Exchange Rate Dynamics in a Peripheral Monetary Economy: A Keynesian Perspective

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Abstract:
The purpose of this paper is to discuss, from a Keynesian perspective, the determinants of exchange rate behaviour in a peripheral monetary economy. The paper starts by approaching the essential properties of both monetary and open monetary economies. It then proceeds to present the Post-Keynesian view of exchange rate determination, chiefly developed by John Harvey, who does not discuss, however, the specific causes of exchange rate behaviour in "emergent" peripheral economies. Next, after re-examining the notion of "peripheral condition", the paper discusses the historical and institutional characteristics associated with the integration of a peripheral economy in the modern international monetary and financial system.

Keywords: Exchange Rates; Monetary Economy; Keynesian Economics; Centre-Periphery.
JEL Classification: B50; F02; F30; F50.

1) Introduction

The purpose of this paper is to discuss the determinants of exchange rate behaviour in a peripheral monetary economy that, having engaged in the process of financial globalization, became an "emerging" economy. It does so by resorting to a Keynesian theoretical framework.

The paper is structured in the following manner: after this Introduction, in section 2 we discuss what the essential properties of a monetary economy are according to the Keynesian approach. In section 3 we discuss the main aspects of an open monetary

economy. Part 4 presents the Post-Keynesian view of exchange rate determination. Part 5 takes up the idea of "peripheral condition" and examines the characteristics of exchange rate behaviour in emerging peripheral economies. The last part of the paper presents a few final remarks.

2) The Analytical Structure: Characteristics of a Monetary Economy

Our starting point is the acknowledgement of the importance of Keynes's suggestion (1933) that modern economies are *monetary* economies in the sense that the existence of money crucially affects the motives and the decisions of economic agents, as much in the short as in the long term.

In a monetary economy, money's function as a store of value is fundamental. It allows one to understand money as a "refuge from uncertainty", the "abode of purchasing power" or a "liquidity time machine" (Davidson, 1994). Money becomes the least uncertain link between the present (or the "irrevocable past") and the unknown future, the safest way to preserve wealth and purchasing power across time. One of the consequences of this is that, by becoming a means of storing wealth, money also becomes an asset; it thus becomes an alternative to other means of accumulating wealth, especially in contexts of pronounced uncertainty regarding the future.

Based on Keynes (1933, pp. 408 ff.), it is therefore possible to make a conceptual distinction between an "exchange economy" (or a "real exchange economy") and a "monetary economy". In the latter, which is the one we are interested in, money is not neutral, acting as a simple means of rendering exchange easier. It crucially affects the motivations and choices of agents. Thus, "monetary economy" is the expression that ought to be employed to define a (capitalist) economic system

> in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last (Keynes, 1933, pp. 408-409).

In a monetary economy, the different assets, including money, have specific attributes. These attributes, which every asset has to a larger or lesser degree, are (Keynes, 1936, chapter 17; Carvalho, 1992, chapter 5): a) the expected quasi-rent, q; b) the carrying cost, c; c) the liquidity premium, l; and d) the expected appreciation, a.

The combination of these attributes yields an asset's specific interest rate (r_a) (or its total expected return):

$$r_a = a + q - c + l$$

In this analytical treatment, liquidity preference is expressed by means of a trade-off between monetary returns (a + q – c) and the liquidity premium (l). This dilemma is reflected in the way in which agents structure their assets portfolio, i.e., in how they manage their stock of wealth over time. More specifically, in a monetary economy with such characteristics, liquidity is strongly valued in times in which uncertainty regarding the future is deemed to be higher, justifying an increased demand for money as an asset or for its close substitutes, so as to structure a portfolio which is as liquid as possible, while one waits for better circumstances in which one can take on less liquid assets which may, however, yield higher monetary returns. In this sense, the search for liquidity has a crucial role to play in the determination of expenditure decisions. Hence, the idea that money has short and long-term implications on the "real side" of economy.

Given the logic of capitalist accumulation and the ubiquitous existence of uncertainty, in certain situations there will be a clear preference for money and its closer substitutes, since they are the liquid assets *par excellence*. Thus, (the perception of) greater uncertainty causes q to decrease and l to increase. What matters here is the *monetary* return (and not an imaginary "physical" return, expressed by the marginal productivity of the asset). More specifically, in the case of investments in fixed-capital goods, what is relevant is the expected monetary profit.

The liquidity preference therefore corresponds to a kind of *rational* (or defensive) behaviour under genuine or fundamental Keynesian uncertainty (non-quantifiable, non-

probabilistic).[1] The liquidity preference and the resort to conventions (discussed below) are, from a Keynesian point of view, the typically rational answers of agents that must make prospective calculations and strategic decisions in an environment of uncertainty.

