New Financial Policy for Undeveloped and not Industrialized World Economies

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Abstract

Since the end of 20th century, developing economies have suffered from economic crises whose origin and frequency seem to be related to the collapse of the commodity money regime associated to the Bretton Woods System as well as to other changes in the global scene. This has brought about a loss of efficiency in domestic economic policies designed in order to achieve internal and external stability. The major policy implication has been the need to look for alternative exchange rate regimes and better-suited financial and monetary policies in order to both stabilize the interest rate and the exchange rate, and guarantee the required credit expansion for development. This paper proposes, justifies, and explains the major particularities associated to the implementation of a new policy referred to, hereafter, as Financial Substitution.

Keywords: Bimonetarism, Exchange regime, financial substitution, macroeconomic stability, small open economy

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1. Introduction
In the paradoxical global environment, national economic and monetary systems are affected by erratic flows of capital at the global level, which compromise achieving internal goals and also create difficulties to pursue the international ones, wherein both spheres are susceptible to movements of interest and exchange rates. As a result, a diminishing efficiency of domestic economic policies is observed. Common discussion held in the political stage, runs between monetary credibility and independence to face up speculative shocks by means of different exchange schemes. The menu of options has been composed by: fixed, currency board, monetary substitution, partial monetary substitution or of financial assets, regional currency, intermediate or hybrid systems and flexible rates. Each of them had been justified by different postulates or theoretical perspectives and strategic purposes. So, the suggestion has been made of using some kind of fixed type to overcome inflation and the employ of a flexible type to fight unemployment (IMF, 2000).

Recent history -after the transformation of international monetary system in 1971, accepting flexible exchange rates-, shows that at the beginning of 90’s over 60% of countries tended towards intermediate exchange regimes, but ending the decade this tendency reduced nearly in a half, and extreme regimes came back again in a significant degree. The explanations range from the Fischer’s economic approach (2001), who sustains that intermediate systems are not feasible in the long term when countries keep strongly linked to capital markets, to the viewpoint of Eichengreen (1995), to whom the generalized instrumentation of regimes under fixed exchange rates and its change into flexible ones, can not be viewed as the result of evaluating the performance of economic regimes in themselves, but as the product of endogenous transformation in a set of variables not restricted to the economic sphere. In this sense, several elements must be reviewed: the leading sense of the hegemonic power, the degree of co-operation among nations, the level of intellectual consensus, degree of macroeconomic stability, features of monetary and fiscal policies, so as distributive policies, all as an expression of the level of relative empowerment of different actors within a society.

Regarding the collapse of fixed exchange rate regimes, growing credit expansion and speculation seem to be the major explanatory variables. On the other hand, financial speculation with foreign currency assets, currency-mismatches and/or a high component of imports of final, intermediate and capital goods imply that, currency baskets, target zones and intermediate regimes, as well as “purely” (market-driven) flexible exchange rate regimes have not been able to deal with inflationary pressures, leading in most cases to a fear of floating; a label coined by Calvo and Reinhart (2000).

Others exchange experiments results are also discouraging: While the benefits from full-dollarization are: lower inflation, greater credibility, lower interest rates, lower transaction costs in trade and investment, and the full elimination of nominal exchange rate risk, its disadvantages are mostly associated to the lack of an independent monetary policy to deal with the absorption of fiscal crises – when substantial fiscal deficits and
debt burdens are present, or simply in response to general asymmetric shocks. Above all, fully-dollarized economies suffer as well from not having an instrument to deal with domestic financial crises since the absence of a national monetary authority makes it impossible to print money, either to act as a lender of last resort or for any other purpose. An additional outstanding disadvantage from full-dollarization is that the government from a fully-dollarized economy loses the revenue from seignorage, that is, the proceeds the central bank enjoys from issuing non-interest-bearing debt in the form of money base.

As a consequence of the historical and theoretical failure of the above mentioned proposals, this paper considers as fundamental the need to clarify a minimum of reference terms in order to lead to more satisfactory policy decisions. This paper distinguishes between historical and theoretical elements, and mainly focuses on the explanation of a new set of financial policies in order to deal with the above mentioned problems associated to present-day economies. In doing so, the paper implicitly identifies the major implications of the asymmetries of the international monetary system, namely, the co-existence of four major international reserve currencies among a large number of non-universally accepted local currencies. Those distinctions prove to be extremely significant in the design of successful financial policies in contemporary monetary economies.

Our work is organized as follows: we begin outlining a set of global transformations, then an exposition of concepts and theoretical elements, we follow with a proposed policy of Financial Substitution and we finish with some general considerations and recommendations in order to promote regional integration.

2. World Context

Among the characteristic aspects of economic evolution in the last thirty years, since the declaration of US dollar/gold inconvertibility or rejection of merchandise-money, first must be expressed, a growing flow of mass production below the volume of financial transactions, backed by electronic instruments, with the subsequent relative decrease in the use of paper-money issued by the states.

The disparity between the dynamics of production and that of financial processes terminates in increase of unemployment rates and outburst of many financial crises. The exception to this assessment was, apparently, the behaviour of USA economy, which was able to gather a great part of worldly financial investment, through transactions in securities, hence, that economy could compensate its fiscal and commercial deficit. But with the new century, the recurrent volatility of financial values and the increase of unemployment beside the depreciation of US dollar against the euro and the yen, the intrinsic weakness of the USA economy was brought out.

A second feature has been the relative declining tendency, in value and volume, of international trade of raw materials with industrialised nations; hence the less industrialised countries witnessed how their fiscal, monetary, banking and exchange problems worsened.

A third one is the encouragement of multinational processes of integration, stepped to conform continental-sized economies, leaving the national dimension just as an obsolete standard, or at least an insufficient one. In fact, the search for domestic responses to exchange and banking crises, evidently speculation-associated, has been led to reach positive international trade balances, which in a world with intensive ranges of innovations of any sort, full mobility of capitals and merged corporations borne to
operate all over the world (producing the phenomenon of labour exclusion⁴), has left small economies practically unarmed to achieve simultaneously internal (stability of prices with frictional level of unemployment) and external equilibriums (trade equilibrium under free mobility of capitals).

This way, political practice has looked for:

- Avail the complementarities of comparative advantages in processes of economic integration in a continental context, in order to reduce the external character of a good proportion of commercial trade.

- Coordinate macroeconomic policy with partners in processes of regional integration, in order to contribute to fight unemployment and speculation.

- Get rid of the paradigm of ‘one currency for each nation’ and to favour that of ‘one currency for each market’ or regional integration context.

The US dollar in the NAFTA, and the euro in the European Union, are two important examples of what we have said, whilst in South America the integration processes - though initiated in mid-20th century- have been hindered by nationalist visions and the misunderstanding about the rejection made by more advanced capitalist countries on merchandise-money concept, and the recognition of the influence of financial interaction.

Such difference of performance spurs us to indicate precisely the explicative conditions and differences between monetarist and financial visions from a theoretical angle and their political consequences; questions to be faced next.

