POST-KEYNESIANISM AND HORIZONTALISM: LIQUIDITY PREFERENCE, MONETARY CIRCUIT AND ACCOMODATION OF INFLATION

Fernando Nogueira da Costa[1]

Introduction

If post-Keynesian economists intend to establish a respected stream in the history of economic school of thought, they should avoid the barrenness of a purely theoretical debate, based on the exegesis of some "sacred" text or an authoritative argument. Without going too deeply into the controversial standpoints held by the US and the European economists (Bruno & Eichenberger, 1992; see also Kyklos magazine, v. 48, vol. 2, 1995; Earp, 1996), where those of the US are considered members of an academy that produces pure theory and the Europeans part of a strand that tends towards applied theory, we could perhaps suggest – to complete the methodological threesome – that those developed by the developing countries, particularly from the Latin American countries, because they have had to survive economies suffering from chronic inflation, have made their mark of distinction due to the sheer need of having to master the art of economic policy far different to that found in canonized models.

The different levels of theoretical abstractions are prerequisites for the drawing up of any economic policy. But the "normal" conditions that are taken for granted in building the more generalized theories are quite often absent below the Equator. What are considered "abnormal" conditions in comparison with those found in the developed capitalist world, are considered quite normal in Latin American countries.

The development of the post Keynesian monetary theory is the result of the many challenges its proponents faced in their debates. Divided into "fundamentalists" e "horizontalists", the post Keynesians discussed issues such as liquidity preference, cash deposits demand, the accomodationist role of central banks, and the consequent form of the money supply curve. Although we do not expect to resolve the theoretical controversies by winning over the theoretical antagonists completely, the challenge this poses to the mind is the very stimulus necessary to the development of this field of knowledge.

Because a great misunderstanding still exists with respect to what horizontalism really means and how it is positioned in relation to such issues, in this paper, we will be examining the compatibility between horizontalism and liquidity preference, credit crunching, the flexible mark-ups in interest rate formation, as well as other recurrent questions. However, to avoid slipping into the criticized sterility, we will also be comparing the horizontalist viewpoint with the heterodox (or post-Keynesian) approach to the Latin American theory on inflation. We will analyze the monetary accommodation of oligopolistic inflation,

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[1] Economics Professor of *Instituto de Economia da UNICAMP - Universidade Estadual de Campinas* (Institute of Economics of the State University of Campinas), São Paulo, Brazil. Coordinator of economic studies of FAPESP - *Fundação de Amparo à Pesquisa do Estado de São Paulo* (State of São Paulo Research Fostering Foundation). *Email*: fercos@eco.unicamp.br. The author owes a special debt of thanks to Antoniio Carlos Macedo Silva e Gilberto Tadeu Lima .

inertial inflation, accelerated inflation and hyperinflation, as well as the stabilization policy that was developed therefrom.

Assuming that there is a consensus post-Keynesian hard core (that would constitute an Alternative Theory of Money: Costa, 1998), we now need to stress the scientific need to falsification test of their derived theories, in different contexts (historical and local) and levels of abstraction. For example, the key concept of the Liquidity Preference Theory would have to be adjusted to become analytically applicable. We can talk about absolute or conventional liquidity preference in a "liquidity trap" context (such as that Japan is currently facing), but liquidity preference is relative or heterogeneous in a demonetization, indexation and or "dollarization" context (as occurred during the period of high inflation in Brazil).

There are several texts available on the recent post-Keynesian debate making up a handy anthology (Musella & Panico, 1996). There is also an abundance of detailed accounts on debates such as horizontalism versus fundamentalism (Cottrell, 1994; Arestis, 1996); accommodationism versus structuralism (Pollin, 1991; Palley, 1991; Costa, 1992; Costa, 1993; Carvalho, 1993; Costa; 1994); as well as on mark-up versus liquidity preference (Rousseas, 1986; Dow & Dow, 1989; Hewitson, 1995; Lavoie, 1995). To avoid falling into redundancy as we review basic ideas, we will compare the microeconomic approach to decisions with the macroeconomic approach to monetary circuit. In other words, we will be questioning whether the debate will terminate on comparing "methodological individualism" against "methodological holism". If this proves to be true, it would perhaps be possible to acknowledge that, notwithstanding an apparent antagonistic polarization between post-Keynesianism and horizontalism, there is a necessary supplementation between the two distinct viewpoints.

2. A comparison between fundamentalism (or structuralism) and horizontalism (or accommodationism)

2.1. Liquidity Preference and effective demand

Ten years later, it was found that Moore's book (1988) prompted a greater theoretical debate among post-Keynesian followers who postulate the endogeneity of money supply endogeneity than a reaction among the mainstream "verticalists". Today, however, the pragmatism of this predominant economic school of thought acknowledges Moore's main argument. This argument is that the main goal of monetary policy is to ensure interest rate stability to avoid causing inflationary instability (both in asset prices and in current product prices) on the financial market and at the level of activities.

Their criticism of the exogeneity of money supply was based on their having found an ex post interdependence between the money supply actually in circulation and the demand for credit money that had been fulfilled. This led them to stray quite far from post-Keynesian "fundamentalist" thought, since the logical conclusion drawn by the horizontalists is that the Liquidity Preference Theory constructed by Keynes is inconsistent as a basic interest theory. Under

the horizontalist theory, the reference interest rate is disclosed and sustained by the central bank. Thus, ex ante, it is exogenous to the transactions that establish the different interest rates existing on the market.

The response of the fundamentalists to the question was to seek a logical solution through a precise redefinition of the demand for money (Wray, 1990). The demand for money that stems from ordinary (to cover current expenditures) and or extraordinary transactions (to cover investment expenditures), linked to loan flows, would not, in fact, influence the interest rate charged. But demand for precautionary or speculative purposes (to cover deferred decisions on spending and or on buying financial assets), which in both cases is linked to the money balances (stocks) held by each economic agent according to its respective liquidity preference, would influence the market interest rate.

Thus, Wray emphasizes that interest rates (both on the short and long term) are determined by liquidity preference and not by demand for credit-money. To encourage investors to waive their liquidity and buy long-term debt bonds they must be offered a short-term and long-term rate differential, prompting the positive inclination of the income curve. Any increase in the investors' liquidity preference will widen this difference.

According to Dow & Dow (1989), the apparent rejection of the Liquidity Preference Theory by post-Keynesian horizontalists is understandable, "if the liquidity preference refers solely to demand for non-interest bearing money". Authors recognize that this restricted notion according to which it is the liquidity preference that determines the differential in the interest rate paid on money in the strict sense and that paid on other close substitutes of this non-interest bearing money, is not of any great interest, since money as a store-of-value is outside their scope. They further affirm that it is irrelevant in that it is the monetary authority that fixes the short-term interest rate.

However, if liquidity preference explicitly comprehends demand for both idle and active balances, the concept becomes broader and embraces an institutional context in which money supply includes interest-bearing deposits (including the broader definitions of money supply such as given in M4). We then arrive at the theory of a choice between these liquid assets and other less liquid assets.

In the opinion of Dow & Dow, in practice, liquidity preference determines the difference between the interest paid on liquid deposits and those paid on substitute less liquid assets. The monetary authorities fix the short-term interest rate, at one extreme of the spectrum; liquidity preference (together with other considerations) determines the mark-up prompting the long-term rates. Thus, in a broader sense, liquidity preference can be expressed as a preference for any liquid assets over any less liquid assets, whether these are debentures, stocks, working capital loans, or capital goods. It almost becomes the antonym of the decision to spend. And, as such, it loses its "monetary" characteristic and simply becomes a function that is inversely proportional to effective demand.

