks do have a natural goal, to which they try to adhere as long as they are free to do it. The first assumption makes activist monetary policy only a source of nuisance for private agents. The second suggests that monetary policy is activist only if prodded on by government.

⁸ We will see that one of the most important members of the ICB group, Alex Cukierman even adopts as a measure of independence the degree to which central banks accept as a goal to seek price stability and disconsider employment objectives. Of course, this collaborates to make the argument a little circular: one measures independence by the degree of adherence to price stability and then correlates the measure of independence with the observed rates of inflation! See next section for a more detailed discussion.

3. Independence of the Central Bank and Price Stability: Empirical Arguments

ICB defenders seem to be fully conscious of the theoretical fragility of their arguments. In fact, much more effort is dedicated in this literature to the empirical search of significant correlation between measures of independence of the monetary authority and the observed degree of price stability.¹¹ It becomes a matter of “applied economics”, or so is desired by them in an apparent attempt to consider the sole duty of a central bank to fight inflation as an *axiom*, as a self-evident proposition.

Even as an empirical proposition, however, it should be taken with some reservations.¹² Firstly, because independence of the central bank is a difficult idea to conceive and even more to measure in any way. Of course, the monetary authority has

⁹ Goodhart (1994) reminds us of such a possibility offering the example of post-communist Russia. Friedman seemed to share the fears that such a situation might emerge. (Cf. Friedman, 1962, as quoted by Burdekin and Laney, 1988). In fact, we should ask ourselves whether the ICB view is tenable in the face of public choice theory that is accepted by so many of these authors. Why should we expect that independent central bankers would really act to sustain price stability, as suggested by Haan and Sturm (1992), instead of adopting other policies to increase their power, influence or even pecuniary rewards? For a discussion of the public choice perspective as applied to ICB, see Willet and Keen (1990).

¹⁰ One cannot expand output and employment with monetary policy but also restrictive monetary policies cannot have durable contractionary effects on them.

¹¹ Much less attention is given to the correlation between independence of the central bank and real variables, such as employment and growth. To see one of these fewer attempts that finds that central bank independence “has no measurable impact on real economic performance”, see Alesina and Summers, (1993). Haan and Sturm (1992) were also unable to find any significant correlation between them.

to be accountable to someone. If not the government, whom to? Also, there has to be some procedure to choose its governor and board of directors and to set its operating rules. There may be some way to remove the governor in case of need. Its resources must be provided somehow and the central bank must be accountable for its use (which is something different from being accountable for its decisions, which was mentioned above). In other words, what does it mean to be independent?

Most of the time, ICB proponents want to make it independent of the central government. But even this is not as devoid of ambiguity as one should wish. The monetary authority may be independent in the sense that it is not required to sacrifice monetary policy goals to compulsorily accommodate fiscal policy decisions. This sense of independence is generally acceptable. In fact, it only means that there are limits to the use of monetary instruments (as there are limits to the use of instruments of *any* nature) to preserve monetary institutions and practices. Another, and much narrower, sense of independence requires that the central bank may be able to implement monetary policies in a direction contrary to that decided by the central government. In this sense, independence means to decide on monetary policy without any consideration for an eventually opposite choice made by the central government as to, for instance, its fiscal, commercial, exchange rate policies,

¹² Based as it is on the natural rate hypothesis, the ICB thesis would, at best, be as valid as the NRH. The empirical literature on the latter is vast and it would be an euphemism to say that the evidence is not entirely favorable to NRH. See, for instance, De Long and Summers (1988). Of course, even if the NRH was shown to survive empirical tests, ICB could still be proved false as it results from further restrictions placed upon NRH that could themselves be proved false.

etc. This meaning of independence, that is clearly implied in most of ICB literature that intends to isolate the search for price stability as a task for monetary authorities no matter which policy the central government may be following, is much less acceptable.¹³

Be it as it may, the ICB thesis is that central banks must be continuously trying to act towards price stabilization, because this is supposed to be its nature, just to be restrained by outside interference, mainly from the government, that would stress other goals, such as expanding employment. To this literature, this is not just a conflict between alternative goals. Government's attempts to expand and sustain high employment are clearly *wrong*, since any employment target that is actually achievable will be attained without the help of policy, since the private economy tends to reach its *natural* position anyway. Why then do governments try to increase employment? There are two possible answers to this question. The first one is that governments just do not understand how the economy works. Of course, this answer is hardly acceptable. Why should everybody else in the economy be able to make their decisions based on the correct model of the economy *except* the government? The second answer is more coherent: even with rational expectations it is acknowledged that there is a possibility of influencing employment in the short run, by surprising private agents with non-anticipated changes in the money supply. This, of course, is supposed to play havoc in the monetary system in the mid to long-run. Governments, however, have short-run horizons, since mandates are limited. They stress results that are closer in time in detriment of price stability that offers long-term