3. Renovating concepts

In modern economic science, currency is thought as a standard, as medium of exchange and store of reserve (referred to processes over time and space) affected by the behaviour of one or more markets, with which appear different values (prices) and volatile relations among them.

Does it become surprising then that different and even opposite viewpoints have appeared historically around monetary definitions and on predominance among relationships?

If trade balances of all countries were liquidated and there were no flow of capitals, then exchange rates would not be necessary and domestic monetary systems would be kept isolated and countries would focus on temporal valuation’ problems, that is, interest rate. Given the existence of international relations, is mandatory to count on an international payments system linked to domestic ones. For that reason, Keynes (1943), Meade (1964), Triffin (1968), and D’Arista (1999) among others, state the necessity of enough liquidity to manage commercial and financial needs, and to this end, the international system ought to fulfil the following conditions:

- Serve as lenders of last resort to national central banks, with a similar function to the one they realise for domestic commercial banks, which implies the evaluation of reserve resources used to guarantee the balance of trade flows, and

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⁴ The labour exclusion or tendency to chronic unemployment arises from technical transformations in the last twenty years, because new job posts are not easily occupied by the old workers. Therefore, the market division has grown for the various specialisations and with manifold effects, among others a big variability among salary rates; and between offer and demand. (See Alayón, 1999).
• Set an interest rate as a reference to the credit process and to expose criteria to establish exchange rates among national currencies.

The systems set in the last centuries -gold standard in 1870, the gold-exchange standard, or gold-US dollar in 1944- brought out serious failures, so they were relinquished\(5\).

The main failure in gold standard was the fact of relating international liquidity issue to a national authority, this by addition meant for other national instances to be under such authority, without the constitution of any supranational authority.

From the unsuccessful experiences two conclusions are drawn:

• International currency (and the national one) must be an abstract pattern, with no link to any merchandise or particular-market. Its issue must be subjected to no central authority (national central banks) operating under universal patterns and supervision emanated from a global authority (possibly a federation of central banks), and

• The discussion about fixed and flexible exchange rates, initially associated with flows, ended up as theoretically incomplete (because it did not consider the influence of stocks), impending the incorporation of all necessary elements for discussion about its influence on stability of international context (DeGrauwe, 1993).

From the theoretical side, a review beginning with the seminal work of Mundell (1961), and including among others, McKinnon (1963), Minsky (1967), Kenen (1969), Aglietta & Orlean (1982), Davidson (1997), DeGrauwe (1993, 1997), with the necessary references to Keynes (1943) and Mill (1848), depicts a consensus about:

• National monetary diversity would bring international trade to a process almost near to barter: financial activity decreases and conversion’s costs rises according to the increase of the amounts of monetary signs. This will result even more troublesome under a floating regime. For that, the dynamics of international trade is associated with a few currencies, and predominantly one of them: the US dollar.

• Under the above conditions, the existence of numerous and very small exchange markets contributes to the appearance of speculation, which reduces the effectiveness of domestic policies conceived to achieve domestic equilibriums (price stability and unemployment reduction) under perfect freedom of capital movements: the ‘impossible trinity’.

• This is explained by the fact that the structure of production between tradable and non-tradable goods and their linked employment are affected by the variation in the exchange rate, necessary to achieve external equilibrium, through the demand elasticity of exports and imports\(6\). Therefore, it can not be assessed that flexible exchange rate is a warranty to protect the total employment level.

• From the financial side (micro and macro level), the variation of exchange rate acts directly on the variation of interest rate; depreciation of national currency befalls the rise of national interest rate, thus bringing a restrictive effect on credit and investment. Therefore, from this financial angle, floating neither will guarantee a stimulant effect to economy.

\(5\) The gold standard was relinquished for its asymmetric results that violated its assumptions: countries with surplus didn’t revaluate, and those with deficit that devaluated were not able to grow for the negative impact of interest rate rise.

\(6\) Thus, the protected employment is the one related to exports, whilst the employment associated with the production of non-tradable goods will depend on the internal demand, which depends on its price (affected by the cost of imported goods).
Finally, though from the political angle the most desirable would be the fixed exchange, it would be only sustainable while there is an inflow of capital (as a positive result of current and capital account) that may be able to ensure a large amount of international reserves for normal operations.

The synthesis herein presented, leaves many pending questions, in particular, regard to small and open economies (SOE). How to solve the dilemma of moving among the negative effects of floating exchange and shortages of reserves in order to maintain a fixed exchange rate? How to conciliate within a strategy the supply of ‘expensive’ money (credit) for the private sector —to protect the reserves— and the ‘free’ money through seigniorage for the public sector to stimulate, at best, growth?

The answers to the former questions go further the distinction between fixed and floating exchange rates, since not alone it is required to consider money as numerary, but rather should be considered its creation *ex nihilo* through the credit process, which allows to distinguish between public and fiduciary money (issued by the central bank) and private and intangible money (created by the financial system), to study the interaction between the role of money as medium of exchange and its role as asset or store of value.

Upon that, it is necessary to stand out that the processes of financial innovation have increased the assets with high-level of liquidity, and therefore, accepted as money; for this reason, at a global level, private financial processes prevail over the public monetary ones. Hence, in practice, there is a substitution of domestic currency for foreign currencies of universal acceptance in its role of store of value. In the banking context (deposits and credits) this is brought about by way of the action of international banking in last instance.

When such operations are carried out directly between the international banking and no-financial domestic agents without committing central bank reserves, nor shrinking the role of medium of exchange of the domestic currency, we meet with the so-called *financial substitution* or *bimonetarism*, which has the trait of avoiding the political strains trigged by the total monetary substitution, keeping its main benefit: dropping inflationary pressure associated with the exchanged rate, because the international supply can offer any increase in demand for foreign currencies.

As long as financial substitution replace domestic currency for foreign ones in its role of store of value, is concerns, then, to a portfolio conformation decision, wherein is taken into account the differential of risk-yield relation of assets in domestic and foreign currency. At a micro level, such decision can be analyzed starting from portfolio models, and the combinations of risk-yield ratios of domestic and foreign currencies instruments generate what is called the Portfolio Efficiency Frontier, and each individual will choose that, which optimizes earnings and risks. Thus, at a macro level it will be set the proportion of portfolio to be kept in domestic and foreign currency.

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*Financial substitution does not impose to eliminate national currency of legal course, but it permits the coexistence with the foreign currency, being this last one what assumes the function of store of value, meanwhile the domestic one remains as medium of exchange and unit of account. The practice of total monetary substitution occurred in the 80’ and 90’, due to the loss of credibility in price stabilisation policies. After their failure, the trial of financial substitution was started.*

*The models of making up portfolios derived from the principles developed by Markowitz in 1959. The utmost used are the Capital Assets Prices Model (CAPM) and the Arbitrage Prices Model (APM), the last being more general than the former (Levy, 1999: 21-28).*
Under this scheme, the impact of domestic monetary policy will be restricted only to the effect achieved by the proportion of transactions made with domestic currency, and to the supervision of financial transactions (in foreign and domestic currency) carried out by the financial system.