Conventions and Speculation

In a monetary economy, one of the means for agents to deal with uncertainty regarding the future is the adoption of conventional behaviour. Keynes's analysis of conventions is developed in chapter 12 of the *General Theory* (*GT*) and in his seminal 1937 article (Keynes, 1936, 1937a).

In Keynes's terms, a convention can be characterized in the following way:

1) The current market conditions provide a reasonable guide for decision-making (under "normal" conditions, agents tend to give little importance to future changes).
2) Agents presume that the current state of opinion, as expressed in prices and production, is based on a correct summary of the future perspectives of the economy, which they accept until something new and relevant comes up (Keynes, 1936, p. 152; Keynes, 1937a, p. 114). In other words, people act based on inductive reasoning, believing that "the future will resemble the past" (Keynes, 1937b, p. 124).
3) Besides, Keynes emphasises the intersubjectivity of the agents' actions. Since they believe that their knowledge is "limited, vague and uncertain" and that other agents might be better informed than they are, the individual agent that has to make a decision will tend "to conform with the behaviour of the majority or the average opinion" (Keynes, 1937, p. 114).[2]

Thus, conventions appear because agents have limited and uncertain knowledge concerning the different relevant factors affecting their decisions as well as the results of these decisions. As an anchor, conventions guide decision-making processes under fundamental uncertainty. Conventions act as a kind of "substitute for the knowledge which

[1] The concept of uncertainty here alluded to is obviously the one consistently developed, since Keynes, by Shackle (e.g., 1972, 1979), Davidson (e.g., 1994), Lawson (1988), Runde (1990), Dow (1995), Vercelli (2002) and Dequech (2000), among others.

[2] On the issue of intersubjectivity, see the many contributions in Fullbrook (2002).

is unattainable" (Keynes, 1937b, p. 124). They are a kind of tacit social knowledge, generated from past experiences and from agents' interactions in time and space. Conventions are the embodiment of a kind of knowledge that was generated through intersubjective action in historical time.

In the *GT*, there is also a discussion concerning the relation between conventions and speculation. The "activity of speculation" is likened to a sort of "beauty contest". The logic of the behaviour of agents engaged in that activity (in the assets market) is defined as follows:

> to anticipating what average opinion expects average opinion to be. … to guess better than the crowd how the crowd will behave (Keynes, 1936, p. 157).

According to Keynes, the majority of these "game-players" (p. 156) is actually concerned

> not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of evaluation a short time ahead of the general public (Keynes, 1936, p. 154).

It is the precariousness of the convention itself, partly owing to speculative behaviour (which can be interpreted as a kind of *unconventional* behaviour) that, according to Keynes, lies at the root of economic cycles and of the waves of instability and volatility which characterize prices in assets markets, with negative consequences for the "real side" of the economy, especially for the decisions concerning investment in fixed capital.

Such rationality (which some theories interpret as *ir*rationality) is pervasive in the assets markets. In other words, the way for successful gambling in financial markets is not what the individual investor considers to be the virtues or advantages of a particular financial asset, nor even in what the hoard of investors actually believes to be the attractions of that particular financial asset. The "professional" investor is more concerned with finding out or anticipating what each agent in the market believes to be the other investors' beliefs.

Thus, the pricing of assets depends on current conventional assessments in each context. According to this view, there are no *a priori* fundamentals to tell the direction in which the prices of assets will inexorably evolve (in a mythical long term). As far as the future is concerned, uncertainty prevails.

In order to reduce or minimise the uncertainty that is always (to a greater or lesser degree) present, if "fundamentals" exist, they are created through social interactions so as to provide a view of the (imaginary) future that influences current decisions (Wray & Tymoigne, 2008, p. 15).

The price of assets, expressed by q, c, l and a, is compared to a "normal", or conventional, price which provides a kind of anchor for agents. This normal price is socially determined through a process of imitation, consisting in copying what the majority, or the general opinion in the market, considers to be "correct" in that context. Those agents that attempt to anticipate the general opinion concerning the best market prices are engaged in speculative activity (as in the beauty contest described by Keynes). Thus, the convention of a normal price provides a concrete alternative to the supposed existence of "inherent fundamentals" in the determination of expectations concerning price changes. If the agents of a given market assess that "structural changes" created an environment in which the "normal price" ought to be much different from what it actually is, strong speculation might ensue (Wray & Tymoigne, 2008, p. 16). This is what usually happens, for example, in exchange rate markets in which there is a perception that a certain currency is "misaligned".

