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Explicit or implicit Monetary Coordination – Considering Historical And Future Aspects©

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Abstract

This paper introduces a theoretical approach to defining the old and new configuration of currency tripolarity as an important framework for monetary coordination. The theoretical approach encompasses three dimensions: (i) the designation of unequal, but dominant currencies, which (ii) is itself determined by the international functions of money and (iii) the monetary coordination expected from central bank policy and exchange rate management. The paper is limited to special remarks regarding these three dimensions, set against certain the historical background. It reviews literature emphasizing that economic interdependencies are no longer identified merely as restrictions on domestic macropolicy, in contrast to the view held in the preceding decades.

Introduction

The paper introduces a theoretical approach to a configuration of tripolarity focusing on unequal structures of three dominant currencies and its implications. It implies a hierarchy of currencies. Each currency can be defined by the international functions of money. The introduced tripolar configuration of currencies goes beyond a normative claim. It avoids assertations such as, that *in the long run* the world will be divided into a bipolar or tripolar international monetary system. The approach tries rather to capture the hierarchical structure of currencies taking into consideration old and new configurations of tripolarity. The old configuration consists of the U.S.dollar, d-mark and yen. The new configuration consists of U.S.dollar, euro and yen. The important element of the new configation is that the d-mark was replaced by a non-national currency, the euro issued

by a non-national central bank. A comparison of the hierarchical structure of both configurations leads to very different results.

Much empirical evidence on these dominant, but unequal, currencies has been provided, e.g. by McCauley (1999), the European Central Bank (ECB), the Bank of International Settlements (BIS), and the International Monetary Fund (IMF). Other authors have, however, investigated a model of a multipolar world in order to explain how and why distinct vehicle currencies have emerged, e.g Kenen (1983) and Krugman (1984).[2] Canzeroni (1982) has provided a pioniering model. The motivation for introducing a theoretical approach results from debates over a tripolarity *versus* a bipolarity of currencies or currency blocs in order to discuss the implications of a tripolar configuration for the international monetary system.

The literature on the international monetary system and exchange rate coordination is extensive. Contributions to these topics have been provided by, e.g., Bergsten (1999), Fratianni eta al (1998), McCauley (1999), Mundell (2000) and Salvadore (1998). Mundell (2000) raises the point that "today, the dollar, the euro, and yen have established three islands of monetary stability, which is a great improvement over the 1970s and 1980s" (2000, 339).

It is worth noting that a positive theory of monetary coordination does not exist. The topic of international monetary coordination therefore has become a field of research for many different theoretical approaches (Weber 1996), including game theory

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[2] Hartman (1998) investigates a three country model from the viewpoint of transaction costs theory, focusing on the financial market from the viewpoint of microstructure analysis.

(Canzeroni/Henderson 1991), international money, exchange rates and monetary system (Eichengreen 1998, Fratianni et al 1998, Frankel 1999, McKinnon 1993), central bank policy (Blinder 1998), and international macroeconomics (Kenen 1994, Mundell 1995, Salvadore 1998b). Not to mention that this reference to the literature is not complete. The new literature on monetary coordination left behind the idea of an optimizing approach, which dominated the early 1970s and 1980s (Bryant 1995; Ghos/Masson 1994; Goldstein 1994). Economic interdependencies are not to be identified as restrictions to domestic macropolicy as they were throughout the past decades.

The paper is structured as follows: Part I introduces a theoretical outline of a tripolar configuration as a composite of different dimensions. Part II applies the configuration of tripolarity to the *contemporary world*, comparing an old and new configuration in a brief historical reconsideration. Part III surveys some basic features of exchange rate theories, referring to proposals for improvements in the international monetary system. And finally, Part IV provides some conclusions.

A terminological approach to tripolarity

A theoretical outline of the configuration of tripolarity is a composition that encompasses three dimensions: (i) The designation of three dominant currencies regarding the functions of international money; (ii) the non-neutrality of money; and (iii) a managed exchange rate system, i.e., monetary coordination.

This theoretical outline follows an approach to economic theory introduced as *representative realism.* Whom or what does *representative realism* represent? It states a

non-correspondence between reality and observations because the distinction between theoretical notions and notions that are "pure" observations is useless.[3] *Representative realism* focuses on a comparison of theories or models. It emphasizes that models are the primary and not the final step in analyzing economic problems. Therefore, models must have a link to the *contemporary world*, i.e., the perceivable world.

I now want to refer to the first dimension of the theoretical outline that has already been described in the literature. It deals with the function of money in particular (Kenen 1983, Krugman 1984). As for the functions of money in general, international money is defined as a medium of exchange, a unit of account, and a store of value for both private and official preferences. Money as an international medium is defined by its function as a settlement of international payments, as a denomination of price and as a liquid asset for international transactions. Private agents use the U.S.dollar as a unit of account. Finally, the U.S.dollar serves as a store of value for banking activities. Official agents, i.e., central banks, intervene with the U.S.dollar. They use this currency as a unit of account in order to peg currencies to it. Regarding the third function of international money, the preference of central banks to hold – for instance – the U.S.dollar as a store of value, i. e., as a reserve currency in their portfolios, has been significant since 1971. Nevertheless, there have been remarkable changes in currency compositions (Dal Bosco 1998).