Beside its important positive potentialities, there also exists a weakness of financial substitution, which is the possible appearance of crises due to ‘monetary mismatch’, right after the impact of real depreciation of domestic money, with negative effect over non-exporting firms. For such reason, we asse NCT is quite useful to apply a rule of monetary adjustment jointly with high obliged reserve requirements, until currency-hedge markets develop and mitigate such impacts ix.

4. General equilibrium as analytical reference: from Walras to contemporaries

Within the orthodox perspective, previously to Keynes, the general static equilibrium — for any time (t) - in any economy, according to Walras-Pareto xii, it would be reached if demanded and supplied amounts in the markets are equalled under the presumption of flexible prices, for all and each market xii. Since Keynes (1936) it’s possible to state adjustments for quantities with exogenous prices, except for the interest rate -adjusted in the monetary market. Following Hicks’ classification (1937): goods, labour, securities (capital) and money markets, and according to Poncet-Portait (1980), the following equation may be written:

\[ p(Yd - Ys)_t + w(Ld - Ls)_t + 1/r (Vd - Vs)_t + (Md - Ms)_t = 0 \]  

where:

- \( p \): goods price
- \( r \): security yield
- \( Yd \): goods demand
- \( Ld \): labour demand
- \( Ys \): goods supply
- \( Ls \): labour supply
- \( w \): wages
- \( Vd \): security demand
- \( Vs \): security supply
- \( Md \): money demand
- \( Ms \): money supply

ix A ‘rule of monetary adjustment’ is understood as credits in foreign currency restricted to sectors which generate themselves such currency.

x The general equilibrium is the only one that allows from relative elasticities related to interest rates, to recognise the summatory condition as equal to the unity of all elasticities.

xii Static general equilibrium supposes that profit and competence make the individual actions to converge into a maximum of social welfare, so there are no reasons in order to accept government intervention - economy self-regulate by means of the ‘invisible hand’. This idea shares two essential elements: efficiency and equity. As for the efficiency, is assumed (is demonstrated) the existence of a flexible vector of prices clearing the markets (equilibrium prices), being compatible as a whole (general equilibrium); but moreover they satisfy the condition of the non existence of another vector of prices allowing to get better the collective welfare (Walras-Pareto Optimum). Even if market failures (externalities) are considered, it will there be anyway a vector of ‘virtual’ prices giving response to the condition expressed above (Arrow, 1951). Real prices can include subsidies and taxes (Pigou, 1920). The consequence thereof is that any intervention over prices befall social costs. The last statement (neo-classical approach) makes up as far a general theory with precision and strict formality. The long term will be a succession of short terms or temporal equilibriums (Hicks, 1946).

From the mathematical side, the price of any particular commodity depends upon the offered and demanded quantities of such a commodity; but beside the prices of the rest of commodities. For Walras, the oneness of the vector was found just counting the number of equations and unknown numbers. For \( n \) merchandises will exist \( n-1 \) relative prices, expressed in terms of \( n \)th (numerary). Therefore, there will be \( n-1 \) independent equations and one lineal combination of the \( n-1 \) equation. As the prices found are ‘relative’, a ‘multiplier’ is lacking to find the ‘absolute’ prices found in the marketplace. That multiplier will be aggregated in the classic vision with the quantitative equation of money.
This equation should be interpreted, following Allais (1978), as a formal expression of general equilibrium under the hypothesis of compensation in value between deficits and surpluses into different markets. Whether additionally is established the condition $t \to 0$ as a short-term reference, then a financial interpretation is reached for the equation [1].

In fact, distinguishing flows and stocks -which outlines dynamics features\textsuperscript{xiii} - allows to enunciate the existence of general equilibrium when stocks in the different markets compensate each other\textsuperscript{xiv}; because flows in an instant, that is, when $t \to 0$, are annulled. So, equation [1] is reduced to compensation between stocks of securities and money\textsuperscript{xv}.

That is, to the following expression:

$$\frac{1}{r} (V^d - V^s) + (M^d - M^s) = 0$$

[2]

Or alternatively, it is reduced to compensation between stocks of securities and that of currency, and shown by expression [3], when assuming that exchange market is a ‘mirror’ of monetary market; being that $(ch)$ is the exchange rate and $(d - s)$ is the demanded and supplied amounts of currencies.

$$\frac{1}{r} (V^d - V^s) + ch (d - s) = 0$$

[3]

Equation [3] states that the conditions in financial markets define the conditions of dynamic economic equilibrium, because the presence of the interest rate points out the time flow\textsuperscript{xvi}. The expression [3] imposes\textsuperscript{xvii}, in the political stage, to arbitrarily select, \textit{ex ante}, an anchor when choosing between interest rate and exchange rate, taking into account the need of getting just one degree of freedom.

In open economies, the arbitrary anchoring open up chances for speculation, as a valid alternative to pursue profits by the way of reproductive investment. Thus, as a matter of fact, \textit{such investment, and therefore product, are determined ex-post (or adjusted) based on decisions made \textit{ex-ante} in relation to interest rate or alternatively on exchange rate.}

Is it possible to replace the trial-and-error procedure on the political decision making, defining the interaction mechanism between interest rate and exchange rate?

\textsuperscript{xiii} The dynamic analysis or inter-temporal must comprise flows and has to use the principle of maximum (Pontryagin) to allow the formal calculation of optimum paths for growth (Samuelson, 1973) like consumption flows with updated values. For that reason, interest rate becomes a key element.

\textsuperscript{xiv} The equilibrium, viewed from econometrics, is defined as a model of type $f(x_1, x_2, .., x_n) = 0$, generated by a stationary or convergent process. From this point of view, the defined general equilibrium is included; a reason for this equilibrium to be object of econometric test related to stationary and co-integration.

\textsuperscript{xv} This is like saying that stocks markets are adjusted at the instant whilst the flows need estimation by periods.

\textsuperscript{xvi} Hicks (1939) assesses that the most evident difference between any static trade and production system, and any dynamic system resides in the lack of loans in the first, and the presence of these in the other (Hicks, 1954: 267, in Spanish edition).

\textsuperscript{xvii} We can also build an orthodox version whether making the synthesis of classic hypotheses along with those of Hicks (1937). In this event, the market of securities is eliminated because it would be like a ‘mirror’ of monetary market; the general equilibrium depends on the interaction between monetary and commodity market, that is to say, formulating $P(Y^d - Y^s)t + (Md - Ms)t = 0$. Such interaction states the same idea than the called ‘quantitative equation of money’. The orthodox reasoning supposes yet that the adjustment of employment market is an output, as it would come represented by two ‘combined’ equations of independent equations. Mathematically, the four-market model would be reduced to the interaction of two markets: commodities and monetary, so that, before the condition of joint equilibrium only rests a degree of freedom: the ‘amount of money’, hence monetarist policy is justified. In Mata (2000) there are versions corresponding to the different hypotheses of models: classical, Keynesian, Hicksian, neo-classical (Patinkin), and neo-Keynesian.
4.1 Financial interaction with real economy

Wicksell (1898) had distinguished between natural interest rate, as productivity of capital goods, and nominal or monetary rate; however he found that banks could not anticipate the natural rate. Keynes (1936) uses the concept of marginal efficiency, justifying capital gains depending upon its scarcity and not to physical productivities. Tobin (1958) understands the concept of \( 'q' \) coefficient, as the relationship between the price of new reproductive assets and the value of the old ones, evaluated like stock value in the capital market.