Mutually Exclusive Starting Points in the Analysis of Financial Markets

In order to arrive at a more detailed description of a monetary economy, emphasising the dynamics of financial markets, it is necessary to discuss other equally important aspects. Here, we intend to contrast the idea of efficient financial markets (and the associated concepts of rational expectations and "fundamentals"), the hypothesis of financial instability (Minsky) and the theory of liquidity preference (Keynes, Davidson).

According to the traditional view, if the levels of production and employment are generated by the efficient operation of markets, money and financial relations have no relevant role to play. In the case of exchange rate markets, this worldview is expressed by

the idea that it is the trade flows, much more than the capital flows, that determine the prices. Capital flows (money and credit) would have the sole purpose of providing funds for the main activity (foreign trade). Besides, there would be an inexorable tendency towards a balance between imports and exports, a natural conclusion if the main demand for foreign currency derives from the purpose of pursuing foreign trade. In the long run, the prices of foreign currencies would be the result of the global demand for goods and services, in such a way that there can be a trade balance. This macroeconomic result derives, in the microeconomic sphere, from individual rational ("substantive" rationality, i.e., dynamic optimisation) and efficient decisions; in this process of decision-making, there is no place for biased forecasts of the future prices of assets. In other words, irrational actions cannot be sustained in the long run.

Minsky (1982, 1986) proposes a different perspective based on the hypothesis of financial instability. The idea is that periods of prosperity carry within themselves the seeds of their own destruction. There are endogenous forces in modern capitalist economies, of which one should single out the role of banks and other financial institutions which generate, in cycles of expansion, debt structures that will eventually become financially fragile and incapable of being sustained or rolled. There is an inevitable interpenetration between the real and the monetary sides of economy. It would therefore make no sense to resort here to the methodological framework known as the "classical dichotomy" (the separation between a monetary and a real side for the purposes of analysis) or to the idea of the neutrality of money in the long run. The growing weakness of financial structures built during periods of prosperity will inevitably bring about negative consequences for the real side of economy. There is therefore an "evolutionary" path of the economy towards the financing structure (the weakest of all) that Minsky named Ponzi (unless a strategy of economic policy and, more specifically, of monetary policy, acts so as to stop these endogenous forces).

Davidson (1998, 2000) argues that financial markets cannot be efficient. In a "non-ergodic" world, one cannot believe that the data available at every moment provides a reliable and safe guide for decisions that will have concrete results in the future. Under these conditions, the main function of financial markets is to provide liquidity. This "liquidity function" (Davidson, 1998, p. 282) requires the ability to buy and sell assets in an

orderly and well-organized market, so that it is always possible to get hold of the asset (money) that makes it possible to pay off debts. Rules and institutions should be created to ensure that liquid markets work in a well-organized way.

If the main role of financial markets is to offer liquidity in an organized way, then the issue of efficiency is not relevant. In the real world of modern capitalist economies, as stated by Davidson, "*efficient markets are not liquid and liquid markets are not efficient*" (Davidson, 2000, p. 6; emphasis in the original).

As one can see, the hypothesis of efficient markets, as typical to approaches inspired in the old "classical" tradition, limits the role of money and finance to the short term at best.

Markets and Liquidity

Liquid assets are financial assets traded in spot markets which are orderly and well-organized (see Davidson, 1994, pp. 49-50). A well-organized market is one in which the interaction between buyers and sellers does not involve high costs. A well-organized market requires a standardized good with low carrying costs. In an orderly market, given the routine nature of the activities performed, the expected changes in market prices will be low and within a "reasonable" range.

An orderly market requires a regulating institution known as the market maker: the agent or institution that publicly announces the disposition to act promptly as a residual buyer and/or seller so as to ensure stability and orderliness in case of a sudden destabilizing change affecting either the demand or the supply. The market maker, based on previously announced and known rules of that market, must make sure that, after a disturbance or shock, the market price will not chaotically differ from the recently observed price.

In order to be able to operate adequately, the market maker needs the following resources: a) a regulatory stock of the asset that is traded in that market; b) a significant stock of money (and/or, when necessary, immediate access to an additional amount of money). In situations in which abrupt changes in demand or supply can generate ample variation in market prices, the market maker must intervene. The market maker must buy in a falling market and must sell in a rising market, so as to limit market price fluctuations to an acceptable range.

