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International Financial Instability
in a World of Currencies Hierarchy

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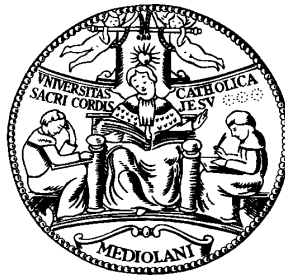
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Abstract

The 1990s witnessed an increase in international financial turbulence. In fact, financial crises have become a global policy issue, due to their frequency, size, geographic extension, and social costs, while an array of policy actions have been advocated to prevent crises from happening again. One significant, yet controversial question is whether efforts should be directed towards national reforms in emerging markets or, rather, towards a new international design of international payments.

After a critical review of the standing proposals, this paper contends that this debate has not yet fully explored one of the problems of international instability, that is to say, the problem raised by international payments in a world where currencies are of diverse quality. As Keynes firmly contended, the monetary side of the (global) economy is not a neutral factor. In fact, it may be that some of the fundamental factors behind any model of international financial instability, are the problems posed by the different degrees of “international moneyiness” that make currencies unequal.

Viewed in this light, a major re-design of international payments systems is warranted, and options seem limited to either world dollarization or the ‘bancor’ solution. Recent reformulations of Keynes’s original ‘bancor’ proposal seem to be a more viable alternative to either the status quo or world dollarization

JEL codes: F02, F33, F34, G15

Keywords: Currency hierarchy; Currency crises; Banking crises; Capital flows; International monetary arrangements and institutions.

INTRODUCTION

Financial instability is a long-known characteristic of market economies, but an intermittent subject of economists' empirical and theoretical investigation. In the three decades following the Second World War, the relative tranquillity of financial markets seemed to validate the view that financial crises are rare episodes. Consequently, research in this field was given lower priority. Minsky (1975, p. 16) was well aware of how, at any given time, current developments concur in shaping the dominant paradigm, when he wrote:

Economics and other sciences whose data are generated by history are not like the experimental natural sciences with respect to anomalous observations ... In economics if history over a thirty-year period does not cast up observations with at least a family resemblance to a financial panic or a deep depression, then arguments to the effect that these anomalies are myths, or that what happened can be explained by measurement errors, human (policy) errors, or transitory institutional flaws which have since been corrected, may be put forth and gain acceptance.

The Post World War II period was also the time when the long-run money neutrality paradigm was shared by both Keynesians and monetarists: in good, classical tradition, the belief was that monetary affairs are a reflection of underlying, real phenomena and that money matters only in the short run. Notable exceptions were seen, however, in the works of Harrod and Kaldor, the critique to money neutrality by Davidson (1972), the contributions to financial instability by Minsky—drawing from both Keynes and Fisher—and by Kindleberger (1978)—himself deeply influenced by Minsky.

After a period during which research on the problem of financial crises was never a top agenda item, the 1990s have witnessed a remarkable surge of interest in this field. The compelling factor behind this resurgence has been the more frequent occurrence of episodes of financial turbulence at the domestic as well as at the international levels: in the past thirty years, financial crises have become a major source of disruption in the growth path of several countries and of the world economy as a whole. Hence, what had been a distinctive concern

of a minority of researchers became a primary concern for a broader group of economists, who approached the problem from a variety of angles. Not surprisingly, their efforts have produced an array of competing policy recommendations.

This chapter contends that this debate has not yet fully explored one of these angles, that is to say, the problem raised by international payments in an environment of diverse currencies in a world economy that, as Arestis et al. (2005) put it, is not truly globalized. Once this dimension of the problem is put into full perspective, one has a better view of the quality of the standing proposals.

This chapter has two parts. The first part reviews how economists have answered the questions: what causes international financial crises, and what can be done to prevent them from happening again? The second part explores the questions raised by the existence of a currency hierarchy in the world economy and its impact on international settlements. The aim here is to provide a criterion by which one could recognize the effective power of the different proposals. It is suggested that only a limited set of effective, though conditional, actions can stabilize international finance, including dollarization, the creation of a single world currency, or a major international reform of international settlements along the lines of Keynes's 'bancor' proposal.

DIVERSE VIEWS AND A GLUT OF PROPOSALS

The accumulation of empirical evidence offered by major financial crises in the 1990s was the primary catalyst behind the renewed efforts to understand— the causes and cures of international financial instability. The sequence of episodes is too well-known not to sound like a nursery rhyme by now: the European Exchange Rate Mechanism (ERM) crisis, the Tequila crisis, the East Asian crisis, the Russia–Long Term Capital Management crisis, the Brazilian crisis, and so on. This succession of events was responsible for a flourishing of articles on the subject, whose main aim was to investigate whether these episodes epitomized an increasing financial fragility in the global economy (a new growing problem in international finance and something that economists were not ready to explain, assess, and

counter).