From the already explained is possible to appraise an investment portfolio as a combination of assets, when considering discreet returns of banking deposits, but without risks, and the most attractive expected returns -but risky-, of those shareholder assets, as representation of capital goods, and comparing them with the cost of credit or interest rate. In other words, the valuation of an investment portfolio allows, grounded on solely economic concepts -scarcity of capital and yields- to compare or make the transit between the financial sphere and the real economy imagined by Wicksell, in order to explain the accumulative process.

The general equilibrium equation presented as [3] can be broke down when distinguishing between financing from credit, and financing obtained via securities\(^{\text{xviii}}\); so it is obtained the following expression [4]:

\[
\frac{1}{rx} (V^d - V^s)_t + \frac{1}{q} (V^d - V^s)_t + (1 + 1/ra) (CR^d - CR^s)_t + ch (S^d - S^s)_t = 0 \quad [4]
\]

where:

\[
\begin{align*}
CR^d &= \text{credits demand} \\
CR^s &= \text{credits supply} \\
r_a &= \text{domestic active interest rate} \\
V^d &= \text{demand of securities in foreign currency} \\
V^s &= \text{supply of securities in foreign currency} \\
q &= \text{yield of national securities} \\
r_x &= \text{yield of foreign securities}
\end{align*}
\]

Thus, separating credit market from security market, we see that interest rates and yields conform a link of dynamic relation. In the sense of Tobin (1968), stock exchanges provide a referent to financial investment, while savings’ remuneration (passive interest rate) and banking credit acts as the marginal referent for capital costs (active interest rate).

The distinction of three financial markets: international securities, national securities, and credit banking, depicts three options for profit and risk. Currency market allows, in turn, to consider risk aversion. So, all financial referents remain linked: speculation, credit and risk reluctance. The relative prices \textit{par excellence} will be then the active interest rates, profit rates (or liability rate instead) and exchange rates.

Normally, differences (margins) among these prices must allow credits cancellations. Whether this condition is denied, then a lack of liquidity would arise and banking would

\(^{\text{xviii}}\) The ‘unbalancing’ version of the interaction between financial and real processes, corresponds to the notion of fictitious capital from Marx (\textit{The Capital}, Tome III), who states that there is not even a slight link between the process of capital valorisation (accumulation) and the idea of a capital thought of as an automaton able to create value by itself. Marx gives an example about the unbalancing action which he calls fetishism: the issue of public debt securities, and he states that neither the allocated quantity exists, nor it is oriented to productive investment (accumulation). That is why, to simplify, we shall suppose that the securities are referred to stocks issued by firms.
fall into insolvency because of delays and suspended payments. A situation like this will make attractive to refugee into currency market. An abnormal increase in liquidity demand -withdrawal of funds- or in currencies could be judged as triggers for a crisis\textsuperscript{\text{xix}}.

Effectively, if the condition expressed in [4] is applied to a small economy, that is, with external influence but with a performance not affecting global conditions, domestic interest rate -due to the scales of markets- will be equal or higher to the international interest rate: $ra \geq rx$. Then, if the currency rate increases, $ch$, as a consequence of a higher currency demand $S^d > S^*$, a pressure will occur to raise the domestic interest rate, $ra$. This rise will increase the demand of domestic securities, compared with the demand of foreign securities, but will bear a decrease in the demand of credit, affecting the growth of production and consumption; and everything will be summarised as a stimulus over depressing forces, $Y \downarrow$.

The situation $S^d > S^*$ implies the persistence of negative trade balances: $X < M$. Under this circumstance, orthodox perspective states that the movements $ra \uparrow$ and $ch \uparrow$ and their ultimate consequence $Y \downarrow$ will drop $M \downarrow$, moving the economy towards an equilibrium in a lesser satisfactory point. That is, with lesser consumption and lesser employment.

Thence, orthodox policy outlining the movements of $ra \uparrow$ and $ch \uparrow$ has brought depressive tensions and political upsets, which strength the emergence of financial and banking crises, when transforming illiquidity situations into solvency problems, as defaults and stoppage of payments increase. History teaches that the coordinated assistance of central banks along with the IMF happens after the plunge of the currency, and that banking bailouts are to preserve international creditors.

In ‘big’ economies, as their domestic markets are quite superior to that of international trade, the influence of external events is minimized; thus economic policy favour changes in interest rates. For that reason, monetary authority will act above all taking care of the influence exerted by credit over production; while in ‘small’ economies, wherein external influence predominates, they may suffer the temptation of manipulating their interest rate to struggle with currency speculation. Therefore, in these economies, the sole currency market will occupy the centre of the stage.

To sum up, \textit{general equilibrium}, when assuming the credit hypothesis of money, precise the dynamic interaction between finance and real markets, and postulate that banking resources (credit) and from stock markets, are key factors for growth, with non-stable dynamics affected by uncertainty and speculation. This is a consequence of independent agents’ behaviour (investors, financial and banking firms) in imperfect and inefficient markets\textsuperscript{xx}.

The basic consequence of this statement is that in contemporary capitalist economies (with prevalence of private and intangible money), the fulfilment of the economic circuit occurs when banking system transactions (credit payments) happen without strains. Whether otherwise, financial and exchange crack could be brought out.

\textsuperscript{\text{xix}} Note that the explanation comprises a credit ingredient, as stated by Wicksell (1898); a banking element, according to Bernacer (1922), and a speculative component, as put forward by Stuart Mill quite early in 1848. The stages of crises (Mata, 2000: 284) are: allocation of economic surplus in speculative activities; levered expansion of these ones; forward liquidations, and rising in currency type. In small economies, speculation and rise in credit can be associated with persisting fiscal deficit; the market of titles will exert a lesser role due to its smallness. (Mata, 2001: 107).

\textsuperscript{xx} In this level, the monetary rules and financial policies impose a first-rank influence.
As anticipations, key indicators can be obtained from financial key-signs: interest rates, stock market performance, exchange rates, as well as the movements of production, employment and consumption, as real key-signs. In stock markets, a steady drop implies a decrease in capital valuation (losses) and eventually no incentive for investment. Monetary authorities can advance trials trying to reduce interest rate \( r \) in order to stimulate credit and recover growth of reproductive investment. Hereby they confront a dilemma, as speculators hold the option of selling up their securities and buying foreign currency. Authorities must trade off between rise interest rates to protect international reserves, or low these rates in order to stimulate credit.

This bring us to point out that:

1. In ‘big’ economies, interest rate considerations prevail over exchange rate, due to the relative importance of domestic over international trade.

