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Is it Time for a World Currency?

Rasul Shams

HWWA DISCUSSION PAPER

167

Hamburgisches Welt-Wirtschafts-Archiv (HWWA)
Hamburg Institute of International Economics

2002

ISSN 1616-4814

The HWWA is a member of:

- Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz (WGL)
- Arbeitsgemeinschaft deutscher wirtschaftswissenschaftlicher Forschungsinstitute (ARGE)
- Association d'Instituts Européens de Conjoncture Economique (AIECE)

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This Discussion Paper has been prepared within the HWWA's "International Financial Markets Research Programme".

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**Edited by the Department
World Economy
Head: PD Dr. Carsten Hefeker**

Hamburgisches Welt-Wirtschafts-Archiv (HWWA)
Hamburg Institute of International Economics
Öffentlichkeitsarbeit
Neuer Jungfernstieg 21 - 20347 Hamburg
Telefon: +49/40/428 34 355
Telefax: +49/40/428 34 451
e-mail: hwwa@hwwa.de
Internet: <http://www.hwwa.de/>

Rasul Shams
Telefon: +49/40/42834-442
e-mail: shams@hwwa.de

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Abstract

There have been several proposals to reduce the observed volatility of flexible exchange rates. The paper reviews two recent opposite views on the appropriateness of a common world currency for this purpose. Referring to an adequately formulated theory of world money, it is shown that there is presently no alternative to a flexible exchange rate system. This system might, under specific conditions, gradually evolve into a world monetary system with a global currency. Developing some structural principles of the world economy the paper also explains some hitherto unexplained features in the development of international monetary relations.

Zusammenfassung

Es existieren viele Vorschläge zur Reduktion der hohen Volatilität flexibler Wechselkurse. Im Papier werden zwei neuere, einander ausschließende Ansichten über die Angemessenheit einer Weltwährung zu diesem Zweck diskutiert. Auf Grundlage einer adäquat formulierten Theorie internationaler Währungen wird gezeigt, daß gegenwärtig keine Alternative zu einem flexiblen Wechselkurssystem besteht. Auf lange Sicht dagegen könnte jedoch zur Entstehung eines Währungssystem mit einer einzigen internationalen Währung kommen. Darüber hinaus werden einige weltwirtschaftliche Strukturprinzipien formuliert, die dazu dienen, einige bisher unverstanden gebliebene Entwicklungen in den internationalen Währungsbeziehungen zu erklären.

JEL classification: F, F3, F33

Keywords: World Money, International Transactions, Development of the World Economy, National Currencies as International Monies, Credit Money, Multi-currency Standard

1. Introduction

One of the salient features of today's international monetary relations is the high volatility of exchange rates, both in nominal and real terms. There have been several proposals to reduce the observed volatility of flexible exchange rates. One of these proposals has been to establish target zones, i.e. central rates with relatively wide bands of permissible variation between the core currencies (Williamson 1985; Bergsten and Henning 1996). The purpose would be to allow market forces to determine exchange rates while at the same time preventing major misalignments. A second proposal assigns to monetary policy in the core areas the role of stabilizing a chosen domestic price index (McKinnon 1984, 1996). The most radical proposal takes the process of exchange rate coordination a strong step further by suggesting the creation of a common currency for the major industrial countries (Cooper 1984, 1999). This last proposal will be the subject matter of the following discussion. We first review two recent opposite views (Rogoff 2001, Cooper 1999) on the appropriateness of a common world currency and point out the weak theoretical foundations of both positions. Next we approach the question of the appropriateness of a world currency basing our argument on a theory of money which will be elaborated to deal with the development of the world economy. Depending on the present stage in the development of the world economy the question of whether it is time for such a currency will be answered adequately.