It would seem that the words of Minsky were vindicated: the illusion that financial crises are rare episodes that can be explained as exceptional events caused by errors or transitory flaws had, at least for a while, gone. Indeed, the frequency, the size, the geographic extension, and the social costs of financial crises in the last quarter-century have made the topic a global policy issue.

Most of the efforts in this strand of research went in two directions. One aimed to empirically explore the seriousness of the problem and to show how current instability compares with historical experience, although the causes of the recent resurgence of financial instability are still debated. The other attempted to model financial crises, and proved to be more problematic, as models often seem much more powerful in explaining the last crisis rather than the next.

After a little taxonomy, this section reviews the major empirical findings and theoretical points on this topic, and concludes with a critical review of policy recommendations.

A Little Taxonomy on Crises

This section offers the necessary clarification of the meanings of a variety of terms normally used in the debate on financial crises.

Though defined somewhat differently and sometimes loosely in the literature, a working definition of '(systemic) *financial crisis*' should designate a state of affairs where a drop in the value of assets and/or a rise in the value of liabilities cause a serious impairment of the balance sheets (and thus on the net worth) of a sufficient number of economic units, severe enough to induce negative repercussions on aggregate real activity. A crisis is systemic when it causes distress to a variety of economic units, independently of their initial financial strength or of their 'share of responsibility' (their being 'innocent' or 'guilty') in causing the crisis.

By contrast, a financial crisis in the balance sheet of a *single* economic unit (not big enough to spread its effects significantly) remains contained and is resolved locally, without becoming 'systemic'. This latter case is not of our interest here, and every subsequent

reference to ‘crisis’ should be understood as referring to a ‘systemic’ crisis.

There is, however, a special case of one single defaulted entity that may have systemic repercussions, and this is the case of the sovereign state. This is referred to as a *sovereign debt crisis*, when government-backed debt obligations are defaulted or rescheduled. The financial strain caused by a sovereign debt crisis depends on its relative size and how it impacts other economic entities’ net worth, and thus it may or may not cause a financial crisis.

A *financial market crisis*, a case of asset deflation, is a collapse of the market price of financial assets. This clearly afflicts the balance sheet of economic units, and it threatens to impair the net worth of firms and banks. The latter suffer from the direct impact on their assets, from the loss in the value of collateral, and from the impairment in their clients’ balance sheets.

A subset of the notion of financial crisis is a *banking crisis*, when the normal functioning of banks as liquidity providers is hindered by a financial crisis of the banks. Not only is this a common configuration of a financial crisis; it is also unquestionably the worst. Because their balance sheets are strained, banks become illiquid and if things are not quickly corrected they become insolvent, and the blow on real activity can be substantial. One can indeed argue that a banking crisis is likely to spread to non-financial firms, as the latter lose their normal access to credit. But crisis can originate as well within the non-financial sector, in which case the impact will depend on whether the banking system can resolve the balance sheet difficulties of firms, or rather will catch the contagion instead. It may then be convenient to refer to banking crises when the balance sheet strain originates in the banking sector, and to financial crises when it originates in the non-financial sector.

A *currency crisis* is a collapse in the foreign value of the domestic currency unit. This raises those liabilities in the balance sheets that are denominated in units of the appreciating foreign currency, and afflicts the balance sheet of exposed economic units. Whether this generates a financial or banking crisis depends on the impact of the currency drop. Again, banks may be affected directly or, through their clients’ exposure, indirectly.

Though a currency crisis may show up as a dramatic drop of the exchange rate, it often comes in the form of a breakdown of a unilaterally pegged exchange rate arrangement and as an outcome of a *balance-of-payments crisis*. This is a loss of the government’s (or central

bank's) ability to enforce a given parity so that the peg must be abandoned. It normally follows a quick reduction of international reserves facing an international flow imbalance. The latter may result either from a current account imbalance or from a large request of redemption of domestic currency for internationally accepted reserves. Again, whether a currency crisis causes a financial crisis depends on its impact on economic units' net worth.

Finally, an *international financial crisis* is one that involves effects in more than one country, either because of an 'international spillover' effect (on foreign balance sheets), or because of an 'international contagion' effect, whereby a confidence crisis spreads abroad.