The market maker must be an institution that has credibility. The organization of the market follows from the public's trust in the market maker. The existence of a market maker allows the asset holders to "sleep peacefully". These agents know (actually, they believe) that, on the following day, the spot price of the market will not be significantly different from the closing price of the previous day.[3]

3) Open Monetary Economy: Relevant Theoretical Aspects

After having discussed the more general aspects of a monetary economy, the next step is to "open" it. The heterodox literature deals with the notion of monetary economy *in general*, without making a clear distinction regarding the (trade and financial) interactions of a given economy with the rest of the world. Our purpose here is to extend the discussion and apply concepts and ideas associated with monetary economy to a specific dimension of financial markets, namely the markets where exchange rate assets are traded. In these markets, one faces two phenomena which begs further analysis: 1) the existence of a specific class of assets, the "exchange rate assets" (for the lack of a better name) which have some distinctive traits (such as the strong volatility of a and a hierarchy of liquidity premium l); 2) the process of determination of the prices of these exchange rate assets.

Therefore, based on the above theoretical foundations, we shall attempt to broaden the discussion so as to account for the openness of markets, that is to say, for the fact that modern economies are characterised for trading goods and financial assets with the rest of the world.

In these markets, a crucial determinant of the agents' decisions is obviously the exchange rate (both current and expected). In the current stage of development of the world economy, in the post-Bretton Woods era, the exchange rate itself is an object of speculation (Davidson, 2000). Variations in the exchange rate reflect changes in the speculative positions of agents that act on strongly interconnected exchange rate markets, much more than changes in the patterns of trade among the different nations (Harvey, 1999).

In exchange rate markets, it is the central banks of each country, whether they operate in isolation or as a group, informed by their larger goals in the conduct of domestic

[3] In a well-organized spot market, when the market maker notices that it cannot perform its role of keeping order and stability, negotiations are usually suspended. This allows the market maker to reorganize its resources and intervention strategies, so that order can be reestablished when the market is reopened.

policy, that act as market makers in their national spheres, with the purposes of containing exchange rate volatility, and, especially in the case of emerging peripheral economies, of keeping exchange rates at a competitive level and accumulating foreign currency (more on this in section 5).

It is therefore necessary to discuss, based on the previous concepts, the determinants of the exchange rate in a monetary economy from a Keynesian point of view. More specifically, our discussion seeks to demarcate further the analytical field and to focus on a particular issue, namely the behaviour of the exchange rate in a *peripheral* monetary economy.[4]

4) Exchange Rate Determination: The Post Keynesian View

The Post Keynesian approach to the determination of the exchange rate provides an explanation for the volatility of exchange rates in the globalised monetary and financial system which came about after the collapse of the Bretton Woods regime. Its starting point is a specific historical context distinguished by the following characteristics: 1) higher volatility, with exchange rates, interest rates and the prices of assets being subject to both ample fluctuation in the short run and to important changes in the long run; 2) a high degree of contagion, with financial turbulence spreading from the epicentre of the system to countries and markets that apparently have no relation with the original problem (even to those considered to have "sound" macroeconomic policies).

Agents' greater liquidity preference, the volatility of capital flows and, for this reason, the volatility of the exchange rate markets, are a result both of the key currency[5] (the dollar) and of the combination of the floating exchange rate regime with an environment of free mobility of capitals – which stimulated speculation in the exchange rate markets as well as the short-term capital flows, causing these markets to become even more volatile – and of the dynamics of the international financial system, determined by financial globalisation and by the pre-eminence of the so-called "market finance".

[4] Later on we will define what we understand by "peripheral condition", identifying the mechanisms, relations and forces which operate in such economies, but are absent in the so-called central economies.

[5] We resort here to the concepts of money and currency proposed by Aglietta (1986). According to this author, money is sovereign in the national sphere and it becomes a currency when it starts circulating in the international sphere.

Concepts such as liquidity preference, speculative demand for money and expectations formation under uncertainty have an important role to play in the analysis of the dynamics of exchange rate markets.

The Post Keynesian approach (e.g., Davidson, 1998, 2000; Dow, 1999; Harvey, 1991, 1999, 2006, 2009) is based on the idea that short-run capital flows play an active and autonomous role in the economy and constitute the chief determinants of the evolution of exchange rates. In other words, the prices of currencies would be the consequence of buying and selling decisions by the banks' trading desks – which are the dealers in exchange rate markets – and of the structure of the investors' portfolio, determined by expectations of capital gains (expected changes in *a*), which are (at least directly) independent from the evolution of trade flows and from the fundamentals (as sustained by the conventional approach). Thus, a fundamental issue in the Post Keynesian perspective has to do with the underlying factors which determine agents' expectations in exchange rate markets in an environment of uncertainty.