Considering the function of money, the U.S.dollar meets the criteria of international money for both private and official agents (Issing 1998, McCauley 1997). As a

medium of exchange, private and official agents use the U.S.dollar as a vehicle currency. Three criteria in particular characterize a vehicle currency: (a) economic performance; (b) degree of integration in the financial market; and (c) expected inflation rate. Each criterion is important in itself; but to judge a vehicle currency does not simply mean adding (a) + (b) + (c) equally. More important, the last criterion, the expectated inflation rate, leads to the phenomenon of the liquidity premium of a currency and hence to the credibility of a central bank.

The hypothesis of non-neutrality of money

> "The Lucas critique warns us that some parameters may change when policy does. Yet what are we to do about these problems? Be skeptical? Of course. Use several methods and models instead of just one? Certainly".
> Alan Blinder (1998, 8).

The non-neutrality of money is a second component part of the theoretical outline. The hypothesis of the neutrality of money was originally advocated by Friedman in 1968. Robert E. Lucas and The New Classical Macroeconomics (NCM) treated this proposition with more radicalism and rigor in so far as they additionally implemented the hypothesis of rational expectations (RE). The premise of this paper is that the abandonment of the hypothesis of neutrality of money and hence of international money seems to be required for thinking about monetary coordination, because monetary coordination is a function of central bank policy and finance authorities which do not

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[3] The theory-laden approach to economic theory introduces Viskovatoff (1994), and Muchlinski (1998c).

decide on the basis of rigid rules, but rather according to various models. A mechanistic use of models or a robotic application of a single model is not compatible with monetary decision making under uncertainty (Vickers 1998).

These hypotheses – the hypotheses of neutrality and RE – opened up never ending controversies within the community of science. The Lucas critique, a famous result of these paradigmatical debates, has been guiding the macroeconomic discussions up to now (Mishkin 1995). McCallum résuméd, "it should be remembered that Lucas's critique itself was not new, but merely a (brilliantly persuasive) application of Marschak's (1953) fundamental insight that policy analysis requires a structural (as opposed to reduced-form) model" (1999, 181). To be brief on that point: The hypothesis of the neutrality of money implies that *money does not matter*. While stressing the non-importance of money, Friedman and Lucasians demanded rigid rules for money supply (Hahn 1982, 45-6). One conclusion of this viewpoint is that only unanticipated money-system changes have real effects. Sargent objected to the interpretation given by some authors of a triad consisting of the hypotheses of rational expectations, neutrality of money, and policy ineffectiveness in Lucas's work, because papers on equilibrium models are concerned with different monetary and fiscal policy arrangements (1996, 543). Without going into much details, I would like to emphasize that different models on different monetary or fiscal policies should not be confused with their implicit *unique* premise determined by the view of the NCM.

International monetary coordination cannot be based on rigid rules and premises which – for the sake of simplicitiy – are not linked to the contemporary world. The application of RE can be misleading for two main reasons: First, it implies a convergence

of the 'true model' which is perceived and acknowledged by economic agents and which determines their expectations. Systematic mistakes by agents are excluded by premise. Pesaran manifested that the assumption, economic agents learn from their mistakes is hardly indisputably, rather "the issue of whether the learning process converges to the rational expectations equilibrium is an open one. Generally speaking, the learning problem has been studied in the literature using two types of framework: the rational (or Bayesian) learning model, and the boundedly rational learning model" (Pesaran 1996, 31). Beyond this, the substitution of the premise 'true model' with the premise, agents "are committed to some plausible learning rule" as stated by some authors, has not been avoiding the core problem of this model (Pesaran 1996, 32). The RE is addressed to a special model of rational expectations building, it does not contain any link to *contemporary world.* This model is to be distinguished from the model of a rational use of information (Simon 1992).[4]

Second, this method of defining a premise for the "sake of simplicity" shall provide a stable environment and consistent modeling. Considering the market euphemism emphasized in this view, one has to ask why the idea of price as a market clearing function should be eliminated by the implementation of a unique ('true') model? What function, then, should a price have?[5] To conclude this consideration so far, it is hardly acceptable to work with the RE and reject the premise of the neutrality of money.

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[4] Theoretical refinements and applications of rationality reviews Runde/Anand (1997).

[5] For greater investigations:Hoover (1997, 1991), Muchlinski (1999), Schotter (1996). New evidence on the unacceptability of RE has been presented by Ball/Croushore (1998)

Because the premise of the neutrality of money implies a certain conclusion, i.e., the result that an anticipated monetary system change does not provide real effects in the economy, it is quite clear that both are connected in a certain theoretical way of thinking.