2. Opposite Views on the Appropriateness of a Global Currency

The main issue of the discussion concerns exchange rate movements and whether this volatility is a source of uncertainty for trade and capital formation. Cooper (1999, pp. 114-115) maintains this position and therefore proposes "an eventual currency union among the major industrial democracies" (p. 117). Politically unrealistic as yet, he views the creation of a common currency as a vision for a decade or two into the twenty-first century. To substantiate his argument, he lists three empirical-based prognoses. According to the first one, international financial transactions will grow further and dominate exchange rate determination more than they do today and the exchange rate will become more important in determining the profitability of trade and investment than it is today. The second prognosis is that real shocks among large industrial countries will not be radically asymmetrical and adjustments to such shocks no more difficult than adjustment to shocks within these economies. The last prognosis

signifies that financial markets in future will be just as fragile as they have been in the past.

Taken together these prognoses have serious implications for the appropriateness of the flexible exchange rate system. Far from absorbing real shocks, flexible exchange rates will gradually evolve into a transmitter of financial shocks. As financial shocks grow in importance, flexible exchange rates will become increasingly troublesome for trade and investment. A common currency will thus become a more and more serious alternative to the flexible exchange rate system.

Besides the question of whether these empirical prognoses are correct, the whole argument is based on the alleged dysfunctionality of exchange rate movements for productive economic activity. The opposite view does not substantiate this position. Rogoff (2001) refers, for example, to "the exchange-rate disconnect puzzle", saying that in spite of the proven volatility of flexible exchange rates, the effects of the volatility on the real economy is not as "conspicuously disastrous as one might have guessed" (Rogoff 2000, p. 244). The puzzle, according to him, is resolved if one incorporates the costs of trading goods into the models of international trade. Due to trading costs the consumption of traded goods remains small, so that only very large exchange rate movements can be expected to have significant effects on the real economy. Wild fluctuation of exchange rates between large economies does not therefore justify the introduction of a common currency.

Rogoff (2001, p. 245) also mentions some other arguments against a global currency. These include for example the difficulties involved in establishing adequate checks and balances on a global central bank in the absence of a global government, or the political problems in choosing central bankers who place a strong emphasis on inflation. Other arguments refer to the desirability of maintaining some level of currency competition as a check on inflation, or the fear of constraints on innovation induced by a global central bank trying to maintain its monopolist position. All these secondary objections to the introduction of a global currency refer to institutional problems which, as a matter of principle, could be resolved by providing adequate institutional checks and balances.

Coming back to the main body of the argument, neither opponents nor supporters of a global currency base their view on an adequately formulated theory of world money. The question of whether a multi-currency standard or a global currency is the more suitable monetary constitution for the world economy should be answered by referring

to such a theory and not simply by considering the costs caused by the present flexible exchange rate system. Referring to such a theory below, we will show that both positions are reconcilable if we take the development level of the world economy into account: while there is presently no alternative to a flexible exchange rate system, this system might, under specific conditions, gradually evolve into a world monetary system with a global currency.

3. Some Basics of a Theory of World Money

For private agents at the international level money serves as a medium of exchange, as a store of value and for denomination purposes. At the governmental level it performs intervention and reserve functions and is used as a unit of account. Every convertible national currency that assumes one or more of these functions at the international level is a partial international money. A fully developed world currency is one that performs all these monetary roles (Cohen 1971, p. 17).

The most basic function of an international currency is its transaction function. The existence of transaction costs and the denomination of revenues and expenditures in different national currencies are factors which lead to a demand for specific international monies. In which currencies cash balances are held depends on the composition of foreign trade. Furthermore, the volume of cash balances held in a specific currency varies positively with the volume of transactions in the same currency (the share of the respective country in world trade). However, due to scale economies the volume of cash balances grows at a slower rate than the increase in the volume of transactions (Swoboda 1968, p. 6).