In this broader sense, liquidity preference plays a major role, in the fundamentalists' construction of the Keynes theory. It attributes the possibility of involuntary unemployment to the existence of liquid assets, in a scenario of uncertainties, and not directly to the lack of effective demand resulting from available labor supply. To this strand of post-Keynesian followers, investments are not made only due to cash shortage and not to a scarcity of savings, as postulated under the Loan Funds Theory. This cash shortage stems from an increasingly greater liquidity preference, that is, a greater desire to hold "idle" money balances. To what extent are these balances in fact "idle", in terms of the monetary circuit? Could the lack of credit demand not be the crucial problem, since the other determinants failed to adequately boost investments?

The key question is whether changes in different individual liquidity preferences could actually influence the general level of production and employment, when the credit supply is endogenous, that is, when, in the private sector, it is at least partially determined by the market forces. When Dow & Dow extended the portfolio range of the liquidity preference concept – including of the preference for liquid interest-bearing assets (having conversion and or transaction costs) – to capital assets, they failed to look deeper into the consequences of this theoretical step. They held that credit supply and liquidity preference were interdepended to the extent that the credit supply did not fully accommodate demand. But they failed to show that any greater individual desires to hold "idle" liquid balances are met outside the money circuit, so why would the banking system run counter to this circuit, curbing credit, under normal circumstances? They also failed to check whether the substitute assets had similar properties to those of the monetary assets themselves, that is, zero production and substitution properties. Wouldn't the creation (or issue) of such assets be the counterpart of a process of job creation?

A general desire of the entire banking system's holding noninterest-bearing "idle" assets and, thus, avoid having to enter any loan agreements to fund the acquisition or generating of illiquid assets, or, to spend money productively in the creation of new jobs, is an anomaly. But the fact that the banking system chooses to buy public or private debt bonds to build up a portfolio (thus fostering indirect funding) that could perhaps be more liquid, instead of any direct consumer or producer credit portfolio, does not constitute the necessary or sufficient grounds to explain unemployment.

Dow & Dow (1989: 151) give six different ways in which an exogenous increase in the demand for "idle" balances--namely, an increase in liquidity preference--can affect plans (ex ante decisions) and results, nothwithstanding the willingness of the monetary authority to provide banks with all the bank reserves they need to maintain the stability of a given rate of interest. Reference is made to all the different forms of increased liquidity preferences of the consumers, enterprises, financial investors, banks, non-banking financial institutions, international financial companies to show that liquidity preference does affect the amount of credit extended. They, thus, conclude that the assumption of an infinite elasticity of the credit supply is too simplified a notion, which calls for a better explanation by the horizontalists. The horizontalists would argue that the problem does not rest on the *potential* credit supply, but, rather, in that it affects *effective* demand and, consequently, the *effective* money

supply, if the *real* demand for credit is not entirely met. The crux of the matter is the effective money supply, and it does not exist without an interdependent demand.

The caricatural criticism of the "horizontalist automatism" – with the imputation of a perfectly accommodating credit supply, meaning that any demand for credit would always be satisfied – is well known. As a counterargument, we could hold that there is a difference between post-Keynesian fundamentalist and horizontalist methodologies. It is generally agreed that the choice between the endogenous creation of credit and liquidity preference is spurious and a mere habit one acquires of thinking in either-or terms. From the horizontalist viewpoint, ex ante liquidity preference and any credit extended ex post should not be looked upon as rivaling theories, but as partial theories (clippings from reality) with specific research goals.

2.2. Methodological individualism and methodological holism

The counterargument of the horizontalists--quite correct from the viewpoint of monetary circuit--is that any individual liquidity preference that is maintained through demand deposit holdings in a developed banking system is innocuous in macroeconomic terms. In other words, if the loans granted create new deposits in the banking system, the fact that there are no "leakages" in the monetary circuit, in the form of paper currrency withdrawals, would cause the stepping up the "loanable funds", the accounting basis for new loans. Thus, $\Delta L^s = \Delta L \Rightarrow \Delta D \Rightarrow \Delta R$, in the well-known version of Chick (1986). The logical conclusion we can draw from this is that liquidity preference is a *microeconomic* concept, and offers no solid grounds for a consistent explanation of *macroeconomic phenomena*, such as permanent unemployment and the money actually in circulation, including financial and industrial circulation.

Except if the economic agents have an absolute, homogeneous and conventional liquidity preference, which occurs only in a "liquidity trap" situation such as that Japan is currently facing, the concept is useless in macroeconomic analysis. This piques the fundamentalists. It means giving priority to the effective demand principle over the liquidity preference theory. But the latter does not counterbalance the first. In normal conditions, in which there is a heterogeneity of expectations and several liquidity preferences and not the conventional notion of having one "representative agent", the decision to defer spendings by some economic agents can be fully compensated by the greater spending of other agents, buttressed on a fully-satisfied credit demand by the banking system. Then, even if some agents have a liquidity preference, the credit monetary economy can attain full employment.

New-classical macroeconomics centers on microeconomic fundaments and studies the reasoning behind each individual decision of the economic agents interacting on the market. The macroeconomic trends would be a result of a plurality of private initiatives. Mainstream macroeconomic models are commonly based on the simplified assumption that any economy has a representative agent, that is, an ideal agent with an *average type of behavior*. Using this microeconomic foundation, the macroeconomic analyst then analyzes the behavior of the representative agent in different contexts. But this

analyst cannot investigate the problems that arise from information asymmetry or coordination failures, which are precisely what cause the uncertainties that explain liquidity preference. If all individuals have similar, known and expected behavior, there would be no need for them to hold liquid assets as store-of-value. Liquidity preference is only justified in an environment of economic uncertainty, in which the decentralization and lack of coordination of individual decisions occur.

In the post-Keynesian theory, the problem arises when macroeconomic fundamentalists try to explain the general behavior of the economy by a uniform aggregation of the various microeconomic decisions as is commonly done under the orthodox economic theory. The behavior of a typical individual is extrapolated to determine aggregate behavior. Keynesian macroeconomics always works with aggregates, but heterogeneous behavior, based on distinct structural positions and expectations, cannot be uniformly aggregated.

The heterogeneity of behavior is straightjacketed and termed convention. The fundamentalists impose a conventional behavior, summoning up the "representative agent" of mainstream economists. A convention can be defined as a self-imposed impulse to follow a previously established course of action (Lima, 1998). Because decision-makers have cognitive limitations, both in terms of information availability and of processing capacity--which explain the persistent presence of the uncertainty phenomenon--conventional behavior is shown, in the texts prepared by Keynes and his fundamentalist followers, to be a possible guideline for decision-making. Convention uniformly patterns the varying degrees of psychological inclinations and attitudes that different individuals show in their spending or investing decision-making.

The presence of any radical uncertainty frightens the "sorcerer's apprentices" authors. The assumption that the "follow the leader" behavior will prevail, that is, the judgment of the rest of the world will follow that of the agent who is, perhaps, better informed, backs to a very reduced view. With this behavior, the uncertain and heterogeneous expectations do not generate chaotic dynamics about which theorizing becomes difficult (Costa, 1998). The anticipatory and divergent behaviors of speculators are minimized under the "herd behavior" epithet. From this point it is only a short step to the argument of "self-fulfilled prophecy" used to masquerade the concept of "rational (or certain) expectations".

The question really has to do with methodological individualism. If individual actions, created by conventions, constitute the study field for macroeconomic analysis, this does not occur in terms of a cause-and-effect sequence, but rather in terms of individual motivations and intents. The investigation of the individuals is then carried out as though they behaved according to rules with which the macroeconomist had been previously cognizant. This leaves no room for analyzing the element of surprise, of innovation or of invention.

The principle of methodological individualism establishes that macroeconomic analyses should only be considered suitable if conducted in terms of individual beliefs, attitudes and decisions (Blaug, 1980). This principle

is completely opposite to that of methodological holism, which postulates that all social groups have objectives and functions (such as that of supply and demand for money) that cannot be reduced to the beliefs, attitudes and actions of the individuals that make up each of these groups.