2. In ‘small’ economies, the inefficiency of variations in interest rates, for the protection of the reserves, exaggerates the considerations on exchange rate. As a consequence, devaluation seeks to impede the rise of interest rate, but for no purpose, because speculation remains; and

3. Upon that, in this last event, bimonetarism is viewed as a way to minimize exchange speculation and to decrease interest rates, increasing currency supply through finance.

Summarizing, the starting point is the general equilibrium principle (interaction of prices and deficit and surplus compensation in markets), outlining the presence of credit market and the relationships between international and domestic trade, which facilitate to grasp a dynamic version of general equilibrium, when considering the differentiation between flows and stocks\(^{xxi}\). According to Hicks (1939), equilibriums are dynamic whether interest rate appears, because it is itself a relationship of values over time. When the condition of short run is pondered on, which from the mathematical angle is equivalent to the application of limit calculus, for a very small lapse \( t \to 0 \), then equilibrium is reduced to conditioning \textit{ex ante} of the stocks markets.

All of this is interpreted in the sense that economic agents consider first the prices of securities, credit, currency markets and that the decisions made on these markets, which are plunged into a short-term view, influence on decisions related to the markets of labour, goods and domestic currency. In other words, macroeconomic adjustment depends upon decisions of portfolio selections of the private sector, taking, primordially, as a reference those on interest rates, yields on stocks and decisions of the authorities with regard to interest and exchange rates. This will be henceforth called by us a financial preadjustment, and thus the adjustment sequence must be examined.

\textbf{4.2 Adjustment sequence: dynamic general equilibrium}

The basic formal model of financial preadjustment gather the hypotheses of instantaneous adjustment on prices and quantities in the exchange market, under the assumption of flexible prices; the adjustment for quantities in security market, when \( q \) is known; the adjustment for quantity and prices in the credit market, with a perfectly elastic supply; and the respective further adjustment for quantities in the markets of

\(^{xxi}\) The incompatibility criteria, consisting in simultaneously to use ‘flows’ and ‘stocks’, fails when the observation is made that flows and stocks are equivalent after deducing initial values from the stocks (Poncet-Portait). Moreover, we suppose, for simplicity sake, that the whole of transactions related to foreign trade (currents and capital) are recapitulated in the stock market. Even additionally the use of national currency is kept along for internal transactions.
labour, goods and currency, according to results obtained from the already referred markets. These originate two reiterative stages \textsuperscript{xxii} as follows:

\textbf{Financial Pre-Adjustment: First Stage}

<table>
<thead>
<tr>
<th>MARKETS</th>
<th>SECURITIES</th>
<th>CURRENCIES</th>
<th>CREDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY</td>
<td>$V_s = V\left(\frac{+}{-}r,q\right)$</td>
<td>$S_s = S\left(ch, R_0, X_0\right)$</td>
<td>$CR_s = CR\left(\frac{+}{+}r, KB_0\right)$</td>
</tr>
<tr>
<td>DEMAND</td>
<td>$V_d = V\left(\frac{-}{-}r,q,ch\right)$</td>
<td>$S_d = S\left(ch, M, S_0\right)$</td>
<td>$CR_d = CR\left(\frac{-}{-}r,q,ch\right)$</td>
</tr>
</tbody>
</table>

\textbf{Financial Pre-Adjustment: Second Stage}

<table>
<thead>
<tr>
<th>MARKETS</th>
<th>LABOUR</th>
<th>GOODS</th>
<th>MONEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUPPLY</td>
<td>$L_s = L\left(\frac{+}{w}\right)$</td>
<td>$Y_s = Y\left(L_d, I\right)$</td>
<td>$M_s = M_d$</td>
</tr>
<tr>
<td>DEMAND</td>
<td>$L_d = L\left(\frac{-}{w}, q\right)$</td>
<td>$C_d = C\left(\frac{+}{-}w, r, ch\right)$</td>
<td>$M_{1w} = M\left(C\right)$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_d = I\left(\frac{+}{-}CR, V, ch\right)$</td>
<td>$M_s = M\left(r\right)$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$M_d = M_{1} + M_{2}$</td>
<td></td>
</tr>
<tr>
<td>VARIABLE OF ADJUSTMENT</td>
<td>$L_s, L_d$</td>
<td>$Y_s, Y_d, P$</td>
<td>$M_d$</td>
</tr>
</tbody>
</table>

At the first stage, for the five endogenous variables: $CR, M, V, ch$ and $r$, there are five exogenous variables: $X_0, q, R_0, KB_0$ and $S_0$, where $X$ represents exports, $q$ nominal yield of securities, $S_0$ the pre-determined outflows in currencies (for example, amortizations and payment of interest); $R_0$ means the initial stock in reserves of currencies; $KB_0$ means banking capital, and $M$ represents imports \textsuperscript{xxiii}. In order to examine the real markets of labor and goods, at the second stage, is enough to explicit the exogenous variable for nominal wages ($w$), in the market of labor, because when dealing with the goods market, then the variables $CR, V, q, ch$, are the result of the first stage. In the currency market, practically residual to liquidate balances, is determined the demand of money ($M_d$) in function of variables already calculated or predetermined. In short, there are six predetermined variables $CR, V, r, w, r$ for six endogenous variables: $L_s, L_d, Y_s, Y_d, M_d, P$. The corollary valid for the policy will be: if authorities think the level employment is excessive, decreases in interest rates and exchange rate will result essential.

The first goal need the lack of pressures in the exchange market, upon that capital inflows must be facilitated and their eventual outflows be moderated, using prudential

\textsuperscript{xxii} Stock market will give a $q$ \textit{ex post} which becomes reference for the next stage.

\textsuperscript{xxiii} Alternatively, on this same stage, can be assumed that $r$ is exogenous linked to a fixed $ch$, finding so as endogenous a certain $q$. This condition was yielded in big economies under the Bretton Woods system.
reserve requirements at the Central Bankxxiv. As for enterprises, price of goods’ adjustment, taking care interest’s reduction and exchange stability, will keep a desirable level of inventory.

4.3 Graphical interpretation of financial preadjustment

The former section explains algebraically the stages of financial preadjustment. The following graphs depict the respective schematization following the method conceived by J. Hicks (1937) and originating the very well-known IS-LM Model. That is, the functions corresponding to equilibrium possibilities in financial and real markets are determined. We will focus on demand, as considering supply as potentially infinitexxv.

The function to be defined in the graph No. 1 corresponds to portfolio investments, which we shall call \( VCR \), as the result of interaction between demand of stock securities \( (V^d) \) supplied with yields \( q \) which we assume as being the Tobin’s ‘q’, and credit demand \( (CR^d) \) whose cost is the interest rate, \( r \).

A second function appearing in the graph No. 2 is what we call \( M_S \), which reflects the interaction between demand of currencies \( (Sd) \) inversely associated to interest rate. This withholding is equivalent in volume to the one we would obtain for domestic currency \( (M) \) as risk moderator, in positive association to savings.