The existence of transaction costs and scale economies also explains why only few national currencies will develop into global monies. The benefits arising from these economies would be at a maximum if international cash holdings could eventually be restricted to only one currency. Until now the discussion has been confined to the transaction function of money. A fully developed world money will also fulfill the other five remaining functions. It can be easily shown that substantial incentives exist for an international transaction currency to develop into such a full developed world money (Shams 1983, pp. 127-130). The reason is again the expected reduction in transaction and information costs should a currency which has already developed into a transaction currency be chosen for these other purposes too. Given the risk of a loss of capital

value, the development of the financial markets is as important for the store of value and reserve functions as for the acceptance of a currency for transaction purposes.

The theory of world money so far discussed establishes a direct relationship between the international monetary function of different national currencies and the world trade shares of the respective countries. Several features in the evolution of international monetary relations nevertheless remain unexplained:

- Why, historically, did gold precede national currencies (fiat money) as international money?¹
- How can the sequence of different national currencies (Pound Sterling, US \$) as international monies be explained?
- How can the development of the world monetary system into the present multi-currency standard (US \$, Euro, Yen) be explained?

An adequate theory of world money has to answer these questions. Only then will it be possible to discuss the possibility of the evolution from national currencies to a common world currency on a sound theoretical basis. The basic hypothesis we propose for this purpose utilizes the above-mentioned relationship between the international monetary function of a currency and the world trade share of the respective country. According to this hypothesis the evolution of international money depends on the development of the level and structure of international trade and financial transactions. Therefore in the following we have first to analyze the salient features in the development of the level and structure of international transactions in order to explain the above-mentioned evolutionary features of the world monetary system.

4. The Evolutionary Patterns of International Transactions

According to our basic hypothesis (section 3) the historical evolution of international money depends on the historical development of the level and structure of international trade and financial transactions. We do not possess a theory of the world economy and how it develops through time. But it is possible to catch its most relevant aspects by formulating some structural principles that encompasses observed historical regularities. Knowing the structural principles of the world economy we are thus in a position to

¹ A number of recent studies have attempted to explain how fiat money can emerge directly from barter. These attempts have been heavily criticised by Dowd (2000), not least on grounds of historical facts.

explain some hitherto unexplained features in the development of international monetary relations. In the following we formulate three such structural principles which can be used in a further step to explain the evolution of world monetary relations.

4.1 The Long-run Integration of the World Economy

The first principle applies to the long-run integration of the world economy. It states that, neglecting temporary disturbances, there exists a long-run increasing trend in the volume of international transactions. Rostow (1978) has gathered data on world trade volumes since 1700. Plotting the trade volume index against time results in an almost linear function (Rostow 1978, p. 66). This steady increase in the level of international transactions is to be explained by the ever increasing international division of labor, specialization, and demand and product differentiation. Against this background the phenomenon of globalization currently under debate is nothing more than the latest phase in the long-running process of world economic integration.

4.2 The Cyclical Development of the World Economy

Notwithstanding its long-running integration the world economy features a clear cyclical pattern of development. Periods of increasing integration are succeeded by periods of disintegration and vice versa. This can again be verified by referring to world trade data. Rostow (1978, p. 65-66) identifies rising growth rates of world trade for the period 1820-1870, slowing down thereafter until the mid-1890s and rising again until the first world war. The massive decline of world trade in the inter-war years was again replaced by spectacular growth rates from 1945 to 1970. Lewis (1981) indicates similar patterns in world trade growth rates for the period 1830-1973. The latest cycle covers the downswing after 1973 and the subsequent upswing beginning in 1990.

This cyclical pattern can be traced to long-term fluctuations in world industrial production. A systematic analysis of such fluctuations of economic activity lasting 50 to 60 years was first undertaken by Kondratieff. A theoretical justification for such long waves in economic development was provided by Shumpeter (1961). He based his hypothesis on the discontinuity in the emergence of technological innovations and the function of pioneer entrepreneurs in the capitalist development process.