The fundamentalist psychologism is based on the proposition that all macroeconomic conceptions are reducible to psychological conceptions. However, the main purpose of any macroeconomic theory should be to identify the involuntary social repercussions of intentional individual actions. The holding of this specific knowledge is what distinguishes economists from the layman. Their knowledge contemplates propositions on social groups that go beyond the overall sum of the theories on all the parts that make up such groups. The mechanism that prompts market operation results from the social consequences of the unintentional and unplanned actions of different individuals. The study of the by-products of these actions in the monetary area is the focus of horizontalism. Its macroeconomic propositions are, thus, not reducible to microeconomic ones.

Bresser & Lima (1996) have challenged the currently popular notion that one has to search for microeconomic fundaments for macroeconomic ones. The latter deals with relations that, in principle, result from the actions of individual agents. But one does not necessarily have to begin with individual actions to understand macroeconomic relations. Enterprises are made up of many different individuals with different interests and multiple viewpoints regarding the economic scenario and its restrictions. Only in unusual circumstances—such as the liquidity trap or hyperinflation—do these distinct preferences tend to converge. Post-keynesian scholars should not see them as normal conditions.

2.3. Demand for liquid assets on the monetary circuit and the resulting inclination of the money supply curve

Economic holism, resting on the principle that systemic behavior is more than the simple aggregate sum of individual behaviors, shows that some entities, such as the banking system, cannot be reduced to invidual propositions, such as the liquidity preference of each bank. Tobin's (1963) stand is classical when he makes a distinction between the entrepreneurial position of a banker ("loans from third parties") and the systemic position of the economist ("loans create deposits"). Therein lies the difference between the lay microeconomic opinion and the specialized macroeconomic opinion.

"Even though individual choices and preferences should not be necessarily denied, they are severely limited by existing institutions, social norms, socialeconomic classes, and even macroeconomic events. In such a case, the definition of individual preferences [such as liquidity preferences] is not sufficient to allow us to understand macroeconomic behavior" (Bresser & Lima, 1996: 24).

The horizontalism and the Monetary Circuit Theory, drawn up by contemporary scholars of French and Italian extract, have reclaimed the classical methodology of political economy, according to which macroeconomic

analyses are conducted without any reference to individual behaviors, tastes or preferences. By placing more emphasis on the social and economic classes, these theories are clearly breaking away from methodological individualism.

As structured by Graziani (1989), only four economic agents were taken into account in his brief description of the stylized stages of a monetary circuit: central bank, commercial banks, companies (non-financial companies) and wage earners. During the first stage involving the presentation of the economic process, the companies are considered as a whole, and they only contract outside labor and credit. As soon as the production cycle starts up, the companies request bank loans to cover the payroll, which is contingent on both the salaries negotiated on the labor market and the number of job offers. The result of the negotiations conducted between the banks and the companies on the credit market determine the amount of credit actually secured and the interest rate charged.

Thus, from this angle, the operation of the labor market is intrinsically linked to that of the credit market. Any labor contracting or salary negotiating depends on how companies anticipate how the banking system will react to credit demand, in other words, what its credit policy will be.

The second step is given by the decisions made on production and spending. On the part of the companies, they have to make independent decisions on the number of employees they need to hire, their production levels and the apportionment between consumer goods and capital goods. The only decision the wage earners will have to make is whether to spend their money on buying goods and services or to invest in financial assets, regardless of whether these are monetary or non-monetary holdings. In this simplified case, that disregards the public sector and any outside sector, only the companies issue bonds. Thus, the money that is spent on buying goods and services, as well as that invested in the bonds issued by the non-financial companies is returned to the companies. This is the money they will have to settle any debts owed to the banking system. Upon the settlement of the loan, the money that was originally created is destroyed, completing the circuit. New money will then be created provided the banks extend new credit, and a new production cycle will then begin.

The monetary circuit is thus completed without any leaks or losses if the wage earners' spendings equal their earnings, regardless of whether the money was spent on buying goods and services on the market or invested in company bonds on the financial market. In either case, the companies recover all their total monetary disbursements and are able to pay their outstanding bank loans.

If, on the other hand, the wage earners decided to hold some of their investments in the form of monetary assets, that is, in bank deposits, the companies recover less money from the market than what they initially injected into it. In this case, there will be a loss in the circuit and the companies will be unable to fully settle their bank loans. At the end of this cycle, the money created initially will not be totally destroyed. A part of this money will exist in the form of the companies' outstanding debt to the banks.

If the banks decide to extend the same amount of credit that they initially granted, the nominal money balance will increase. Then, the existing money supply will depend on the rate at which the money is currently created and destroyed. This rate is related to the established assumption, according to which the workers spend their earnings gradually and hold demand deposits. This would be irrational, if there were no uncertainties. This is undoubtedly a realistic hypothesis, since if, contrariwise, the velocity of the circulation of money were infinite, the money would frequently disappear from the system.

What does this synthetic view of the monetary circuit clearly contribute to the debate on the compatibility between liquidity preference and money supply endogeneity? Firstly, the possibility of—or the need for—a "harmonious" coexistence between the two concepts used to abstractly characterize the monetary circuit. Secondly that, in accordance with the principle of effective demand, the crucial decision rests on whether money should be spend or invested. If an investment decision is made, the choice would be between holding paper currency or investing in financial assets, which are the counter entries to the financial system liabilities. When the banks take in deposits, they fulfill the reserve requirement (or need) based on which they extend loans according to credit demands (resulting from decisions to spend). All these situations may increase the money supply (endogenous).

The circuit theory holds the money supply to be a strictly endogenous variable. The circuit starts with the creation of money in the non-government sector, independently of any public deficit, and continues with the ongoing existence of the outstanding debit balances of business concerns in banks, as well as the debit balances of commercial banks with the central bank.

In an extreme *pure credit* system situation, as developed by Wicksell, in which all payments would be made via deposit transfers within the banking system (where no paper currency would pass through public hands), there would be no need for any idle voluntary bank reserves. Inasmuch as the liquidity preference itself would be exercised via demand deposit holdings, the money multiplier would be infinite, if the central bank did not establish any reserve requirement. If all the credit demand, including any inflationary demand (due to the cumulative process of attaining full employment), were met, the degree of money supply endogeneity would be absolute.

Unfortunately, as Davidson (1990) points out, the same banking system that provides the mechanism prompting the endogenous increase in money to satisfy the needs of all transactions, does not normally distinguish whether the greater need by companies for money to meet more obligations is due to (a) a higher employment level (at a given nominal salary) due to a slight stepping up of the production flow, or to (b) more money per labor effort unit (after due adjustments to labor productivity changes), that is, a higher labor/production unit cost ratio. Consequently, the same banking system that provides the financial conditions to raise production and employment levels is also able to passively endure any inflationary forces stemming from the distributive conflict. This conflict is caused by the incompatibility of the economic, social and political higher nominal income demands of the various groups with a view to

increasing*, ceteris paribus*, their participation in some aggregate product flow. We will return to this topic subsequently.

First, we must point out that both Arena and Wray, in a collection of works published by Deleplace & Nell (1996), believe that the circuit approach does not deal appropriately with the liquidity preference nor with asset price determination and financial markets in general. They believe that the problem lies in the inadequate treatment of the construction of expectations in a scenario of uncertainty. The post Keynesian fundamentalists argue that the ex post identities do not express the ex ante divergences between spending expectations and income expectations, which can influence the levels effectively attained ex post. As liquidity preference increases, asset prices fall, causing a decline in physical asset output and, consequently, a decrease in the ex post spendings and income flows. In the opinion of these authors, the divergence is basically because the circuit theory followers have their focus on the money flow created by credit, whereas the fundamentalists stress money as a balance that has to be held, because the future is uncertain. However, they point out that this does not mean that liquidity preference is inconsistent with the money supply endogeneity and or monetary circuit approach. It simply means that the liquidity preference variations affect the money supply flow directly. The horizontalists hold that the varying liquidity preferences affect credit demand first.

