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The International Monetary Fund
And the International Financial Architecture

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SUMMARY

The IMF is a perennial institution in a changing environment. The institutional structure has stayed put, reflecting the lasting prominence of the US in international monetary affairs. However the international monetary system has undergone a sea change : the shift from a government-controlled to a market-led system. It was both an origin and an outcome of the rise of global finance.

In adapting to this structural change, the Fund has exerted new ways in providing guidance to member countries and in regulating financial markets. But it has kept its former missions, so that no less than four models of collective action can be depicted within a careful analysis of the Fund's mandate. The Fund has been an insurer in mutual assistance of its member countries, an issuer admittedly aborted of a world currency (the SDR), a financial intermediary for development with respect to the Washington Consensus, and lately an international crisis manager, even playing the role of an international lender of last resort.

Playing all those partly contradictory roles has overextended the Fund's capacities and eroded its speed of reaction to disturbances which come more from markets, less from governments. A refocusing on prudential issues, both in prevention and crisis management, is what the new financial architecture is all about. It leads to trimming existing facilities, involving the private sector in potential loss sharing schemes, strengthening international supervision on active intermediaries in wholesale liquidity markets, inducing central banks to act or acting directly as an international lender of last resort in a crisis management system.

The rationale for the new financial architecture is solving a basic prudential dilemma inoculated by global finance. The twin benefits of market efficiency in allocating savings and a workable degree of global financial safety can only be attained if national prudential independence gives way. But cooperation in prudential regulation cannot be achieved without a political legitimacy. The IMF has no comparative advantage in competing with the Basel Committee to set standards, with national supervisors to check bank internal control systems, with central banks to forestall a market liquidity crisis. The IMF should assert its leadership on world monetary politics, in place of the G7, so that decisions of a global scope proceed from the universality of its membership.

This mission of global governance calls for an institutional overhaul which should entail two drastic changes : on the one hand, a substantial revision of quotas to reflect the rising power of non-OECD countries; on the other hand, the creation of an executive policy committee with authority on the services to implement the Fund's restated mandate.

RESUME

Le FMI est une institution pérenne dans un monde en cours de bouleversement. La machine institutionnelle est demeurée immuable depuis les origines, conformément à la prééminence des Etats-Unis dans les affaires monétaires internationales. Pourtant le FMI s'est métamorphosé d'un système contrôlé par les gouvernements à un système mû par les marchés. Cette transformation a été à la fois le point de départ et l'aboutissement de la mondialisation financière.

Pour s'adapter à un changement structurel, le Fonds a dû inventer de nouvelles méthodes de guidage de ses membres et de régulation des marchés financiers. Mais les nouvelles missions n'ont pas effacé les anciennes. Pas moins de quatre modèles d'action collective doivent être mobilisés pour rendre compte de son mandat. Le FMI est un assureur qui gère l'assistance mutuelle de ses membres, c'est un émetteur d'une monnaie fiduciaire dont l'usage a été stérilisé, un intermédiaire financier pour le développement conformément au consensus de Washington, plus récemment un gestionnaire de crises internationales pouvant aller jusqu'au rôle du prêteur en dernier ressort.

En cherchant à remplir des missions trop nombreuses et en partie contradictoires, le FMI a submergé ses capacités de réaction à des perturbations qui proviennent maintenant des marchés plutôt que des gouvernements. La nouvelle architecture financière est la remise en ordre qui consiste à concentrer les moyens d'action sur la prévention et la gestion des crises. Cela devrait conduire à simplifier les facilités financières, à impliquer le secteur privé dans des schémas de partage des pertes, à renforcer la supervision des intermédiaires qui tiennent les marchés de gros de la liquidité, à inciter les banques centrales à prendre les responsabilités de prêteur en dernier ressort international, voire à exercer cette fonction lui-même.

L'esprit de la nouvelle architecture financière est la solution du dilemme prudentiel inoculé par la globalisation. Les avantages jumeaux de l'allocation efficace de l'épargne et d'une sécurité financière acceptable ne peuvent être atteints si les systèmes de contrôle prudentiels nationaux restent jaloux de leur indépendance. Mais la coopération dans le domaine prudentiel ne peut s'établir sans légitimité politique. Le FMI n'a pas d'avantage comparatif à concurrencer le Comité de Bâle pour concevoir les normes internationales de réglementation, les superviseurs nationaux pour juger de la qualité des systèmes internes de contrôle des risques bancaires, les banques centrales pour endiguer une crise de liquidité de marché. Mais il devrait affirmer son rôle dirigeant à la place du G7 dans la dimension politique des relations monétaires. Ainsi les décisions de portée globale procéderaient-elles de l'universalité de ses membres.

Cette mission éminente de gouvernance globale requiert une remise en ordre institutionnelle de grande envergure. Deux changements décisifs sont nécessaires : en premier lieu une révision substantielle des quotas pour refléter la montée en puissance des pays hors de l'OCDE, en second lieu la création d'un conseil politique qui soit l'exécutif du Fonds avec autorité sur les services pour mettre en œuvre un mandat reformulé.

The International Monetary Fund and The International Financial Architecture

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INTRODUCTION - THE IMF : A PERENNIAL INSTITUTION.

The International Monetary Fund, with her twin rival sister the World Bank, carry on the legacy of the Bretton Woods system, albeit remote from that distant monetary order present international arrangements be. Such persistence in the institutional structure, amidst a sea change in economic conditions over fifty-five years or so, teaches a lot on how a non-sovereign institution impinges upon international relations.

An excessive but popular opinion in explaining Fund's paramount influence over international monetary matters is sheer hegemony. The IMF is an institution ruled by an inter-governmental council, where crucial decisions are taken by weighted votes and qualified majorities. Because U.S power has been overriding throughout the existence of the IMF, U.S values and priorities have been given universal acceptance amongst an increasing membership. This not to deny the truth in this argument. When the U.S Treasury took the lead to design a monetary order for the postwar world, it was careful to secure an American predominance in the institutional structure. While aiming at restoring the free flow of American goods and capital as soon as possible, the Treasury wanted also to curb the strength of Wall Street which had consistently opposed New Deal reforms in the Thirties. Therefore the IMF was conceived as an institution to promote collective action in a government-run monetary system under the leadership of the U.S government.

But the gist of the Bretton Woods monetary order was destroyed by sweeping changes brought about by the surge in capital mobility the U.S government had intended to provide with a friendly climate. From the early Seventies onwards the international monetary system has been altered decisively in becoming market-led. The metamorphosis has brought more active players in the international arena and woven more channels of interdependence: competing currencies, influential financial centers, the momentous common beliefs of

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financial markets, the rising economic power of Asian countries. The complexity of such a world was not foreseen in the Bretton Woods Agenda. The IMF has had to adapt its doctrine and missions while keeping its identity. A broader concept of hegemony is needed to account for this evolution.

Even if tilted towards the American interests of the time, the outcome of the Bretton Woods Conference and of the lengthy prior preparation was an Anglo-Saxon compromise. Not only the U.S and U.K governments had different views on postwar challenges, but the main negotiators, Harry White and Lord Keynes, had quite distinctive conceptions on international money. Keynes thought to supersede foreign exchange markets with an International Clearing Union issuing a truly international reserve asset. White proposed an International Exchange Stabilization Fund to maintain a fixed but adjustable exchange rate system. These conceptions, compounded with the challenge raised by the evolution of the international monetary system, allow pundits of Fund's behavior to highlight the doctrines which provide guidance to its missions.

Besides, while arguing over the extent and the mechanism of monetary cooperation, the Bretton Woods negotiators had a common philosophy about the basic principles implied by an open society. Money had a primary role to play if free trade beneficial to all countries could ever be recovered. Stable exchange rates were the key not to repeat the errors of the inter-war years. But they could no longer be achieved by a binding rule of gold convertibility. Collective action was in the intellectual mood of the new era. It had to be secured under the guidance of an international institution operating on behalf of the mutual assistance of its members.

Being in a position to rebuild the international monetary system entirely, the two Anglo-Saxon countries had reached a compromise after a lengthy bilateral negotiation that no other country or cluster of countries was able to block. It is the reason why the Bretton Woods conference is unique and will remain so in the foreseeable future. All prior world conferences failed anyhow: Paris in 1865, Genes in 1922, and London in 1933. So did the grand design to overhaul the IMS launched after the Smithsonian Institute Agreement in December 1971.

The international monetary system has evolved under the spur of market forces. It has never been reformed. Indeed the International Monetary Fund is not a political institution in its own right, capable of spelling out and imposing a collective good over the confronting interests of its members. As the dissemination of power makes world politics shift further away from the configuration that had made Bretton Woods possible, a minimal political insight is recommended in studying the so-called new financial architecture. There are too many academic plans, concocted in various ivory towers, lacking the most elementary ingredient of political feasibility.

