

de Melo Modenesi, André; Modenesi, Rui Lyrio; Oreiro, José Luis; Martins, Norberto Montani

## Article

# Convention, interest rates and monetary policy: a post-Keynesian–French-conventions-school approach

European Journal of Economics and Economic Policies: Intervention (EJEEP)

## Provided in Cooperation with:

Edward Elgar Publishing

*Suggested Citation:* de Melo Modenesi, André; Modenesi, Rui Lyrio; Oreiro, José Luis; Martins, Norberto Montani (2013) : Convention, interest rates and monetary policy: a post-Keynesian–French-conventions-school approach, European Journal of Economics and Economic Policies: Intervention (EJEEP), ISSN 2052-7772, Edward Elgar Publishing, Cheltenham, Vol. 10, Iss. 1, pp. 76-92,  
<https://doi.org/10.4337/ejeep.2013.01.07>

This Version is available at:

<https://hdl.handle.net/10419/277258>

## Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

## Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

# Convention, interest rates and monetary policy: a post-Keynesian–French-conventions-school approach\*

André de Melo Modenesi

Institute of Economics, Federal University of Rio de Janeiro, Brazil

Rui Lyrio Modenesi

Former Associate Professor, Department of Economics, Fluminense Federal University, Brazil

José Luis Oreiro

Economics Department, Universidade de Brasília, Brazil

Norberto Montani Martins

Institute of Economics, Federal University of Rio de Janeiro, Brazil

*This article aims at analysing the relationship between conventions and monetary policy using both the post-Keynesian and the French-conventions-school approaches, treated as complementary; and stressing the design of monetary policy frameworks (for example, inflation targeting) and the setting of interest rates as phenomena highly governed by conventions. The Brazilian monetary policy after the mid 1990s – marked by the highest real interest rates in the world – will be used as a case study.*

**Keywords:** *conventions, monetary policy, interest rates*

**JEL codes:** *B20, E40, E43, E52, P16*

## 1 INTRODUCTION

A *convention* is a belief or a rule of expectations formation that is shared by a large number of individuals in a given society. It can be seen as a defensive device that allows one to deal with uncertainty in the Keynes–Knight sense. This view is in line with Keynes's and post-Keynesian analyses regarding the behavior of individuals in an environment of uncertainty. It is also in line with the French-conventionalists' approach, which emphasizes conventions as elements of common knowledge which are built due to uncertainty.

Conventions are particularly important in financial markets: as Keynes argues in the *General Theory*, the actual value of the rate of interest is governed by the prevailing convention about what its value is expected to be. More specifically, in the financial

\* An earlier version of this paper was presented at the 5th Brazilian Keynesian Association International Conference (August 2012). We are grateful to Marc Lavoie, Mario Seccareccia, David Dequech, and Alain Herscovici for their valuable comments. Any errors or omissions are our own. Financial support from the National Research Council (CNPq) is gratefully acknowledged.

sphere, monetary policy and interest rates are subject to conventions that may attend mainly the interests of the major market players and of the central bank.

In this context, the current article aims at analysing the relationship between conventions and monetary policy, considering both the post-Keynesian and the French-conventions-school approaches, treated as complementary, and stressing the design of monetary policy frameworks (for example, inflation targeting) and interest rate setting as phenomena highly dependent on conventions. Brazilian monetary policy after the mid 1990s – marked by the highest real interest rates in the world – will be used as a case study.

The article is divided as follows. After this introduction, Section 2 presents the concept of convention both from the Keynesian and the French-conventionalist standpoints, stressing the similarities and complementarities shared by the two approaches. Section 3 discusses the determination of interest rates and its relationship with the concept of convention, especially regarding long-term interest rates. Section 4 presents the Brazilian case from the perspective of several authors who have analysed the high Brazilian interest rates using the concept of convention. In Section 5 we sum up the main points touched in the article with concluding remarks.

## 2 CONVENTION: KEYNES'S AND THE FRENCH SCHOOL'S CONTRIBUTION

### 2.1 Keynes's and post-Keynesians' contribution

Keynes had radically changed his philosophical thinking from his early works through to the *General Theory* (Davis 1997).<sup>1</sup> The main change had been the replacement of the concept of *intuition* – as ‘an unfailing direct insight into the nature of what was real’ – with the concept of *convention*, about which he had in the early days stated: ‘we repudiated entirely customary morals, *conventions* and traditional wisdom’ as having any significance in judgment (Davis 1997: 149; our emphasis).

According to Keynes (1936: 162–163), ‘human decisions affecting the future whether personal or political or economic cannot depend on strict mathematical expectation, since the basis for making such calculations does not exist.’ He implicitly assumes that an *entrepreneurial economy* is characterized by a *nonequidistant* stochastic process<sup>2</sup> (Davidson 2002), implying that current knowledge is not enough to estimate, for instance, the mathematical long-term expectation of the yield of an *investment*.<sup>3</sup> For Keynes, convention is the device one utilizes to overcome the uncertainty involving an investment decision. He has presented concepts of convention, examples of convention and of conventional judgment (or behavior), but has never translated its content into a formalized expression, for good or ill.

1. We first developed this theme in Modenesi et al. (2013).

2. In which, according to Hicks (1977: vii), ‘[agents] do not know what is going to happen and know that they do not know what is going to happen. As in history!’ This is a genuine nonequidistant concept of uncertainty, although Hicks did not know this when he elaborated it. This he revealed to Davidson (2002: 52) in a 1983 letter: ‘You have now *rationalized* my suspicion, and have shown me that I missed a chance of labeling my own point of view as *nonequidistant*’ (emphasis in the original).

3. Keynes uses the term ‘investment’ to designate not only the purchase (or own production) of capital assets, but also the purchase of financial assets, such as shares in the stock market (see, for example, Keynes 1936: 157–158).

What may be considered Keynes's first concept – as he uses convention in italics – or an example of convention – as he refers to it as 'this convention' – is introduced in chapter 12 of the *General Theory* to explain how evaluation of existing 'investments' is made in the stock exchange, as expressed by the price of shares:

[i]n practice we have tacitly agreed, as a rule, to fall back on what is, in truth, a *convention* [emphasis in original]. The essence of *this convention* [our emphasis] – though it does not, of course, work out quite so simply – lies in assuming that the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change. This does not mean that we really believe that the existing state of affairs will continue indefinitely. (Keynes 1936: 152)

Termed *projective convention* by Dequech (2011), this concept of convention reflects the weak confidence in forecasts of the future, because they are based on 'facts about which our knowledge is vague and scanty' and 'for this reason the facts of the existing situation enter, in a sense disproportionately, into the formation of our long-term expectations' (Keynes 1936: 152). Keynes later on added that, having to act without knowing what the future is likely to be, agents need to assume some hypothesis about the future, which is, in fact, a convention: '[w]e tend, therefore, to substitute for the knowledge that is unattainable certain conventions, the chief of which is to assume, contrary to all likelihood, that the future will resemble the past' (Keynes 1973: 124).