¹³ Cukierman, Webb and Neyapti (1992) even transform disregard of other policy objectives into a test of independence.

benefits. Central banks are supposed to have opposite preferences, stressing the long-term gains associated with stability. The longer a mandate for monetary authorities is conceded the more they will be able to implement strategies that reflect their preference for price stability.¹⁴

This seems to be the main rationale for the particular way in which the ICB literature seems to conceive of independence and how to measure it. As Eijffinger and Schalling (1993)¹⁵ show, the most common way to assess the degree of independence enjoyed by specific national institutions is by examining the way the board of governors of each central bank is chosen, how long their mandate lasts and which are the formal channels of contact, if any, between the monetary authority and the government. Cukierman, Webb and Neyapti (1992) take a step further including in their measurement not only the formal mandate of governors but also their *actual* duration, as an indication of independence.

¹⁴ As pointed out by Grossman, although with respect to the defense of automatic rules, in the view of those who want to isolate monetary policy, "[t]he most basic problem ... seems to be the inherent weakness of politics as a process for making economic decisions. Experience suggests that the political process has limited ability to specify consistent goals, establish priorities, and choose between competing objectives about economic matters, especially when these decisions require comprehension of complex technical issues and constant processing of complex information." (Grossman, 1981, p. 8).

¹⁵ This very useful paper summarizes the methods and findings of the most influential works on the theme in recent years, by Bade and Parkin, Alesina and Grilli, Masciandaro and Tabellini, while developing an alternative along the same general lines. The paper is also useful for providing excerpts of the charts of central banks of twelve countries related to their goals, choice of governors and mechanisms for the solution of conflicts between the monetary authority and the central government. Haan and Sturm (1992) is another attempt to measure independence through formal rules of control.

These indices are admittedly fragile. Formal rules reflect very poorly the actual mechanisms through which power is exercised. It does not consider more complex and effective factors like political consensus formation, that may be so important to differentiate the cases of the United States and Japan.¹⁶ The nature of politics and economic policy decision-making is completely different in countries such as Germany, France or Japan, with a tradition of centralization and political consensus, and England or the United States, where dissensus tends to be strong and vocal. The actual substance beneath formal rules can be completely different in each context. As Cukierman, Webb and Neyapti, for instance, recognize, long actual duration of mandates can mean both that the central bank is beyond the control of central government or the case in which governors are so submissive that governments have no interest in replacing them. Another case in point refers to the existence of formal mechanisms to arbitrate conflicts between central banks and government. As

¹⁶ Cargill and Hutchison (1990), for instance, persuasively argue that the differences between the two cases (USA and Japan) should be attributed to "the institutional and political environments in which the two central banks operate" (p. 165). The case of Japan is a puzzle to ICB defenders. As the authors point out "The Bank of Japan ... is legally subordinate to the Japanese Ministry of Finance, and no claims of formal independence are suggested". Some of the ICB literature suggests that BOJ could be more independent than it seems. This is not the conclusion of Cargill and Hutchison: "In Japan, the government agencies, viewed in their entirety, take responsibility for economic policies, and hence political trade-offs between agencies based on manipulation of the economy are not commonplace." (p. 175) Of course, the low rates of inflation in France under Socialist governments and a dependent Bank of France or of Great Britain, despite its highly dependent Bank of England should also be a puzzle!

Eijffinger and Schalling show, most of the twelve industrial countries investigated by them provide for the ultimate power of governments to direct the monetary authority toward some desired behavior. Nevertheless, none of the governments studied ever used this power. Is it a sign of moral strength of monetary authorities deterring intervention? Or is it a sign of compliance of the central bank in what respects to the fundamentals?¹⁷

The Bank of Switzerland and the Bundesbank are universally acknowledged as the most independent of Western central banks. ICB defenders say that this is the reason why inflation is so low in their countries. Helmut Schlesinger, a former central banker in Germany, states that the Bundesbank actually works in close association with the Federal government, and stresses that the success of the bank's inflationary strategy is due to the general consensus of German society in favor of price stability (Schlesinger, 1982). Holtfrerich (1988) agrees and lists two occasions when conflicts arose between the Federal government and the Bundesbank that ended with the retreat of the bank.