A relevant contribution to Post Keynesian analysis has been made by Schulmeister (1988), who sought to explain the evolution of the exchange rate of the dollar between 1980 and 1985. This author emphasised that these years saw well-defined sequences of appreciation and depreciation of the dollar (against the yen and the mark), interrupted by erratic fluctuations. The appreciation of the key currency in this period was the result of the movements of appreciation being longer than those of depreciation.

The purchases and sales of currencies by the banks' trading desks would be based on the so-called trading rules, which contribute to two effects: the bandwagon behaviour and the cash-in effect (profiting from the sales of appreciated assets). These rules would in turn be determined by two kinds of expectations regarding the future movements of exchange rates: a) short-term expectations, more susceptible to economic and political news; and b) long-term expectations, influenced by the behaviour of the "economic fundamentals", such as balance of payments, growth, and inflation and interest rates differentials.

According to Schulmeister (1988), new economic or political events favourable to the currency of a given country would entail changes in the expectations of some dealers, who, seeking for capital gains, would initiate a movement of purchase of this currency and,

as a result, would cause its appreciation and attract other dealers, building up a bandwagon effect. However, the larger the appreciation, the more likely it would be that the dealers would cash in on the profits resulting from the appreciation of the exchange rate, as the expectation that the movement of appreciation cannot be sustained grows. The movement of appreciation would come to an end when the main dealers took positions that are contrary to the currency in question.

Although Schulmeister does not argue in these terms, it is possible to interpret this process as the previously mentioned "Keynesian mechanism" of decision-making under uncertainty in full operation: some dealers opt for speculative, or unconventional, behaviours, in search for temporary surplus gains, whereas the remaining dealers follow the conventions (the average opinion) until these conventions become obsolete as a result of the action of successful unconventional behaviour. It is in this sense that one can say that conventions carry within themselves the seeds of their own destruction.

With John Harvey's works (1991, 1993, 1999, 2006, 2009, among others), the Post Keynesian approach to the determination of the exchange rate became consolidated. Harvey makes an in-depth discussion of the volatility of exchange rates in the post-Bretton Woods context, explaining the underlying logic that governs the expectations of agents in exchange rate markets. In his first articles (e.g., Harvey, 1991 and 1993), Harvey seeks to integrate the contributions of his predecessors in a model of the determination of the exchange rate that tackles the agents' short and medium-term expectations regarding the evolution of the exchange rate.

Taking up Schulmeister's analysis (1988), Harvey starts by acknowledging that the main determinant of the evolution of exchange rates is the transactions of dealers in the exchange rate markets (and not the demands for liquidity for the purposes of investment and trade), which would be influenced by the two types of expectations defined by Schulmeister. On the one hand, there are medium-term expectations (E^e_{t+n}), which would be less volatile (i.e., less elastic). Better foundations would be a sign of the strength of a currency for the traders (these expectations would also guide the decisions of dealers involved with direct investment, portfolio and trade flows). On the other hand, short-term expectations (E^e_{t+m}) would be susceptible to new political and economic (especially monetary) events and would thus be subject to sudden and frequent changes (i.e., they

would be more elastic). For Harvey, these expectations would also depend on both the models used by traders and the recent tendency of the exchange rate (the number of consecutive periods in which the exchange rate moved in the same direction), which would determine the bandwagon and cash-in effects, respectively.[6]

Therefore, the exchange rate in the present (E_t) would be a function of the expected values for the exchange rates in the sort and medium terms, i.e., of E^e_{t+n} and E^e_{t+m}. Changes in the two types of expectation would result in changes in the present exchange rate, which would actually stem fundamentally from reassessments of short-term expectations. However, medium-term expectations would provide a medium-term tendency for the exchange rate, reinforcing movements of E^e_{t+n} and controlling movements in the opposite direction. The high volatility of the exchange rates in the short term would be the consequence of the inherent volatility of expectations in an environment of uncertainty, of historical time and of the irreversibility of the agents' decisions. As Harvey states, emphasising the underlying causality of the idea, "Expectations are volatile, therefore actions are volatile, therefore economic variables are volatile" (Harvey, 1991, p. 69). And, the more elastic the expectations, the broader the fluctuations of the exchange rate.

Harvey (1999) discusses the types of demand for foreign currency (foreign trade, direct investment, portfolio investment and foreign exchange reserves) and highlights the foremost role of portfolio investments, which would be inherently unstable and subordinated to the logic of speculation and, therefore, the main reason for the volatility of exchange rates. The investors' expectations concerning the movements of the prices of assets would determine the movement of exchange rates and of the current prices of these assets.