In chapter 12 of the *General Theory*, Keynes seems to introduce a *second concept* of convention which is related to the propensity to follow the majority or average opinion. This may be understood as Keynes's main example of conventional judgment (or behavior): '[t]he psychology of a society of individuals each of whom is endeavoring to copy the others leads to what we may strictly term a *conventional judgment*' (Keynes 1937: 214; emphasis in the original).

This concept is first mentioned in the *General Theory*<sup>4</sup> to describe the logic of financial speculation, metaphorically illustrated by the beauty contest 'in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most corresponds to the average preferences of the competitors as a whole' (Keynes 1936: 156). In such situations where common references are not provided to the agents, as prevails in the financial markets, Keynes (1937: 214) prescribed that the only rational behavior is to follow the others: '[k]nowing that our own individual judgment is worthless, we endeavor to fall back on the judgment of the rest of the world which is perhaps better informed. That is, we endeavor to conform to the behavior of the majority or the average.'

The above concept is quite unanimously interpreted in the same way – that is to say, ultimately identifying convention as referring to 'mimetic behavior' (Dupuy 1989), 'collective representation' (Jodelet 1989), 'rules of the game' (North 1990), 'shared mental model' (Denzau/North 1994), 'collective rule of behavior' (Oreiro 2000), and the like. According to Davis (1997: 154), a convention is a 'structure of interdependent judgments across individuals that both contributes to the determination of different individuals' respective judgments and results from the interaction of different individuals making their respective judgments'. And for him, an important feature of a convention is the fact that, although by nature normative, its content may vary over time. What it implies is that convention is, in a relevant sense, not a static but rather a 'dynamical structure.'

4. Davis (1997: 150) argued that 'Keynes's post-*General Theory* writings do not add significantly to our understanding of Keynes's thinking on the subject [convention]'.

According to Oreiro (2000), if convention is defined as a *collective rule of behavior*, then ‘assuming that the existing state of affairs will continue indefinitely, except in so far as we have specific reasons to expect a change’ is a particular kind of convention, one in which a projective standard of expectations formation becomes a ‘shared mental model’ that may lead to ‘mimetic behavior’ by economic agents.<sup>5</sup> In Dequech’s (2011: 482) view, Keynes formulated an ‘implicit concept’ which, nevertheless, contained what are considered the essential features of a general concept of convention: social sharing, conformity with the conformity of others, and arbitrariness.

The first of the aforementioned concepts would suggest that convention is an *institution* or ‘a socially shared pattern of thought (and possibly of behavior)’ (Dequech 2009: 73). The second implies that people follow conventions because others also do (partially at least). Arbitrariness denotes that a pattern, which is not perceived as evidently inferior to the one being followed, may replace it. Keynes (1936) argued that, in the case of a decision to buy capital goods, arbitrariness is mainly due to uncertainty – that is, to the precarious basis of knowledge for estimating its prospective yield. In the decisionmaking process of buying a share, conventional valuation ‘is established as an outcome of the mass psychology of a large number of ignorant individuals’ (ibid: 154), which reinforces precariousness. Thus, ‘[it] is liable to change violently as a result of a sudden fluctuation of opinion due to factors which do not really make much difference to prospective yield; since there will be no strong roots of conviction to hold it steady’ (ibid: 154).

Why, then, ought one follow a convention? Dequech (2003) identifies six types of arguments for that.<sup>6</sup> First, the rationality of following simple rules of thumb for people with limited capabilities facing a complex world in terms of information. Second, the reasonability of the conformity with the average or majority opinion under the supposition that the individual judgment isn’t as valuable as that of the social group which may be better informed, as we have already mentioned. Third, there is the argument that majority opinion may represent an expectation about the future values of the pertinent variable, what may turn the convention into the best guess and, eventually, a self-fulfilling prophecy. A fourth justification is the defensive behavior argument: ‘the safest course of action may simply be to follow the crowd’ (Hamouda/Smithin 1988, quoted in Dequech 2003: 149). The fifth argument is that induction is a reasonable guide to follow when facing uncertainty. The projection of the present situation into the future is associated with a convention by O’Donnell (1989: 250, quoted in Dequech 2003: 150) who assures us that, in Keynes’s theory of expectations, ‘the primary notion is that expectations are generally based in *induction*.’ The last reason for following a convention is to avoid social disapproval: ‘[w]ordly wisdom teaches us that it is better for reputation to fail conventionally than to succeed unconventionally’ Keynes (1936: 158).

It should be emphasized that convention has turned into the basic philosophical concept of Keynes and was incorporated as a core notion in the *General Theory*: ‘the genuinely revolutionary positions found in the *General Theory* appear to depend in important respects upon the new views Keynes developed there regarding history and conventions’ (Davis 1997: 149). Keynes attributed to convention a fundamental

5. Oreiro (2000) uses Brian Arthur’s (1994) model of network externalities to formalize the process by which a particular ‘mental model’ can emerge as a social convention.

6. All these reasons are examples of *network externalities* that arise from the adoption of a common rule of behavior.

role in the determination of the interest rate and, eventually, of the level of investment, the key variable of his innovative macroeconomic theory. As summarized by Davis (ibid: 151), ‘Keynes’s understanding of unemployment equilibrium depends upon his thinking about convention.’

In chapter 15 of the *General Theory* (‘The psychological and business incentives to liquidity’), Keynes focuses on the phenomenological aspects of the interest rate. He at first affirms that it is a psychological phenomenon, but eventually concludes that ‘[i]t might be more accurate, perhaps, to say that the rate of interest is a highly conventional, rather than a psychological, phenomenon’ (1936: 203). He reached that conclusion based on the following reasoning. A monetary policy that public opinion perceives as having an experimental nature or being easily subject to change may not achieve the target level of the interest rate. Instead, it ‘may prove easily successful if it appeals to public opinion as being reasonable and practicable and in the public interest, rooted in strong conviction, and promoted by an authority unlikely to be superseded’ (ibid: 203). Summing up, the interest rate is mostly conventional ‘for its actual value is largely governed by the prevailing view as to what its value is expected to be’ (ibid: 203).