The present paper will not add up another plan but will try to highlight the problems that are perceived and taken to the fore by the interested governments. It will also try to guess what are the forces already at work, which will change the power structure, and shape the monetary oligopoly that the IMF will continue to regulate. In this prospect the paper is organized as follows. A first section will depict the pervasive and the transient in the Fund's environment and conduct. The new challenges will be described in the light of the financial crises of globalization. A second section will outline four models inspiring the doctrine of the IMF or having been debated under its auspices. A third section will define theoretically

the prudential dilemma in the global financial system and will discuss alternative ways which have been proposed to handle it. A conclusion will underline a prospective view of the future of the IMF. It requires some insight about the forces, which could eventually reshuffle the international monetary system. The formation and the attraction exerted by regional monetary zones on the one hand, the changing power structure in the world economy on the other hand, are likely candidates. Equipped with the theoretical discussion on the new architecture and with the prospective outline on the international financial environment, the institutional overhaul needed in the IMF will be posited.

I. THE PERVASIVE AND THE TRANSIENT.

What strikes the outside observer in researching the Fund's policies is how much their environment has changed and how little their institutional structure and underlying economic belief have evolved. U.S share of world GDP has more than halved, but the U.S still detain a veto power in quota-weighted votes requiring a qualified majority to make any significant decision in the Council. The Polak's monetary model of the balance of payments celebrated its fortieth anniversary in 1997, as the highly praised basis of adjustment policies. The Fund's constituency has been enlarged to quasi-universality. Still the recruitment of the staff is almost entirely monolithic. Whatever their nationality, the Fund's employees are economists of an Anglo-Saxon training. The IMF being a bureaucracy organized according to the staff and line principle, horizontal divisions control the ideological righteousness of any paper to be published or even distributed to the administrators.

This compounding of organizational, cultural and ideological features makes the IMF a peculiar institution. As a political entity, it is a joint venture of its member governments, not an independent supranational institution. Nevertheless the IMF has a firm's culture which provides a strong cohesion and a devout dedication to economic liberalism. This stance is both an asset and a liability. The IMF opposes its unrelenting faith to outside criticism and stands firmly aside its debtors in times of hardship. But it apprehends worldwide changes through the prism of its overriding ideology. This doctrinal rigidity makes the institution less than adequately responsive to shifts in world politics conveying other views of international monetary relations. The way this contradiction has been overcome to the present is in piling up four models of conduct in making the international monetary system work. Each one is a response to the surge of new problems in the management of the international monetary system. But none of them has phased the others out. The outcome is an over extension of the capabilities of the institution and a blurring of its missions, both symptoms of a serious uneasiness. Before presenting the four models, the metamorphosis which have given rise to the shifting responsibilities of the IMF must be pointed out.

The international monetary system(IMS) born from the Bretton Woods Agreement was government-controlled. With respect to the adjustment mechanism, a mixed regime had been chosen in the Mundell's triangle of feasible alternatives. A par-value system of exchange rates was set up with provisions to alter the parities under certain conditions. Convertibility on current account was to be achieved, but capital controls were left at the discretion of governments on any capital transfer which did not impede on the free flow of current account items. International adjustment was expected to work with substantial autonomy for national governments within a framework of rules designed to make their policy stances compatible.

The ambition was to conceive a man-made monetary order centered on the IMF. The international institution was the guardian of the rules and the watchdog of conducts regarding exchange controls. It was also hoped to express the consciousness of the concert of nations about their collective responsibility to the global stability of the IMS. As such the IMF was endowed with a function of go-between to engineer national policies consistent with the overall goal of international monetary stability. It was also charged with the task of regulating international liquidity thanks to the contributions brought in by its members.

The actual role of the IMF was much less effective than implied by the above-mentioned mandate. The parity grid became rigid in the Sixties and the provision for international liquidity was plagued by the so-called Triffin's dilemma. Furthermore capital controls were circumvented by the growth of the Euro-dollar market, so that speculative pressures on Sterling became overwhelming in October 1967. This episode originated the agony of the Bretton Woods monetary order, whose coup de grace was struck by President Nixon on August 15, 1971 when he shut the gold window once and for all. This pure opportunistic political move gave rise to the sea change of the advent of a market-led system.

I.1. Rejuvenating the IMF after the demise of the Bretton Woods order

After the deceitful Smithsonian Institute Agreement in December 1971, which reset the exchange rate ladder, the IMS had been laid out on a pure Dollar standard. G10 authorities felt that such a basis was shaky. They decided to embark on an ambitious round of negotiations in a gathering closely connected to the IMF, with the aim of reforming the system. The Council of Governors created the Committee of Twenty(C20) which held a number of meetings from 1972 to 1974. The C20 published valuable studies on the working of international money. But, as far as reform was concerned, it was an utter failure. Americans and Europeans were not able to agree on the respective obligations of deficit and surplus countries in the adjustment mechanism. On international liquidity, the issue was the role of the SDR(created by the First Amendment in 1969) as the main reserve asset. It opposed developed and developing countries on the link between reserve creation and aid to development.

Meanwhile market events had overpowered the ambition of reestablishing a rule-based system. As early as February 1973, the par-value exchange rate system had burst out and generalized floating had spread in a vacuum of consistent responses to mounting inflationary pressures. Finally the first oil shock of October 1973 triggered much larger capital flows than experienced beforehand with the recycling by Euro-banks of the surpluses of oil-producing countries.

Against those adverse phenomena, the C20 changed its course. Giving up its grand design, it focused on the task of arming the Fund with a legal framework to operate in an environment quite at odds with the Bretton Woods era. The negotiation led to the Jamaica Accord in 1976, resulting in the Second Amendment to the Articles of Agreement adopted by the Council of Governors in 1978.

Jamaica acknowledged the structural transformation of the IMS. The problems that had plagued the late Bretton Woods years had been de facto solved by capital market developments. In the newly-born market-led system, the overall amount of international reserves was no longer supply-constrained by US balance of payment deficit. It had become demand-determined by borrowing in international capital markets. The fierce competition between banks, in search of high volumes of international credit to make up for lost domestic credit with the growth slowdown in OECD countries, had made the supply of funds highly elastic to demand changes. Subsequently the recurrent problem of the scarcity of reserves, which had motivated the creation of the SDR, was no longer relevant. Moreover, as far as adjustment was concerned, floating exchange rates had resolved in principle the conflict between internal and external balance and jettisoned the need of policy cooperation. The monetarist counter-revolution was at high tide at the time. It offered an ideological background to the rebound of monetary nationalism according to which "each country should

put its own house in order". This view expected capital markets to take care of themselves and to drive exchange rates to their equilibrium values reflecting the conditions prevailing in domestic economies.

However the interplay of foreign borrowing and exchange rates dynamics was the locus of new problems which arose in the wake of the second oil shock. International capital markets fed the world with a fast-increasing amount of reserves, but they proved unable to regulate the distribution of borrowed reserves amongst countries. Sovereign indebtedness was not properly assessed, entailing abrupt disruptions between excessive tolerance to borrowing and acute credit crunches. Besides, equilibrium exchange rates were elusive. Huge gyrations of floating exchange rates and foreign exchange crises devastating pegged regimes convinced most governments that exchange rates were too important to be left to the markets. But individual governments were powerless against speculative attacks while reduced to their own means.

The malfunctioning of the market-led system in both exchange rate adjustment and solvency control gave content to the Fund's missions restated in Jamaica. Two keywords have reshaped the activities of the IMF to the present: *surveillance* and *conditionality*. Article IV of the revised statutes stipulates that the IMF is in charge of the firm surveillance of the exchange rate policies of its members within a yearly consultation. The outcome of the process of unilateral surveillance are recommendations of macroeconomic policy which are not mandatory for countries not under the execution of a Fund's program. Multilateral surveillance was enacted much more vaguely. The IMF did not attempt to define, let alone to compute, a system of equilibrium exchange rates. The exercise was confined to periodical reports (World Economic Outlook, International Capital Markets) which had little connection with Article IV. Lately the IMF has supplemented its paraphernalia with an unsuccessful effort in developing meaningful early warning indicators of financial crises.

Unilateral surveillance cum conditionality are the effective means of action which pertain to the IMF. Since conditionality is associated with borrowing to the Fund, the post-Jamaica positioning of the IMF has altered decisively the original philosophy of its founders. In the market-led system, developed countries have refrained from borrowing to the Fund entirely. Correlatively the institution has ceased to be the medium of multilateral assistance between all its members. It has become a financial institution between the asymmetrical interests of debtor and creditor countries, either through public loans or through the sponsoring of their respective commercial banks. Here are at least the lessons of the Eighties. The Nineties brought about further disruptions that impinged upon the Fund's responsibilities.

I.2. From structural adjustment to the challenge of global finance

After the sovereign debt crisis had exploded in Mexico in August 1982, the IMF geared a host of adjustment programs. Coupled with debt reschedulings, the programs were designed according to the Fund's monetary approach and implemented on a country-to-country basis. With this procedure debtor interests were divided. Each country under a Fund's program faced a unified club of public or private creditors, the latter indirectly through the assurance that debtor countries were firmly taken in hands by a Fund's program.