Financial Instability on the Rise

Was there something new in the financial instability of the 1990s? Did some critical combination of events and circumstances set the fire? A primary task of empirical and historical research was to assess the seriousness and the extent of the problem. The results quickly delivered a change in perspective: as Goldstein and Turner (1996, p. 5) candidly admit, there 'is a natural inclination to think of financial crises as rare events. Yet banking crises have become increasingly common – especially in the developing world.' Empirical research of course needs an operational, not just a conceptual definition of crisis, and thus detection and classification of crises requires some judgment and may not be precise. This notwithstanding, the notion that financial crises have become more frequent in the last thirty years became widely recognized.

In fact, a character of financial instability was identified in the increased general occurrence of banking crises. Since 1996, Caprio and Klingebiel have maintained a database on banking crises, operationally defined as 'much or all of bank capital being exhausted.' In their 2003 update, they count 117 systemic banking crises in 93 countries during the last quarter of a century. The context of each crisis is different: while some remain local, others have an international character. Beim (2001) classified 96 crises (in the period 1976–99) listed in Caprio and Klingebiel's database, and found that over half of the crises had been triggered by war, a transition to communism, a major political change, and another deep political confidence crisis; over one-fourth had been triggered by pressure from the International

Monetary Fund (IMF) or the World Bank regarding loans, conditions, reforms, and other recommendations; and the remaining 21 episodes had been triggered by financial market or currency crises. This latter list included Argentina (1980, 1989, 1995), Brazil (1990), Chile (1976, 1981), Finland (1991), Indonesia (1997), Israel (1983), Korea (1997), Malaysia (1997), Mexico (1982, 1995), Nigeria (1992), Norway (1987), Philippines (1998), Russia (1998), Sweden (1991), Thailand (1986, 1997), and Uruguay (1981). Most of these events had international ramifications, and nine were combinations of banking and currency crises.

Dual currency and banking woes is a phenomenon that Kaminsky and Reinhart (1999) had dubbed the ‘twin crises,’ that is, ‘episodes in which the beginning of a banking crisis is followed by a balance-of-payments crisis within 48 months.’ Using a sample of twenty small open economies with some form of exchange rate pegging, these authors found that although there was evidence of only a slight increase in the frequency of balance-of-payments crises, the number of banking crises per year more than quadrupled in the 1980–95 period as compared to the 1970–79 period, and almost all had occurred simultaneously with currency crises.

This suggests an interaction between a crisis of confidence in the official parity of a currency and a crisis of confidence in its banking system, in the form of both a fragility of the banking system to currency turbulence, as well as a fragility of the currency parity to banking troubles. But how ‘new’ was this combination of events and what was the increase in its frequency? Extending to a broader historical perspective that spans 120 years, Bordo and Eichengreen (1999, p. 43) conclude that:

If one thing is distinctive [about our period], it is the coincidence of banking and currency crises – the twin-crisis problem – and the severity of the associated effects. This is more evidence, if more is needed, of the importance of preventing and containing this particularly virulent strain of the virus.

And in another co-authored study, Bordo et al. (2001, p. 72) ask:

What, then, was different about the last quarter of the twentieth century? The obvious answer is the greater frequency of crises. After 1973 crisis frequency has been double that of the Bretton Woods and the classical gold standard periods and matched only by the crisis-ridden 1920s and 1930s. History thus confirms that there is something different and disturbing about our age.

Although no single virus of recent financial epidemics could be isolated, a variety of hypotheses were made on what may have triggered such an increased occurrence of events. One set of explanations point to financial liberalization and free capital mobility. For example, Bordo and Eichengreen (1999, p. 43) claim that:

Under Bretton Woods, banking crises were essentially non-existent, and the effects of currency crises were mild. This is more evidence, as if Chinese and Malaysia policy makers needed it, that strict controls on domestic and international financial transactions can suppress the symptoms of financial instability. Whether there are costs, in terms of slower growth than would have obtained otherwise, is, of course, the question of the day. The speed of growth in this period provides no obvious support for those who would emphasise the negative side effects.

Another set of explanations point to the process of financial liberalization taking place too rapidly in emerging countries with weak institutional environments. For example, Demirgüç-Kunt and Detragiache (1998, p.7) find evidence that financial liberalization tends to have a particularly significant impact on the probability of a banking crisis in those countries where “the rule of law is weak, corruption is widespread, the bureaucracy is inefficient, and contract enforcement mechanisms are ineffective.”

These and other interpretations will be further considered below in conjunction with theoretical models of financial instability.