Another relevant issue addressed in chapter 15 is whether conventions are short or long-lived. As mentioned before, Keynes’s financial convention is precarious and liable to drastic changes. Keynes emphasized the link between convention being short-lived and it being built upon a precarious basis of knowledge. In a very relevant statement about monetary policy he warned that precariousness may benefit the monetary authority in its aim of reducing the long-term interest rate in order to achieve full employment:

[...] precisely because the convention is not rooted in secure knowledge, it will not be always unduly resistant to a modest measure of persistence and consistency of purpose by the monetary authority. Public opinion can be fairly rapidly accustomed to a modest fall in the rate of interest and the conventional expectation of the future may be modified accordingly; thus preparing the way for a further movement [...] (ibid: 204)

According to him, the abandonment of the gold standard in Great Britain represents a very illustrative example of this expected result. As a matter of fact, major movements of the interest rate were then achieved by ‘a series of discontinuous jumps, as the liquidity function of the public, having become accustomed to each successive reduction, became ready to respond to some incentive in the news or in the policy of the authorities’ (ibid: 204).

However, conventions are not *always* fragile and can in fact be long-lived. Keynes asserted that ‘[a]ny level of interest which is accepted with sufficient conviction as *likely* to be durable *will* be durable’ (ibid: 203; italics in the original), a proposition further reinforced by the following statement:

[...] it [the rate of interest] may fluctuate for decades about a level which is chronically too high for full employment; – particularly if it is the prevailing opinion that the rate of interest is self-adjusting, so that the level established by convention is thought to be rooted in objective grounds much stronger than convention [...] (ibid: 204)

Finally, Davis (1997: 155) proposes that Keynes had not explained properly how conventions operated and changed so that, he speculates, if Keynes were to write a second edition of the *General Theory*, ‘he would have at least attempted to say more about how confidence affects stability or instability of convention governing investment.’

## 2.2 French-conventions-school approach

The centrality of the concept of convention to the operation of monetary economies is shared by the so-called French-conventionalists (FC). It emerged as a stream in economics in 1989, with the special journal issue of *Revue économique*, entitled *L'économie des conventions*, as its cornerstone.<sup>7</sup>

The starting point of FC is the criticism of neoclassical economics regarding its statements on market coordination (Dupuy et al. 1989; Orléan 1989: 241–244; Eymard-Duvernay 2006). The belief in rationality and in the invisible hand is criticized by FC authors opposed to the need for coordination in economic decisions – devices which can anchor the behavior of economic agents when interacting is needed.

One of the fundamental reasons for this need is the uncertainty which surrounds economic life, neglected by neoclassical economists (Orléan 1989: 245–248). Uncertainty is treated by FC in the Keynes–Knight sense, focusing on its implications for coordination (Eymard-Duvernay et al. 2006; Boyer 2006: 48). From the perspective of individuals, uncertainty means the inability to elaborate feasible scenarios which will serve as inputs to build distributions of probability. Moreover, it is relevant to note that the behavior of other individuals, also subject to uncertainty, have to be taken into account as well in building scenarios and determining probabilities. In other words, the interactions between individuals are also relevant information but individuals do not dispose of it *ex ante*.<sup>8</sup> Thus individual knowledge, materialized in probability distributions, is quite limited in an environment marked by uncertainty.

The question which follows is: What to do in this context? One possibility is to incorporate within individual knowledge *social constructs* or a *common knowledge* shared by individuals which interact in the same economic *locus* (Lewis 1969; Dupuy 1989). *Common knowledge* is built by society as a result of individual interactions.

Dupuy (1989) argues, then, that conventions are devices which constitute part of the common knowledge. In other words, as pointed out by Lewis (1983: 165–166) and Dupuy (1989: 369), conventions are solutions to coordination problems which tend to occur with some regularity – for example, the valuation of stocks in the stock market. In this context, conventions are defined by Dupuy (1989: 369, our translation) as:

[...] a behavioural regularity R (or a behaviour and a belief) that, in a population P, satisfies the following six conditions:

1. Each conforms to R.
2. Each believes that the others are conforming to R.
3. This belief that the others are conforming to R provides a good and decisive reason for conforming to R.
4. All prefer general conformity to R rather than slightly less general conformity [...]
5. R is not the only regularity possible in satisfying the last two conditions; at least another, R', could have equally been respected (this condition guarantees that there is a certain arbitrariness in conforming to R).
6. These statements of fact described in conditions (1) to (5) are common knowledge.

7. A thorough presentation of the FC school can be found in Dequech (2012).

8. This complexity is reflected also in the rationality of individuals, which is recognized as limited by French-conventionalists (Orléan, 1989: 248–253) as opposed to the neoclassical assumptions of rationality.

One fundamental aspect of this definition is that conventions can be viewed as institutions or rules which integrate common knowledge. The way a convention is created, however, is blurred. It is a social process related to the decisions of individuals and their ensuing results and the behavior of them facing the behaviors of others. This complexity marks social process. Dupuy et al. (1989: 143) highlight that:

As the semantic field of the term 'convention' well suggests in indicating the device constituting a desired agreement as well as its outcome, endowed with an obligatory normative force, convention must be secured at the same time as the result of individual actions and as a constraining framework on the individuals. (our translation)

Furthermore, given that conventions are products of human activity, they are not free from individual will and interests involved in its formation:

Hence one must clarify the double movement of the specification that secures the objects and rules in conformity with a convention. On the one hand, objects and rules impose themselves on persons in the current moment, like the presuppositions whose social conditions of their genesis are forgotten. On the other hand, being the products of a human activity, their objectivity and their form cannot be completely insulated of intentions and of actions prior to their creation. (Dupuy et al. 1989: 145, our translation)

This feature makes it possible for some group of agents to shape a convention – although they cannot simply impose their will to the whole set of agents with which they are interacting. For example, a central bank can contribute to the building of a convention that inflation targeting is the best monetary regime;<sup>9</sup> big traders in the financial markets may be successful in determining specific asset price movements. Building a convention is a social process in which different interest groups may try to impose their visions aiming at maintaining their *status quo* or even improving it. In this process, the more powerful groups tend to be more successful. That is to say, a convention is never neutral: while some groups may benefit from it, others may lose from it (this aspect is especially relevant in the Brazilian case). It should be noted that building a convention is not the same as establishing coalitions of interests – since it violates the arbitrariness involved in the establishment of a convention.