In the mid-Eighties it had become blatant that the original programs would not work. They have been initiated on the assumption that the countries had suffered a temporary setback. If their macroeconomic policies were straightened out and their exchange rate properly devalued, they would generate enough foreign exchange to service their debts in full. Had a single country been in trouble and the international environment been supportive, the adjustment might have succeeded in restoring the creditworthiness of the indebted country. But the sovereign debt crisis was simultaneous in a host of countries, chiefly in Latin America. The rich countries were committed to a strenuous disinflation which had raised real interest rates to the roof and stifled growth in all countries, but the US which indulged in a mammoth budget deficit. Therefore the debtors had to resort to competitive devaluations in order to gain exports on a shrinking foreign demand base. As these countries suffered from a rigid domestic price structure, prone to inertial inflation, excessive devaluation intertwined with inflation in vicious circles. Stop-go policies ensued which, at the possible exception of Chile, impaired growth potential, worsened fiscal deficit and undermined their international creditworthiness further.

Development economists of the structural approach vehemently denounced the Fund's monetary doctrine of adjustment and its deceptive outcome. Ironically their arguments were taken up and turned upside down by liberals. US Secretary of the Treasury J. Baker was convinced in 1985 that growth should resume via structural reforms and that the international institutions should back up structural adjustments in granting longer credits under conditions which became more intrusive. Macroeconomic stabilization was no longer held as the single device to recover an already ploughed growth track. Microeconomic conditions for growth had to be created in privatizing public sectors, in deregulating price mechanisms, in opening markets to foreign competition. On the financial side, liberalization had to be undertaken to reduce the amount of foreign debt via securitization (Brady Plan in 1989) and to attract new funds from non-bank private creditors. Without endorsing debt reduction schemes publicly, the IMF actively encouraged commercial banks which had provisioned their losses to sell their loans at a discount. Meanwhile it originated its practice of lending into the arrears to countries unable to meet their schedule of debt service with the banks.

The doctrine of structural adjustment got a strong impetus from the collapse of East European Socialism. It entered the Nineties hailed by decision-makers of the most powerful countries, united for once under the label of "the Washington Consensus". It fostered the IMF in its role of financial agency for development, which got reconciled with mainstream economics now dedicated to supply side. Financial liberalization reached Latin America, Eastern Europe and Asia at an astounding speed. Capital markets could be truly said almost global for the first time since World War I.

The rest of the story is well known. The disruptions provoked by financial liberalization in countries with weak financial structures and in international markets rigged with self-fulfilling speculation triggered crises of a magnitude not seen since the Great Depression. The sources of these crises starting in Latin America, Asia, Russia, were very different from the sovereign debt crises of the Eighties. They originated in capital markets with predominant role of private debtors as well as creditors. They implied fundamentals of a microeconomic variety due to financial fragility : gross undervaluation of credit risk, overindebtedness, acute asymmetric information. They developed in interaction between the sharp deterioration of creditworthiness, the breakup of pegged exchange rate regimes and the surge of volatility and correlation in asset prices.

The Fund's apparatus was hardly fit to meet the challenge of emerging market crises. The Mexican crisis in 1994-1995 was a harbinger from which proper lessons were not drawn. The lack of proper warning indicators, the surprise before the magnitude of the reversal in capital flows, the gross underrating of the severity of the recession in the aftermath, the lack of foresight of contagion throughout Latin America, were features of poor performance to be repeated in Asia on a much larger scale. Like a central bank trying to adjust its monetary target to shifting financial conditions and always behind schedule, the IMF was waging yesterday's war and was overtaken by a new generation of crises. After the speculative raid on the Hong Kong dollar on October 20, 1997, the IMF had to change its course of actions precipitously and resort to emergency financing in the worst financial environment, leading to extravagantly large loans which did not curb capital outflows, especially in Korea. In early December the initiative shifted to the US Treasury which led an international lender-of-last-resort rescue with a private sector involvement.

This episode introduced a concept foreign to the Fund's practice initiated in the Mexican crisis, consisting in bailing out international banks entirely, thus creating maximum moral hazard. The Asian crisis raised doubts on the Fund's legitimacy in the American Congress and like-minded ultra-liberal economists in the academic community. Without contemplating such an extreme view, a serious debate has been raised on the future of the IMF. Since the time of the C20, it has been the first debate to argue about principles, not only technical matters. Not much is to be expected from the new financial architecture in the near future as far as political decisions are concerned. But things can be viewed differently in a long prospect. It is the stance taken in this paper. To design a comprehensive reform, a first step is to understand the models the IMF has fulfilled or can claim to fulfill as a regulator of the international monetary system.

II. FOUR MODELS TO COMPREHEND THE FUND'S MANDATE

An international monetary system is defined by its structure and by the principles of collective action implemented to achieve a workable adjustment and to make for the provision of international liquidity. The structure is a compatible set of choices by individual countries in the familiar Mundell's triangle whose characteristics are the following: the degree of flexibility in exchange rates, the degree of substitutability between financial assets denominated in different currencies, the weight of an indicator of external balance in the loss function of monetary authorities. Structures are not enough to dispose of the externalities which are inherent to the interdependence between nations. Markets do not produce mutually palatable adjustments when countries pursue independent policies. Whatever the exchange rate regime, open capital markets do not entail adjustments to real equilibrium exchange rates capable of forcing inconsistent policies to yield, albeit in financial or foreign exchange crises. On the opposite side, the choice of capital controls tightens the constraint on current account balance for individual countries and raises the problem of the adequate supply of international liquidity worldwide.

Collective action guides government policies to mutual adjustments conducive to a reasonable overall stability in the IMS. It relies on principles which must meet two requirements to be effective: the sharing of obligations to adjust, either symmetrical or hierarchical, must be transparent and agreed upon by countries that have a bearing on the system as a whole; the collective good of monetary stability must impinge upon government conducts to discourage free riding.

Bretton Woods was a milestone in monetary history, because there was a universal recognition that principles of collective action were paramount and that they could no longer be fully embodied in the structure of the system. The days of the Gold Standard, with its automatic adjustment mechanism proceeding from the rule of convertibility, were bygone. The IMF was the institution created to promote collective action within the structure of the international monetary system. Since the structure has changed, as shown in the first section, the role of the IMF has evolved. New functions have stemmed from new problems. However former responsibilities have not disappeared entirely. They have either been adapted or have receded without being discarded. It is why the IMF has grown in complexity, piling up functions like geological strata.

No less than four models of collective action must be summoned to understand the institution theoretically as well as pragmatically. The first model is the original one: the IMF is an insurer or a credit union which implements mutual assistance between its members. The second model emerged with the creation of the SDR enacted in the First Amendment, but aborted with the failure of the C20. It defines the IMF as the issuer of a world currency. The third model spread from the Second Amendment and the subsequent financial disorders. The IMF has become a financial intermediary and a tutor for developing countries. Last but not least, the fourth model is in limbo. It is what the new financial architecture is all about: a model of the guardian of prudential standards and international lender of last resort.

II.1. Insurer in mutual assistance

Bretton Woods set up a par-value system. The initial conditions made it understandably hierarchical. Every country but the US pegged its parity to the dollar. The US alone declared an official price for gold. On top of the gold stock, international reserves were compounded of US liabilities to foreign official institutions and drawings on the Fund's resources. The latter component had been too rigidly imprisoned in the straight jacket of quotas to permit the IMF to play the role of the regulator of international liquidity.

Yet the place of the IMF in the structure of the system was designed to pinpoint its central role in collective action. The pool of currencies provided by Fund's members is the source of drawings to finance temporary disequilibria in current accounts. Mutual assistance proceeds from the debtor and creditor positions to the Fund created by the drawings. The conditions attached to the drawings depend on the proportions of the quotas that are drawn (the so-called gold and credit tranches). Since mutual assistance was supposed to alleviate domestic adjustments stemming from reversible shocks, i.e adjustments under demand management, the IMF was expected to play a major role in determining if imbalances were temporary or fundamental. In the latter case, it could advise a change in parity. Conversely any government should consult the Fund prior to change its exchange rate. As mentioned in the first section, the IMF largely failed in both regulation of reserves and exchange rate adjustment. The aggregate reserve position to the IMF fluctuated around 6% of world reserves up to the mid-Eighties, then fell to 4% (figure 1). The procedure to raise the quotas is controversial and cumbersome. In spite of periodical revisions, the total amount of quotas fell sharply in the Sixties and early Seventies in proportion of world trade (figure 2). In order to circumvent the liquidity constraint due to the quotas, a group of ten rich countries (the G10) concluded a General Agreement to Borrow (GAB) in 1962. The agreement permitted the Fund to borrow additional resources to any member of the club, which could only be used to lend to a needy member. This club solidarity violated the universality of mutual assistance proclaimed at Bretton Woods. In the Sixties a split between developed and developing countries began to arise. It led to a confrontation between the two groups of countries in the late Sixties about the impending shortage of liquidity. The IMF was no more successful in driving adjustment. The Fund never provided a meaningful definition of a fundamental disequilibrium. This impairment put the IMF in a weak position while facing a government reluctant to devalue its currency. The problem continued after Jamaica in new attire. After any commitment to a par-value system had been repealed and after developed countries had been able to borrow reserves at will in capital markets, the contribution of the Fund to collective action shifted to surveillance of economic policies. The same impediment arose. It has never been possible to provide a meaningful definition of an equilibrium exchange rate and subsequently of a fundamental misalignment. The role of the Fund in mutual assistance to deliver a macroeconomic stability to the IMS has receded to a low-key profile, providing technical assistance to G7 meetings.