Another case in point is the Federal Reserve System. Akhtar and Howe (1991) show that although the Fed's structure was built to restrain the power of the Federal government, its capacity to maintain an unpopular course is limited.

¹⁷ The importance of specific individuals in their role both as heads of governments and heads of the monetary authority is also something that these methods cannot shed light on. However, as the history of central banks in this century clearly show this may be, in crucial moments, a decisive factor. See, for instance, the very informative papers on the history of central banks of the USA, Germany, England, France and Japan contained in Toniolo (1988).

As the authors state, even being formally independent, the Fed is still a part of government, not a power of its own.¹⁸

Cukierman, Webb and Neyapti (1992) tried to go beyond the limitations of giving all attention to formal rules by complementing the studies of choice and mandate of governors with a qualitative examination (based on questionnaires filled by specialists) and also by identifying the stated goals of monetary authorities. The qualitative evidence could be promising although not enough information is given as to its nature in the paper. The other source, the goals of central banks, involves an obvious circularity. An independent central bank is *postulated* as one that prefers price stability to increasing employment, that uses quantitative targets for monetary aggregates instead of interest rate targets, etc. These measures of independence are only acceptable if one previously agree with the theoretical principles on which the thesis of correlation between independence and price stability are based. Of course, if one defends that priority to price stability is a measure of independence and then correlates this measure of independence with price stability, one should not be surprised to find some correlation.

As a matter of fact, it may be surprising that the correlation found by Cukierman in his 1992 book, that seems to be an elaboration of previous studies, including the one with Webb and Neyapti, is not stronger. As stated by Goodhart, a critic generally sympathetic to the proposal of independence, in his review of the book (Goodhart, 1994), "*the empirical relationships exhibited [between Cukierman's independence indices and inflation] ... strike me as rather weak.*" (pp.111/2)

In sum, both as a theoretical and as an empirical proposition the connection between independence of the central bank

¹⁸ On the same vein, see also Pierce (1990).

and price stability seems to be very weak, dependent on very strong and narrow views of how the economy works and what central banks do. This does not mean, on the other hand, that no improvements cannot be made in the way monetary authorities are nowadays expected to act. In any case, a different conception of how a modern market economy works leads to a very different program for monetary policy. In the next section we try to outline something of this program.

4. A Keynesian Critique of the ICB Thesis

The central argument behind both the proposal of fixed rules and of independence of the central bank is the natural rate of unemployment hypothesis. As we saw, it means that monetary policy cannot contribute to increase employment permanently and, which is, of course, the other side of the same point, that the pursuance of price stability through monetary restriction will not lead to persistent unemployment. Money is, thus, neutral: it neither contributes to increase or to decrease employment, with the possible exception of very short, transitional periods. This is certainly the bone of contention between monetarists (Friedmanian or new classical) and Keynesians (possibly most of neoclassical synthesis¹⁹, new Keynesians and post Keynesians).

Keynesian monetary theory relies on the non-neutrality of money. This is not the place to discuss which particular ratio-

¹⁹ There are exceptions, the most noted of which is perhaps Robert J. Gordon who accepted the NRH. See, for instance, Gordon (1990).

nale for money's non-neutrality should be considered more faithful to Keynes's original ideas. In fact, there are many possibilities to establish the point. Hahn's multiple equilibria (Hahn, 1983) as well as Clower's dual decision hypothesis (Clower, 1965) define models in which multiple equilibrium positions exist and monetary policy can be an instrument to determine which one is actually achieved.²⁰ Alternatively, one can consider models in which money affects the choice of assets that determine growth paths or long-period equilibrium positions. We count here Tobin's model of growth with a monetary asset (Tobin, 1987) as well as Keynes's own *General Theory* (chapter 17). We could even think of models that accept the natural rate hypothesis in the way it is conceived by monetarists and argue, as Gordon (1990), that, in practice, that one cannot just wait for economic processes to unfold, so policy should be designed to accelerate the adjustment processes.²¹

When preparing *The General Theory*, Keynes took his distances from the models in which "Money ... is employed, but is treated as being in some sense *neutral*" (Keynes, 1973a, p.

²⁰ We may think of multiple Walrasian equilibria, where money is neutral anyway or conceive of non-Walrasian equilibria. If there are multiple equilibria of the latter type, one should think of multiple natural rates of unemployment. In a different spirit, see Kregel (1984/5) criticism of the assumption of unique natural rates, based on Sraffa (1932).