Regarding the first and second components, the configuration of tripolarity leads to the view that money is *not* neutral. Neither the hypothesis of the neutrality of money nor the RE can be supported by the modern view of central bank theory and policy or the empirical phenomenon of exchange rate coordination. At this point the question arises which policy instrument a central bank should choose if one bears in mind that it controls the nominal short rate and not the real long rate (see Blinder 1998). According to open economies, Keynes described this aspect similarly: "The short term rate of interest is easily controlled by the monetary authority, (...) because it is not difficult to produce a conviction that its policy will not greatly change in the very near future, and also because the possible loss is small compared with the running yield (unless it is approaching vanishing point). But the long-term rate may be more recalcitrant when once it has fallen to a level which, on the basis of past experiences and present expectations of *future* monetary policy, is considered 'unsafe' (…). For instance, in a country linked to an international gold standard, a rate of interest lower than prevails elsewhere will be viewed with a justifiable lack of confidence (...)" (1936, 203). The notion lack of confidence expresses the precariousness and fragility of knowledge inherent in both, past and future events and decisions. It implicitly refers to a credibility of a central bank which is compelled to act within these fragile circumstances.Given the hypotheses of the neutrality of money and RE, no requirement for monetary coordination would be

observable because instability in economic theory is not conceivable. On the contrary, monetary coordination as presented in the paper avoids such rigid premises.

Given these brief remarks on a topic of modern central bank theory and politics, the aim of a *neutral* monetary policy is compatible with constant inflation in the medium term. This point of reference is not to be confused with the neutrality of money. The particular questions of *how* and *when* monetary policy of an independent central bank affects the capital market, i.e., the interest rates, which regularly attract the attention of investors and effect their decisions, are still controversy in the literature (Clarida et al. 1999). They are also important aspects regarding monetary coordination. To summarize, since monetary coordination is addressed to central bank policy, it makes no sense to adhere to both hypotheses.

Comparing an old and new configuration of tripolarity

> "The moral, then, seems to be that it is not a collapsed but a collapsing role of the dollar that we should worry about" (Krugman, 1984, 278).

The very roots of the emergence of different key currencies within the international monetary system go back to the time when the British pound sterling was challenged by the U.S.dollar in its role as a key currency during the gold standard. The Sterling-centered system of global finance was changed by 1931, but it was not displaced by any other dominant currency during the period of 1931 to 1944. Eichengreen figured out that the interwar arrangements, in comparison to the Post-World War II period, was

characterized by the omission of certain coordination for at least two reasons: (a) The central banks were not independent, and (b) the controversies on macropolicies *en general* dominated because many countries struggled with inflation and high unemployment. Only one tentative attempt towards any coordination had been undertaken: The Tripartite Agreement of 1936 (Eichengreen 1994, 49). England and the United States shared the *potential* of hegemony. The willingness or capability of France did not emerge with clarity (Keynes 1933, C.W. XXI).

During the gold standard, i.e., the pound sterling standard, the pound sterling held a reserve function. The Bank of England dominated the discount rate policy for at least fifty years. Regarding the Bank's structure, issue and banking department, it worked not like a modern central bank (Eichengreen 1998, 579).[6] Its capital inflows and outflows were conducted in sterling. Evidently, the Bank of England acted as a world banker. It regulated the international flow of capital by controlling discount rates. The pound sterling standard was a two-tier system of banking and money supply (Eichengreen 1998, 579). To be sure, the commitment to gold-convertibility by the Bank of England was credibly although it was widerly known that the circulation of Pound Sterling exceeded its gold reserves (Spahn 1998).

A differentiation must be made between a nation's world position serving as an international intermediary or as a world banker. The latter is part of the former. Nations serving as international intermediaries and as world bankers are able to induce short-term capital inflows and long-term capital outflows. In addition, only a world banker supplies

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6 Bloomfield (1959), Keynes (1913), Lindert (1969), McKinnon (1993)

the world's liquidity denominated in its own currency (Tavlas/Ozeki 1992, 19ff.). England's loss of the role as a hegemon began when it was struggling with inflation after World War I and made the decision to go back to the gold-parity of the pound sterling of the year 1925. One result of this policy was the amazing overvaluation of the pound sterling, the loss of competitiveness in international markets and the diminished liquidity premium of the Pound sterling (Keynes 1925). England's policy of focusing on external balance and high interest-rate policy was a strong contrast to that of America. The United States practiced a policy of neutralizing of the gold inflow to avoid easy money policy and inflation. Comparing both the overvaluation of the pound sterling and the tight money policy in the United States, it is obvious that England did not have any possibility of reducing the overvaluation of the pound sterling. The United States therefore prepared its hegemonic position which came into force by the implementation of the Bretton Woods Agreement in 1944. The United States served as a world banker from 1945 to 1980. To sum up this retrospective, the very roots of tripolarity can be found in the interwar period, although the Franc remained in the background.

The old configuration of tripolarity

Applied to the contemporary world, the theoretical outline of a configuration of tripolarity leads to an *old* configuration of tripolarity that took shape with some clarity from 1985 to 1987 when the Plaza Agreement and the Louvre Accord established an agenda for the international monetary bargaining process. This process started after the abandonment of the gold standard as a final reference to define and assess the U.S.dollar,

according to an official exchange rate of dollar to gold. With that abandonment, a new era of central banking and particularly monetary policy-making under uncertainty and its consequences for exchange rates commenced. At that time the anchored U.S.dollar, implemented by the Bretton Woods Agreement in 1944, had already broken down.