We may highlight some similarities between the PK and FC approaches. First, they share the same criticism about neoclassical economics, stressing the presence of uncertainty. While PK focuses on the consequences of uncertainty to individual behavior, FC are interested not only in these consequences but also in the implications of uncertainty for coordination. Both PK and FC recognize conventions as a crucial element that rules economic decisions, specifically financial ones. Conventions rule the stability (for example, the state of affairs will continue in force) and the instability. The aforementioned PK core elements of the general concept of convention (social sharing, conformity with the conformity of others, and arbitrariness) is largely inspired by the definition given by Dupuy (1989) – which, in its turn, is inspired by Lewis (1969).

9. Anti-inflationary policy has been marked by different conventions according to which a specific monetary regime is seen as the best one. In fact, the history of monetary regimes has three paradigmatic moments. The gold standard was the conventional policy of the late 19th and early 20th centuries. In the 1970s and early 1980s, it was replaced by the targeting of monetary aggregates. Since the 1990s, inflation targeting has become the conventional regime prescribed by the New Consensus. None of those regimes is rooted in solid theoretical grounds or robust empirical evidence. Nevertheless, they all represent, in their turn, a socially shared belief as to the correct way of conducting monetary policy (Modenesi et al. 2013).



Finally, this proximity among the two streams is also related to the reasons why one individual may follow a convention. First, the rationality of following rules of thumb stressed by Dequech (2003) is in line with Dupuy's (1989) notion of common knowledge and with Orléan's (1989) discussion of rationality. Second, the 'conformity with the average opinion' is only partially opposed to the notion of common knowledge: common knowledge is an input to individual knowledge for FC; individuals do not follow conventions because social opinion could be better informed but because conventions provide knowledge, which is lacking but which they need to take their decisions. Third, to the self-fulfilling prophecy reason, as in the preceding sentence, the same caveats apply. A fourth justification is the defensive behavior argument, in consonance with FC; while the fifth argument pertains to the existence of uncertainty. The last reason for following a convention – to avoid social disapproval – is not treated explicitly by FC.

### 3 MONETARY POLICY, CONVENTIONS, AND LONG-TERM INTEREST RATES IN KEYNES'S GENERAL THEORY

#### 3.1 The determination of the short-term interest rate

The short-term interest rate is the rate of the interbank market – that is, the market where commercial banks lend money to each other in order to meet their liquidity needs. Central Banks act as a lender of last resort in this market, supplying liquidity to the banking sector in the case that its demand for liquidity is bigger than the amount of banking reserves.

Lending in the interbank market may have short-term government securities as collateral. The nominal value of collateral depends, however, on the price of these bonds which, in its turn, depends on the short-term interest rate. This means that the Central Bank can easily determine the level of short-term interest rates by means of selling and buying government bonds, which are called open market operations. These operations will result in the creation or destruction of high powered money.

If the Central Bank wishes to reduce short-term interest rates, it should convince commercial banks to exchange some of the bonds that they had in their portfolios for the new money that is being created by open market operations. This will only happen if commercial banks believe that they can earn a capital gain with this operation. Banks need to believe that interest rates will rise in the future in such a way that carrying government bonds in their portfolio will result in a capital loss in the short run. This will happen if the interest rate offered by the Central Bank on the open market is below the interest rate commercial banks expect to prevail in the short run. In this case, banks will bet on a rise of short-term interest rate in the short run and, consequently, on a fall of bond prices. This expectation will encourage banks to sell some (or all) of their bonds to the central bank, speculating with the possibility of buying these bonds again later at a lower price. In order to increase short-term interest rates, the Central Bank must convince commercial banks that its interest rate will be reduced in the near future. In this case, commercial banks will bet on a future rise of bond prices, accepting a reduction of their liquidity and increasing their position in government bonds.

In order for the Central Bank to be able to set the short-term interest rate (at a level that is required to accomplish the goals of monetary policy) there must be a *considerable divergence of opinion* between commercial banks regarding the future evolution of monetary policy. On the one hand, if all banks bet on a future increase of short-term interest rates (falling bond prices), there will only be selling orders, and prices will

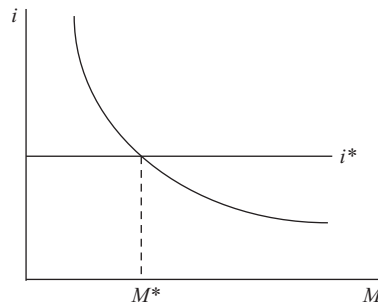


Figure 1 Short-term interest rate determination

converge to zero. On the other hand, if all banks bet on a reduction of short-term interest rates (increasing bond prices), there will only be buying orders, and short-term interest rates will eventually tend towards zero. This means that normal operations of monetary policy require the existence of a continuum of expectations about the future evolution of short-term interest rates.<sup>10</sup> If this is true, as Central Banks reduce short-term interest rates, some banks will change their bets, betting now on a future rise of interest rates. In other words, the gradual reduction of interest rates will change 'bull' banks into 'bear' banks.<sup>11</sup>

We can conclude that the determination of short-term interest rates by the Central Bank requires the existence of a speculative demand for money function such that, as the interest rate is reduced, there occurs a gradual increase in the demand for money by commercial banks. If the speculative demand for money function has a negative slope, the Central Bank could set the short-term interest rate at any level it considers appropriate, by means of the management of the speculative demand for money, changing 'bulls' into 'bears' when it wishes to reduce the interest rate, and changing 'bears' into 'bulls' when it wishes to do the opposite. This means that, under the conditions supposed here, the short-term interest rate is a phenomenon that is under the control of the monetary authorities.

The level of the short-term interest rate set by the central bank ( $i^*$ ) will depend on the goals of monetary policy and on how the management of this rate allows the achievement of these goals. We suppose that the short-term (or the base) interest rates are exogenously determined according to the goals of monetary policy (Figure 1).<sup>12</sup>

10. In the case of the short-term bond market, it is reasonable to suppose the existence of considerable divergence of opinion about the future evolution of interest rates, because buyers of these bonds are, in general, banks/speculators, who are more interested in earning short-run capital gains than in earning long-run income. The same does not occur, however, in the long-term bond market since long-term bonds are demanded by institutional investors (pension funds, insurance companies, etc.) which are more interested in the income arising from the possession of these assets rather than in capital gains that can be earned from the trade of these bonds. In this market we can expect a greater convergence of opinions regarding the convention about the future value of long-term interest rates. See Chick (1992: chapter 11).