The growth process of the world economy therefore takes shape in successive phases which are divided by the emergence of new ground-breaking technologies and leading

industrial sectors (textiles and clothing; transport; iron and steel; chemicals; electricity; automobiles, petroleum and natural gas; aviation, nuclear reactors, information technology). This is a time-consuming process since the development and diffusion of such technologies require new institutional arrangements that have to replace the old ones. Conventional behavior patterns have to be changed and old infrastructure to be replaced in order to clear the way for the introduction of radically new technologies.

Such ground-breaking technologies can be viewed as technological systems or species which encompass a whole series of technically and economically interconnecting technologies in different sectors. The diffusion of such technologies leads continuously to the introduction of new products and processes in various areas in terms of quality, efficiency, costs and other criteria. This continues until the technology reaches maturity. Gradually it may lose its innovative potential, thus jeopardizing the growth and profits of the respective firms. The search for radically new products begins anew, products which may become the nucleus of another technological system. Paradoxically enough, the infrastructure and institutions connected with the preceding technological system may become a hindrance to the development of the new system.

Although, due to methodological problems, a convincing theory of long waves does not yet exist, it is evident from empirical observations that the world economy features a degree of long-term instability which expresses itself in the form of turning points and succeeding trend periods in economic development (Eklund 1980, p. 412; Maddison 1980). The latest evidence is provided by the slowing down of the growth process in the industrial countries since the end of the 1960s and the upturn of the 1990s, developments which have initiated a new round of discussions on the theory and empirical validity of long waves (Eklund 1980; Thomas, Nefiodow 1998).

4.3 Regionalization of the World Economy

Another feature of the world economy is its regionalization. In the discussion on new regionalization there is often no clear distinction made between formal (politically based) and market-induced regionalization. Integration induced by market processes can, but does not necessarily, coincide with formal bloc formation. In many cases it is easily overlooked that regional bloc formation has been encouraged by an already developing market-induced integration. Market economy-induced regionalization can thus initially be accepted as an empirical fact. A theoretical explanation for regionalization can best be formulated by considering the line of intersection between

the location theory and the growth or development theory.² Earlier attempts in this direction, by Predöhl (1971) for example, are based on the transposition to the world economy of considerations and concepts relating to regional and development theory.

Regional concentration models are usually based on the identification of centripetal forces, i.e. forces promoting agglomeration, and centrifugal forces, i. e. forces impeding agglomeration. In more recent models, centripetal forces are attributed to increasing returns to scale in production, whereas centrifugal forces are treated as a consequential effect of land rents, immobile factors, increasing infrastructure bottlenecks or environmental pollution (Krugman 1991b). Owing to transport costs, the best locations are those where consumers and suppliers can be easily reached. However, they establish themselves precisely where production is concentrated, and the mobile factors have become linked to it. On the other hand, immobile factors or rising land rents slow down the concentration process, so that as a result a centre-periphery structure is formed or new subcenters arise. Depending on the values of the parameters a multiple equilibrium can also be formed, i.e. several centers arise.

Concentration processes can occur even in the absence of external technological factors, insofar as monopolistic competition between companies is assumed (Venables 1996). The benefits of agglomeration in this case arise from the interaction of costs and demand linkages while location-specific labor and final demand operate as factors impeding agglomeration. Whichever model structure is selected, it can be assumed that the trend towards spatial concentration is necessarily determined by the special features of the sectors concerned.

Transposed to the world economy, concentration models refer to manufacturing industry as a whole and take into account the benefits and disadvantages of agglomeration resulting from the interdependence of a large number of sectors. The conurbation centers arising as a consequence of this can be seen as large-scale industrial complexes. In this respect, two special features of such concentration processes should be noted. Due to benefits of agglomeration and the complementary nature of industries, such large-scale industrial complexes tend towards individualization and self-containment (Lemper 1974, p. 137). This means that the demand originating from the industrial complex is met wherever possible by the output potential of the complex itself. Apart from the extent of the benefits of agglomeration and transport costs, the

² This part draws heavily on my paper Regionalization of the World Economy and Centric Development (Shams, 1998).

spatial expansion of industrial complexes in the world economy is also determined by this trend towards self-containment.