Briefly, the overvaluation of the U.S.dollar and the easy money policy in the United States at the end of the 1960s led to inflation in the United States and to a lack of confidence of this key currency. I would like to argue that the impossibility of a redemption of U.S.dollar in gold merely triggered off the dollar crisis, it does not caused it; the U.S.dollar was weakened by a diminished liquidity premium and confidence. Reminding the policy of the Bank of England (BoE); the BoE defended successfully its credibility by the maintenance of the internal exchange rate of the pound and therefore the liquidity premium, but not by a certain amount of gold.

A tangible result of the Plaza Agreement of September 22 in 1985, was the abandonment of the policy of 'hands-off' and *benign neglect* which the United States had practiced up to that point.[7] The immediate goal was to reduce the overvaluation of the U.S.dollar, whereas the Japanes yen's appreciation was welcomed by the Bank of Japan and the Federal Reserve System of the United States (Frankel 1984). It could have been the starting point for the yen's emergence as a *key currency*, but its period of appreciation ended in 1986 (Iwami 1993).[8] The intented bilateralism between Japan and the United States, documented by the yen-U.S.dollar Committee in 1983, actually was the turning

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[7] Decisive objections to and skepticism toward international coordination during that period are dominant in the literature; see, for instance, Kenen's review (1994), and Kantzenbach (1990).

point for the Bundesbank and the Bank of Japan.[9] Both started to cooperate more closely on currency interventions during that time. Japan, which felt itself deceived by the United States because of the "US aggressive bilateralism", tried to transform bilateral commitments into formal arrangements with the Group of Five, later with the Group of Seven. This feeling of being deceived by the United States still seems to be valid until now (Funabashi 1998).[10]

The Louvre Accord of February 22 in 1987, documented an important view of the Group of Seven: "In current circumstances, therefore, they agreed to cooperate closely to foster stability of exchange rates around the current levels". Although debates among the participants on the definitions of "current level" only led to vague descriptions, Mundell (1996) concluded this discussion was a remarkable progress compared to the Smithonian agreement of August 1971.

Important for the understanding of the theoretical outline of a configuration of tripolarity is that Japan and West Germany were not willing to allow their currencies to become an international medium "particularly as a currency for private assets and official reserves - during most of the postwar period. In particular, the two governments limited borrowing by foreign residents in their domestic capital markets in d-mark or yen" (Hen-

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8 Comprehensive researches provide McKinnon/Ohno (1997).

9 For the full text of the communiqué, see at *Treasure News*, Washington: U.S. Department of the Treasury, 31 October 1986, cit. in Funabashi (1988, 160).

10 Japan, the United States and Germany relied on different diagnoses and strategies for their domestic policies. Because Great Britain and France ruled out taking less important actions during that time, one could argue that both they and other European countries were marginal players in trilateral relations between the United States, Japan, and Germany. Nevertheless most of the marginal players possessed certain background rules, negotiations, and proposals.

ning 1994, 317). Nevertheless, empirical and theoretical evidence supports the view that the market has provided a different response: the d-mark has become an international currency whereas the use of the yen in its functions as a unit of account and medium of exchange was restricted by particular pattern of trade (Frankel 1992).

All interdependencies in the exchange rate of the U.S.dollar and the d-mark should be seen in the broader context of the function of the d-mark as a *key currency* within the European Monetary System (EMS). This was evidently documented by the fact that interest rates in Germany were unaffected in the periods before realignments were carried out (Spahn 1988).[11] The d-mark was accepted as an international currency in its function as a unit of accont, store of value and medium of exchange. Considering the official view of the Bundesbank during the second half of the eighties, its objections to having a key currency were due to concern about destabilizing exchange rates and jeopardizing price stability.

The role of the U.S.dollar during the 1980s and 1990s can be described as a relative declining in all three functions of international money.[12] Its weight in all of the functions of an international money has changed gradually. The U.S.dollar's ups and downs during both decades are due, for instance, to the development of the U.S.dollar's effective exchange rate and to an increase of foreign exchange reserves in d-mark and

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[11] Galati (1999) investigates the emergence and development of a "U.S.dollar-mark-axis" as a result of how currencies responded to shocks according to the degree of interest-rate sensitivities.

[12] DalBosco (1998) investigated the management of official foreign exchange reserves which is an important indicator regarding the function of money as an international medium of transactions and payments. Empirical and theoretical evidence on the

yen. Both reasons refer to the role the U.S.dollar represented at that time, i.e., the function as a store of value, standard of deferred payment and medium of account.

One feature of the old configuration in summary is that the d-mark emerged as a *key currency*, whereas the yen lagged behind. The old configuration consists of three dominant, but unequal, currencies representing each of them the functions of money differently. However, the U.S.dollar-centered system still exists. Neither the informal end of the U.S.dollar-standard in August 1971 nor the currenct U.S. account deficit, has caused the U.S.dollar to be replaced.