11. We must stress that the terms 'bears' and 'bulls' refer to the expectation of an increase and decrease in prices respectively.

12. Since we are assuming an exogenous short-term interest rate, we are also assuming that the money supply is endogenous.

### 3.2 Conventions and the long-term interest rate

According to the expectations theory of the term structure of interest rates, the long-term interest rate is the weighted average of actual and future (expected) values of short-term interest rates. Besides that, the liquidity preference of bond holders requires long-term interest rates to pay a liquidity premium over short-term interest rates due to the greater uncertainty of long-term bonds compared to short ones. This means that long-term rates are not under the direct control of monetary authorities. More precisely, long-term rates depend critically on the expectations of the financial markets about the future values of short-term rates. As Moore (1988) pointed out, this means that long-term rates depend on expectations about future monetary policy.

How are these expectations formed? For neoclassical theory, expectations about the future behavior of monetary policy are formed based on the concept of the *natural* rate of interest – the value of the real interest rate which is compatible with a steady inflation, which requires the equality between aggregate demand and potential output. In other words, the natural rate of interest is the value of the real interest rate that prevails when the economy is operating with an unemployment rate equal to the non-accelerating inflation rate of unemployment (NAIRU). The natural rate of interest is considered to be independent of monetary policy, being determined by the productivity of capital, inter-temporal preferences of households, and the state of fiscal policy. This means that, holding all these variables constant, the natural rate of interest will also be constant, which allows it to act as a *benchmark* for expectations formation relative to the future evolution of monetary policy. More specifically, if, on the one hand, the actual value of the real interest rate is less than the natural rate, then economic agents could anticipate an increase of real interest rates in the medium-term. If, on the other hand, the actual value of real interest rates is greater than that of the natural rate, then agents should expect monetary easing, which will produce a reduction of interest rates in the medium-term.

From the Keynesian point of view, the concept of the natural rate of interest is completely misleading because it is based on the idea that potential output is independent of aggregate demand. Theory and empirical evidence regarding the relationship between long-term growth and aggregate demand show clearly that output is demand-determined even in the long-term (Kaldor 1988; Ledesma/Thirwall 2002; Libanio 2009; Oreiro et al. 2012a).

Expectations about the future behavior of monetary policy depends on what Keynes called the ‘safe rate of interest’ – that is, the value of the interest rate that the public believes will prevail in the long-term. The safe rate of interest is nothing more than a *social convention*, that is, a shared belief regarding the value around which interest rates fluctuate through time.

Suppose that the safe rate of interest prevailing in an economy is given by  $i^S$ . Suppose also that the Central Bank begins a process of monetary easing, by reducing the short-term interest rate below  $i^S$ . Given that the long-term interest rate is the weighted average of actual and future (expected) values of short-term interest rates (plus the liquidity premium), if the reduction in short-term interest rates does not induce a reduction in the value of the safe rate of interest or a reduction in the liquidity premium of long-term bonds, expectations about the future value of short-term interest rates will be revised upwards in a such way that the long-term rate will remain unchanged (see Seccareccia/Lavoie 2004). In this case, monetary policy will be ineffective. According to Keynes:

The short-term rate of interest is easily controlled by the monetary authority, both because it is not difficult to produce a conviction that its policy will not greatly change in the near

future, and also because the possible loss is small compared with the running yield (unless it is approaching vanishing point). But the long-term rate may be more recalcitrant once it has fallen to a level which, on the basis of past experience and present expectations of future monetary policy, is considered 'unsafe' by representing opinion. (Keynes 1936: 203)

This does not mean that the Central Bank is unable to influence the long-term rate by means of appropriate changes in the short-term interest rate. The Central Bank can do it if it is capable of inducing changes in the expectations about the level of the safe rate of interest. In other words, a reduction of long-term interest rates requires a change in the prevailing convention about the value of the safe rate of interest. If the Central Bank is not capable of modifying the convention regarding the safe rate of interest, then the reduction of the short-term interest rate will produce an increase in the expectations of short-term interest rates in the near future. Because of that, the long-term interest rate will remain unchanged.

From this, we conclude that a fundamental condition for the Central Bank to influence the long-term interest rate is a credible monetary policy. Credibility here does not mean that monetary policy should have price stability as its only goal, as proposed by neoclassical theory; it means a situation in which economic agents believe that monetary policy is compatible with the public interest, being conducted with strong conviction by a monetary authority that is unlikely to be superseded (Keynes 1936: 203). If that is not the case, 'a monetary policy which strikes public opinion as being experimental in character or easily liable to change may fail in its objective of greatly reducing the long-term rate of interest' (ibid: 203).

In this context, prevailing conventions about the value of the safe rate of interest could be changed if the public understands that monetary policy is conducted in a logical and determined way by the central bank (ibid: 204). In general this requires moderate and gradual changes in the short-term interest rate, in order to give time for the public to become used to lower levels of interest rates. Another necessary condition is that the level of the rate of interest established by the convention is not seen by the public as being based on more objective grounds than the convention itself (ibid: 204). For instance, the existence of large current account deficits could prevent a fall of long-term interest rates if the public considers the established value of the long-term rate as necessary to induce the inflows of foreign capital that are required for balance-of-payments equilibrium.

Summing up, the Central Bank can influence the prevailing conventions about the value of the safe rate of interest if: (1) it has independence to conduct monetary policy according to the public interest; (2) it conducts monetary policy in a logical and determined way; (3) changes of short-term interest rates are moderate and gradual; and (4) there do not exist objective reasons for the maintenance of the long-term rate at a specific level (due, for example, to the existence of large current account deficits).

#### 4 THE CASE OF BRAZIL: THE PROBLEM OF HIGH INTEREST RATES AND THE OVERVALUATION OF THE *REAL*

Almost 2 decades after the launching of the *Real* Plan, in mid-1994, and the achievement of price stability, a reasonable reduction in the Brazilian base interest rate

(hereafter referred to as Selic<sup>13</sup>) is yet to be seen. In fact, the country is known to lead the ranking of the world's highest interest rates.<sup>14</sup> Initially, the Central Bank of Brazil (BCB) used the need to offset the current account deficit (4.3 percent of GDP in 1998) and, eventually, to preserve international reserves as a justification for maintaining the Selic rate at a high level. The loose fiscal policy of President Cardoso's first term has also been cited as a cause of this rigidity in monetary policy.