Figure 1

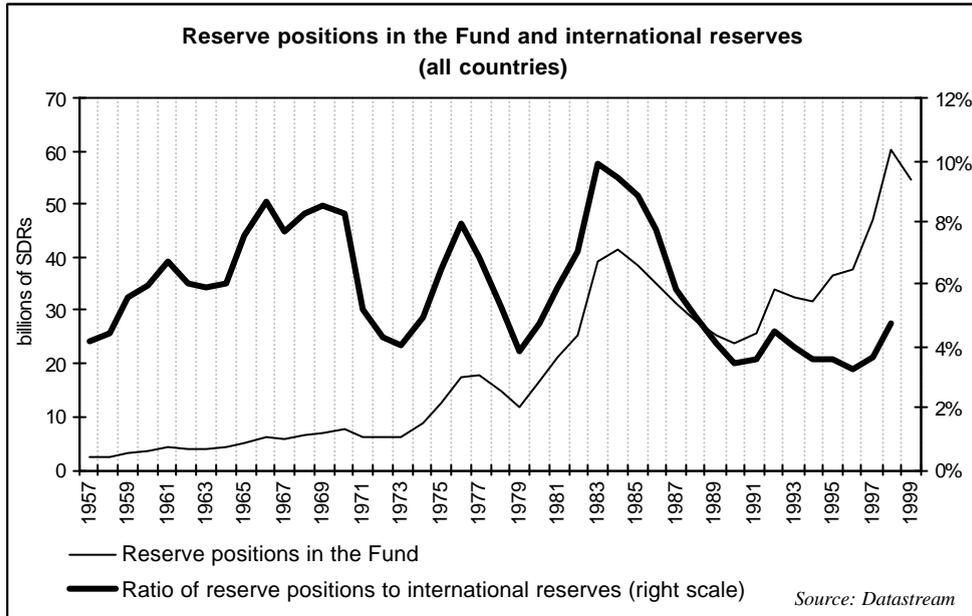
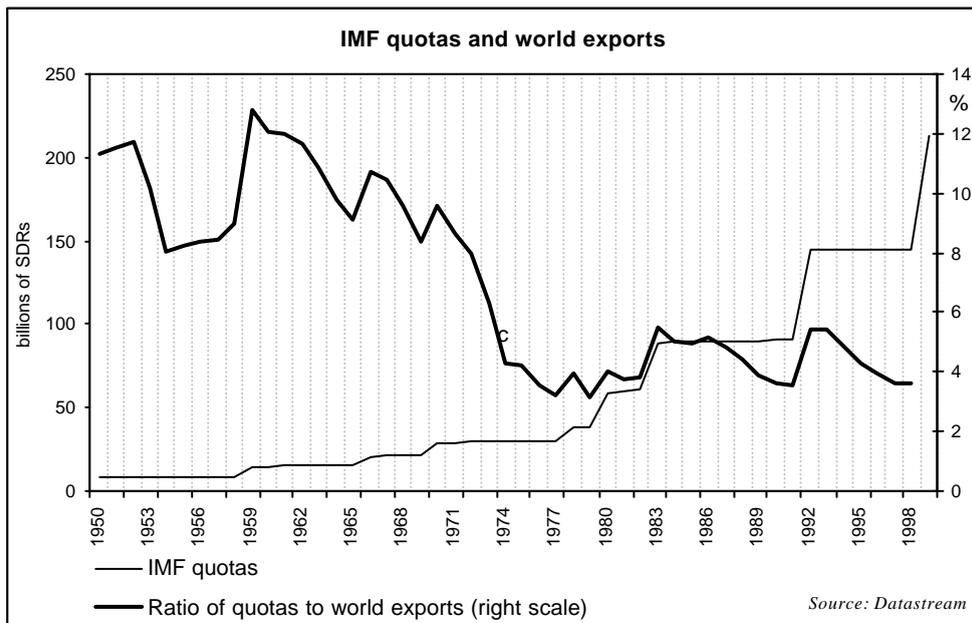


Figure 2



II.2. Aborted issuer of a world currency

A common thread weaves together Keynes's proposal for an International Clearing Union in 1941, the debate about the nature of the SDR to be created between 1965 and 1968, and the work of the C20 between 1972 and 1974. They all amount to an attempt at a radically new conception of international money. They all failed to overcome conservatism.

The common thread is the creation of a supranational asset being used as a means of settlement of international liabilities between national monetary authorities. Keynes's report to the UK Treasury was a compendium of principles for an IMS conceived to supersede the shortcomings of payment mechanisms in separate currencies linked by foreign exchange markets. Keynes spelt out three basic ideas : multilateralism in international payments, symmetry in adjusting disequilibria between surplus and deficit countries, an extension of the pyramidal structure of banking abolishing foreign exchange markets altogether. The first is a shared view of Western policy makers in the post-war world. The second is a claim which lingered all over the fixed-but-adjustable exchange rate era and surfaced in the negotiations to reform Bretton Woods, but was never fulfilled. The third was revolutionary at the time and is still so in present days, since it is tantamount to the creation of a world currency. Keynes observed that the logic of bank money implied the hierarchical structure of banking systems. Within countries inter-bank settlements are daily proceeded in central bank money after multilateral clearing of net bank exposure. Keynes thought that the same logic could be forwarded to international settlements, if a third stage was built in linking national banking systems together as it is now done in EMU via TARGET and the ECBS.

Keynes's proposal implied an international standard to express assets and liabilities, as well as an international institution acting as a world central bank. The liability of this institution would be the exclusive international reserve asset for national central banks. The monetary mechanism devised by Keynes closely linked liquidity and adjustment. It introduced a functional symmetry between surplus countries being creditors of the international institution and deficit countries being debtors, as the outcome of the daily international transactions of all kinds. However an effective symmetrical adjustment needed enforceable rules to assign the obligation of correcting a detected disequilibrium either on the debtor's side or on the creditor's side. Both the creation of a truly fiduciary international reserve asset and the definition of symmetrical adjustment rules offered formidable difficulties. They were not tamed by future attempts in reforming the IMS. The potential of the SDR was curtailed by so many restrictions that it dropped into almost insignificance. On its own account the C20 failed to set up adjustment rules both operational and acceptable by all parties.

In the early sixties, R. Triffin had pleaded for resurrecting the Keynes's Plan. He suggested to merge all gold and foreign currency reserves into the Fund against the issue of an international currency. Less ambitious projects suggested to supplement existing reserves with a new reserve asset whose counterpart could be deposits of foreign exchange or national monies in the Fund. But the agreement reached in Rio de Janeiro in 1967 differed from all previous proposals. The SDR has no counterpart drawn from existing assets. It is pure fiat money like Friedman's money dropped from helicopter, with a caveat however : it is distributed to countries according to their quotas. The SDR satisfied the purpose of the US to create a pure fiduciary reserve; but it met the hostility of the French government, which insisted that it should be treated as a credit instrument. It is why the use of the SDR was

surrounded by many legal restrictions which actually precluded its acceptance as an international money.

In the turmoil of the early Seventies after the severance of the link with gold, the SDR was defined as a basket of currencies in 1974. This decision concluded the failure of the reforming attempt by the C20. The reform was upheld by the services of the IMF who perceived an opportunity to boost the SDR and place it in the center of the IMS. C20 members confronted the unescapable question of adjustment while trying to design a symmetrical system with fixed-but-adjustable exchange rates. An American proposal was to make the accumulation or decumulation of reserves an early warning indicator of a fundamental disequilibrium, whenever the reserve outstandings approached an upper or lower threshold, calling for an appreciation or a depreciation of the guilty currency. The philosophy behind the proposal was that a permanently surplus country is as much a nuisance for international stability as a deficit one. This philosophy met a fierce opposition from the German participants in the Committee who pointed out world inflation as a symptom of global imbalance which should not be treated symmetrically. The deadlock could not be reconciled and the whole reform went under.

Nothing much was left for the SDR. Aggregate international liquidity had quickly shifted from scarcity to plenty. The link between SDR allocation and aid to development was rebutted by the rich countries. The idea of a substitution account to consolidate the dollar overhang in the late Seventies was killed as soon as the US changed its monetary policy. Nonetheless the bold invention of an international fiat money remains. It can be awakened some day if all the other models of global financial regulation fail.