The interaction of both curves \( VCR \) and \( M_S \) in the graph N° 3 determines the portfolio \( (I^*) \) of assets and liabilities, which allows to observe interest rate level. That is, the equilibrium portfolio or financial preadjustment is determined. It is evident how the composition of portfolio \( (I^*) \) has an equivalent of physical or reproductive investment, and that the interest rate and consumption hold an opposite relation. Thus, pondering of interest rate leads to consumption level \( (C^*) \) and if we add \( (I^*) \) the global demand, or \( Y^* \), will be found.

In graph N° 4, we see production and real wages \( (w/p^*) \), which are determined according to technical relations between real investment and labour demand, being evident that \( Ld^* \) and \( w/p^* \) levels are not necessarily those for full employment, neither global supply needs to be in equilibrium with global demand, just as is showed in the second stage of the algebraic scheme of financial preadjustment.

Note that the two first graphs, corresponding to the first stage of financial preadjustment, gather the microeconomic conditionings, which allow the selection of portfolios that will predetermine the macroeconomic results showed in graphs No 3 and No 4, referring to second stage of preadjustment. So, the micro and macro interaction are observed.

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xxiv The experience in Peru and Bolivia set this level around a 30%.
xxv In the case of credit, of course there are limitations on quality, but this is not a limit in the potential of offer.
Financial Preadjustment
Investment Portfolio Selection

Graph N° 1
Credits and Securities

Graph N° 2
Monetary Assets

Interaction with Real Markets

Graph N° 4
Employment and Output

Graph N° 3
Global Demand

Note: Quadrants express nonnegative values and lines reflect only the direction of the associative relation and not its structure.
5. The Economic Turmoil.

Following the preceding adjustment scheme, the economic circuit fulfillment would come along when final transactions of banking system (credit payment) occur without higher strains, accepting that credit process shows a lot of instabilities in the interest rate, when transforming non-liquid into liquids assets (payment obligations).

Effectively, if financial investment speed up (speculation) or any equivalent, an increase of risky credits demand (followed by stock accumulation) will produce new credit demands (or discounts) in order to pay past obligations, pushing up interest rates and rediscount rate (monetary market). This will induce losses in the stock market when companies’ values will go down. So, part of monetary resources will trend to deviate into currency (risk protection) with further detriment in production and a greater fall of payment capacity for acquired obligations (banking fragility).

Generally speaking, we can say that a strong valuation of securities and an increase on credit (1st stage) without chance to cancel (interest rate rise) will be followed by a stage (2nd) wherein the lack of liquidity will bring problems of banking solvency and will look for liquidity through stock markets, in order to cancel obligations (3rd stage). As a result, stocks will lose value due excess in supply and thus investors will lose wealth. If banking solvency problems do not receive the assistance from their owners, with new capital or through central bank aid, currency demand will rise; so a banking and stock crisis will add up to another in the exchange market (twin crisis, 4th stage). In countries with steady fiscal deficits, domestically financed, aids may create a similar process. For all events, steady rises in interest rate will blend into depressive processes, banking and stock crises (pursuit of liquidity) and losses of currency.

Then, it is self-evident that fiscal and monetary authorities have to keep freedom in currency market and provide liquidity for the credit market, which means to keep one eye on currency encashment and international reserves, and another on credit market. As for crises, authorities ought to take action ex ante, checking the quality of credit and ex post diminishing the depressive process, increasing liquidity. It must be underlined that this assistance must not be automatically done (guaranteed) to avoid laxity in banking sector behavior. But once the panic broke out, intervention must be quite fast.

Executive and legislative national powers (authorities with fiscal responsibilities), must account for public expenditure and its finance; influencing interest rate and exchange market. Therefore, to achieve goals on rising employment, price stability and increase per capita incomes, is necessary a tied collaboration between fiscal and monetary authorities. However, as these authorities have lost efficiency at international level, due to globalization processes, solutions will depend upon, taking advantage of international

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**xxvi** The interaction among fiscal and banking crises and those of exchange rate has occurred recurrently during the last two decades (Chile 1982, Argentina 1982 and 1985, Venezuela and Mexico in 1994-95, Asian Southeast Tigers in 1997-98, and Colombia 1999). Krugman will employ the monetaryization as an explanation of steady fiscal deficits, which would lead to attacks against currencies; in the meantime Müller (1996, 1999) points out how banks with lack of liquid assets will be a sufficient cause to stimulate speculation attacks on a set of nations.

**xxvii** This indebtedness process being faster than the cash flow ever allows, has occurred frequently in USA during 1929 and 1971, and the presence of the four stages mentioned has been proved, even the loss of value in the dollar too. The intervention of Federal Reserve in 1987, proved to be useful to stop the crisis just at the beginning.

**xxviii** Among the present preventive measures is possible to find the rules comprised in the Basel Agreements.
supply of currencies, through the behavior and political commitment of supranational authorities and those of continental-sized nations in formation.\textsuperscript{xxix}

It may be stated that, for achieving international coordination and accepting the hypothesis of endogenous money, that interest rate change transmissions -supervised or controlled by central bank and financial authorities- in the short run, affect savings and agents’ debt prone. Agents’ responses to these shifts is measured through the so-called substitution effects (attractions to expenditure and saving) of rent (changes on financial gross incomes), and finally over production and aggregate demand. This will be expressed on movements on exchange rate and goods prices. Interactions between finance and real economy are depicted in graph No.5.

**Graph 5. Financial Integration**

\begin{quote}
\textsuperscript{xxix} The cooperative behaviour allows to evade the ‘prisoner dilemma’ when reaching a higher economic equilibrium.
\end{quote}
6. **A new policy for undeveloped or not industrialized economies: the Financial Substitution.**

Two elements are of extreme relevance for the study of the case of undeveloped or not industrialized economies:

- Firstly, as opposed to the case of the so called first world economies, undeveloped or not industrialized economies are characterised by the fact that the locally issued currency is not accepted abroad. This represents a great limitation for economic policy, since it implies that the ultimate repayment of imports and international debt uniquely relies upon the evolution of exports; while the same is not true for the case of first world economies. The latter, in turn, may as well rely upon final settlements by means of credit expansion and money printing.

- A second relevant element refers to the degree of development of capital markets which in the case of undeveloped or not industrialized economies is very limited, and therefore, implies that the raise of the interest rate in order to calm pressures upon the foreign exchange market is usually insufficient to deal with the problem of financial speculation with foreign exchange.

A major consequence for the case of undeveloped or not industrialized economies is derived from the above conclusions. As those economies are usually dependent upon the import of final, intermediate and capital goods, their economic growth becomes highly dependent upon the attraction of international currency by means of exports and financial substitution. Next section focuses on the latter.

In present days which are characterized by a vertiginous increase in the volatility of capital flows, the exchange rate regime constitutes a deterministic institutional rule to achieve the necessary systemic stability. The problem is to simultaneously stabilize the interest rate and the exchange rate. Under a limited amount of international reserves, credit expansion or, simply, speculation, leads to the collapse of fixed exchange rate regimes. Equivalently, the extreme alternative to the previous case, namely, the establishment of a floating exchange rate regime may lead to high levels of imported inflation, and therefore to a fear of floating.