Closely associated with this, on the other hand, is also the attraction exerted by the regions with existing clusters with regard to the establishment of new companies. In other words, these regions attract companies from their surrounding areas. Thus, as Arthur (Arthur 1990, p. 247) puts it, regions with such clusters cast an "agglomeration shadow" around themselves. As a result of the knock-on effect of such "gravity centers", new clusters cannot arise in their direct neighborhood but only at a suitable distance away from them.

Completely disregarding political boundaries, the world economy - under the influence of spatial structural dynamics - could be regarded as a system of large-scale industrial complexes located at suitable distances away from each other. Assuming full employment of the production factors, the major proportion of world trade would be conducted as trade between regional clusters within individual industrial complexes. By contrast, in terms of trade policy, the individual, large-scale industrial complexes would be relatively independent of each other. Trade between them would result on the one hand from the varying levels of self-containment of the individual complexes and on the other hand from consumer preferences for different kinds of products.

5. Structural Principles of the World Economy and World Money

Summarizing the previous section, we can suggest that in the very long-term the world economy is subject to a steady integration process. At the same time it is characterized by long waves of economic development and, with regard to its spatial structure, it underlies a pronounced regionalization process. Through time, international transactions are therefore subject to specific development patterns which we call structural principles of the world economy. Knowing these structural principles of the world economy we are now in a position to explain some hitherto unexplained features in the development of international monetary relations.

5.1 Why did Commodity Money Precede Credit Money at the International Level?

To answer this question we refer to the structural principle regarding long-run integration of the world economy and begin with a situation where the level of integration is very low. First we assume that the three countries A, B and C are linked with each other neither through trade nor financial transactions. Additionally we assume that every one of them possesses a national fiat currency which is redeemable in gold. Now if an exporter from A sells a good to an importer from B, the probability is very high that the medium of exchange will be gold. For executing such casual deals a commodity money has a specific advantage as an international currency. Its property as a medium of exchange and a commodity gives the exporter from A the security that he will be able to execute further deals both inside his own home country and with economic agents from C. The commodity money, due to its property as a commodity, can be exchanged not only for other commodities but also for other commodity monies and credit money. A fiat money from country B would only render the exporter from A a similar degree of liquidity if it were already accepted as international money. According to our assumption this is not the case.

Now assume that trade and financial transactions between the economic agents of the three countries slowly increase. With growing transaction levels, the exporter from A who receives a fiat money from B in exchange for his goods will more easily find an importer from A or an exporter from C who will be ready to accept the fiat money of B. The acceptance of credit money therefore increases with growing transaction volumes. This process can continue until, ultimately, the acceptance of credit money is not impaired even if the redeemability of credit money into gold is waived.

Credit money is without intrinsic value. Its acceptance requires trust. The production of trust is an increasing function of the level of economic transactions. As the level of international transaction increases a fiat money can replace commodity money under the condition that an inflationary production of fiat money is avoided. Which national fiat money is accepted as the international currency again depends on the level of international transactions in that currency (world trade share of the respective country).

5.2 Sequence of National Currencies as International Monies

The sequence of national currencies accepted as international monies can be discussed in connection with the existence of long waves of economic development. The emergence of ground-breaking technologies and leading sectors which is responsible for such waves does not need to take place everywhere and at the same time. On the contrary, it tends to be concentrated in one location and spreads to other locations by means of a diffusion process. Due to the required adjustment of institutions and infrastructure the diffusion process is time-consuming, so that a process of catching up and overtaking sets in.