²¹ Arguments like Gordon's reminds us of the old debate around the Pigou effect that led to the same conclusion: in theory, full-employment equilibrium should always be within reach, contrary to what Keynes expected, but in practice something had to be done to accelerate the process. Friedman calculated that full adjustment to monetary changes could take decades (Friedman, 1989). Tobin replied that with these lags he would be very much satisfied to act in-between (Tobin and Buiter, 1976).

408, his emphasis). He went on to state:

"The theory which I desiderate would deal, in contradistinction to this, with an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last. And it is this which we ought to mean when we speak of a monetary economy." (id., pp. 408/9, his emphasis)²²

According to Keynes, it was non-measurable uncertainty that conferred to money special properties as a general form of wealth (Keynes, 1979, pp. 108ss). As a result, *"On my view, there is no unique long-period position of equilibrium equally valid regardless of the character of the policy of the monetary authority."* (Keynes, 1979, p. 55)

One cannot develop here this view to show it can base a full-fledged model.²³ Nor can we compare it with the other versions of Keynesian economics that share, in some degree, the postulate of non-neutrality of money. Suffice to say at this point that refusing the natural rate hypothesis implies to recognize durable real effects of monetary policy. This puts other challenges to the monetary authority than just seeking price stability. As cogently put by Samuelson recently:

"Leaning against the wind of inflationary overheating is

²² Keynes added later: "The idea that it is comparatively easy to adapt the hypothetical conclusions of a real wage [neutral money] economics to the real world of monetary economics is a mistake." (id., p. 410)

²³ Post Keynesian economics is an attempt to develop these views into a formal model. See, for instance, Davidson (1978), Minsky (1986), Kregel (1980). This author's own attempts are in Carvalho (1992).

a vital duty of the Federal Reserve as a central bank. It goes along with the Fed's vital duty to lean against the winds of self-aggravating recession." (Samuelson, 1993, p. 22)²⁴

Under the conditions of these models, policy activism in general is justified and monetary policy, in particular, is conceived as part and parcel of the tool box at the disposition of government to seek for its goals. As Vicarelli (1988) pointed out, conflict between institutions (such as the central government and the central bank) are signs of inefficiencies in the decision-making process rather than healthy signs of independence of the monetary authority.

One should notice that these views do not favor the *subordination* of monetary policy to other policies, in particular fiscal policy. The preservation of an orderly monetary and financial system defines limits and constraints on the use of monetary instruments, much in the same way as limits are also placed on the use of other instruments. Monetary policy has, however, to be *coordinated* with other policies to maximize the efficiency of policy-making in general. Once one refuses the natural rate hypothesis, one cannot see any sense in the proposal of independence of the central bank to set its own goals and to pursue them as it feels fit.

²⁴ Even more forcefully, Samuelson added: "The Bundesbank notion that its *one* concern is price level stability and that it is an independent fourth estate of government has spread much mischief, around the world, and in Germany itself." (Samuelson, 1993, p. 23)

5. Conclusion

Modern central banks were created or had its behavior changed to help the management of monetary systems that were to a bigger or lesser extent freed from the shackles of the gold standard. Modern monetary institutions were devised to allow money and credit to be more elastic than they were in the previous standards, so as to accommodate the needs of trade. The Federal Reserve System even had this goal put at the Preamble of its chart (Eijffinger and Schalling, 1993, p. 83).

As the economy evolves, so do its institutions. No one doubts that monetary institutions have to be adapted to the new times. Few would doubt that means have to be found to increase the discipline of the money and financial markets since a reasonable case can be made in favor of the idea that monetary policies have been too permissive of inflation. In particular, the relationship between fiscal and monetary policies have most probably to be redesigned, although the idea that all the problems reside there is more a result of the assumption that private markets are never the source of troubles than of crude facts.²⁵

Keynesians are inclined to propose that monetary policy should be put at the same foot as fiscal or other policies, not a lower one. The notion of a independent central bank, on the other hand, is a very peculiar result of very restrictive assumptions.

²⁵ Keynesians have emphasized the importance of conflicts between labor and firms as an inflationary source, demanding some kind of permanent incomes policy (e.g., Weintraub, 1978). Circuit theorists emphasize the relation between the monetary authority and private agents rather than with fiscal authorities as determining the behavior of the money supply (e.g., Graziani, 1990).

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