Clearly, the first best economic policy to deal with the above mentioned problem is the effective development of a process of economic integration leading to the establishment of a regional currency and central bank. However, in the short-run, many political, institutional, and cultural obstacles represent relevant costs within this process. Unsurprisingly, as will be argued, the policy of financial substitution implies a smoother transition to the convergence process leading to economic integration and the establishment of a common regional currency. The reason is that financial substitution requires neither a benchmark currency to be followed nor any extreme deflationary fiscal and monetary policy aimed at guaranteeing convergence. That is, financial substitution policies imply a soft-landing to convergence.

What is then so neat about Financial Substitution?

The answer to the previous question is straightforward since it is mainly associated to the evolution of contemporaneous economic processes and conditions. That is, in undeveloped or not industrialized world, economic agents themselves, following their own interests, usually enter into off-shore asset substitution. This regularly occurs due to the fact that regardless of the level of domestic interest rates, agents tend to protect
the value of their monetary and financial wealth by purchasing foreign assets
denominated in terms of international reserve currencies.

The above legitimate process, when confined to off-shore transactions puts greater
additional pressure upon the interest rate and the exchange rate, and above all, implies
that economic monetary and financial resources flow out of the domestic economy; a
major consequence of which is a continuous process characterised by permanent
unemployment, and stagflation.

The same is not true when political authorities are willing to recognize the legitimacy of
such a process, and hence allow for domestic institutional reforms in order to internalize
it. Those reforms transform the off-shore process of financial substitution into an on-
shore one; in practice what they do is: (i) to institutionalize a decision which has
already been taken by the public, and (ii) to establish the rules aimed at achieving the
general objective of stabilization.

The following table summarizes the pros and cons of a process of financial substitution:

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce the risk of devaluation and hence</td>
<td>Reduce the impact of exchange and</td>
</tr>
<tr>
<td>exchange rate crises</td>
<td>monetary policy, which is confined to the</td>
</tr>
<tr>
<td>Tendency to equalization among domestic and</td>
<td>domestic currency</td>
</tr>
<tr>
<td>international interest rates</td>
<td>Banking system focused on currency operations</td>
</tr>
<tr>
<td>Transaction costs reduction and parallel</td>
<td>and bias of investments to operations returning</td>
</tr>
<tr>
<td>of price movements to international level</td>
<td>international currencies</td>
</tr>
<tr>
<td>Depth of financial markets and increases</td>
<td>Surveillance and control of credit amount</td>
</tr>
<tr>
<td>trade and investment</td>
<td>and quality on private banking decision</td>
</tr>
<tr>
<td>Downs inflation levels and stimulate</td>
<td>(associated to international banks)</td>
</tr>
<tr>
<td>fiscal discipline</td>
<td>Diminishing seignorage returnsxxx</td>
</tr>
<tr>
<td>Increases general credibility</td>
<td>Domestic economic pressures under non-</td>
</tr>
<tr>
<td>No need for big institutional</td>
<td>encompass cycles domestic/international</td>
</tr>
<tr>
<td>transformations</td>
<td>Central bank losses</td>
</tr>
<tr>
<td></td>
<td>Lending</td>
</tr>
<tr>
<td></td>
<td>Resource function</td>
</tr>
</tbody>
</table>

The financial substitution process, which is mainly characterised by the fact that is
everywhere legitimizied and observed in the case of undeveloped or not industrialized
economies, is mainly associated to commercial bank money (loans and deposits) and
not to central bank money (monetary base). The comprehension of the previous
argument is fundamental for the design and implementation of fiscal, institutional,
financial and monetary rules.

Following the theoretical lines previously defined in Section 3, the core of those rules
cannot be assessed within a partial equilibrium framework; nevertheless, they may be
summarised as follows:

xxx Which in turns it is an element that reduce the propensity to the abuse of this mechanism as fiscal
income generator, being so, also a positive aspect.
**Institutional:**
- To reform *legal tender rules* in order to allow for the domestic (on-shore) holding of financial assets in terms in foreign currencies (credits and deposits).

**Finance and Monetary:**
- To regulate financial substitution in order to guarantee that foreign currency denominated (bank) credit loans are solely allocated to the export business sector of the economy – currency-matching rule.
- To establish a *managed flexible exchange rate regime* characterised by the fact that exchange rate stabilization policies will not affect the central banks’ interest rate-setting decisions.
- To implement a financial and monetary policy whose principal focus will be on maintaining a low and stable short-term interest rate aimed at accommodating private banks’ demand for base money (bank reserves).
- To impose an adequate reserve ratio upon foreign currency bank deposits which must be in any case higher than the one applied to the case of local currency deposits.
- To coordinate government development plans and central bank’s discount activities in order to promote the selective allocation of private bank credit, as well as to limit credit expansion associated to speculative activities.
- To promote the development of a market for foreign exchange hedging instruments.

**Fiscal:**
- To implement a policy aimed at pursuing fiscal balance at the different structural levels, mainly by restricting the expenditure of revenues coming from exhaustible commodities and raw material exports to capital investments.
- To eliminate permanent (current-expenditure) fiscal deficit in order to reduce continuous pressures upon the interest rate.

**Fiscal-Monetary:**
- In order to guarantee a lower volatility and level of the interest rate, competition among the fiscal and monetary authorities must be avoided by creating the appropriate incentives to exploit complementarities between both policies by means of coordinated asset and liability management strategies.

7. **Monetary and Financial Substitutions in Latin America**

Latin American experience indicates that the currency substitution process does not require either the so-called full dollarization of the economy, as in the case of Ecuador\(^{xxxi}\), or the establishment of a currency board, as in the case of Argentina\(^{xxxi}\);

\(^{xxxi}\) Many of the political and economic difficulties of Ecuador are associated to the resulting deficits conducted in order to finance the conflict with Peru (1995), and the destruction of the coastal infrastructure in 1997 due to natural causes (phenomenon "Del Niño") whose cost reached up to 13% of GDP. During 1996-1997, the financial assistance from private banks for US$ 300 million and the placement of Eurobonds for US$ 500 million were insufficient to avoid the fiscal, banking and exchange rate crises which immediately distorted the political sphere. The decision to dollarize the economy by President Jamil Mahuad took place on the 9th of January 2000 immediately before being ousted by a
both are nothing else than variants of the commodity money regime. It is sufficient to reform a few legal norms, and to establish international financial support agreements, in order to allow for the establishment, holding, and settlement of banking transactions not only denominated in local currency, but as well in terms of selected foreign currencies, while simultaneously allowing private agents to freely choose whether to use them or not as units of account and means of payment. That is to say, it is sufficient to resort to financial substitution or partial dollarization without giving up the country’s own monetary policy; experience which, in the last decade, shows remarkable benefits in the cases of Bolivia and Peru\textsuperscript{xxxiii}.