If the prices of assets are strictly bound with the movements of the exchange rates, these movements become one of the main targets of portfolio investments. Thus, current exchange rates would depend on the expectations concerning their future tendency, as in the other financial markets. However, contrary to the other assets, money itself does not need to be an object of speculation:

[6] See Harvey (1991) for a systematic presentation of the author's ideas.

> This is really no different from any other asset market, except, interestingly, that the currency itself need not be the direct object of speculation. Nevertheless, because the exchange rate is such an important part of the value of any international asset, the potential of fluctuations must be carefully considered (Harvey, 1999, p. 206).

In sum, the fact that exchange rates are subordinated to investors' search for capital gains in the short run would explain their volatility in the post-Bretton Woods context. Sudden changes in expectations regarding future movements of the exchange rates would imply abrupt changes in current prices. Sudden changes in expectations can in turn be explained by the interaction of six factors, namely: 1) the speculative nature of exchange rate markets; 2) the absence of an anchor for the value of the exchange rate; 3) the dealers' subculture, operating in a market of foreign exchange; 4) the specific form of decision-making, which would be based on heuristic principles; 5) the influence of uncertainty on the dealers' decisions; 6) the amplifying effect of bandwagon effects (Harvey, 1999, pp. 206-209).

In later interventions (e.g., Harvey, 2006, 2009), the author goes further in the interpretation of these factors and especially of the underlying process that affects the expectations of dealers in the exchange rate markets. Harvey (2009) consolidates the main aspects of his approach to the determination of the exchange rate in an analytical structure anchored not only on the Post Keynesian perspective, but also on the works of institutional economists and of psychologists Amos Tversky and Daniel Kahneman (authors associated with the field of behavioural economics).

Whereas this theory emphasised the role of uncertainty, historical time and the autonomous influence of financial markets and agents' expectations (as the fundamental determinants of the evolution of the prices of assets), the institutional approach – according to which markets are seen as social institutions that do not necessarily lead to "efficient" results – contributes to the understanding of the specific culture of the exchange rate market and its organisation. Since, in the Post Keynesian view, it is the portfolio flows which determine transactions in the exchange rate markets (a point made by Harvey, 1999), the expectations concerning the future evolution of exchange rates are the main determinants of the current rates:

> Today's prices are created by the weighted (by liquidity and confidence) average of market participants' expectations of tomorrow's price. Agents are not, as in rational expectations, forecasting an event that is independent of their actions – they are creating the event (Davidson 1982-83). Realized outcomes clearly affect the exchange rate, … but even then the current structure of the currency market means that they do so primarily through expectations. [A currency] moves more in reaction to the announcement of a trade imbalance than from the pressures created by the imbalance itself (Harvey, 2009, p. 42).

Thus, as forecasts themselves are capable of creating the *realised* values for the exchange rates, a fundamental step in the development of a Post Keynesian theory of the determination of the exchange rate must be the understanding of the process underlying the creation of dealers' expectations and decision-making in the exchange rate market. According to Harvey (2009, p. 9), the works of Tversky and Kahneman provide the necessary elements for understanding this process. According to these authors, people in the real world make decisions based on heuristic principles, or "rules of thumb", of which three are singled out: availability, representativeness and anchoring (cf. Harvey, 2009, p. 46-49).

For Harvey, the combination of these three heuristic principles and the five aspects he highlights in Keynes's interpretation of the structure of assets markets (uncertainty, conventions, degree of confidence, search for quick results, and animal spirits) would provide an appropriate interpretation for decisions in exchange rate markets, resulting in forecast-construction biases, strong price volatility and bandwagon effects, and would induce dealers to resort to technical analyses, to take on risks and to engage in periodical movements of profit-making.

For Harvey, dealers would also take into account (when deciding to buy or sell foreign currency) the assets' expected liquidity. This attribute would depend on specific factors as well as on the currency in which the asset is denominated:

> liquidity increases if the currency in which the asset is denominated is one in which many commodities are priced or if it is the de facto or de jure international reserve currency (the dollar has benefited from both of these since World War Two) (Harvey, 2007, p. 85).

One can thus state that, at least implicitly, Harvey acknowledges that there is a monetary hierarchy within the international monetary system, in which the dollar, the key currency, has a privileged position. However, as we will argue next, this author does not acknowledge the existence of an *asymmetry* between convertible currencies (those issued by the other central countries) and non-convertible currencies (those issued by the emerging peripheral countries) in this system.