Historically the positions of leading industrial nations have changed several times. This could not be explained by traditional growth theory. Modern theories of leapfrogging in international competition (Brezis, Krugman and Tsiddon 1993) provide an explanation based on technological development. These theories differentiate between incremental technological change and major breakthroughs that change the nature of technology fundamentally. Additionally they assume the existence of positive external economies resulting from learning by doing. Due to nationally limited external economies the old technological leader possesses a high productivity level and can therefore afford high wages. The new generation of technologies is efficient in the long-run but more expensive in the short-run. It is therefore rational for the old leader to continue to use the old technology. The new technology will be adapted by the late-comer nations who can compensate the higher short-run costs by lower wage rates. Since the new technology ultimately offers the possibility of substantial productivity improvement over the old, the late-comers of today will become the leading nations of tomorrow. An alternative hypothesis (Olson 1991) ascribes the change in technological leadership to the increasing rigidities experienced by the old leading nation.

Since major technological breakthroughs explain the cyclical pattern of the world economy as well as the cycles in technological leadership, both can be combined: every worldwide boom period is based on the evolution of the growth potential of some leading sectors. Therefore, it can be maintained that such boom periods coincide with the dominant position of a leading nation in trade and finance. Sometime in this period a process of catching up will begin in other countries, while an overtaking of the old leading country takes place in the following worldwide downswing period. The crisis period will be therefore characterized by intense competition among different countries trying to build up a leading position. The following boom period will again be

characterized by the dominant position of the nation which can successfully assert its technological leadership (Shams 1983, p. 105).

Coming back to the theory of world money we already know that the currency of the country with the largest share in world trade will have a good chance rather to assume international monetary functions. Furthermore, from the discussion in this section we know that this currency will belong to the country which has secured a leading position during the boom phase of the world economy. However, since this position is subject to erosion in the following cyclical downturn period, another currency can replace the currency of the hitherto leading country in its international monetary functions. The result, in the long-run, will be a succession of national currencies as international monies. For a number of reasons, the process of displacement of a hitherto dominant international money will be characterized by a long period of currency competition:

- During the catching-up process the hitherto leading country will lose market shares to its competitors. At the same time the national financial centers of these countries become internationally more prominent. Therefore, the currencies of the catching up countries slowly develop into potential international currencies and in this function they become the rivals of the currency of the leading country.
- However, the currency of the hitherto leading country enjoys a decisive competitive advantage. This results from the scale economies and externalities realized through its hitherto international monetary functions. Therefore, a loss in world trade shares does not translate into an attendant loss of international monetary functions of its currency. Due to scale economies and externalities there is a clear lag structure between changes in world trade shares and changes in international monetary functions of the respective currencies.³
- However, already realized scale economies and externalities cannot secure the world monetary position of a currency in the long run should the world trade shares of the respective country fall persistently. Such a persistent fall increases the costs of holding the money of the leading country and vice versa decreases the costs of holding the money of the catching up countries. A process of currency substitution slowly sets in.
- From what has been said it is clear also that with the emergence of rival countries the currency of the hitherto leading country will be threatened first in its function as

³ The lag between changes in world trade shares and changes in international monetary functions can also be explained in terms of network effects and switching costs (see Dowd and Greenaway 1993).

an international store of value and far more slowly in its function as an international medium of exchange.

5.3 The Present Multi-currency Standard

What we are presently witnessing is not a process of succession of national currencies as international monies but the parallel existence of several national currencies as international monies. In other words, we are experiencing a multi-currency standard. Referring to the discussion in the last section, we could interpret this situation as a period of currency competition that will last until one of the currencies asserts itself as a new dominant international money. However, this would imply that we are still experiencing a long-run downswing period, which would be at odds with the developments seen since the beginning of the 1990s. We have therefore to accept the fact that the multi-currency standard is a new and lasting phenomenon requiring a different explanation. One reason for the permanence of several national currencies as international monies may be that the diffusion process of new technologies (presently information technology) is much faster than in the past. The rapid international transfer of technologies prevents individual countries from building up new leading positions in the world economy. Therefore a single currency can no longer evolve into a dominant international money.