As far as the money supply curve is concerned–a matter of great controversy among the economists–the individual liquidity preferences of banks, because they have different degrees of exposure and credit-restricting policies, do not justify a stronger inclination in the money supply curve between the interest rate and quantity of money axes. Please note that this graphic representation does not take time into account; it is “atemporal”--in that it represents a given moment ex post, that is, the demand for money that is effectively satisfied by supply--and “aggregate”. In other words, it is merely an illustration of the statistical register of the *total* money actually supplied over a determinate period of time[2]. Potential money supply is not significant in the decision-making process. In economics (and also in terms of statistical registers and graphic illustrations), only the *effective* money supply is meaningful. The former, in fact, does not exist. Money supply only exists to the extent there is any demand for it.

2.4. The accommodationist role of central bank and interest rates

There is also a certain difference in the opinions held by the different new economic schools of thought regarding the validity domain of the endogenous money concept (Lavoie, 1996). For example, monetarists believe that money supply becomes endogenous if central bank fixes the interest rate and or the exchange rate in a free-market economy. This is different to the opinion held by the horizontalists and circuit theorists, who further base their approach on the

[2] The flexibilization of the mark-up of each bank by increasing the spread between the interest that is charged and that paid would lead to two distinct horizontal straight lines, each representing new credit transactions based on each different rate.

view that the monopolistic supplier determines the money stock, and not the demanders.

The accommodationist role of money should not be used as a mere argument for the horizontalists to affirm that this is, in fact, what central banks do in the long run, as lenders of last resort. It would be reasonable to argue that central banks, under monetarist guidance, could attempt, on the short term, to control the money supply. However, on the long term, central bank could not directly and politically sustain this control over the money supply due to the economic and financial instability caused by the ensueing interest rate volatility. Nevertheless, as mentioned before, central bank officers themselves affirm that what they do every day is to control the basic interest rate, and the stock of money on the market is a mere consequence. The *accommodation* or *sterilization* of money supply (for example, of the monetary impact of the balance of payments), via the buying and selling of bank reserves, are the *tools* the central bank uses to ensure the daily *targeted* interest rate stability. The "automatic zero balance" used by the Brazilian Central Bank is a good example of this tool[3].

The operational purpose of monetary policy is the stability of the basic interest rate, which is attained by managing the level of bank reserves (Torres, 1998). Bank reserves are commercial banks' cash deposits with the central bank. The only control central bank has over bank reserves is carried out indirectly by influencing the interest rate paid on economic agents' spendings. The fact that they have no strict control over bank reserves disqualifies them as monetary policy's operational target.

Despite being focused on the control of monetary aggregates, central banks all over the world carry out monetary policy by fixing the short term interest rate. Thus, in practice, this is its operational *target variable*.

The bank reserves market is designed for interbank reserve negotiations and also for negotiations carried out between banks and the central bank. On the *primary market*, the transactions are carried out between commercial banks and the central bank. In this case, the result of the operation entails the creation and destruction of reserves, since the central bank is the monopolistic supplier. On the *secondary market*, interbank transactions are carried out with existing reserves. In this case, there are no changes in the total supply, only an interbank exchange.

Demand for reserves assumes a specific profile in the case of *legally established reserves*. Central banks can restrict the volume of liquid holdings

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[3] The so-called "automatic zero-balance of the market" is a mechanism used by Central Bank to ensure the equilibrium between the debit and credit positions of government bonds, thus eliminating the risk of holding these bonds and facilitating the renegotiating of any in stock to guarantee relative control over the market interest rate structure. Using this mechanism, Brazilian Central Bank repurchases government bonds when the banking system does not have the necessary funds to cover bank reserve requirements and sells them when the banks have excess liquidity, so as to avoid any significant decline in the interest rate. The "automatic zero-balance" mechanism makes the money supply fully endogenous, and withdraws Central Bank's monetary control power.

available to banks by establishing *legal reserves*. In general, the reserve requirement is a percentage of their *cash* deposits the banks are required to hold with the central banks. The required reserve is calculated as a percentage of the daily average of deposits subject to reserve over a given time period known as the *calculation period*. The period of time banks are required to keep the deposits in reserve is known as the *movement period*. Consequently, throughout the movement period, demand for bank reserves has a fixed minimum value, which is determined by reserve requirement.

The strong power that any central bank has in controlling the bank reserve market rests not only on the fact that it is the monopolistic supplier of paper currency, but also because it can guarantee relatively stable demand on the short term (*movement period*), through the management of legal reserves.

The greater or lesser need of liquid funds influences the *overnight* interest rate paid on the bank reserve market. If the system has excess reserves, the interest rate will quickly drop. On the other hand, if there is a shortage of reserves, the rate will likely rise. But, at a given level, bank reserves will ensure interest rate stability. In the management of liquidity, this is the level targeted by the central banks.

The *estimated liquidity* is the initial stage in the implementation of any monetary policy. It is the basis of any decisions on the volume, frequency and maturity of the transactions designed to balance the market. Most central banks prefer to rely on discretionary behavior when managing liquidity.

The central bank is *oversold* when the volume of bank reserves on the market is below the stock of bonds issued by the central bank, which is kept in commercial bank portfolios. In this case, the banks that have a deficit cash flow will find it difficult to finance their bonds portfolio on the interbank reserve market. As a result, they will be pressured into paying whatever interest rate the central bank establishes in order to bring cash flows back to an even keel. If the opposite occurs, then the central bank is *undersold*.

To signalize the monetary policy means to inform the financial system what the central bank has targeted as the desired basic discount rate. This rate will serve to orient market expectations and, as a result, the entire interest rate structure of that particular economy. In general, this signaling involves *adjusting the volume of bank reserves*, with a view to establishing the *programmed basic interest rate level*, which will then affect the entire interest rate structure.

Using this example of the "*art of monetary policy*", it is possible to construct the bridge between the different levels of abstraction — between *pure* monetary theory and *applied* theory – by incorporating institutions, dated and located within the perspectives of horizontalism. In the case in point, we will be comparing these with the heterodox inflation theories of Latin American origin. Our intent is to examine the role played by money supply in each case of these explanations of high inflation regimes.

3. Comparing the horizontalist approach with the heterodox inflation theories of Latin American origin

There is a general theoretical interest to know what Alternative Theory of Money would replace the Quantitative Theory of Money, if the latter is dismissed from the viewpoint of money supply endogeneity. In other words, if the latter monetary theory on prices–that is, the cause of inflation is a greater expansion in money supply than in output--then what are the possible explanations? Because they had to survive in an environment of high inflation, Latin American authors were forced to "get down to it" and develop sound theoretical fundaments to support consistent inflation stabilization plans.

In the opinion of Friedman (1992), "inflation is neither a capitalist nor a communist phenomenon. In our modern world, inflation is a money-printing phenomenon". According to him, "high inflation is at all times and in all places a monetary phenomenon". Based on this, he developed a general theory on inflation and a sole stabilization policy: persistent monetary control adjusted to noninflationary conditions. However, in economies suffering from chronic inflation, this monetary theory is shattered: demand for money becomes totally volatile, the degree of endogeneity of money supply is absolute and using monetary policy to control aggregate demand has failed time and time again.

3.1. The structuralist theory of inflation

The Latin American structuralist economists – members of the Economic Commission for Latin America and the Caribean (ECLAC) (CEPAL in Brazil) – have developed their theory based on the premise that economic policy decisions are not made out of the blue. On the contrary, there is a set of objective realities that condition and, to a certain extent, determine them (Sunkel & Pinto, s/d). The general diagnosis for developing an inflationary model takes different elements (including nonmonetary elements) each with distinct relative importance into account. This is a more useful theory than the simplistic financial approach or that of "ultimate" or sole causes (Pinto, 1978).