The new configuration of tripolarity

Applied to contemporary world, the theoretical outline of a *new* configuration of tripolarity consists of U.S.dollar, euro and yen. One *new* pattern is that the d-mark was displaced by a non-national currency and has been issued by a non-national central bank since the launch of the euro. If the European Central Bank (ECB) as a non-national central bank implies the highest degree of independence and credibility is still controversy among academics (Dornbusch/Favero 1998). The history of the pound sterling and U.S.dollar has told us that formal arrangements are not sufficient to establish a key currency. The competition between the pound sterling and the U.S.dollar was decided by economic and political performance, not by legal documents (Muchlinski 1998). Therefore it is necessary to refer the concept, i.e., euro, to representations of the

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U.S.dollar movements are reported by Frankel/Froot (1993) and Leahy (1996); for a more comparative analysis of the U.S.dollar, d-mark, and yen, see f.i., McCauley (1999).

world. The questions still open in present debates can be identified as follows: Does the euro's assessment through the market represent an avarage performance of Euroland as a whole or some countries of Euroland? In other words: Does the euro represent a new currency union or merely the old d-mark anchored standard in Europe with new clothes? The replacement of the d-mark by the euro has great implications for the new configuration, because the real challenge for the euro is to become a medium of exchange, store of value, and unit of account, and also being compelled to represent these functions from the outset. To be more precise, this real challenge must be addressed by both the ECB and public financial agencies.

A reasonable consideration as well is that the euro takes its place in a world of persistent payment imbalances among the United States, Europe, and Japan (Salvadore 1998a, BIS 2000, 1998, IMF 1999). Some authors state that the U.S.dollar's prospective rule will basically depend on the United States' external economic position.[13] The BIS outlines problems according to the U.S.dollar which are conceivable for two reasons. First, a loss of confidence in the market regarding the U.S.deficit could lead to pressure on the U.S.dollar. A consequence of the lower degree of confidence could be a greater likelihood of a system change back to a tight money policy. A second problem could emerge from the United States' tendency to retreat into protectionism of the United States (1998, chap. VI, IX). At this point, no substantial divergence is to be found in the current Annual Report of the BIS (2000).Therefore, the amount of the euro's decline will be quite dependent on whether it will be accepted as an international currency or not.

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[13] Bergsten (1997a, b), Mundell (1995, 528; 1996, 140), Salvadore (1995, 515).

Unlike Great Britain and the United States, Japan has never been east into the role of World Banker.[14] Nevertheless research by the Bank of International Settlements (BIS) underscores that the yen has defended its third place as an international currency with 24 percent of all transactions worldwide; it is involved in two of the ten most widely traded currency pairs (BIS 1996, p. 24; see also BIS 1999, chap. VI). In terms of the prospective role of the yen, Bergsten concludes that "the euro's rise will convert an international monetary system that has been dominated by the U.S.dollar since World War II into a bipolar system" (1997, 92). Similarly, Issing (1998, 24f,) and Fratianni et al (1998) focus on the prospective bipolar system. Frankel referred with some criticism to the "popular hypothesis", "that the world is breaking up into three blocs, one pegged to the dollar, one to the euro, and one to the yen" (1999, 17; see also Frankel and Wei 1995).

Comparing the old and new configuration I would like to emphasize that historically the United States pursued a different U.S.dollar strategy than they did in the 1970s and 1980s. Regarding the euro, one can hardly assume that the ECB will adopt the strategy of the Bundesbank. Furthermore, one must bear in mind some changes in macroeconomic theory since the emergence of the old configuration of tripolarity in the 1980s: Macroeconomic theory today does not unconditionally accept the assumptions of the NCM and the premise of the neutrality of money.

To summarize the main points of this section, then, the replacement of the d-mark by the euro will presumably not lead to a replacement of the U.S.dollar. The success of

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[14] McKinnon/Ohno (1997), Tavlas/Ozeki (1992, 21).

the euro in becoming an international money depends heavily on the policy of the ECB which shall act as a market participant and not a speculator of the market.[15] Because money is non-neutral, and monetary policy lead to its non-neutrality, basic assumptions of the NCM theory are passé.

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15 Bordo/Jonung (1999), Muchlinski (1998)

Monetary coordination - beyond policy optimization

"Although many economists doubt that exchange rate expectations are truly rational, they tend to disparage any other view" (Kenen 1994, 114).

Considering the framework of exchange rate relations is a further component of the theoretical outline to precisely depict the configuration of tripolarity. First of all, I would like to consider certain terminology concerning exchange rate regimes. The term exchange rate *regime* is based on a "mechanism design" on international coordination that goes back to the old-fashioned view of macropolicy dominated economic discussions since the tradeoff of the Phillips curve (Johnson 1969, 399). Applied to those items dealing with international macropolicies, it seemed plausible to solve aspects of economic interdependencies by focusing on definitions of instruments and goals. The mechanism design is basically found in the literature dealing with the *policy optimizing approach.*[16] The notion regime includes the application of rigid rules governing the monetary and financial relations between countries (Cooper 1975). It also encompasses the term *system* which can also be applied to monetary coordination. An exchange rate system adheres less to certain rules and conventions than a does regime. By contrast, an exchange rate *arrangement* characterize an adhoc acceptance of urgently needed bargaining on exchange rates. Besides this attempt to differentiate the notion regime, sys-

tem, and arrangement, most authors use regime not in the rigid meaning introduced at the beginning of this paragraph.