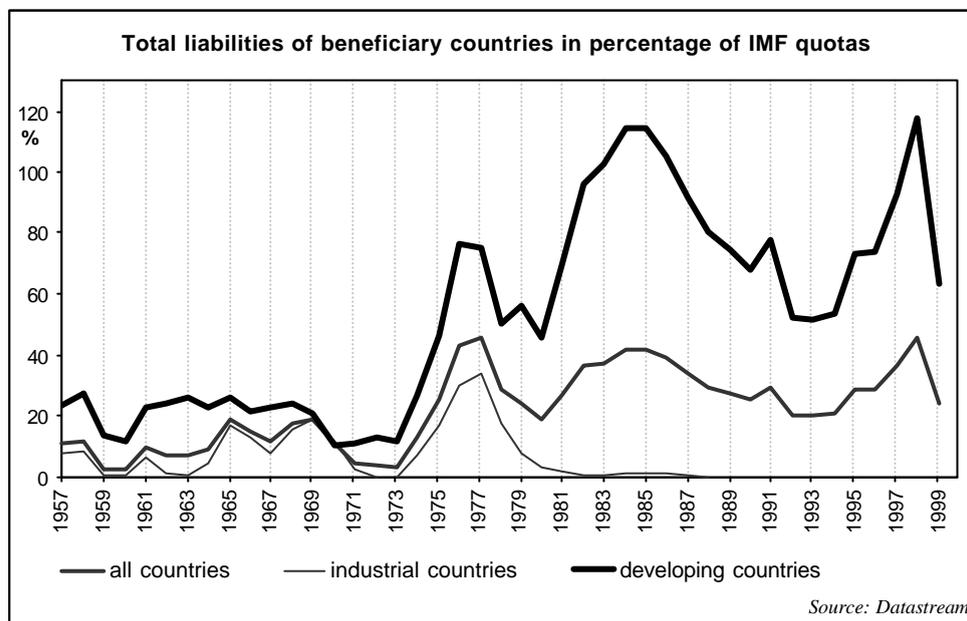
II.3. Financial intermediary for development

As noticed in section I, the market-led monetary system has released the developed countries from the financial grasp of the IMF. Conversely the model of mutual assistance has degenerated into a function of surveillance without any effective bearing on their economic policies. On the contrary, the stark inefficiencies of capital markets in assessing sovereign debt has driven developing countries under the tutorship of the IMF on long-term arrangements. Therefore the Fund has become an intermediary between two groups of countries : the contributors to its resources and the beneficiaries from its resources (figure 3). The use of resources was so heavy at some critical times that the IMF had to borrow actively from its creditors, to raise substantially the ceiling of liabilities for individual countries in proportion of their quotas, to diversify and to specialize its credit facilities to fit the needs of its debtors. This is the typical pattern of a financial intermediary.

The problems encountered by the IMF in dealing with insolvent debtors made it non-relevant the distinction between temporary and fundamental disequilibria. Structural adjustment compounded monetary management as a guide toward a more ambitious goal than the correction of imbalances which validated the model of mutual assistance. The economic and financial integration of developing countries in a world economy adopting Westernlike rules has been the stake of reforms guided by the IMF since the late Eighties.

On the adjustment side of collective action, the Fund broadened its recommendations substantially. It emphasized the benefits that developing countries would enjoy in meeting the requirements of Article VIII, which stipulates that member countries should raise all restrictions on current accounts. The persuasion had a considerable success in the Nineties. But the Fund's doctrine moved further to the objective of getting an opening of capital accounts from the countries under its programs. This has become a twin objective with the liberalization of domestic financial systems. The countries which engaged in the twofold financial reform attracted huge amounts of foreign capital in the early Nineties and were labeled "emerging markets".

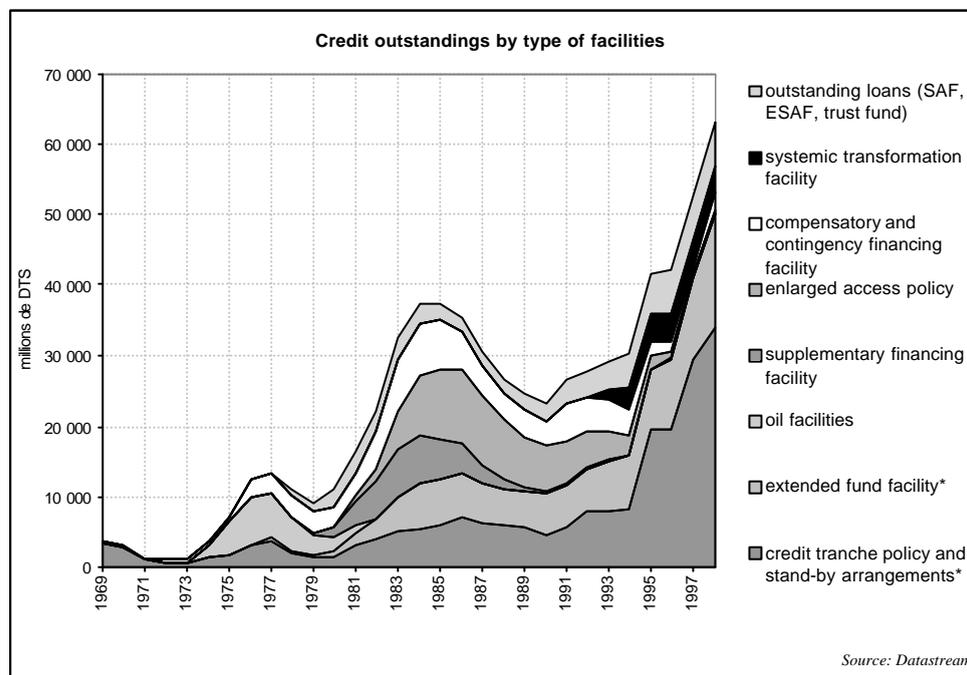
Figure 3



Conditionality deepened in sympathy with the larger scope of adjustment. The abolition of subsidized interest rates, the suppression of direct controls, the privatization of financial institutions entered the Fund's wherewithal. Likewise the IMF encroached the field of the World Bank in a forceful campaign in favor of deregulating non-financial markets. Discarding the traditional cautions approach which fitted the model of mutual assistance, the Fund muted into a zealous preacher of ultra-liberalism. It recommended the usual kit of deregulation : dismantling labor market rules, desindexing wages, removing price subsidies of public utilities. Furthermore, moving beyond its urge for overall fiscal balance, the Fund got involved in the quality of public expenditures, intruding directly into the sovereignty of local legislators. To justify this perilous exposure, it paid lip service to the struggle against poverty, recommending the reservation of some social expenditures.

The shift in the Fund's doctrine on the adjustment side had a counterpart on the financial side. A number of ad hoc facilities were created (figure 4). Special and concessional facilities have supplemented the standard financial means which were associated to the model of mutual assistance. They are intermeshed however. The compensatory and contingency financing facility was introduced as soon as 1963 to mitigate the adverse shocks on the balance of payments of primary commodity exporters due to adverse terms of trade changes. Conversely the extended financing facility was created in 1974 to assist countries suffering from structural deficits, but was treated as a standard facility because the delusion was maintained that it was not reserved to developing countries.

Figure 4



With the structural adjustment facility, the enhanced structural adjustment facility, the systemic transformation facility, the Fund looked like what it had really become : a long-run financial intermediary offering concessionary terms with a renewed conditionality. Part of the money lent to the beneficiaries was ear-marked for special use attached to the detailed performance criteria resulting from structural adjustment.

The maturities of the financings and their renewals are shaped with much longer programs encompassing successive agreements between the IMF and the same countries lasting for 10 to 15 years. Most facilities keep the fiction of a link between the aggregate amount of loans to a single country and its quota. But the limit of access were raised repeatedly. This model enjoyed its heyday in the mid-Nineties. The late financial crises had entailed so huge amount of credits and had shifted the priorities once more in such a way that an overhauling of the Fund's mandate and a restructuring of its financial capacities are at stake.

II.4. International lender of last resort

Financial liberalization has not worked the way hoped by the Washington Consensus. The private sector has indeed entered the financial game on both the debtor and the creditor sides. For emerging markets at least, the IMF does no longer have to substitute to failing capital markets in bringing resources to developing countries. But the late financial crises have amply shown that capital markets could fail otherwise. Instead of sustained current account imbalances by lack of private finance, emerging markets suffer from massive capital flights and contagion effects. Therefore the IMF had to face impromptu new emerging problems, equipped with inadequate mechanisms and handicapped by intellectual prejudices about the presumed stabilizing capabilities of financial markets. The Fund's interventions changed radically in types of facilities, speed of reaction, amounts committed.

The Mexican crisis was the first experience of a huge outflow of capital after the virtue of financial liberalization had been celebrated since 1990. The rescue operation engineered by the US Treasury to avoid default amounted to \$ 50 billions, out of which the IMF brought \$ 18 billions. Before the crisis, the IMF underplayed the seriousness of the situation like other international participants, be they public or private. But surveillance is supposed to be the Fund's comparative advantage, all other players adjusting their behavior to its warnings and recommendations. In the aftermath, the Fund was no more efficient. As late as May 1995, it forecast a mild recession in Mexico of only 2% of GDP !

The misunderstanding was repeated in dealing with Asian countries which had no programs with the Fund prior to the crisis. The importance of short-term debt was overlooked, albeit it amounted to 45% of total foreign debt in Indonesia, Korea and Thailand, about twice as much as the average for emerging countries.