Overlapping Generations of Models

Up until the 1980s, and with the notable exceptions stressed above, the consensus was that both currency and banking crises, though in different ways, reveal serious imbalances in economic ‘fundamentals’. Currency crises were considered to be the outcome of international payments crises caused by poor macroeconomic management. When governments do not hold on to good old classical economic principles (such as when they pursue a persistent, inflationary budget deficit), it becomes intolerably expensive for a country to defend a foreign exchange parity. If the exchange rate is free to adjust, the foreign value of the domestic currency will immediately reflect the deteriorated macroeconomic environment; but if instead, an official parity is maintained through pegging, this parity will be maintained beyond what is economically justified and sooner or later will become untenable. When either domestic or foreign investors, aware of fundamental imbalances, also become aware of the ongoing drain of reserves, a portfolio reallocation will ensue away from the pegged currency at risk of realignment until the official parity must be abandoned.

Banking crises, on their turn, were considered to be the outcome of an adverse macroeconomic operating environment: bad macroeconomic fundamentals cause a rise in non-performing loans that undermine banks’ capital and, unless the economy recovers in a timely way, this will ultimately generate a widespread banking crisis.

In the wake of the then ongoing process of financial liberalization, the consensus approach carried an optimistic message: avoiding financial crises requires no specific caution in proceeding with liberalization. It requires that governments learn sound macroeconomic principles. If this is the case, only unpredictable (and presumably rare) macroeconomic shocks will cause a crisis. The question of how to avoid financial instability then shifted to the question of what are the best macroeconomic policies, and the answer could of course be found within classical principles. This approach has long influenced the attitude of the IMF, which has always primarily stressed macroeconomic adjustment as the best way to prevent, or manage, financial crises.

With the currency crises of the pound sterling (and the ERM) in 1992 and the Mexican peso in 1994, this confidence in the fundamental stability of the existing world monetary arrangements was partially shattered. It was generally recognized that in both cases crisis had been triggered by tremendous speculative activity that could hardly be viewed as the

inevitable consequence of well-known fundamental imbalances in either Mexico or the UK. Neither the crisis in Mexico nor in the UK clearly fell into the ‘first generation’ family of models, and if the pound crisis could alternatively be rationalized within the broader context of the crisis in the ERM, Mexico came to be considered as ‘different,’ and it became commonplace to characterize the peso collapse as the first crisis of the twenty-first century.

Hence, ‘second generation’ models brought into the picture the role of self-fulfilling expectations, that is to say, the possibility of financial panic in a multiple equilibria model. In this new perspective, even countries with solid ‘fundamentals’ may be subject to a currency crisis: one only needs a ‘sunspot’ that functions as the triggering event of devaluation fears, and/or bank default fears, to draw down a currency and/or a banking system.

Although the triggering event may change case by case, a general form of it is understood to be a situation where some difficulties arise in the macroeconomic management of a country: an occurrence that may happen in well-managed countries also. If the medium-term sustainability of a country’s macroeconomic policies is being questioned, and policy inconsistencies create the possibility that policy-makers will revise their policy priorities to pursue some other, perhaps more popular objective, then the loss of confidence in the government’s future ability to implement good macroeconomic policies may erode confidence in the banking sector as well as in the official parity until it creates self-fulfilling speculation.

The message had therefore changed, and the new view was that good macroeconomic management may not be sufficient to maintain financial stability: pegging arrangements are structurally and inherently weak, because they are subject to self-fulfilling expectations. Currency stability was not only challenged by inflationary follies but also by the fact that good policy decisions aimed at safeguarding external equilibrium may look inconsistent with domestic objectives and on government popularity. Also, pegging arrangements were seen as a particular form of moral hazard, inducing traders to undertake riskier activities than under floating rates. The conclusion was that financial crises can strike at any time and a search for a new international system was in order.

This is when the “two-corner solution” view of exchange rate arrangements developed. If unilateral, ‘soft’ pegging arrangements are too fragile, there remain two ‘corner regimes’ that

are viable: a ‘hard’ peg such as a currency board, or a free float.¹ Following this ‘bipolar view,’ a number of countries have moved away from ‘soft pegs’ to either floating arrangements, or to ‘hard’ pegs such as currency boards, dollarization, and currency unions.

This ‘second generation’ family of models, however, would quickly become obsolete as the Asian crisis stroke. Not only were these countries in good macroeconomic shape and considered good pupils of the IMF policy recommendations; but also, it was hard to identify a macroeconomic trigger of self-fulfilling expectations. Yet, the Asian crisis unfolded in a typically contagion effect, with a combination of currency and banking crises.