The approach to monetary coordination I introduce in the paper should be distinguished from monetary integration which in a narrow sense pursues as its main goal unification by a common currency issued by a single central bank. Monetary integration refers to a certain status quo or goal (Hamada/Porteous 1992). Both a single currency and fixed exchange rates are central features of monetary integration because a country steps aside for the autonomy of monetary policy.

Monetary coordination refers both to a flexible exchange rate system and fixed system, i.e., basically to *different degrees of flexibility or rigidity.* Theorefore monetary coordination goes beyond a dualism of free floating versus rigid fixed exchange rate system. By contrast, Hamada defined such an approach which goes beyond such dualism as an "eclectic regime" (1998, 422). I do not follow his view. By definition or taken as a textbook version, the dual distinction refers to the question, if a central bank does or does not intervene in the foreign exchange market. Regarding the debates among the scientific community on the real functions and feasibility of fixed versus flexible exchange rates, one can hardly find a *common-sense view*. This dualism only makes sense as a hermeneutic approach.

What does monetary coordination within a configuration of tripolarity of exchange rates imply regarding these differentiations? It implies a certain perception of divergent domestic and international interests, and to developing a strategy for balancing

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[16] For a further description, see Bryant (1995) and Kenen (1995).

these interests. To be sure, different types of coordination are conceivable: According to the idea of monetary coordination outlined in this paper, monetary authorities for three main currencies – the configuration of tripolarity – are committed to coordinating exchange rates within a certain zone or to smooth exchange rate movements. This approach leaves behind the idea of a domestic economy as being constrained by economic interdependencies. I would propose to define this view as a *challenge to shaping monetary coordination*. The requirement for shaping monetary coordination represents a shift of paradigm or shift of theoretical understanding; it could be interpreted as a preliminary step toward certain forms of international bargaining in economics. The tripolar configuration refers to the functions of money and particularly to the non-neutrality of money. Moreover, it direchts attention to the special relationship of the three dominant currencies (addressed in the following paragraph).

Against the historical background of a period of disillusion with both free floating and fixed exchange rates, economic theories and debates contain a huge variety of theoretical concepts that deal with the phenomenon of instability in the international monetary system.[17] The paradigmatical view of the RE and the hypothesis of the neutrality of money became foundations of theories on exchange rate movements and balance of payments. This theoretical explanation of exchange rates is embedded in the theoretical view of a perfect foreign exchange market which does not differentiate between different currencies, interpreting all currencies equally. Persistent market disequi-

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[17] For a comprehensive review of the literature of exchange rate theories, see Taylor (1995). There is no place here to reconstruct the monetarist approach to exchange rate theories.

libria in the 1980s were evidenced by higher exchange rate volatility. All of this cast certain doubt on the metaphor that *the market knows best.* Kenen stated: "*If* goods prices *were* perfectly flexible, there *would be little cause to worry* about exchange rate arrangements" (1994, 122; emphasized by EM). Regarding the U.S.dollar's ups and downs in the 1980s Kenen concluded: "If the inhabitants of the market had been endowed with the marvelous attributes displayed by those who populate many economists' models, they would have known that the U.S. budget and trade deficits could not last indefinitely and that the U.S.dollar would have to return eventually to something near its 1980 level" (1994, 124). This type of thinking is hardly acceptable because the formation of expectations is not due to *a uniform model* but to different models and perceived situations, i.e., to the contemporary world. According to the configuration of tripolarity, markets have created *various currencies* having functions as international currency, compared to the gold standard and Bretton Woods era.

Monetary coordination – Some new and some not so new considerations

Debates on international coordination of macropolicy, particularly monetary coordination, began during the time upheavals in exchange rates theories and events occured.[18] These unsolved problems in the theories of foreign exchange markets have

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[18] A large number of articles have already discussed the advantages and disadvantages of coordination. These include, f.i., Branson et. al (1990), Bryant (1995), Currie (1993), Currie/Levine (1993), Canzeroni/Henderson (1991),Canzeroni/Grilli (1996),Cooper, R. W. (1999), Fischer (1988), Frankel/Rockett (1986), Frenkel/Goldstein/Masson (1991, 1988), Goldstein/Masson/Taylor (1992), Goldstein

significant impacts on macropolicies and the process of income generation. Of course, the idea of coordination is older than that.[19]

The term monetary coordination can be described by a reference to Bryant who precised the meaning of coordination in a broader sense of the meaning: "International coordination, in my view, is best defined as coordination that goes further than mutual recognition in focusing on the crossborder spillovers and arbitrage pressures that erode the differences among national economics and policies" (1995, 398) [20] In addition, monetary coordination can at best apply in reference to central banks and monetary authorities of the countries focusing on exchange rate stability. Monetary coordination therefore shall avoid a *fallacy of composition*. It does not imply atruism.[21] The suggestions for improvements in monetary coordination shall be divided into two main groups. To be more precise, this classification is a conceivable way regarding the suggestions and implications. It does not imply initiatives given by the IMF and the Word Bank, nor those dealing with capital controls.[22]

(1994), Ghos/Masson (1991), Hamada/Kawai (1997), Kantzenbach (1990), Kenen (1994).