What we are presently experiencing is not a hierarchical world economy with a single dominant country at the top but, due to regionalization, the side by side existence of at least three supra-national industrial complexes of worldwide importance: Europe, North America and East Asia. It is therefore no surprise to find that the national currencies of the central or pivot countries within these complexes (US \$, DM and Yen) have evolved to assume the role of international monies. Some remarks are in order, however:

- The most important international currency is still the US \$, since, due to scale economies and external effects, it has not yet fully lost its past importance as the dominant international money.
- In Europe, the Euro has replaced the DM and will possibly become a serious rival of the US \$ in future.
- Due to restrictions in the use of the Yen as an international currency and the fact that the US is as an important a trade partner of East Asia as Japan, East Asia cannot be qualified as a Yen-zone (Shams 1996, p. 96).

The present multi-currency standard is thus based on the third structural principle, namely the regionalization of the world economy. This is also the reason why we can clearly differentiate between the two currency blocs in Europe (DM-zone or Euro-zone respectively) and the western hemisphere (\$-zone) and a limping Yen-zone in East Asia (Shams 1996, p. 95).

The division of the world economy into large-scale industrial complexes implies a specific structure of international economic transactions: the level of intra-regional trade and financial transactions is much higher than the level of interregional transactions. Referring to the theory of world money this results in the emergence of regional international monies. Within every region that encompasses several national economies, the currency of the pivot country will take on the role of the international money. This is the case because, historically, one repeatedly comes across a structure of national economies consisting of a central country (larger country measured according to per capita income and population and superior with regard to production technology and the availability and level of training of human capital) and several centrically dominated smaller neighboring countries oriented towards the market of the larger country (Shams 1998, p. 16).

5.4 Time for a Global Currency?

The question to be answered now is whether the present multi-currency standard will survive for a long time or if it could evolve into a system with a single world currency. The answer depends crucially on the future development of regionalization in the world economy. Much higher trade levels between the regions require not only the abolition of tariffs between them but also numerous other steps towards economic integration. Additionally they require an increasing level of globalization to counteract the natural tendencies of conurbations towards self-containment.

Since the structural principle of regionalization possesses enough stability over a long period, the emergence of a single world currency seems to be improbable in the near future. The evolution towards a world currency would require regional boundaries to be overcome through a forceful interregional increase in international transactions, so that the result would be a unique, structurally undifferentiated level of transactions worldwide. The different large-scale industrial complexes would grow into one giant worldwide industrial complex with no striking unevenness in the level of transnational economic activities.

Presently we seem to be far away from this scenario. Sapir (2000, p. 1146) maintains that "if the Free Trade Area of Americas (FTAA) initiative and the idea of EC/ACP free trade areas are implemented, we could witness, the emergence of two major 'hegemon-centred' trading blocks". Far from the conditions for the evolution of a world money being fulfilled, the potential for the further development of the regionalization of the world economy has thus yet to be fully exhausted. Rogoff (2001) is thus right to plead for the current international monetary system, though not for the reasons he specifies, but rather for the specific structure of international transactions at the present point in time. On the other hand, Cooper (1999) is much too optimistic in seeing the political conditions for the introduction of a common currency ripen one or two decades into the twenty-first century.

Practically, it is impossible to foresee exactly if and at what time the conditions for the introduction of a common currency will be fulfilled. But it is certainly true that a much higher level of integration of the world economy in terms of interregional trade and financial transactions has to be reached in order to ensure the political and economic attractiveness of a common currency.

6. Conclusions

Due to the high volatility of exchange rates the suitability of a common currency has recently been the subject of controversial discussion. We argued above that judgment of the opposing views has to be based on a theory of world money. After discussing the main features of such a theory it was argued that the historical evolution of international money depends on the historical development of the level and structure of international trade and financial transactions. Therefore three structural principles were formulated to encompass relevant historical regularities. On the basis of these structural principles some important features in the evolution of international monetary relations could be explained. Additionally we were able to show that the conditions for the introduction of a common currency have yet to be fulfilled and that for this purpose a much higher level of world economic integration is required.

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