The occurrence of this type of crisis brought back explanations based on a boom-and-bust cyclical pattern, where credit expansion generates a rise in risk-taking activities and thus becomes the premise for financial crisis, along Minsky–Kindleberger lines. The debated question thus became what triggers the boom and the bust. For some authors, like Kregel (2000), the Asian crisis was not a simple balance of payments crisis, but rather a debt deflation crisis, and the IMF policies that assumed it was a balance of payments crisis made the problem worse. Kregel (2000, p. 27) also stresses his belief that capital reversals had been triggered not by random, irrational reactions to peculiar circumstances, but rather were the natural results of the workings of the system and thus ‘ “systemic” to the current configuration of the international financial system and . . . that will certainly recur, no matter what prophylactics are put in place to dampen them. Preventing financial crises will therefore require systemic changes, not simply improvements in the operation of the existing system’.

In a similar credit cycle perspective, but pointing at different triggers, other authors stressed that credit expansion and financial overheating become problematic when the quality of loans declines, as monitoring borrowers becomes more difficult. This poses the question of the problematic combination of ‘macroeconomic and financial policies [that] combine with financial deregulation to create an unsustainable lending boom’ (Eichengreen and Arteta, 2000, p. 29).

This consideration of national policies as being responsible for generating boom-and-bust cycles opened the way to a new family of (‘third generation’) models. It was in many ways a

¹ Although bank money is also an example of a ‘soft’ pegging arrangement with respect to central bank money,

return to the past: a real fundamental imbalance still explains financial crises. The difference, however, was that while with first generation models, crises were caused by a fundamental macroeconomic imbalance, with third generation models they were caused by a microeconomic bank mismanagement, encouraged by the lack of adequate institutions. The success of financial liberalization was then understood to be subject to the condition of parallel progress in institutional conditions. The capital flows to Asian countries had clashed with backward financial systems, bad functioning banking systems, and an inefficient regulatory system. Information asymmetries, biased incentives, bad loans, and corruption created an enormous moral hazard problem: banks and financial institutions ‘felt protected,’ and this led to the creation of excessive risks.

This situation continued to deteriorate the financial side of these countries. In his two-phase interpretation of banking crises, Beim (2001) maintains that the Asian crises outbreak followed a long, silent build up of capital flows into fast growing economies, with banks making bad profligate loans domestically, encouraged by the safety net of deposit insurance and of the IMF. As long as the banks remain liquid, banking distress can persist for a prolonged period. When the deteriorated situation came to be finally recognized, capital flows reversed when some ‘funder’ of the system started to withdraw its support: causes may act slowly, but triggers act quickly.

This meant that financial liberalization could only proceed safely if good macroeconomic policies were complemented by adequate institutional design. Countries that have only recently joined the industrialized world should therefore carefully move along their ‘learning curve,’ and avoid that financial liberalization occurs prematurely under weak supervisory frameworks, poor transparency, and poor accounting and auditing practices.

Institutional weakness is one example of a disadvantage that may afflict emerging countries. In a similar vein, but arriving at very different conclusions, the ‘original sin hypothesis’ explores the vulnerability of emerging countries that cannot borrow from abroad in their domestic currency. Eichengreen and Hausmann (1999, p. 3) describe:

this debate has not included recommendations to move towards either a free float or a hard peg for bank money.

a situation in which the domestic currency cannot be used to borrow abroad or to borrow long term, even domestically. In the presence of this incompleteness, financial fragility is unavoidable because all domestic investments will have either a currency mismatch (projects that generate pesos will be financed with dollars) or a maturity mismatch (long-term projects will be financed with short-term loans).

In this view, the problematic position of emerging countries does not depend on a lack of prudence or on institutional weakness. Rather, the country is exposed to crises because it finds it impossible to match the maturity structure of its assets and liabilities. Regardless of the exchange rate regime, the country is at a disadvantage: 'If the government allows the currency to depreciate, the currency mismatch will cause bankruptcies. If instead it defends the peg by selling reserves and hiking interest rates, it will precipitate defaults on short-term domestic debts' (Eichengreen and Hausmann, 1999, p. 3). Considering that it takes time for a country to abolish 'original sin,' a faster solution is to eliminate the exchange rate through the substitution of the domestic currency with the dollar, or some other original sin-free currency.

A Summary of Public Policy Proposals

How can global financial instability be reduced? How many crises must the world undergo before a better method to contain them can be found? The variety of theoretical models and empirical investigations that have flourished offers a wide spectrum of public policy recommendations. A summary of the range of proposals is now warranted. The reader will notice that public policy proposals differ in their preference for market as opposed to public solutions, as well as in the relative weight given to national as opposed to international arrangements.