[19] Contributions on the history of international interdependence leads back Cooper (1968), Johnson (1954), Meade (1951), Niehans (1968), and Scitovsky (1941).

[20] A fashionable assertation during the 1980s which was not only lectured by adherents of the "market view" reads as follows: There is no need for international policy coordination, if every country keep its own economy in shape. Blinder (1999) presented an entirely different view of this view which was dominated in the literature.

[21] Hamada/Kawai (1997, 93f.) refer to an example of a fallacy of composition given by Keynes (1936). Keynes explained that an individual's rationality does not necessarily imply a rationality of the whole because the latter is not simply an addition of its parts.

[22] See the Bretton Woods Commission Report (1994), Feldstein (1998), Masson/Mussa (1997). For debates on capital controls, i.e., the Tobin Tax, see, Aretis/Sawyer (1997), Edwards (1999), Garber/Taylor (1995), Smith (1997), and UNCTAD (1994).

Group one contains different forms of target zones. The significant framework of monetary coordination was established by Williamson and Miller (1987).[23] Both the definition of central parity and target zone, i.e., the band-widening, provoke many questions regarding the feasibility and adequacy of such arrangements. The Exchange Rate Mechanism I (ERM I) is one famous example for investigating the concept of target zones. The ERM II, which was implemented in January 1999, is going to be another example (Muchlinski 1998).

Krugman explained that the impact of target zones on exchange rate stability is due to the credible commitment of the target zones themselves (1992, 89). This guides expectations and determines the tangent condition of the *curvature* because it ties down the ends of *"the-s-curve"* (1992, 83). Credibility is based on a the central bank's ability to defend it, considering its limited reserves. Theoretical refinements and enrichments were provided – for instance – by Flood and Garber (1992), who emphazised the relevance of shift systems and the range of interventions for the credibility of target zones. An incompatibility of an exchange rate parity and target zones could be interpreted as an invitation for speculation. Another reason for a speculative attack, even if compatibility exists, is an expected system shift as a result of the speculation attack itself.[24]

The second group of suggestions contains the argument that a gold standard, currency board, pegged exchange rate or a fixed exchange rate system will provide more

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[23] The considerable literature on monetary coordination is best reviewed by Hallet (1993), who deals with the exchange rate targeting mechanisms on certain aspects of economic performance.

[24] Obstfeld (1986) presented a basic model. Obstfeld/Rogoff (1995) evaluated the connection between different types of target zones and speculative attacks.

stability in the foreign exchange market. These issues have always been at the core of debates concerning modifications to the international monetary system (Eichengreen 1999, C3). These proposals are regularly submitted to subdue inflation and exchange rate volatility. Regarding some countries, fixed exchange rates have also been interpreted as the cause of illness for which they are cited as a cure. They did not eliminate exchange rate risk for investors or provide a credible nominal anker for monetary policy as it is said in textbooks on open economies. Considering, for example, the Asian economies in crisis, fixed and immutable exchange rates led to the illusion that exchange rate risk can be avoided by foreign creditors and debtors. Defending currency boards or fixed exchange rates depends fundamentally on the amount of international reserves. Furthermore, as some authors have mentioned fixed exchange rates and currency pegs are not a substitution for domestic policies.

Mundell suggested a gold standard because experience has shown that gold is a stabilizing factor. "Gold would again become a good standard of value *if and only if it were made stable in terms o f commodities*" (1995, 490). "Gold would today make an excellent unit of value for the world economy if the conditions for its stability existed" (1995, 488). These prerequisites are a "huge quantity of gold held in stocks" and "widerly dispersed in private hands" (1995, 488/89). Only the latter must be realized with wisdom to diversifying the gold holdings. If countries do not repeat the mistakes made in the 1920s and 1930s, and if they agree on gold policies of governments, then the gold-anchored international monetary system would be optimal. On the one hand, gold is to be seen as superior to international currencies–instead of the U.S.dollar or any other national currency – because "gold is nobody's liability and nobody can print it" (Mundell

refers to Johnson on p. 486). On the other hand, he emphasized "whether gold is stable or not depends *inter alia* on the gold policies of governments" (Mundell 1995, 489).

If the stability of gold results from gold as a nonprintable factor (alone), why is it required to rely on international monetary arrangements and government agreements? The question also arises as to why the loss in the U.S.dollar's attractiveness was caused by the instability of gold in the 1960s, while, according to Mundell's investigation, at the same time, "the U.S.dollar became even more important in international reserves" (1995, 484)? My objection is reformulated for clarity, substituting governments with central banks: Why did private and official agents lose confidence in the U.S.dollar as a medium of exchange, a unit of account, and a store of value? This question focuses on the liquidity premium of the U.S.dollar. Regarding the history of currency crisis Mundell concluded, "the missing factor is a stable world currency" which cannot be identical with the U.S.dollar. A "universal currency" could mitigate intabilities of the monetary system (1995, 492).