What was not recognized at the time was the financial dynamics tantamount to cumulative processes which had already plagued a number of OECD countries. The uncanny relationships between asset price appreciation, careless leverage, major flaws in credit risk management, extreme sensitivity of foreign investors to liquidity, were the sources of systemic risk which replaced the familiar macroeconomic adjustment problems of the developing countries. In a nutshell the IMF referred to the wrong model in the wake of the crisis. The misperception was magnified in the view of foreign investors by the bailing-out on and off-balance sheets that international banks had enjoyed in Mexico.

Because neither the financial community nor decision makers have a long historical view, the Asian episode has inaugurated a new generation of crises. Yet nothing that occurred was stranger to historians. The late events register in a long series of disturbances which go along with open capital markets. It bluntly means that the IMF has to change the model which provides guidance to collective action. The inherent instability of global financial markets is the kind of externality which threatens the prosperity of the world economy. The main role of the IMF has become the part of a crisis manager. The IMF started to learn this part the hard way in the hot days of October to December 1997.

The most crucial task of a crisis manager is to restore confidence among international investors. It does not necessarily involve huge amounts of funds. But it does imply strategic interactions with market participants, a mode of action aloof from those the IMF was used to and more akin to an international lender of last resort.

Facing this challenge, the Fund activated pre-established lines of credit and secured new ones. In 1983 the GAB had been requalified to general use and the funding substantially enlarged. They were activated to the benefit of Russia in July 1998. More importantly, the conclusions of the Halifax summit of the G7 in June 1995 led to New Agreements to Borrow (NAB) which add up to the GAB. They were activated for the first time to the benefit of Brazil in December 1998.

More directly dedicated to the lender-of-last-resort function are two recent facilities : the supplemental reserve facility (SRF) in December 1997 and the contingent credit line (CCL) in April 1999. The first one is designed to meet large short-term financing needs coming from a sudden loss of confidence, which can destroy the foreign exchange reserves of the country under attack. The second one is conceived to be preventive. Eligible only to countries whose policies are of the Fund's taste, it is expected to stem the contagion spread from a financial disturbance originated elsewhere. Drawing mechanisms on both facilities highlight that they do not pertain to the accustomed models of the Fund's interventions. They are discretionary and unconnected to the quotas. They are activated by decision of an emergency meeting of the Council which can decide, as a lender of last resort does, of the opportunity to intervene, the amount and the conditions attached.

II.5. Synopsis and further questions

The characters of the four models can be summarized in the following table. Each model exhibits a different expression of collective action in facilitating adjustment and providing funds to members.

The magnitude of the late crises and the virulence of contagion are clues that financial globalization calls for an international regulation. However the policies of world money are caught in a deadlock. On the one hand, the principle of mutual assistance founded at Bretton Woods has run its course economically and politically. Developed countries have opted out as far as macroeconomic adjustment is concerned. If any principle of co-responsibility takes grounds, it comes from compatible views of price stability in the system of independent central banks. On the other hand, the whole institutional machinery which drives the Fund's operations is still shaped according to the original philosophy. Meanwhile the political balance of powers makes it extremely difficult a change in paradigm.

Table 1. Synopsis of the Fund's mandate

MODEL OF COLLECTIVE ACTION	ADJUSTMENT	LIQUIDITY
Insurer in mutual assistance	<p><i>With exchange rate arrangement :</i> Capital controls and current account balance Devaluation or revaluation if fundamental disequilibrium</p> <p><i>Without exchange rate arrangement</i> Surveillance of macroeconomic policies Misalignment to equilibrium real exchange rate</p>	<p>Quotas and tranches Macroeconomic conditionality in credit tranches GAB between G10 countries</p> <p>GAB extended to the benefit of any member</p>
Issuer of a world currency	<p>Symmetrical adjustment of surplus and deficit countries</p> <p>Reserve accumulation or decumulation as an indicator of disequilibrium</p>	<p>Keynes's proposal to issue international reserve according to the banking principle extended.</p> <p>SDR as a <i>pure fiat money</i> distributed according to quotas. Legal restrictions in use</p>
Financial intermediary for development	<p><i>Structural adjustment :</i> Financial liberalization and opening capital account Deregulation of labor and product markets Privatization and budget restructuring</p>	<p>Ad hoc facilities (SAF,ESAF,STF) Concessionary terms Microeconomic conditionality</p>
International lender of last resort	<p><i>Crisis manager :</i> Restoring confidence in international capital markets Prudential issues Early warning indicators of financial crises</p>	<p>Emergency liquidity in capacity of an <i>international lender of last resort :</i> NAB on the liability side Emergency lines of credit : SRF and CCL</p>

Nonetheless facts are stubborn. The events of September-October 1998 demonstrated that no financial market and no financial firm, whatever their sophistication, are sheltered from the spillover induced by a loss of confidence and a subsequent liquidity crisis. Besides the stunning rise in asset prices amply shows that the central banks are unable to hamper destabilizing financial dynamics. Emerging markets being encompassed in the same maelstrom with magnified disturbances, the IMF can no longer pretend to stand as a financial intermediary for countries which are no longer permanently discriminated by capital markets. Even with regards to poor countries, there is no rationale for the IMF to encroach on the legitimacy of the World Bank.

With all these shortcomings, the need for reform has burst in on prudential issues. International prudential standards, mechanisms to enforce them, crisis management on a worldwide scope, are problems which are encapsulated in the works on the new financial architecture. Thus the fourth model is the one to start with.

III. LINGERING PROBLEMS IN THE THEORETICAL FOUNDATIONS OF THE NEW ARCHITECTURE

The four models presented here above can be associated in two groupings according to the overriding principle governing international relations. Models of mutual assistance and financial intermediary proceed from the principle of international insurance. Models of a world currency and of an international lender of last resort stem from the principle of international monetary sovereignty. The opposition between the two rival principles is the offspring of the irreversible demise of the Gold Standard. It nurtured the confrontation between Keynes's and White's proposals for a new monetary order in 1942. It surfaced in the C2O aborted attempt of reform. It is emerging again, admittedly in disguise, in the debate on the new architecture.

The principle of insurance denies the relevance of organizing international money. A range of competing currencies can supply international liquidity if channeled by an efficient wholesale money market, so it says. Adjustment can be smooth if governments behave as they should. The IMF shall supervise their behavior (surveillance for all countries, conditionality for countries with debt contracts with the Fund), provide temporary financing in case of adverse shocks, diagnose the nature of shocks and recommend the proper adjustment. As noticed above, the metamorphosis of the IMF from an insurance company to a financial intermediary is perceived as the transitory outcome of a procrastinated schedule of financial liberalization in developing countries.

The principle of monetary sovereignty states that confidence in global finance subjected to systemic risk relies ultimately on fiat money made available worldwide in time of crisis. No single pattern of organization is a first best to supply international fiat money. One can think of an international institution, an hegemon with implicit international responsibilities, a cooperative group of monetary authorities with or without a leadership. But, as will be made clear later, the principle of monetary sovereignty forcefully stresses that the political clout to make discretionary decisions in managing crises will take precedence on market discipline cum insurance in any scheme for an international lender of last resort.

Mainstream is quite conservative on macroeconomic issues. The discussion on adjustment is not to be reopened soon. Floating exchange rates coupled with explicit or implicit inflation targeting will go on ruling monetary interdependence between developed countries or groupings of countries without much interference from the IMF. It is likely that emerging countries which have overcome the latest crisis and want to monitor their financial liberalization more carefully, will make the same choice for the most part. Those which opt for pegging will do so with much stronger links and guarantees with respect to the anchor currency. As much as the countries have recovered from the hardship induced by the latest financial crisis and are adopting more flexible macroeconomic policies than before, the grip of the IMF on structural adjustment will hopefully recede. Except for poor countries which raise a different class of problems, the IMF will doubtless run a loose model of mutual assistance based on surveillance, will reduce sharply its role of financial intermediary and will refocus its mandate on prudential matters.

Therefore the new architecture is not a recipe for global reform in the present state of international monetary politics. Only the radical liberals advocate the return to a narrow concept of insurance in an international monetary order grounded on rules. On the opposite

side, no influential intellectual constituency pushes consistently the concept of international monetary sovereignty in both its macro and prudential aspects. It follows that the debate on the international lender of last resort, which is the crux of prudential matters, remains ambiguous. An international lender of last resort must be conceived without a world currency.

The rationale for a new architecture of limited scope will be considered first. The organization of this architecture will then be dealt with a careful distinction between market discipline, crisis management and lender of last resort per se. Finally the roles of the IMF in this renewed prudential framework will be surveyed.

III.1. The rising importance of prudential issues and the international lender of last resort in the new architecture

The liberalization of capital flows has brought to the fore interactions between microeconomic behavior and macroeconomic processes. These interactions used to be overlooked in standard international economics. Yet they are prominent in financial crises. It is why prudential policies have both a micro and a macro dimension. In an international context with separate national regulatory and supervisory bodies, the micro-macro potentially disruptive interactions raise problems which are reflected in a prudential dilemma akin to Mundell's monetary dilemma.