An intervention limited to the broad institutional environment within which financial markets and institutions operate is advocated by proposals that stress the need for countries to improve financial sector supervision and fight corruption and 'cronyism' by strengthening property rights. To play the game of financial globalization safely, they could, if necessary, be subject to supranational surveillance. This solution is consistent with the belief that the

instability of the 1990s was the unfortunate result of emerging countries initiated to financial liberalization with backward national financial structures.

Amendments of greater significance are advocated by proposals that call for a radical reassessment of the existing risk protections apparatus. Based on the notion that risk protection systems generate moral hazard, such proposals call for national reforms aimed at reducing existing deposit protection. The principle of relying on market discipline should, in some proposals, be extended to international practices, by limiting the scope for major central banks or international institutions to rescue troubled financial institutions. Other proposed schemes, however, call instead for an ‘international lender of last resort’ that could prevent financial contagion of one (guilty) country to spread to the (innocent) rest of the world. The moral hazard implication of bailout expectations makes this device problematic, and its creation is often viewed as being part of a broader system of cooperative crisis management with access to a contingent provision of emergency lending, not an automatic mechanism.

An older type of approach stresses the role of national macroeconomic policies to maintain sustainable standards. Based on the notion that an international commitment limits the room for ‘time inconsistency,’ a more effective approach is considered today as being a system of supranational surveillance of nations’ macroeconomic, exchange rate, and balance-of-payments policies. In this respect, classical macroeconomic policy prescriptions provide the most popular standards: a combination of public budget rules, inflation targeting, and floating rates.

On a different track are those policy prescriptions based on the notion that the problem of international financial instability is not transitory and thus requires a higher-order of intervention in international finance. One of these prescriptions recommends that national policies enforce capital controls. Although this is an often-debated question, very few of those who favour this provision believe this is a sufficient device.

The dollarization approach needs no capital controls, and its advocates do not regard a reduction of moral hazard a sufficient condition for stabilizing international finance. There are two distinct arguments for dollarization: there is the notion that dollarization is a more efficient way to strengthen national policy commitments; and there is also the notion that adoption of a ‘strong’ currency is the way for emerging countries to access international

capital markets. The debate on ‘original sin’ has also suggested an alternative approach that aims at establishing supra-national currencies, and claims that a condition for a more stable international financial environment is a drastic reduction of the number of currencies being used.²

A different way to address the problem of international payments in a world of diverse currencies, which counters both the dollarization solution and the creation of currency blocks, is tackled by a set of proposals that build on Keynes’s plan presented at the Bretton Woods conference in 1944. This set includes Davidson’s (1991) design of an international clearing unit, and D’Arista’s (2005) proposal for a multilateral international payments system, managed by an international clearing agency.

There are, as suggested, different perspectives that distinguish these proposals from one another, but a major divide in this discussion is probably that between the objective of creating the conditions for an orderly functioning of financial, banking and currency markets, and the objective of considering monetary institutions in need of a significant upgrading in the face of financial globalization.

INTERNATIONAL MONEYNES, CURRENCY HIERARCHY, AND INTERNATIONAL SETTLEMENTS

It is common to define money as a universally accepted means of payment, and thus the asset with the highest degree of liquidity. This definition, however, must refer to a single currency area where all contracts fall under a single state jurisdiction enforcing the use of a common legal tender. In a world where different currencies exist, this definition may not apply to each of the existing currencies when not every single currency is ‘universally’ accepted. Economic historians provide evidence that in the history of the world economy currencies have typically differed in terms of their breadth of acceptance. This is easily observed today as well, when the probability that the US dollar is accepted as a means of payment far from US borders is

² An extreme form of dollarization is the establishment of a single world currency, a proposal that has flashed at

much higher than the probability of acceptance of the Thai baht or the Ethiopian birr or the Costa Rican colon far from national borders. In a multi-currency world, the statement that money is universally accepted is either loose or outright incorrect.

That currencies do not circulate as ‘equal’ suggests that there exists a hierarchy of currencies in terms of their degree of ‘moneyness’.³ This is hardly a new concept: economic historians and political economists⁴ have long made use of the notion of a core–periphery structure of the world economy; while economists have long recognized the quality of ‘key currencies’ that function as vehicles of payments across borders, and other (‘soft’) currencies that are less, or not at all, acceptable in international transactions. With few exceptions, however, this remains a missing element in debates on international financial crises.