The abandonment of the exchange rate anchor in 1999, the improvement in external accounts, and the adoption of a tight fiscal policy – with a primary surplus of around 3.5 percent of GDP – were expected to bring the basic interest rate down, but these changes proved to be insufficient to cause a *substantial* decline in the Selic rate nonetheless. The real Selic indeed fell by a non-negligible amount over the period 2000–2010 to an average of 10 percent per year. However, it still remained at a very high level – almost four times the real base interest rate of 2.7 percent per year on average in developing countries over the same period. The phenomenon of Brazil's high interest rate has been given many explanations.<sup>15</sup> Among them we highlight the existence of a *convention*, in line with the approach developed here, shared by the economic agents (the BCB among them), justifying the long-lasting high levels of Brazilian interest rates and the overvaluation of the *Real*.

In order to understand why the long-lasting high levels of the Selic may be the result of a convention, one should note a special feature of the Brazilian public debt. There is a particular kind of government bond, called *Letras Financeiras do Tesouro* (LFT), which is indexed to the Selic. Arbitrage imposes the equality between the level of the (long-term) interest rate in the government bonds market and the level of the (short-term) interest rate in the interbank market. So the short-term interest rate set by the BCB (Selic), is actually determined by the long-term rate. This happens because the indexation of the LFTs by the Selic rate generates a bond with zero duration. It is a prefixed bond with a constant market price (it does not change as a result of movements in interest rates), making government bonds quasi perfect substitutes for bank reserves (Barbosa 2006).

Because of this institutional peculiarity of Brazilian debt, a convention about the long-term rate has a direct 'contagion effect' on the short-term rates.<sup>16</sup> This means that, the more firmly a convention about the long-term rate has been established, the lower is the BCB's degree of freedom to set the level of short-term rates. In a limiting case, the BCB rate (Selic) is determined by conventions concerning the long-term rate.

Therefore, one possible explanation for the long-lasting high level of short-term interest rates in Brazil is that the BCB has been setting the Selic by conducting a so-called pro-conservative monetary policy, combined with the peculiarity of Brazilian

13. In Brazil, the base interest rate goes by the acronym Selic, for Sistema Especial de Liquidação e de Custódia (Special System for Settlement and Custody), the settlement system for most domestic securities of the Brazilian central government.

14. We first developed this theme in Modenesi et al. (2013).

15. For the debate on the so called 'problem of the interest rate' in Brazil, see Modenesi/Modenesi (2012).

16. This is a very important remark since, according to Keynes's theory of liquidity preference, the determination of short-term rate requires substantial divergence of opinion between bond holders, which excludes the possibility of a convention for short-term interest rates. The existence of LFTs explains why a convention formed in the market for long-term bonds can influence the determination of the short-term interest rate.

debt, which reduces the efficacy of monetary policy (Oreiro et al. 2012b; Modenesi/Modenesi 2012). In fact, the concept of convention has been used to explain the long-lasting high levels of the Selic rate by many authors such as Bresser-Pereira/Nakano (2002), Nakano (2006), Erber (2008a; 2011), Chernavsky (2007; 2008), Modenesi (2008), Corrêa (2010), Oreiro (2012), and Modenesi et al. (2013).

Bresser-Pereira/Nakano (2002) originally sought inspiration in the concept of convention to explain the Selic's long-lasting and excessively high level. According to Nakano (2006), the overly slow movement of the Selic reduction that started in 2005 could only be justified by the BCB's acceptance of a convention according to which: the Selic nominal rate floor, although extremely high, should remain around 14 percent per year; and monetary policy should be based on a Taylor rule, aligned with the New Consensus on monetary policy, in order to smooth interest rate movements.

The idea implicit in Nakano's argument is that, having put inflation under control by imposing a high interest-rate policy, economic agents, the BCB among them, came to share a convention that lower interest-rate levels (in line with the rates of low-inflation economies) would jeopardize the economically and socially costly process of price stabilization initiated with the *Real* Plan in 1995. In effect, the memory of the undesirable consequences of chronic and extremely high inflation is believed to have created the socially-shared feeling that lowering the interest rate would represent a threat to inflation stability – and nobody wanted to go through periods of high inflation ever again. So, given that uncertainty makes it foolish to believe that one can forecast the real consequences of faster cuts in interest rates, agents eventually came to agree (that is, share the convention) that keeping the interest rate at a high level was the best course of action in the case of the Brazilian economy.

Summing up, in terms of the approach developed here, understanding their knowledge to be insufficient to form true expectations, agents established the convention, 'contrary to all likelihood, that the future will resemble the past' (Keynes 1973: 124). We agree with Corrêa (2010) that this convention has the three main features of a general concept of conventions as proposed by Dequech (2009; 2011): social sharing, since the understanding that the Selic rate must remain high is clearly a socially-shared pattern of thought; conformity with the conformity of others, which implies that agents agree to the high level of the Selic, partially at least, because others also do; and arbitrariness, meaning that, given the lack of knowledge or the uncertainty as to the consequences of lowering the Selic more quickly, agents prefer to take the slow course.

Erber (2008a; 2008b; 2011) took an innovative approach when stating that the excessively tight Brazilian monetary policy should be understood from the perspective of political economy. The question is not merely macroeconomic, but the result of a coalition of interests revolving around the maintenance of high interest rates. In his own words:

[...] a coalition of interests was formed, structured by the public debt and the high interests earned on such debt. This coalition operates under a tacit agreement that the Brazilian State has to pay high interests and so must do other debtors. In other words, there is a convention firmly grounded on powerful interests, historically consolidated, about the payment of interest rates [...] (Erber, 2008a: 623–624)

According to Erber (2011, our translation), the overvaluation of the *Real* is another pillar of the coalition of interests sustaining the BCB's conservatism: '[t]he exchange rate appreciation is the Siamese sister of high interest rates.' As Erber (2011: 43) pointed out, the persistent appreciation of the *Real* has significantly benefited importers, consumers and enterprises; and the two sisters act in the benefit of 'companies that are able to access external credit and all who want to send resources abroad, either

for investment (especially commodity producers) or as interest, profits and dividends.’ In his opinion, such a convention benefits not only the agents of the financial markets, the ‘rentiers’ and financial institutions, providing them with high earnings derived from high interest-rate payments, but also the BCB itself, which collects as a benefit the reputation of being able to achieve its targets. As Erber (2011: 43–44, our translation) says:

A coalition of interests has been formed in support of the high interest and the overvalued currency, and has established a convention that those are key elements to the country’s development [...] This coalition of interests has access to powerful tools to consolidate and disseminate its development convention. The most explicit of those instruments is controlled by the financial system, as demonstrated by the way it effectively handled the new Brazilian government’s expectations during the crises that took place in the year 2002. But there are other, more subtle instruments, such as political campaign financing, liaisons with Congressmen, engagement in ‘entrepreneurial–bureaucratic circles’ [...] and the relations with media groups responsible for disseminating the convention of stability. The Central Bank is a key member of that coalition [...] but this does not mean that it has been ‘captured’ by the financial system in the sense of a ‘public choice.’ Establishing the coalition as well as the convention that socially represents it requires that the Central Bank and private agents benefit from the same policy – in this case, the good reputation of achieving targets and the profits from high interest and an overvalued currency.

Chernavsky (2007; 2008) also suggested that the high level of the Selic relates to a convention that has been established by the BCB and public debt holders, seeking to obtain the highest payoffs possible. In this context, a self-referencing logic – rather than economic fundamentals – is the basis for determining the Selic.

Finally, results presented by Modenesi et al. (2013) corroborate the argument that the BCB policy is ruled by a pro-conservative convention supported by the adoption of a Taylor rule (aligned with the New Consensus) with three distinctive features: (1) a high degree of interest rate smoothness; (2) a high *pure domestic* equilibrium interest rate; and (3) high interest rate differentials. Items (2) and (3) largely explain the overvaluation of the *Real*, a key element to ensure price stabilization in Brazil during the period analysed.

As a matter of fact, maintaining a high differential between domestic and foreign interest rates has been the BCB’s main instrument to ensure price stabilization since the adoption of the *Real* Plan, with two main implications: it has stimulated large inflows of foreign capital, which finance the balance of payments, and has been one of the main causes of the overvalued *Real* (Bresser-Pereira 2010a; 2010b). As pointed out by Erber (2011) the overvaluation of the *Real* is the flip-side of the coin – that has a high Selic level on the other side. Also, it has been a crucial element of the pro-conservative convention supporting the BCB’s conduct. Indeed, the overvaluation of the *Real* has played a key role in price stabilization. As Kregel (2004), Carvalho (2004), Arestis et al. (2011) among others have shown, the exchange rate has been the main monetary policy transmission mechanism.

## 5 CONCLUSION

The concept of convention is fundamental to PK as well as to FC economists in understanding the behavior of economic individuals which face uncertainty when taking their decisions. On the one hand, from the Keynesian standpoint, conventions are represented either by mimetic behavior or the practical theory of the future. On the

other hand, from the FC standpoint, conventions constitute the common knowledge which is shared by individuals and is incorporated by them in the ‘general’ knowledge necessary for taking decisions.

In spite of these apparently distinct treatments, both approaches have many elements in common and can be treated as complementary. In this context, we highlight the fact that uncertainty, a synonym for the lack of individual knowledge, is the main explanation for the existence of conventions. Hence, conventions can be viewed as beliefs or rules of expectations formation that are shared by a large number of individuals in a given society. They can be seen as defensive devices that allow one to deal with uncertainty in a Keynes–Knight sense.

Since the financial sphere is mainly driven by the prospects of future earnings, uncertainty and conventions play a crucial role in financial decisions. The determination of interest rates, then, is marked by conventional behaviors and the establishment of conventions as giving rise to a *common financial market knowledge*. We argue that, despite short-term interest rates being set by the monetary authority and thus not being properly subject to conventions formed in this market, long-term interest rates are highly dependent on conventions. The uncertainty which marks the bets in the long part of the yield curve requires a broad knowledge from financial market players where conventions play a big part.

Finally, many economists appeal to the concept of conventions to explain the chronically high levels of Brazilian interest rates – the highest in the world. We highlight that the indexation of a large part of government bonds to the Selic rate, the so-called LFTs, generates a bond with zero duration which implies that the short-term interest rate set by the BCB is actually determined by the long-term rate. In this context, conventions are useful to explain the persistently high levels of short- and long-term interest rates in Brazil after the mid 1990s.

## REFERENCES

- Arestis, P., Ferrari-Filho, F., Paula, L.F. (2011): Inflation targeting in Brazil, in: *International Review of Applied Economics*, 25(2), 127–148.
- Arthur, B. (1994): Self-reinforcing mechanisms in economics, in: *Increasing Returns and Path-Dependence in Economy*, Michigan: The University of Michigan Press, 111–132.
- Barbosa, F.H. (2006): The contagion effect of public debt on monetary policy: the Brazilian experience, in: *Brazilian Journal of Political Economy*, 26(2), 231–238.
- Boyer, R. (2006): L’économie des conventions 15 ans après. Un point de vue à partir de la théorie de la régulation, in: Eymard-Duvernay, F. (ed.), *L’Économie des Conventions, Méthodes et Résultats – Tome I: Débats*, Paris: La Découverte, 45–66.
- Bresser-Pereira, L.C. (2010a): A tendência à sobreapreciação da taxa de câmbio no Brasil, in: Bresser-Pereira (org.), *Crise Global e o Brasil*, Rio de Janeiro: Editora FGV, 127–151.
- Bresser-Pereira, L.C. (2010b): *Doença Holandesa e Indústria*, Rio de Janeiro: Editora FGV.
- Bresser-Pereira, L.C., Nakano, Y. (2002): Uma estratégia de desenvolvimento com estabilidade, in: *Brazilian Journal of Political Economy*, 22(3), 146–180.
- Carvalho, F.J.C. (2004): Teoria e política monetárias: uma visão pessoal sobre uma relação difícil, in: *Econômica*, 6(2), 315–334.
- Chernavsky, E. (2007): Sobre a construção da política econômica: uma discussão dos determinantes da taxa real de juros no Brasil, Dissertação de Mestrado, São Paulo: Universidade de São Paulo/IPE.
- Chernavsky, E. (2008): Taxa natural e convenções: uma discussão dos determinantes da taxa real de juros no Brasil, in: Proceedings of the 13th Brazilian Meeting of Political Economy, João Pessoa.