Regarding these contributions above, much criticism is found in the literature. For the sake of illustration, Mussa (1995), f.i., argued that there is no need for improvement of the international monetary system.[25] Let us add one aspect to this brief view on target zones and managed exchange rates: The U.S. treasury and the Fed, the finance ministers in the EMU and ECB, also the ministry and Bank of Japan today are

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[25] Objections to international coordination are also reported by Kantzenbach (1990), Neumann (1991) und Vaubel (1981). Fischer stated, "so long as exchange rates remain flexible – and they will likely remain flexible among the three major currency areas – macroeconomic policy coordination among the major blocs is unlikely to advance

opposed to target zones. In case of the United States, the reminiscence of those events in the early eightis where an overvaluation of the U.S.dollar hurt the domestic steel industry and diminshed its competitiveness dramatically is still conceivable.

Current debates on monetary coordination go beyond the pure idea of measuring the costs and benefits of maximizing one unique utility function of the world because it focuses on non-measurable cross-border events.[26] The different types of monetary coordination pointed out that economic theories have been making progress in the analysis of economic interdependencies since the emergence of the old configuration of tripolarity. [27]

In light of the theoretical outline introduced here, some authors suggest linking a model to contemporary world. No universal law can be a substitute for the requirement to think in terms of situations in questions. Fixed or flexible exchange rates, currency pegs, or currency boards are *not universal solutions* guided by *universal law* (Muchlinski 1998b). Economic theories are not devoted to market mechanisms guided by "hidden structures, mechanisms and tendencies", as adherents of the *critical realism* argue (Lawson 1997). According to *critical realism*, the world investigated by science is not a

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beyond the provision of mutual information and occasional agreements for specific policy tradeoffes" (1988, 39).

[26] Many surveys documented the efforts of measuring the benefits and costs of international policy coordination. Most of them supported rather skepticism than optimism. Beyond this, many contributions focused on particular aspects of the comparisons and measurements itself, see, for instance, Frankel/Rockett (1986), Ghos (1991), McKibbon (1997).

[27] Milner claims for a political economy approach to avoid still ongoing restrictions to international coordination. Economists and academics have failed to promote greater coordination because of the missing theory. They tend to shorten the topic to a question to be measured, oriented to the costs and benefits of coordination (1997, 180f.).

compilation of supposedly regular of events and experiences as asserted by Hume, but is fundamentally based on nonobservable "structures, mechanisms, powers and tendencies".[28] By contrast, *representative realism* avoids referring to invisible structures, mechanisms, tendencies, or universal laws for two reasons: First, economics as a social science has unavoidably created *all* these structures, mechanisms, and tendencies it deals with. Second: there are no hidden factors except a lack of perception of these connections (Muchlinski 2001).

Regarding the proposals for interventions in markets, i.e., on target zones, fixed exchange rates, etc., all of these suggestions make clear that economic theories try to provide answers to perceived problems of open economies from different points of view. Bryant (1995) basically refers to the *regime-preserving approach* as the *new view* on international coordination. The *regime-preserving approach* is opposed to *the* optimizing approach. In light of a new understanding of international coordination, Hamada and Kawai emphasize the *regime-choice approach*: "Regime preservation is nothing but a special outcome of regime choosing in each period" (1997, 136). The difference between Bryant's *regime-preserving approach* and Hamada/Kawai's *regime-choice approach* lies in the methods they apply to international coordination.

Some conclusions

This briefly outlined controversy within the theory of international coordination is amazing because it leads to various a new consideration. I propose defining both ap-

proaches to international coordination as a *challenge to shaping monetary coordination*. This attempt to shape monetary coordination is a significant paradigm shift that also expresses a shift in perception. Referring to a different theoretical understanding of the function of money as discussed in this paper.

The core of the theoretical outline of a configuration of tripolar focuses of the non-neutrality of money and currencies. It is applied to the exchange rate relations among three dominant currencies. The very roots of a configuration of tripolarity can be found in the interwar period, although the Franc remained in the background. The old configuration consists of U.S.dollar, d-mark, and yen, whereas the new configuration emerged with the displacement of the d-mark by the euro. The latter is a non-national currency, issued by a non-national central bank. Debates on advantage and disadvantage of fixed exchange rates or floating system cannot be separated from central bank policy. Monetary coordination refers both to *different degrees of flexibility or rigidity* of exchange rates. Widespread disenchantment with both fixed exchange rate system and the variety of flexible exchange rates in theories and politics led to the view that exchange rate instabilities needed to be addressed. The proposals for improvements of the international monetary system are as diverse as the realm of analysis, but one consideration should be mentioned: Dealing with instability in the international monetary system requires a form of *ex-ante* coordination which is beyond any rigid rule. Against a historical background this paper sketches how the theoretical outline of a configuration of tripolarity can be referred to contemporary world without being normative.

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[28] For a critique on the *Critical Realism* approach to economics theory, see Baert

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