The problem of the existence of different currencies and banking systems is how to settle international payments. Consider a world of ‘currency islands,’ where traders in each country insist (either by law or by habit) in denominating contracts exclusively in their own currency, and in only accepting their own currency as a means of contractual settlement (that is, nobody is willing to hold foreign currency and the degree of moneyness of every currency abroad is zero). No basis for international money payments exists: no capital flows are possible across borders, and trade is only possible on the basis of a bilateral agreement in the form of an international barter.

By contrast, a multi-currency world is a world where traders in each country are free to decide how to denominate debts and prices and whether to accept currencies other than their own as means of contractual settlement. Here, each trader’s willingness to accept any currency depends on the range of goods, services, and assets (including debt payments) that each currency can buy. Hence, any given currency has a higher or lower degree of moneyness, depending on how extensively it is used as a unit of contractual debt in

times since at least the sixteenth century.

³ The term ‘moneyness,’ being referred to a characteristic of money and not of all assets, is here preferred to that of ‘liquidity’. This type of hierarchy may be related to, but should not be confused with, (a) the pyramidal structure of domestic money including (from the top down) central bank money, bank money, and other near-monies; and (b) the difference between ‘complete’ and ‘partial’ monies, where the latter only play the function of unit of account, not of means of payment (Hicks, 1967).

⁴ One can look at the works of Carlo M. Cipolla, Marcello De Cecco, and, for an attempt to define hierarchy levels in today’s world economy, Cohen (1998).

international transactions; how extensively it is accepted as a means of payment in lieu of the unit specified in the contract; and how extensively it is chosen as a store of value or as the unit of denomination of assets held. In sum, international moneyness depends on the access that a currency guarantees to goods, services, real and financial assets abroad, and it is higher, the greater is the international use of a currency.

How can international settlements be made possible in a world of currency islands? And what constraints are imposed by international settlements in a multi-currency world? These questions can be approached along three fundamental basic configurations. Of course, reality may be the result of a combination of more than one.⁵

An International asset Guarantee (IG) system. Although they denominate debts and prices exclusively in their own currency, traders in each country are willing to accept a commonly agreed international asset as a means to discharge international debts. Cross-border payments are made possible by either of two settlement techniques. In one, traders in each country obtain the foreign currency required to carry on foreign trade from their central bank, which obtains the foreign currency from the foreign central bank in exchange for an international asset. In the other, traders in each country are willing to accept the foreign currency as a means of contractual settlement as long as they can quickly obtain domestic currency from their own banking system, while their central bank clears any foreign currency holdings by obtaining an international asset from the foreign central bank.

In an IG system, international settlements are made possible by a conventional recognition of an international asset as a means to settle international debts. Currencies are granted international moneyness on the basis of international reserves: as long as they can be converted in the international asset, currencies are ‘convertible’ and thus accepted in foreign trade, as well as in the asset market.

A logical consequence is that countries’ imports (not exports) are constrained by their reserves in the international asset. When a country lacks the international asset, acceptance of its currency drops. Countries’ reserves, when accumulating in some countries and fading out in others, create asymmetry in countries’ ability to settle international payments, and this

⁵ Notice that configurations abstract from exchange rate arrangements.

builds the threat that some currencies may suddenly lose their international moneyness. A hierarchy of (convertible) currencies is thus established.

International financial instability in an IG system occurs as a result of a shortage of international reserves: A disruption of international trade credit creates financial strains on economic units' balance sheets. In addition, if capital flows develop in an IG system, balance-of-payments problems and an expected shortage of a country's reserves can quickly set off financial market, banking, and currency crises, as a result of the speculative nature of financial markets.

A Multi-currency Capital-flow-based (MC) system. Although they denominate debts and prices exclusively in their own currency, traders in each country are willing to accept (and hold) foreign currency as a means to discharge international debts. They are willing to accept the foreign currency as a means of contractual settlement because they are willing to invest any excess holdings that are not spent towards goods and services into foreign-currency denominated assets. Hence, in this system financial markets and capital flows are the source of mutual acceptance and provide the ground for international payments.

In an MC system, international acceptance of currencies is not based on reserves of an international asset guarantee: it is based on capital and money markets that make a well-organized currency market possible. Inevitably, however, differences in size, organization, and depth of financial markets, create a hierarchy of currencies. This is inherent in any international system with free capital flows. In the language of Keynes's (1936) *General Theory*, currencies differ in terms of their liquidity premium, with the higher-hierarchy currencies carrying a premium (l) higher than lower-hierarchy currencies.