- Chick, V. (1992): *On Money, Method and Keynes*, New York: Saint Martin's Press.
- Corrêa, L.C. (2010): Convenções financeiras e a taxa básica de juros no Brasil, Dissertação de Mestrado, Campinas: Unicamp.
- Davidson, P. (2002): *Financial Markets, Money and the Real World*, Cheltenham: Edward Elgar.
- Davis, J. (1997): J.M. Keynes on history and convention, in: Harcourt, G., Riach, P. (eds), *A 'Second Edition' of the General Theory*, vol. 2, London: Routledge, 149–162.
- Denzau, A., North, D. (1994): Shared mental models: ideologies and institutions, in: *Kyklos*, 14(1), 3–31.
- Dequech, D. (2003): Conventional and unconventional behavior under uncertainty, in: *Journal of Post Keynesian Economics*, 26(1), 145–168.
- Dequech, D. (2009): Institutions, social norms, and decision-theoretical norms, in: *Journal of Economic Behavior*, 72(1), 70–78.
- Dequech, D. (2011): Financial conventions in Keynes's theory: the stock exchange, in: *Journal of Post Keynesian Economics*, 33(3), 469–490.
- Dequech, D. (2012): The French economics of conventions: interpretation, legitimacy, justification, uncertainty, and norms, Mimeo.
- Dupuy, J. (1989): Convention et common knowledge, in: *Revue Économique*, 40(2), 361–399.
- Dupuy, J., Eymard-Duvernay, F., Favereau, O., Orléan, A., Salais, R., Thévenot, L. (1989): Introduction, in: *Revue Économique*, 40(2), 141–145.
- Erber, F. (2008a): Development projects and growth under finance domination – the case of Brazil during the Lula years (2003–2007), *Revue Tiers Monde*, 195(3), 597–629.
- Erber, F. (2008b): The evolution of development conventions, in: XII ISS Conference, Rio de Janeiro: Universidade Federal do Rio de Janeiro.
- Erber, F. (2011): As convenções de desenvolvimento no Brasil: um ensaio de economia política, in: *Revista de Economia Política*, 31(1), 31–55.
- Eymard-Duvernay, F. (2006): Introduction, in: Eymard-Duvernay, F. (ed.), *L'Economie des Conventions, Méthodes et Résultats – Tome I: Débats*, Paris: La Découverte.
- Eymard-Duvernay, F., Favereau, O., Orléan, A., Salais, R., Thévenot, L. (2006): Valeurs, coordination et rationalité: trois thèmes mis en relation par l'économie des conventions, in: Eymard-Duvernay, F. (ed.), *L'Economie des Conventions, Méthodes et Résultats – Tome I: Débats*, Paris: La Découverte, 23–44.
- Hicks, J. (1977): *Economic Perspectives*, Oxford: Oxford University Press.
- Jodelet, D. (1989): *Les Représentations Sociales*, Paris: Presses Universitaires de France.
- Kaldor, N. (1988): The role of effective demand in the short and long-run growth, in: Barrère, A. (ed.), *The Foundations of Keynesian Analysis*, London: Macmillan Press, 153–160.
- Keynes, J.M. (1936): *The General Theory of Employment, Interest and Money*, London: Macmillan.
- Keynes, J.M. (1937): The general theory of employment, in: *The Quarterly Journal of Economics*, 51(2), 209–223.
- Keynes, J.M. (1973): Some economic consequences of a declining population, in: Moggridge, D. (ed.), *The Collected Writings of John Maynard Keynes*, vol. XIV, London: Macmillan, 124–133.
- Kregel, J. (2004): Comment on Fernando Cardim de Carvalho – monetary policy, monetary theory and financial structure, in: *Econômica*, 6(2), 341–348.
- Ledesma, M.L., Thirlwall, A. (2002): The endogeneity of the natural rate of growth, in: *Cambridge Journal of Economics*, 26(4), 441–459.
- Lewis, D. (1969): *Convention: A Philosophical Study*, Cambridge: Harvard University Press.
- Lewis, D. (1983): Languages and language, in: Lewis, D., *Philosophical Papers – Vol. I*, New York: Oxford University Press, 163–188.
- Libanio, G. (2009): Aggregate demand and the endogeneity of the natural rate of growth: evidence from Latin American Countries, in: *Cambridge Journal of Economics*, 33(5), 967–984.
- Modenesi, A.M. (2008): Convenção e rigidez na política monetária: uma estimativa da função de reação do BCB (2000–2007), Texto para Discussão Instituto de Pesquisa Econômica Aplicada (IPEA), No. 1351.

- Modenesi, A.M., Modenesi, R.L. (2012): Quinze anos de rigidez monetária no Brasil: uma agenda de pesquisa, in: *Revista de Economia Política*, 32(3), 389–411.
- Modenesi, A.M., Montani Martins, N., Modenesi, R.L. (2013): A modified Taylor rule for the Brazilian economy: convention and conservatism in 11 years of inflation targeting (2000–2010), in: *Journal of Post Keynesian Economics*, to be published.
- Moore, B.J. (1988): *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge: Cambridge University Press.
- Nakano, Y. (2006): Antes que os populistas tomem conta, in: *Jornal Valor Econômico*, 01/17/2006, A-10.
- North, D. (1990): *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- Oreiro, J.L. (2000): Incerteza, comportamento convencional e surpresa potencial, in: *Econômica*, 2(2), 111–138.
- Oreiro, J.L. (2012): Keynes e os Juros, in: *Jornal Valor Econômico*, 02/28/2012.
- Oreiro, J.L., Nakabashi, L., Silva, G.J.C., Souza, G.J.G. (2012a): La economía del crecimiento impulsado por la demanda: teoría y evidencia respecto del Brasil, in: *Revista de la Cepal*, 106, 161–180.
- Oreiro, J.L., Punzo, L., Araújo, E. (2012b): Macroeconomic constraints to growth of the Brazilian economy: diagnosis and some policy proposals, in: *Cambridge Journal of Economics*, 36(4), 919–939.
- Orléan, A. (1989): Pour une approche cognitive des conventions économiques, in: *Revue Économique*, 40(2), 241–272.
- Seccareccia, M., Lavoie, M. (2004): Long-term interest rates, liquidity preference and the limits of central banking, in: Lavoie, M., Seccareccia, M. (eds), *Central Banking in the Modern World: Alternative Perspectives*, Cheltenham: Edward Elgar, 164–182.