5) The Peripheral Condition: Peculiar Features of the Dynamics of Exchange Rates in the Peripheral Countries

The peripheral condition results from a given economy's structural insertion in the international division of labour, which is organized according to two poles, as expressed in the centre-periphery metaphor. This metaphor can be interpreted in terms of asymmetries and heterogeneities concerning:

- the creation and dissemination of technical progress;
- the national innovation systems as a key institutional structure for the endogenous generation of technical progress;
- heterogeneous productive structures;
- typical profiles of income distribution and employment creation;
- the degree of autonomy of the economic policy;
- the last but not the least, the fundamental structural specificity associated with both the position in the hierarchy of currencies and monetary non-convertibility, which contributes to increasing macroeconomic fragility and, therefore, to high volatility of the exchange rate.

This last aspect is crucial, but it has not been acknowledged as such so far. It is precisely because there is hierarchy and inconvertibility among currencies that it becomes

possible to explain the forces that generate the structural exchange rate volatility in peripheral economies.

One point stands out in the review of the structuralist literature. The different structuralisms, both the "classic" and the "neo" structuralisms (according to Lustig's taxonomy, 1988), have not given the necessary emphasis on the financial relations and on the behaviour of financial markets, especially exchange rate markets. Analyses tend to focus more on the phenomena and process pertaining to the "real side" of peripheral economies. We believe that this "missing link" must be given its proper attention. In this section, we will attempt to make up for this oversight and discuss the exchange rate behaviour in these economies.

The previous Keynesian framework is the starting point for the study of the determination of exchange rates in countries we call "emerging peripheral", a notion that, in this article, applies to the capitalist peripheral countries that engaged in the process of financial globalisation[7] and thus made their exchange rate markets more susceptible to volatile flows of short-term capitals.

However, in order to understand the behaviour of exchange rates in these countries, it is necessary to take into account the specific position of emerging peripheral countries in the contemporary international monetary system, an issue which has not been tackled by Harvey or by any other Post Keynesian from the centre. This system comprises a hierarchical and asymmetrical institutional arrangement organised around a key currency, as pointed out by Keynes during the debates preceding Bretton Woods (Keynes, 1980). Besides the superior position of the key currency (the fiat dollar in the current system), placed at the top of the hierarchy of currencies (and, for that reason, the most liquid currency, as acknowledged by Harvey), the international monetary and financial system is marked by asymmetries cutting across the currencies of the centre countries and those of emerging peripheral countries, which determines the behaviour of exchange rate markets in the latter.

The monetary asymmetry refers precisely to the hierarchical dimension of the international monetary system. In this system, currencies are hierarchically positioned

[7] Financial globalisation refers to the elimination of internal barriers among the different segments of financial markets and to the interpenetration of national monetary and financial markets, as well as to their integration in globalised markets (Chesnais, 1996).

according to their degree of convertibility, which relates to these currencies' ability to perform internationally the three functions of money: acting as a medium of exchange, as a unit of account (and of denomination of contracts) and as a store of value. The dollar, the key currency, is placed at the top of the hierarchy, for it has the highest degree of convertibility (it has the maximum liquidity premium *l* at a global scale). The currencies issued by the other core countries have intermediate positions, and are also convertible currencies, since they as well are used as a means of denomination of contracts at an international scale and are demanded as a store of value by foreign investors (they have a high liquidity premium, but not as high as the dollar). At the opposite end are positioned the currencies issued by the emerging countries, which are the inconvertible currencies, since they are incapable of performing these functions, even marginally.[8] These currencies are priced with a lower liquidity premium, although they might be on demand according to the expectations regarding shifts in the value of attribute *a*.

The asymmetry of the international financial system is superposed to that of the international monetary system and it has two dimensions. The first concerns the determination of capital flows directed to emerging countries. These flows ultimately depend on an *exogenous* process, which causes the emerging countries to be permanently vulnerable to their reversal by changes of phase in the economic cycle and/or changes in the monetary policy of the centre countries, as well as by the increase in the preference for liquidity by global investors. The second dimension of financial asymmetry concerns the marginal insertion of these emerging peripheral countries in the global capital flows. In spite of the growing participation of assets issued by these countries in the portfolios of investors in the centre economies over the 1990s, this participation still is residual (Obstfeld & Taylor, 2004).