The underlying cause for the monetarist "mirage" rests on the propagation mechanisms that gradually take over the panorama, enfeebling its links with the mediate and basic structural elements and feeding the self-propagating trend of inflation. In the opinion of the "verticalist" monetarists, inflation is a budget problem deriving from maladjusted government fiscal, monetary, exchange and or salary policies. This is a more immediatist view in which only the factors that are closer or directly causing the situation are considered pertinent.

The core of the structuralist position can be summarized in a single question: *why*? In their case, it is not enough to prove the obvious: the immediate factors and their relationship with price rises. What is important is to question the reasons for this behavior: the why of the deficits, issues, unadjusted foreign exchange rates, etc. Structuralism is based on the principle that financial or monetary antecedents and manifestations are not self-explanatory.

Under the structuralist approach, special emphasis is given to the diagnosis of inflation (substance, nature, origins, combination of explanatory causes), inasmuch as the success or failure of any stabilization policy action depends on a correct or wrong previous evaluation of the elements. There is no single type of inflation, as the monetarists suggest, based on its immediate manifestations and roots. In the Latin American context, it´s clear *the dismantling of the monistic explanations*, that is, of the search for and emphasis on the identification of a single dominant cause.

A complete control over the inflationary process requires that concurrent steps be taken at the different levels: at the level of the basis factors, including both structural and institutional, and at that of the propagation mechanisms. The outlining of any action depends on the specific circumstances of a given reality and environment. Therefore, there can be no generalizations with respect to procedures, with the exception of the more common ones related to fiscal, monetary, exchange and income policies. The “how much” and “how” will depend on the “where” and the “when”, and also on the assessment of the set of variables of distinct features—particularly the policies—provided for by specialists. Therein lies the “art of economics”, namely, the ability to conceive and execute the economic policy.

From discovering the existing correlation between general price index fluctuations and the volume of money in circulation, the monetarists have skipped right over to attributing the responsibility of inflation to government, in that it issues paper currency to finance public spending at a higher rate than the output growth rate. An Alternative Money Theory suggests, on the contrary, that changes in money stocks are an effect induced by an increase in the general price index rather than the cause of the increase.

The hypothesis proposed by Rangel (1963) assumes that there is an autonomous change in price levels that is prompted by price fluctuations in some products, which has not been offset by opposite price fluctuations in all other products (products that show a certain rigidity towards price decline). Thus: $\mathbf{P_1 > P_0 \Rightarrow M\,V < P_1\,T}$. This is a type of situation that is not sustainable. As a result, any one of three hypothetical situations may occur:

1. increase in the monetary side of the equation: if we assume the inertia of **V**, accommodation is made via **M** (similar to the horizontalist approach);

2. Money supply fails to sanction this: the general price index $\mathbf{P_1}$ drops to the former $\mathbf{P_0}$ level (as proposed under the orthodox theory).

3. $\mathbf{M\,V = P_1\,(T - t)}$ where **t** is a part of the output that is withdrawn from the market. In this case, the real income level falls due to an oversupply and, consequently, less money is pumped into production factors.

As a result, we have economic depression or price hikes. The latter, which is usually the Brazilian “way out”, prompts an expansion of the first factor (monetary side) of the exchange equation. In 1963, Rangel was a forerunner of horizontalist accommodacionist theory in Brazil.

The increase in prices thus prompts the issue of money. As the inventory is retained, the company's stocks increase and its disposables decrease, that is, account entries of cash and deposit holdings decline. In order to reestablish the current asset level, the company demands higher working capital. The banking system lends money to the business, based on the high solvency rate shown in its accounting registers because receivables have been grossed up by additional inventories. In turn, the banking system has a greater demand for liquidity loans that is accommodated by the central bank. Thus, inflation is not generated at the level of federal government budget, but within the economy itself, as a result of independent private company actions.

The issue of money is not the starting but the finishing point of inflation, its peak. As a result of inflation, the exchange equation is reestablished at a higher level**:** $\mathbf{M_1\ V = P_1\ T}$. The market reabsorbs the oversupply that was temporarily withdrawn due to higher prices. Government collects more tax money, inflationary tax is greater and legal reserves are raised.

In this case, government plays a passive role. If, despite the political pressures, government overcomes all the forces that are driving it towards money issuance, it not only deprives itself of three resource flows, but it is also penalized financially because it will have to bail out the companies in the future. Rangel points out that, empirically, it is impossible to establish whether what comes first is the government issue of money or the raising of prices by private businesses. Although, following his logic, we conclude that the antecedent is the latter.

The fundamental issue is first to know why certain private businesses decide to *raise their prices* and, second, *why* instead of adjusting their prices to the former level, the companies *withdraw some of their output*, thereby making the adjustment via *volume* instead of via *price*.

Ignácio Rangel's critique of the structuralist and monetarist theories is that both seek to prove that inflation is originated by a purported insufficiency or inelasticity of supply — *global*, according to monetarist thought, and *sectoral*, according to the structuralist strand — when it should be quite obvious to them that the problem of inflation lies in insufficient and not in excess demand, as they suggest.

The diagnosis made by Rangel, in 1963, was that the level of demand was insufficient to ensure satisfactory utilization of the existing production potential, after the production capacity expansion of the 50's. In Brazil, this was due to inflation itself, to the distribution of income and to the obsolete farming structure with a high concentration of large property owners.

Food product demand had a specific inelasticity. The rigidity of demand for farm products, as opposed to the high elasticity—and not inelasticity as generalized by ECLAC, based on the Chilean experience—of farm product supply produced an anomaly in the price formation mechanism. Furthermore, farm products were sold under an olygopsony-oligopoly system that had the power to manipulate price increases, especially as sales were intermediated by wholesalers.

Rising food prices caused a drop in real salaries and, consequently, in the population's demand for other consumer goods, which already had little specific or overall mass consumption. Inventories were held back not by the industries that were causing price hikes, but by those supplying goods having a higher income elasticity of demand.

The increase in unplanned idle capacity hobbled new investment opportunities, following the oversupply occurring in priority or subsidized sectors. It also stepped up unit fixed costs, which were then transferred to prices, resulting in a so-called "oligopolistic inflation".

What became known as the "Rangel curve" was a graphic representation of the idea that Brazilian inflation rose instead of falling with the expansion of idle capacity. The general price level was inversely proportional to the production level.

This upset the economic and financial balance of the companies that supplied the products with an oversupply on the market and or high idle capacity. As shown above, the high accounting ratio between the company's receivables and its current assets favored bank lendings, sanctioned by the endogenous supply of money. Theoretically, Rangel was offering the arguments of the endogeneity of money supply.

3.2. Inertial inflation theory

The orthodox economists then began to argue that the remedy against inflaiton, regardless of its *primary cause*, was to neutralize the action of *adjustment mechanisms*, spontaneous or not, of prices, salaries, exchange and interest rate (Moura da Silva, 1981). The most efficient alternative to, at once, demolish an important *inflationary inertia mechanism* and promote the change in relative prices, and, as a result, adjust the balance of payments was to alter the salary policy and maintain the exchange policy.

From the ECLAC members' view of inflation, as mentioned above, there was a distinction between the different categories of thought. The *structural inflationary pressures* were the real causes of inflation, whereas the *propagation instruments* maintained or lent a cumulative nature to inflation. The self-denominated neo-structuralists of the 80's began to focus more on the *propagation processes*, the more visible aspect of inflation.

Thus, Bresser & Nakano (1986) divided the inflationary factors into inflation *accelerating, upholding and sanctioning* factors. Therefore, to them the mechanisms or factors that influence prices are:

1. **accelerating factors**: those that cause inflation acceleration (or deceleration) due to greater increase in profit margins or real wages than in productivity; *the changes in relative prices* that start the process are thus *the primary causes of inflation*;

2. **upholding factors**: *uphold* the inflation level; these are related to what portion of cost increases economic agents are actually able to *transfer to prices*, causing a *distributive conflict*; and

3. **sanctioning factors**: *sanction* price hikes or the inflation level: the increase in *nominal volume of money supply* is specifically due to inflation; monetary expansion is seen as an *endogenous variable*, that is, it is the *consequence* and not the *primary cause of inflation*.