What was the cost of this action? It was simply the authorities’ recognition and acceptance of their impossibility to face the universal transformations with their obsolete set of domestic monetary policies. Nowadays, it is necessary to reform the very old central banks, by enabling them to undertake financial policies to be properly coordinated with major trade partners. Under these conditions, fiscal coordination is crucial to instrument an anchoring on prices, since by avoiding the internal financing of the fiscal deficit, the interest rate in the national market must come near to the international one, which is always lower due to scale economies.

civic-military board on the 21st of January of the same year. After the dollarization, the IMF approved assistance for US$ 304 millions; and up to US$ 2,000 million on demand during the next years. Additional international sources accounted for US$ 500 million. The old debts (Eurobonds and Bradys included) have been reduced in 40% of their face value while their terms have been extended between 12 and 30 years, hence allowing for a more reasonable repayment. A recapitalization of private banks still remains to be done.

\textsuperscript{xxxii} Between 1945-1955, period of the Peronism, the growth of domestic consumption (5.1%) reduced traditional exports (cereals and meats 0.9%) while, ironically, the policy of imports substitution caused an increase in the imports of intermediate goods (13.8%) and capital. From 1956, the regimes established in order to palliate the trade deficit resorted to devaluations and external credit, which in 1983 reached up to US$ 42,000 million. This process, along with maintained fiscal deficits, lead to hyperinflation and to the conviction of the need to increase exports. The different stabilization plans contained aggregate demand, as well as aggregate supply; the insolvency of firms implied the fragility of the domestic financial system. The internal debt was liquidated through negative real interest rates, while extensions up to five years in repayment plans applied for past due debts. In 1984 the “ustral plan” settles down (within a period of permanent renegotiations) in order to reduce inflation and to be able to service the external debt through the increase in exports. The financial burden, of approximately US$4,200 million/year, constituted a constraint for economic policy and a dependency upon international organisms and creditors. The constitution of ”MERCOSUR” and the establishment of the currency board, initially supported by external capital inflows started a period of price stability. The reduction in capital inflows, the devaluation in Brazil, and the incapability to face external payments lead to the withdrawal of any remaining support of the collapsing system.  

\textsuperscript{xxxiii} By 1977 a system of ”crawling peg” or maintained mini devaluations was established in Peru. Such a period lead to substantial devaluations and a hyperinflation associated to the fiscal deficit and the crisis of the Latin American external debt in 1982. During the period 1985-87, the attempts to revert the crisis by freezing foreign-currency denominated deposits failed, while the aversion to the national currency, and a dynamic black market, started developing. Between 1990 and 1994 a drastic change in the economic policy of Peru took place within the terms of the Washington Consensus. The state intervention in production, the intensive protection (denominated “active industrialist policy”), and the so-called indiscriminate subsidies were diminished in order to deal with the government’s acute deficits (14.7% of the GDP in 1988). The financial public systems (with funds financed by credits from the Bank of the Nation and by monetary emission) were radically suppressed, and the handling of the interest rate was left to the free market. The fiscal and monetary adjustment initiated in 1990 stopped the hyperinflationary process. The program of adjustments included the suspension of the foreign exchange control, and the free holding and use of foreign currencies by residents, installing, therefore, a regime of financial substitution or partial dollarization.
The corollary for the exchange rate and monetary policy in Latin America, is that in general, according to the experience of the last years, independent floating regimes, without the establishment of a financial dollarization (through the corresponding institutional reforms) is a strategy that may lead to accentuate the crises instead of reverting them; we must have then to concentrate on the debate of realistic options.

8. Final Remarks

Every alternative associated to a diverse exchange rate regime has a set of characteristics that makes it more or less appropriate for the specificities of the different economies, including their links with the international capital markets, and the tendencies that may take place in their surroundings. Equivalently, the roots of the considerations about diverse exchange rate regimes are the different principles which sustain the theoretical perspective regarding money, its functions, its creation and the link between the financial and real spheres of the world economy. In the present times characterized by a vertiginous increase in the volatility of capital flows, the exchange rate regime constitutes a deterministic institutional rule to achieve the necessary systemic stability.

Ever since the collapse of the Bretton Woods Agreement, and hence, since the end of the commodity era, an increase in volatility of capital flows and exchange rates has been experienced. Equivalently, increasing financial crises have shown their impact upon economic growth and employment. In all of these crises, the fragility of the exchange rate regimes has been observed after important speculative attacks and private capital outflows take place under the impotence of the public sector. The international tendency seems to be led towards the establishment of great areas of influence for the main currencies. In this sense, the US dollar and the euro are the most relevant currencies playing a crucial role in the international sphere.

The need for a reconstruction of the international financial architecture, although felt since the flotation of the US dollar, has been evident with greater clarity since the Mexican crisis (1994), the Asian crisis (1997), the Russian crisis (1998) and the Brazilian one (1999). As previously indicated, many are the views on the debate around this reconstruction, among which, the need for a world-wide currency to allow making compatible the objectives of economic growth and stability is underlined. This scheme would entail a true pattern of measures for the universal currency constituting itself a “numeraire” anchorage at the global level.

To adopt a currency different than the national one has both political and economic costs, but to evaluate them outside the universal context would not make any sense for the small developing countries. Reality forces small economies to move within viable economic and political perspectives. The costs of adopting a currency different than the national or domestic one cannot be evaluated from absolute perspectives but relative to its viability under conditions of free capital mobility and preeminence of financial factors.

The process of domestic financial substitution offers the possibility for small open economies to achieve relative stability of the exchange rate instrument, while allowing for the use of the national currency for transactions purposes and therefore retaining an autonomous national monetary policy. It also facilitates: (i) future processes of regional integration by accepting de jure what already takes place de facto: the existence of different areas of influence of diverse currencies, and (ii) the constitution of a unique pattern of measure for a universal currency.
Sub-regional or continental integration processes guided by industrialized countries have favored the establishment of great currency areas of influence, being the US dollar and the euro, the prototypes currencies in this process. Under a regional integration perspective, sharing homogeneous quantitative references allows a better evaluation on particular conditions to advance in the pursuit of a common monetary sign of reference, in order to ground objective competitive advantages, to stimulate exports and to pursue common goals on economic growth and stability. These aspects are particularly important to small open economies participating in integration processes.

Authorities must recognize and accept their impossibility to face the universal transformations with their obsolete set of domestic monetary and financial policies. Nowadays, it is necessary to reform the very old central banks, by enabling them to undertake financial policies to be properly coordinated within major trade partners. Under the above mentioned conditions, fiscal and monetary coordination is crucial to promote an anchoring on prices.

Summarizing:

✓ Exchange rate regime is a main institutional rule
✓ Tendency towards great areas of influence of the main currencies is a fact in our days.
✓ Adopting a currency different than the domestic one has both political and economic costs.
✓ Financial Substitution offers the possibility for small open economies to achieve relative stability.
✓ Financial Substitution smoothes the process towards regional convergence and integration

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