The mutually reinforcing monetary and financial asymmetries have two important consequences for the behaviour of exchange rate markets in the emerging countries. First, these markets are particularly vulnerable to the inherent volatility of capital flows, ultimately determined by an exogenous process. At points of reversal of the cycle, of monetary policy changes in the centre or of increase in the preference for liquidity,

[8] Cohen (1998) adopts the concept of "monetary pyramid" to classify the different modalities of currencies, which should be distinguished according to their degree of "monetary internationalization".

emerging financial assets are the first victims of the global investors' "flight to quality", since they cannot perform the function of store of value and, therefore, cannot be a receptacle of uncertainty at a global scale.

Second, the fact that a marginal proportion of capital flows is allocated in the emerging countries also contributes to the greater volatility of their exchange rate markets. In other words, these countries are price takers. This is so because, if the instability of applications is generally larger in the case of foreign assets in relation to national assets (Plihon, 1996) (i.e., investors tend to rescue more frequently applications in foreign assets), in the case of "emerging" assets, this instability is still more pronounced, given the equally marginal impacts of their sale on the profitability of global portfolios.

However, despite the residual nature of capital flows directed to emerging countries, the potentially destabilising effects of these flows on domestic exchange rates and financial markets are significant, since the volume allocated by global investors is not marginal in relation to the size of these markets (Akyüz & Cornford, 1999). Furthermore, as in most of these countries financial markets are not as liquid and deep, sales by foreign investors significantly reduce the price of securities, with important consequences on the other segments of the financial market (Studart, 2001). In the case of totally or partially dollarised markets (securities with an exchange rate adjustment clause), the potential feedbacks among fixed-income and exchange rate securities are more pronounced given the mismatch of currencies; in this context, a depreciation of the exchange rate caused by the reversion of flows contaminates the price of securities and thus affects the financial position of domestic debtors (Griffith-Jones, 1995).

Besides causing potentially large fluctuations in the exchange rates of emerging countries, which are the price of the convertibility of assets and liabilities denominated in inconvertible currencies into the key currency, the inconvertible nature of its currency results both in the existence of a country risk premium in relation to the key currency (thus expressing a decrease in the l attribute of emerging assets) and in a higher exchange rate risk, affecting the relation between internal and external interest rates.

At this point, it is useful to retrieve the previously discussed notion of the attributes of an asset. For the purposes of this analysis, the liquidity premium l and the expected appreciation a are of utmost importance, since it is by means of their assessment and

pricing that agents make decisions in the exchange rate markets regarding which assets to demand and in which quantity.

The higher country risk and exchange rate risk of assets issued by emerging peripheral countries are expressions of the smaller liquidity premium of their currencies at an international scale, which, as a result of the preciously described monetary and financial asymmetries, make them the first victims of movements of the "flight to quality" at times of high uncertainty aversion.

Thus, the precautionary strategy of accumulating reserves ("precautionary demand", cf. Aizenmann *et al.*, 2004) would amount to a rational response by these countries in the context of globalised and liberalised currencies by increasing the potential capacity of sustaining external liquidity at times of reversals of capital flows through an increase in the stock of official reserves.

In contrast, during the booms of international liquidity cycles, when the appetite for risk is high (i.e., when the animal spirits are more pronounced), the emerging assets becomes objects of desire on the part of global investors because of the expectation of the appreciation (increase in a) of their respective currencies (associated with the favourable interest rate and/or with the perspective of capital gains in the stock markets with relatively low price/profit ratios), compensating for their reduced liquidity premium.

6) Final Remarks

Adopting a Keynesian perspective, this paper attempted to advance the understanding of exchange rate behaviour in peripheral countries which engaged in the process of financial globalisation.

To achieve this goal, the paper first dealt with the fundamental properties of a monetary economy and then of an open monetary economy. It discussed the Post Keynesian view of exchange rate determination as developed mainly by John Harvey, who does not discuss, however, the specificities of exchange rates in emerging peripheral economies, limiting his approach to the core countries.

Finally, after taking up the notion of "peripheral condition", the paper presented the historical and institutional specificities associated with how emerging peripheral economies became a part of the contemporary monetary and financial system.

An important conclusion is that, as a result of the monetary and financial asymmetries of this system, the currencies of emerging peripheral countries (which are inconvertible) have a smaller liquidity premium (as compared to the key currency and to the convertible currencies). As a result, in moments of higher uncertainty they are the first to suffer from movements of flight to quality (i.e., to assets denominated in the key currency) on the part of global investors. It is only in periods of international liquidity excess and high appetite for risk (when the interest rates of the core countries are generally low) that the emerging peripheral assets suffer an expected valorisation (which compensates for their lower liquidity premium, i.e., *a* becomes larger than *l*) and thus become assets on demand by institutional investors.

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