One ingredient that is indispensable to anti-inflation policies is the "institutionalization" of pressures and conflicts in relation to income distribution. The econometric studies conducted by *Pontifícia Universidade Católica* of Rio de Janeiro (PUC-RJ) showed that the quantitative relevance of deflationary demand shocks was small when compared to Brazil's prevalent high levels of inflation (Lopes, 1984). They came to the conclusion that an effective program to fight inflation must be made up of policies that have direct influence on the inflation trend.

The basic idea behind the *inertial inflationary trend hypothesis* is that in an environment plagued with chronic inflation, the defensive behavior in the formation of prices is, under normal conditions, an inclination towards recomposing the former real income peak upon each periodical price adjustment. When all economic agents follow this periodical peak price recomposition, the inflationary rate tends to perpetuity, that is, the inflationary trend upholds past inflation.

The theory of inertial inflation developed by some Brazilian economists relies on the notion that behavior becomes conventional in the face of uncertainty. "Informal indexation is taken to be a rational attitude in chronic inflation situations, and the rigidity of this type of behavior is shown to be an equally rational procedure. Given the uncertainties regarding price decisions in an economy subject to high and chronic inflation, indexation can be considered a ruling guide of rational decision" (Bresser & Lima, 1996: 36).

The theory of inertial inflation, like that developed by the more traditional Latin American structuralists, shows that inflation derives from a distributive conflict. Workers demand that the peak value of their real salaries be restored via direct negotiations, strikes and or salary law. Businessmen increase prices during adjustment intervals in order to recover the maximum real profit they were earning at the time immediately preceding salary adjustments, when real salaries had reached the *floor*. Any worker's *peak* earnings is the capitalist's *floor* earnings, and vice versa. The metaphor "seesaw" describes this process very well.

Thus, after every *nominal salary adjustment*, businessmen mark up their prices in an attempt to gradually reduce the actually paid *real salaries*. If, during the intervals between the different collective bargainings, the average real salary level is maintained, relative average prices will be constant. The inflationary inertia represents the distributive compatibility in a hypothetical context of the relationship between profits and salaries.

The proponents of the inertial inflation theory advocated that the focus of the inflation-fighting policies had to be redirected from the generation of deflationary demand shocks to the development of mechanisms that provided for the breaking of inflation's inertial trend. The difference between the "*Heterodox Shock" approach*—according to which distributive compatibility was attained through purported freezing resulting from government-imposed the real average earnings--and the *Larida "indexed money"* theory was that the latter had the apparently non-compulsory quality of being a formula for converting money based on average real values (Arida & Lara Resende, 1986). It presumed that the *distributive compatibility* could be attained via "*market forces*".

This assumption stemmed from studies carried out on practical experiences taking place at the end of hyperinflation periods. The economists concluded that, during every one of these periods, there was an overall voluntary rejection of the hyperdevaluated domestic currency, and use of foreign currency, at least initially, as store-of-value or measure of value. The relevant inflation rate would begin to be expressed in this "new" currency, and the inflation of the "old" domestic currency lost any significance. In this type of situation, all that was necessary to completely eradicate any memory of inflation was to implement a monetary reform that established a *fixed exchange parity* (and enough foreign reserves to back it up) between the "new" domestic currency and the foreign currency.

Thus, according to the inertial inflation theory, the endogeneity of money supply was only relevant to the extent that it was an inflation-sanctioning factor. Hyperinflation was shown to be a monetary phenomenon related not to the purported money supply, as defended by the orthodox theorists, but to domestic currency disfunctions.

3.3. Accelerated inflation theory

When the problem became to explain *inflationary shocks* – with changes in relative prices – and *inflationary acceleration* – in the wake of the previous heterodox plans –, post-keynesian explanations gained evidence in the heterodox field.

Frenkel (1979) was the first to adapt "foreign ideas" to current times and to specific locations. His was an alternative version to Latin American structuralism, which questioned the relevance of the *cost-push* models, the core of a large portion of Keynesian literature. His theme centered on the behavior of businesses in an environment of great uncertainties, and he developed a model that included decisions on prices, expectations and risks. Foregoing any analysis on equilibrium he saw the problem of inflation in terms of a historic process, with a focus on analyzing the microeconomic fundament for the short-term behavior of aggregate prices.

The post-Keynesian thought assumed that, on the short term, mark-ups were stable and not sensitive to changes in demand. But the assumption that mark-ups were stable reduced the market of managed prices to a mere passive transmitter of the inflationary impulses that had been generated in other parts of

the economic system (eg. labor cost fluctuations). Challenging this view of the inflation phenomenon, Frenkel's model presumed that the managed prices market played an active rather than a passive role.

Frenkel held that company price decisions played an autonomous role in the inflation process via short-term mark-up fluctuations resulting from significant changes in information, level of uncertainty and risk considerations.

According to his theory, there were **two loss risks** associated with any decisions made by the producer due to uncertain expectations with regard to inflation:

1. **earnings risk** due to *demand uncertainties*: if the producer could not sell all his output at the *overestimated price* they were being offered, there would be a cost to convert the liquid capital that was tied up to the *unsold portion of output* into assets—*oversupply*, which would depend on the interest rate and the cost of opportunity of the excess inventories that would be incorporated to a future supply.

2. **capital risk** due to the *underestimated future input prices*, in which the *mark*-up would be insufficient to replenish the stock levels required to maintain the output level, leading to capital depletion.

The more general conclusion drawn by the Frenkel model was that, if expectations pointed to high and uncertain inflation, between running the risk of underestimating the inflation of input prices and of overestimating inflation, the decisions would always be to overestimate inflation.

Under *chronic inflation and normal uncertainty*, prices are calculated based on a *constant mark-up* of variable costs, adjusted for inflation at the expected rate. But unusually high inflation rate expectations tend to disrupt these *normal conditions* (Tavares & Belluzzo, 1986). The level of uncertainty rises with inflationary shock, stepping up price decision risks. In order to minimize these risks, unit profit margins are raised so as to offset any loss of profit from lower sales. In other words, there is a *mark-up ceiling test* that is acceptable to the market.

The maintainance of excess stocks depends on: the cost of maintaining such stocks; the liquidity preference of sellers; and the expectation of selling the goods for a higher price than that paid to acquire them. Thus, speculation on price decisions involves renewed expectations regarding future prices.

Another hypothesis studied was that "Brazil's inflation also responded to a strictly financial form of logic" (Costa, 1990). Later, in Belluzzo & Almeida (1990), this more general reference to the anticipated very short-term interest rate as a criterion for adjusting prices was termed the *"financialization of prices*". The interest rate was an alternative form earnings on non-fixed assets, and the decision rested between the goods and services market, on the one hand, and the financial assets market, on the other. The higher the interest rate, the more would profit margins increase. At the same time, as they grew wealthier, the capitalized and liquid companies that were not indebted would be in a better

position to retain any oversupply that they had been unable to sell on the market at higher prices. In other words, a high interest rate policy in fighting down inflation would have the exact opposite effect.

The anticipated interest on any "indexed near money" would play the same role as that of "dollarization" in a hyperinflation context, without any direct reference to foreign currency, but indirectly via the interest-exchange relationship. The expectations on inflation would continue to influence not only the *cost of stock replenishment*, but also the *trading interest rate* charged for term sales. On establishing *term sale prices*, businessmen would have to take into account the choice of selling his goods at sight and investing the proceeds from this sale on the financial market. It would not be a rational decision of businessment to charge lower trade interest rates and earn less operating profit than they would non-operating profit, if they are seeking to maximize profits.