Countries in an MC system, will feel a different constraint depending on their position in the articulated financial hierarchy, and international financial instability occurs as a result of increasing difficulties of the low-hierarchy ('soft') currency countries to honour cross-border public or private debt obligations, as well as the speculative nature of financial markets. It may also originate from the banking system facing a demand of conversion of bank money denominated in the foreign currency: a banking system with foreign currency-denominated liabilities (that is, bank money issued by banks not belonging to the banking system of the

currency-issuing country) faces a greater risk, because its own central bank cannot address international liquidity problems that may arise in the normal conduct of business.

A Key Currency (KC) system. Traders in each country denominate debts and prices in their own currency, as well as in what they consider the key world currency. Although traders in the key-currency country do not accept foreign currencies as means of contractual settlement, traders in every other country do, and are willing to hold the key foreign currency. This gives one of the currencies an international money status, while the other currencies remain for strictly domestic use, i.e., their degree of international moneyness is zero. Under these conditions, trade can be carried out in terms of the currency accepted across borders, functioning as the international money. Goods, services, and assets, however, can only be exchanged under the condition that they must be denominated in the currency with international money status.

In a KC system, all countries but one are constrained in their ability to purchase foreign products by their holdings of foreign currency. Country holdings, on their turn, depend on exports proceeds, as well as on its capacity to borrow. The latter, however, is impaired by the fact that assets can only be denominated in the foreign currency, so any borrowing requires a further effort to dispose of foreign currency to pay interest. Hence, all countries but one are squeezed between two corner options: that of autarchy and that of consistently generating a trade surplus. Whether the latter is a feasible option depends on whether the key currency country is willing to flow its own currency into the rest of the world against imports (or the sale of assets). Financial instability occurs as a result of this asymmetry of currencies, and specifically of the increasing difficulties of governments and residents of all countries but one to honour public or private debt obligations in the key currency.

There is a financial fragility in each of the three configurations above, produced by some kind of asymmetry. In the IG system, it is the disparity of holdings of international reserves that may spoil the international moneyness of some currencies; in the MC system, it is the hierarchy of currencies and financial systems that lends itself to international instability; and in the KC system, it is the complete dependence of all countries (but one) on their disposal of

a currency they can neither issue nor borrow without limits.

The current world system is a combination of the MC and the KC configurations: it is a capital-flow based system with sizeable capital, money, and currency markets, where one currency (perhaps along with a very limited set of currencies) plays a key role as an international means of payment; other currencies have a limited international moneyness; and a number of currencies have a near-zero degree of international moneyness. Thus, one can attempt to assess the validity of standing public policy proposals for stabilizing international finance in the light of the conceptual framework developed above.

This suggests first, that any provision uniquely aimed at creating well-functioning financial, banking, and currency markets in the current system, although welcome for its contribution to operational efficiency, does not address the fundamental problems of financial instability. Secondly, it suggests that any provision that aims at bringing all countries to the same playing field by improving national institutions through some form of coordinated surveillance fails to address the fundamental question of either currency or international reserve asymmetry. Thirdly, it further supports the recent reformulations of Keynes's original 'bancor' proposal as not only feasible, but as the only so far known viable alternative to either the *status quo* or world dollarization. For the latter to be effective, it should combine the KC configuration with a US commitment (approved by the rest of the world) to serve as the lender of last resort of the world economy.

Fourthly, it suggests that the surge of crises in the 1990s may have been made possible, as explored in this and in the previous section, by the increase in capital flows in emerging, lower-hierarchy currency countries, in the absence of truly international reserves and common settlements rules. The reason of the greater stability of the Bretton Woods system, apart from the greater political tranquillity of those times, should be found in the adoption of an international asset combined with limited capital flows. A system where currencies are protected by capital controls and multilaterally agreed pegs makes currency diversity a less prominent feature than it is today.

CONCLUDING REMARKS

The international economy is a world of currencies of diverse quality. It is best to accept these differences as inherent in a world system than trying to hide them under the label of ‘policy commitment’: forcing all countries to follow the same policy and regulation rules will not resolve the problem of international payments, unless countries become politically willing to create, or accept, a single world currency.

As Keynes firmly contended, the monetary side of a global economy is not a neutral factor. In fact, it may be the problems posed by the different international moneyiness that makes currencies unequal that should be considered as one of the fundamental factors behind any model of financial instability.

Viewed in this light, the options for the future international monetary system seem limited and include a) dollarization—on condition that the United States agrees to take responsibility for the world monetary matters, b) currency blocs, supra-national currencies or a single world money—on condition that countries can politically cooperate in their co-management of monetary matters, and c) the ‘bancor’ solution—on condition that the political willingness of countries overcomes the resistance of the existing, yet precarious system.

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