The prudential dilemma stipulates that the best of all worlds from the point of view of a competitive international economy with separate currencies is impossible. One cannot get altogether independent national prudential policies, minimum cost of capital and volatility of financial variables no higher than the volatility of fundamentals in international competitive markets. There exists an unescapable trade-off between *national prudential independence, global financial safety and market efficiency in allocating savings*. One of the three characteristics at least has to give up. Therefore solving the dilemma gives rise to three types of organization depicted in table 2.

While moving along the three types of organization, the Fund's involvement shifts from insurance against balance of current account shocks to financial crisis management and enforcement of prudential standards. The relative importance of the Fund's activity in both roles depends on how far the Asian crisis has made the intellectual mood in official gatherings, mainly G7 ministers and the US Congress, drift from the Washington Consensus.

Despite the violence of financial disruptions, a fashionable opinion, held mainly in the academic community but enjoying a strong political backing, maintains that financial markets are self-adjusting to a unique equilibrium. According to this opinion, the latest financial crises occurred exclusively because of bad policies in emerging countries. Implicit guarantees, non-existent national prudential control, crowny capitalism and the like stand for answers to the cataclysm that occurred. If this is so, it is enough to enforce the governance of international capital markets on the conduct of local public and private agents. It follows that the IMF must concentrate on the guardianship of international standards (data dissemination standard, codes of conduct on the transparency of policies, surveillance of the enforcement of prudential rules).

Table 2. Types of international prudential organization

Type 1 INDEPENDENCE +SAFETY (Bretton Woods)	Type 2 INDEPENDENCE + EFFICIENCY (80's and 90's financial liberalization)	Type 3 SAFETY+EFFICIENCY (Promised new architecture)
Capital controls National supervision and LOLR Foreign exchange crises originated in the current account Insurance mechanism : Mutual assistance via Fund's drawings and quotas	Financial integration in developed regions Endemic financial instability, Episodic crises and contagion Marginal improvement in international prudential regulation : Basel Committee (1974), Cooke ratio (1988), international prudential standards (1996) IMF monitors structural adjustment and faces crisis management problems.	Global financial integration cum regional monetary integration Supervision and crisis management become internationalized at the wider regional level or the world level The IMF as a crisis manager Crucial problem : the structure of the LOLR IMF conditionality and the observance of prudential standards

The alternative view puts the emphasis on potentially disequilibrating dynamics, triggered by positive feedbacks between leverage and asset price appreciation under uncertainty, leading to systemic risk. Such phenomena have a track record since the dawn of financial markets. Because systemic risk is conducive to multiple equilibria and because contagion can spread the occurrence of a bad equilibrium to a large range of countries, international crisis management is crucial to prudential policy, whereas it has only a residual role in the rival conception of self-adjusting financial markets. This is clearly understood. What remains hotly debated is the identification of the international lender of last resort in the crisis management process.

It is not disputable that lending in last resort pertains to monetary sovereignty. When a deterioration of confidence in financial markets has launched a liquidity shortage which is fast-spreading from market to market, the LOLR which can create fiat money ex nihilo has the power to stall the drying-off of market liquidity and to restore market values. The decisive move of the Federal Reserve on unsettled world capital markets in September-October 1998 was undoubtedly a major international lender-of-last-resort intervention.

Therefore this action and others directed to market stability (the Fed's guarantee of loans to brokers on futures markets on October 20, 1987 or its intervention on the Yen-Dollar foreign exchange market on June 16, 1998) clearly assign the ultimate source of sovereignty to the unconditional power to create fiat money. It is the attribute of central banking per se. The model of the issuer of a world currency being ruled out by the Fund's mandate which has drastically restricted the use of the SDR, it cannot create international liquidity at will. Correlatively the IMF cannot lend instantaneously to markets, but after a lengthy procedure to governments which make the money available to markets. It can be noticed however that the two latest facilities (SRF and CCL) can be drawn more speedily.

But the action of the lender of last resort can be manifold. Market liquidity risk is rarely singled out. Indeed market and credit risks are inextricably intermingled. Endogenous and circular repercussions from one type of microeconomic risk to another is what systemic risk is all about. But credit risk implies potential final losses. They are all the more damaging than banks are quite active in financial markets. Because inter-bank liabilities make a tightly interconnected network, it is totally unfeasible to pretend that the LOLR should neatly sift market risk from credit risk; and that it should lend only to solvent institutions in open market-like operations. C. Goodhart rightly observes that lending to insolvent institutions is unescapable, because the social cost of a systemic crisis allowed to run its course is vastly higher than the cost of bailing out an insolvent bank in the beginning. Nevertheless the LOLR may encounter final losses larger than what its balance sheet can absorb. Lending in last resort internationally magnifies the likelihood of such occurrence. Therefore the LOLR can fulfill its mission only if it is backed by a public entity which has the power to decide how final losses are absorbed and to see that the decision is enforced. Monetary sovereignty is overhung by political sovereignty.

This foray into the arcane of the lender-of-last-resort function delivers some definite conclusions for its international implementation. A comprehensive crisis management system combines a lender of last resort to provide liquidity lacking in the market and restore confidence, a public entity with the power to socialize final losses and monitor the restructuring of failed financial institutions, a cluster of regulatory and supervisory bodies to mitigate moral hazard. A meaningful financial architecture should encompass these features.

III.2 Market discipline, crisis management and the international lender of last resort

Adapting a crisis management system to the international arena raises formidable problems.

To begin with, the domestic lender of last resort in a national setting has settled down to a unique institution, the central bank. The broader system is jointly managed by the central bank, a government department (usually the Treasury) and one or several regulatory and supervisory bodies. In an international environment the lender of last resort does not have a unique configuration to deal with different crises and does involve more than one central bank. Collective action is all the tougher than central banks and governments of different countries do not have a common view about the requirements of global financial stability in time of stress. It is also all the more difficult than larger losses are presumed and than their sharing cannot be anticipated but only ascertained *ex post*. Because the allocation of losses is a compromise to reach, different from one crisis to another, the structure of cooperation cannot be institutionalized in a permanent framework. *It is shaped as a network of central banks and government entities contingent to the event to be treated.*

As much as the deterioration of confidence in vulnerable markets with a potential for contagion is an item in a financial crisis of systemic repercussions, the intervention of central banks is highly welcome. Only they have a permanent contact with market participants from which they can draw concrete information on the stress in the markets, as a basis for a diagnosis on the probability of occurrence of a systemic event. Only they can create instant liquidity and as a consequence let market participants in a state of constructive ambiguity about their decision to intervene or not.

One can consider situations calling for the assistance of an international lender of last resort. The first is the default of a financial intermediary jeopardizing its foreign counterparts chartered under different national jurisdictions. The second is the spillover of an asset price slump from one market to another, from one country to another. The third is the powerlessness of a domestic lender of last resort to forestall a liquidity crisis in foreign currency. In any case, a successful arrangement relies on the cooperation of two or more monetary authorities. The most spectacular recent rescue was the large scale operation in Korea after the failure of the announcement of a mammoth Fund's program to stop a landslide capital flight. Under the leadership of the US Treasury, central banks of the major financial centers were able to persuade the commercial banks under their supervision to keep their exposure on Korea. Be it from the creditor side or from the debtor side, the hierarchical relationship between the banks and their supervisors is crucial to bail in all the important private creditors, albeit their rational behavior would have been to indulge in free riding.

This brings the thinking to the implication of the private sector as a necessary ingredient of international crisis management. An influential view these days insists on focusing this implication before stress situations arise. Efficient prevention which can induce market discipline is all what is needed, the argumentation says.

It is not disputable that efficient prevention is a good thing. How to achieve it is more controversial. The easier part of the task is to set standards. The more arduous one is to enforce them. In to-day mark-to-market world, credit risk and market risk are intertwined. The only way to manage risk at the firm's level is to delegate supervision to the internal control systems of the banks. If the big international banks have efficient risk control, the argument goes, they will in turn impose market discipline on their debtors via credit limits and adequate spreads, whatever the capacity of the latter to manage risk themselves. The Group of Thirty is an active promoter of this doctrine. It contends that intermediation in wholesale international capital markets is the core of systemic risk and that the pool of intermediaries is made up of no more than fifty financial institutions. If it were true, the priority should be to strengthen supervisory requirements for these mighty financial firms. The lengthy discussions between the Basel Committee and powerful international associations of bankers, swap dealers and the like about capital provisions on market risk, the use of credit risk models, of stress tests, etc... show that it is more easily said than done. Because the performance of market intermediaries (commercial and investment banks, big securities houses and large hedge funds) in assessing risk was appalling in the Asian and Russian crises and because strategic behavior is so important in market dynamics, only limited improvements can be expected from this conciliatory process.

May be it is the reason why the International Financial Institution Advisory Commission, propped up by the US Congress and better known as the Meltzer Commission, has taken a much more radical approach. Drawing from former work by Calomiris, Sachs and others, the Commission reached devastating conclusions for the IMF, but caricatural and largely unsubstantiated early this year. The Commission would have draconian rules imposed to the financial systems of member countries as a pre-qualification to Fund's assistance. It would restrict de facto the Fund's programs to a small number of countries and unduly limit the scope for an international lender of last resort. As big countries of systemic importance would surely reject what amounts to an upheaval of the political philosophy of Fund's membership, systemic risk and the likelihood of global financial disorders would be greatly increased.