3.4. Hyperinflation theory

Whereas the orthodox theorists have not clearly defined the borderline between high inflation and hyperinflation, charging them both to be a *quantitative phenomenon*, post-Keynesians sees them as a *qualitative phenomenon* that involves changes in behavior and in the contracting system (Carvalho, 1990). Hyperinflation is seen as a form of price formation. The main determinant of any current decisions on pricing would be the expected *future* inflation, as opposed to *past* or *current* inflation. In addition, the breaking apart of the contract formation basis could lead, in some cases, to the suspension of exchange process.

Hyperinflation can be broken down into two stages:

1. different expectations with regard to inflation result in inconsistent price policies, causing an imbalance in relative prices and a chaotic price system, with uncontrolled price hikes (unanticipated);

2. the difficulty in forecasting the prices in effect at the time contracts are terminated leads to the acceleration of maturities and quotations in foreign currency (dollar-pegged); the generalized use of the new measure of value produces almost simultaneous adjustments based on this common unit, making up a new (trial) set of relative equilibrium prices (*distributive compatibility*).

The effects of hyperinflation are:

1. transactions will be carried out at the stable prices in the new measure of value, producing a new distributive compatibility;

2. the "indicator" established by the foreign exchange rate will be immediately adopted, which means that the fixation of the exchange rate will sanction *relative price realignment*;

3. to create favorable conditions for persuasive policies based upon a social acceptance of stabilization, since hyperinflation makes it ineffective individual strategies to gain relative distributive position.

Thus, although “dollarization” alters the high inflation system, it is also the prerequisite to the stabilization of inflation, in that the economy regains some form of coordination. The bedrock of the heterodox stabilization policies is to undermine the manner in which expectations are created and seek to coordinate individual price decisions made from a signalling of future events. What happens in this case is that the *coordination* is replaced by the past inflation rate (in the case of *inertial inflation*) or of the *lack of coordination* is replaced by the plurality of indicators (in the case of *accelerated inflation*).

In any case, there is a gradual replacement of indicators, depending on the pace of inflation:

1. *ex post* indicator = f(cost) => standard past profit margins are maintained;

2. *inercial* indicator= f(general price index) => replacement of past losses;

3. *accelerating* indicator = f(orienting price index) => trailing after leadership prices ;

4. *ex ante* indicator= f(expectations on inflation) => future stock replenishment and formation of term sales prices;

5. *instantaneous* indicator = f(black-market dollar) => avoids lags.

The main purpose of the *anchor* is to provide the necessary strong-currency price-coordinating element, a forward-looking of increases. The fact that prices are quoted in the new “currency" (anchored to or backed by a fixed foreign exchange rate) curbs relative price changes and produces quick price realignment to world market levels.

3.5. The heterodox stabilization plan

The *Real Currency Proposition* (dollar-pegged) is an attempt to reproduce the logic of hyperinflation without necessarily having to experience it (Lopes, 1989). The basic idea is to create a stable-value currency instead of using any foreign currency. Society can migrate to this new currency under a controlled process of deindexation. The *real problem* is to find the mechanism that provides for the coordination of expectations, that is, that induces dollar-pegged indexation in areas where this has not been practised.

What was chosen, in this case, was to introduce a temporary dual currency system, using the new currency as the measure of value. The basic assumption was that, if prices remained stable in relation to a given indexed or dollar-pegged currency, then this should be the domestic currency. Economists believed that they could gradually introduce the new currency and that, by fixing the foreign exchange parity, the inflation represented in this new currency (dollar simulacrum) would, by construction, be zeroed.

In a system of prevalent high inflation, a stabilization plan requires an artificial stimulus if it is to create adequate stabilization conditions. A

programmed hyperinflationary process cannot be deterred spontaneously. Its termination requires a *stabilizing shock*, via the management of a fixed exchange rate, namely, the *exchange-rate anchor*.

The *programmed "dollarization*", coupled with the favorable macroeconomic and international conditions, was pivotal to the success of the stabilization plan. It was what distinguished the Brazilian plan from the plans introduced in other Latin American countries that suffered from rampant hyperinflation due to the *uncontrolled dollarization* of their currencies. It also separated the citizens who kept checking accounts, whose money was adjusted for inflation daily based on the Value Reference Unit (URV) — a daily index that was fixed based on the prorated anticipated monthly inflation rate —and those who only used paper currency and saw their money devaluate at almost 50% per month, due to hyperinflation. The contribution made by Brazilian economists in easying the social burden (at least for some of the population) – this is what we want to demonstrate.

But, perhaps their most significant contribution to economic thought has been to improve our understanding of the inflation phenomenon. Possible explanations for this could be that they were open to new theories from abroad; that they applied these pure theories and adjusted them to Brazil's historic, socio-economic and institutional context; and that they made constructive critcisms of past economic policy actions. But, more important was that, unlike what happened in other Latin American countries, academic economic debate did not stop even when Brazil was under a military regime. This ongoing development in economic thought became an important economic backup during the transition back to democracy. Even if, at times, the Brazilian economy did serve as an experimental laboratory, our "economic researchers" were able to analyze the faults (and some of the successes) and social burdens of such "experiments", and review their own theories.

4. Conclusion

Although demand inflation is not completely turned down as an explanation for inflation, in some situation, the post-Keynesian proponents of countries that do not suffer from chronic inflation, in general, hold inflation to be a cost-push phenomenon (Lavoie, 1996). In this paper, we have shown that the Latin American post-Keynesian followers, after overcoming this conflicting duality (Machlup, 1978), stress the inertial behavior of price mark-ups, on the one hand, and the rational behavior of price decisions, in a context of expected uncertainties.

Horizontalists agree with other post-Keynesian followers that money in not neutral – if demand for credit is not met expansion will be restrained. If businessmen cannot obtain additional bank loans, when they all, in a generalized form, want to step up working capital and expand the level of output, then they would be unable to honor their obligations until they have finished and sold additional output. This situation is possible despite there being no changes in the population's liquidity preference. In this case, in the absence of additional money supply by the banks through loan rescheduling,

businessmen would not feel inclined to sign new employment agreements – hobbling the growth of employment on the long term, even if the expected future effective demand is sufficient to guarantee this expansion.

On the other hand, the banking system that provides the credit that will facilitate the transition to greater production and employment flows, is also able to passively withstand the inflationary forces resulting from the accommodation of inflationary demand. The banking system cannot differentiate between increasing demand due to greater working capital requirements from and job expansion resulting from a higher production flow, or from greater cost per production unit, due to inflation.

In a high inflation system, the banking system extrapolates the power it has of creating money via the credit system, and begins to fund also what is not considered an efficient productive activity, in a drive for greater competitiveness. The endogenous credit money supply anticipates social validation, even before there is any certainty on whether the producer's prices will be accepted. This causes many of the companies that do not have the socially adequate productivity to survive artificially, and to the poor social allocation of resources.

If horizontalism suggests that the creation of credit money is endogenous, that is, supply is effectively determined by demand – with the former having no existence without the later, although it being possible that demand is not necessarily matched by supply –, this does not mean that all credit issued is automatically well-funded. This will depend on the result of the negotiations. But the endogeneity of the credit monety system will allow for a deferment of loss (in the form of unplanned oversupply), which will be financed by new credit extensions.

As a result of this disguising of the sales risk (real earnings loss), the risk of the capitalist business will only be delayed to when the nominal income flow produced by the sale of the goods is converted into purchasing power, the purchasing power required to buy and or replace inventories. In a system of high inflation, this real income flow becomes insufficient. Businessmen then raise their prices again, because the credit system meets their demands. Thus, the endogeneity of the credit money supply accomodates the propagation of inflation.

Therefore, the monetary expansion by the banking system is not the cause of inflation, as postulated in the Quantitative Theory of Money, but the endogenous money supply is a condition that permits or sanctions inflation growth in that it validates product price increases, the power force of inflation.

BIBLIOGRAPHY

ARENA, R. Investment decisions in circuit and post-Keynesian approaches; WRAY, L. R. Money in the circular flow; LAVOIE, M. Monetary policy in an economy with endogenous credit money. In DELEPLACE & NELL (edit.). Money in motion: the post-Keynesian and circulation approaches. New York: St. Martins Press, 1996.

ARESTIS, P. Critical Survey: *Post-Keynesian economics: towards coherence*. Cambridge Journal of Economics. 20, 111-135, 1996.

ARIDA, P., and LARA RESENDE. *A. Inflação Inercial e Reforma Monetária*. ARIDA, P.(org.). *Brasil, Argentina, Israel: Inflação Zero*. Rio de Janeiro: Paz e Terra, 1986.

BELLUZZO, L. G., and ALMEIDA, J. S. *Crise e Reforma Monetária no Brasil*. Campinas, mimeo, March 1990.

BLAUG, Mark. *Metodologia da Economia*. São Paulo, Edusp, 1993.

BRESSER PEREIRA, L. C., and NAKANO, Y. *Inflação e Recessão*. São Paulo: Editora Brasiliense, 1986.

BRESSER, L. C., and LIMA, G. T. *The irreducibility of macro to microeconomics: a methodological approach*. "Revista de Economia Política". Vol. 16, No. 2 (62), Apr-Jun/1996.

CARVALHO, Fernando J. C. *Sobre a endogenia da oferta de moeda: réplica ao professor Nogueira da Costa*. "Revista de Economia Política" No. 51. Vol. 13, n.3, Jul-Sep/1993.

CARVALHO, Fernando J. Cardim. *Alta Inflação e Hiperinflação: Uma Visão Pós-keynesiana*. "Revista de Economia Política" No. 40. Vol. 10, n. 4, Oct-Dec/1990. pages 62-82.

CHICK, V. *The evolution of the banking system and the theory of saving, investment and interest*. Economie et Societés. 20 (8-9), Aôut-Septembre, Série Monnaie et Production, No. 3, 111-26, 1986.

COSTA, Fernando Nogueira da. *Estado de Confiança e Hiperinflação*. in REGO, J. M. (org.). *Inflação e Hiperinflação: Interpretações e Retórica*. São Paulo: Bienal, 1990.

COSTA, Fernando Nogueira da. *Ensaios de economia monetária*. São Paulo: Bienal-Educ, 1992.

COSTA, Fernando Nogueira da. *(Im)propriedades da Moeda*. "Revista de Economia Política" No.50. São Paulo: Nobel, Vol. 13, n. 2, Apr-Jun/1993.

COSTA, Fernando Nogueira da. *Sobre o "Horizontalismo" da Oferta da Moeda: Tréplica ao Professor Cardim de Carvalho*. “Revista de Economia Política” 53. Vol. 14, n. 1, Jan-Mar/1994. Pg. 142-6.

COSTA, Fernando Nogueira da. *Economia monetária e financeira: uma abordagem pluralista*. São Paulo: Makron Books, 1999.

COTTRELL, Allin. *Critical Survey: Post-Keynesian monetary economics.* Cambridge Journal of Economics 1994, 18, 587-605.

DAVIDSON, Paul. *Keynes and Money*. in DAVIDSON, L. (ed.). *The Collected Writings of Paul Davidson* [CWPD]. Volume 1. London: Macmillan, 1990. Chapter. 26, pg. 400.

DOW, A., and DOW, S. *Endogenous money creation and idle balances*. In PHEBY, J. (ed.). *New directions in post-keynesian economics*. London: Edward Elgar, 147-64, 1989.

EARP, F. S. *Estados Unidos versus Europa: mercados distintos, maneiras diferentes de fazer ciência econômica*. Revista de Economia Política. Vol. 16, No. 4 (64), Oct-Dec/1996.

FRENKEL, Roberto. *Decisiones de Precio en Alta Inflacion*. Estudios CEDES. Buenos Aires, 1979.

FREY, B. S. and EICHENBERG, R. *Economics and economists: a European perspective*. American Economic Society Papers and Procedures. May, 1992.

FRIEDMAN, Milton. *A Causa e a Cura da Inflação. Episódios da História Monetária [Money Mischief].* Rio de Janeiro: Record, 1994.

GRAZIANI, A. *The theory of the monetary circuit*. Thames Papers in Political Economy. Spring, 1-26, 1989.

HEWITSON, G. *Post-keynesian monetary theory: some issues*. Journal of Economic Surveys. Vol. 9, No. 3, 1995.

LAVOIE, M. *Horizontalism, structuralism, liquidity preference and the principle of increasing risk*. Ottawa, University of Ottawa, 1994.

LIMA, Gilberto T.. *Conventions*. In Philip O´Hara (ed.) *Encyclopedia of Political Economy*. London: Routledge (forthcoming), 1998.

LOPES, Francisco. *Inflação Inercial, Hiperinflação e Desinflação: Notas e Conjecturas. O Choque Heterodoxo*. Rio de Janeiro: Campus, 1986.

LOPES, Francisco. *O Desafio da Hiperinflação: Em Busca da Moeda Real*. Rio de Janeiro: Campus, 1989.

MACHLUP, F. *Outra Visão da Inflação Alimentada pela Expansão do Custo e pela Demanda Excessiva*. in SHAPIRO, E. (org.). *Análise Macroeconômica - Leituras Selecionadas*. São Paulo: Atlas, 1978.

MOORE, Basil. *Horizontalists and Verticalists: The Macroeconomics of Credit Money*. Cambridge University Press, 1988.

MOURA DA SILVA, Adroaldo. *Inflação: Reflexões à Margem da Experiência Brasileira*. "Revista de Economia Política" 3. Vol. 1, n.3, Jul-Sep 1981. pg. 57-81.

MUSELLA, M., and PANICO, C. (ed.). *The money supply in the economic process: a post-Keynesian perspective*. UK/US, The International Library Of Critical Writings In Economics, 1995.

PALLEY, T. *The endogenous money: consensus and disagreement*. Journal of Post-Keynesian Economics. vol. 13, No. 13, Spring 1991.

PINTO, A. et allii. *Inflação Recente no Brasil e na América Latina*. Rio de Janeiro: Graal, 1978.

POLLIN, R. *Two theories of money supply endogeneity: some empirical evidence*. Journal of Post Keynesian Economics. vol. 13, No. 13, Spring 1991.

RANGEL, Ignácio. *A Inflação Brasileira*. São Paulo: Bienal, 1986.

ROUSSEAS, Stephen. *Post Keynesian Monetary Economics*. Michigan: Macmillan, 1986.

SUNKEL, Osvaldo. *Um Esquema Geral para a Análise da Inflação. PINTO, Aníbal. Estruturalismo e Monetarismo - Um Inventário*. in SÁ JR., F. (orient.). *Inflação e Desenvolvimento*. Petrópolis: Vozes, no date.

TAVARES, Maria da Conceição and BELLUZZO, Luiz Gonzaga. *Uma Reflexão sobre a Natureza da Inflação Contemporânea*. in REGO (org.). *Inflação Inercial, Teorias sobre Inflação e o Plano Cruzado*. Rio de Janeiro: Paz e Terra, 1986.

TOBIN, James. *Commercial Banks as Creators of "Money"*. *Essays on Economics. Vol. I: Macroeconomics*. Amsterdam: North-Holland, 1971 (original in 1963).

TORRES, M. *Operacionalidade da política monetária e formação da taxa de juros*. In COSTA, F. N. *Economia monetária e financeira: uma abordagem pluralista.* São Paulo: Makron Books, 1998.

WRAY, L. Randall. *Money and Credit in Capitalist Economies: The Endogenous Money Approach*. London: Edward Elgar, 1990.