As for the detailed rules the Commission would see imposed to the banks, they would push to the extreme the abandonment of national prudential sovereignty, making them unrealistic, even if some of them were welcome to make financial systems more robust. The following obligations are advocated on the part of member countries : very high capital requirements on risky assets ; liquidity ratios on bank liabilities covered by prime quality negotiable securities (part of which being in foreign currency); a public insurance deposit scheme homogeneous amongst countries; free banking granted to any firm, either domestic or foreign, respecting the common prudential standards; last but not least the issue of subordinated debt. The last two requirements are the most radical. Free banking would increase competition, but is politically unfeasible in most countries who want to preserve their monetary sovereignty. The holders of subordinated debts being lowest priority creditors and having no benefit in windfall profits resulting eventually from risky conduct, are expected to be very sensitive to risk and curb bank management toward prudence. It remains to be seen however who wants to hold such inferior assets event at a premium in every large banks of a country so that it qualifies for Fund's assistance. Furthermore it is not clear how subordinated debt holders could wield enough power in corporate governance to have a decisive clout upon the bank strategy.

While the shortcomings and the limits of prevention have been duly acknowledged, a large field for innovation is open to embody private sector involvement in crisis management systems. This approach is less doctrinaire and more practical. It can be modeled on the contingencies. It is the macroeconomic counterpart of the unavoidable microeconomic delegation of supervision to market participants themselves. It should be theoretically understood as a set of devices to comfort constructive ambiguity in hampering moral hazard.

A promising approach resides in contingency loan contracting. The rationale is to allow debtors in trouble to keep servicing their debts while benefiting from a temporary alleviation of their commitments. It can be technically achieved in grafting derivative instruments upon debts, so as to produce payment flows which are negatively correlated with changes in a variable (an exchange rate, an interest rate, an asset or commodity price) critical for the debt solvency. Inter-bank credit lines are also sources of systemic risk when they are not renewed. Their extended maturity can be secured if they are offered with call option contracts to be exercised at the discretion of the debtor in specified circumstances. Obviously such sophisticated debt instruments are not without drawbacks. Creditors can anticipate the contingencies which are going to trigger the emergency mechanisms and try to sell their claims if negotiable or deny further credit. Such a behavior would exacerbate liquidity crises instead of mitigating them. Obstacles are even more hornny with bonds held by a large number of foreign investors. Asset managers do not usually have a mandate to conclude contracts on behalf of individual investors whose terms can be changed. Nonetheless, whether contingent credit can develop or not in the private sector, some governments (Argentina, Mexico) have contracted credit lines with international banks to secure liquidity in foreign currencies. This arrangement gets close to lending in before last resort.

Organizing a consortium of commercial and investment banks under the aegis of a leading central bank or of a club of central banks in an emergency situation is an approach experienced in a domestic context. Private agents which have a collective interest in forestalling a crisis but have no individual interest in contracting a loss sharing agreement, because they fear that other participants will renege on their commitment, can be bailed in

and induced to coordinate by a third party with a deterrent power. Central banks acting together and working closely with supervisory bodies can display such a power. It is known as prompt corrective action, a process of gradual coercion against excessive risk taking which was adopted in the US when Congress passed FDICIA in 1991.

Therefore concrete arrangements can be designed. But they do not immediately define the role of the IMF. It will be done in the next sub-section.

III.3. The IMF and the regulation of global finance

It is easier to spell what the IMF cannot be, barring a re-negotiation of the articles of Agreement. It cannot be an international central bank. The model of the issuer of a world currency has been rejected by the US government since the foundation of Bretton Woods and the statute of world money has been denied to the SDR. It cannot be a bank supervisor. The IMF operates in world politics, not in world markets. It deals directly with governments not with market participants. Its influence on markets is vicarious. This means that any intervention in last resort through the new non-conditional facilities (SRF and CCL) is still a loan to a government which (or its central bank) in turn lends in last resort as it sees fit. This procedure is quite at odds with a joint injection of liquidity by two or more central banks, cooperating to calm down stress on disturbed money or foreign exchange markets.

Besides, the IMF cannot go on with the extensive model of the financial intermediary for development. As noticed here above, this model has been outpaced by financial liberalization. The strata of differentiated facilities have become cumbersome, paralyzing and inefficient. Soon the wherewithal of the Fund's lending will be streamlined and will settle down to four facilities, covering the implementation of the first and fourth models : two facilities (SBA and EFF) for its role of insurer ; two facilities (SRF and CCL) for its role of crisis manager. As an insurer, its conditionality should revert to macroeconomic issues. The Fund has no comparative advantage in advising how long department stores should stay open each workday in a particular country. As a crisis manager, the IMF participates to the international regulation of global finance the world needs. The basic question is : what should be the cogent institutional division of labor in an efficient crisis management system ? In which capacity could the IMF play a major role in such a system ?

It has been demonstrated theoretically in this paper that a crisis management system has three related components : a lender of last resort, a set of arrangements for the implication of the private sector, a political mechanism to allocate final losses and monitor the necessary restructuring out of the bankruptcies left by a systemic event. The institutional division of labor pertains to the institutions best suited to accomplish the tasks pointed out. These tasks will be taken in turn.

- International lender of last resort

Different configurations of crisis entail different institutional structures of the international LOLR. The IMF can be a direct participant in some of them through the use of the SRF or the CCL. But it is far from being a useful partner in most of them.

In a banking crisis with a direct or an indirect impact on international payments (ex. Herstatt in 1974) the central bank which supplies the liquidity in acute shortage acts de facto as an international LOLR. The same is true in a market liquidity crisis with a potential for contagion in integrated financial markets (ex. stock market crash in 1987 and indiscriminate flight to liquidity after the Russian crisis of August 1998). In every of these cases, the Federal Reserve stood as a *de facto* international LOLR, though it does not have this responsibility *de jure*. Lines of communication with other central banks and a change of monetary policies in the latter completed the picture of a loose cooperation.

Obviously the Federal Reserve rose to prominence in those circumstances because the dollar plays the role of a key currency in global capital markets. The creation of the euro can also attract a number of countries in a monetary zone of influence well beyond the frontier of EMU. A financial accident anywhere in the zone, if it were capable of disturbing core financial markets, would surely be dealt with by the ECB, or more aptly by the ESCB, acting as an international lender of last resort. Therefore the more financial integration induces countries to seek monetary arrangements with key currencies, the more crisis management within the zone will be self-contained, the more likely the prudential dilemma will be solved within the monetary region. If this tendency were confirmed in the near future, regional monetary groupings would have the advantage of decentralizing crisis management. The central banks issuing key currencies would become regional lenders of last resort. Correlatively financial problems which used to be treated in the IMF would escape its reach.

Another configuration is a situation where the government or the central bank of a country, with no privileged links with a key currency central bank, is unable to perform the function of a LOLR *vis-à-vis* its domestic financial system. The reason could be a non-existent supervision, a conflict in the government when no responsibility of LOLR is clearly assigned to a definite institution, or more likely the need to intervene in foreign currency. In any case a truly international lender of last resort is called for to stem the crisis. The IMF is the institution better suited to organize an international rescue and can participate itself with the SRF. It will then collaborate with the local monetary authority which must supply the liquidity to the fragile link and in the relevant form. Furthermore, the IMF can reduce the vulnerability to contagion of countries eligible to the CCL by strengthening their foreign reserves.

- Implication of the private sector

As noted above, the mechanisms being considered pertain both to prevention and crisis management. The precautionary mechanisms depend on the quality of supervision : ability to perform prompt corrective action, to get meaningful information from stress tests, to enforce capital requirements encompassing all kinds of risks and their correlations. At the international level, the competence resides in the cooperation of the supervisory agencies of the most active financial intermediaries in wholesale money markets. They convene in the Basel Committee for banks and other gatherings for securities houses and insurance companies. There will be no gain for prudential control if the IMF were to step into the regulatory and supervisory process with no comparative advantage in this area. The issue is rather the following : is it good or not that the IMF continues to insist on prudential criteria as a basis for its conditionality in countries which are under its programs ? It will leave aside emerging countries of systemic importance and out of the reach of Fund's programs. A better idea might be to enlarge progressively the membership of the Basel Committee and

akin constituencies, so as to involve directly such countries in the prudential rule making and enforcing process.

As far as the implication of the private sector in crisis management is concerned, it depends on the LOLR in the particular configuration of crisis. The LOLR has the ability to identify the main market participants, to get the information about their exposure and to set up a bank consortium. The Forum for International Stability in Basel, working close to the international committees of supervisors, can coordinate the synthesis of the pieces of information and eventually evolve into an international observatory of systemic risk. But on top of the technical aspect of rescue operations implying the private sector, a political authority is needed to induce private sector agents to cooperate. The reason is the loss sharing which might be the consequence of such rescue whenever insolvent firms are bailed out. The institution which takes responsibility in restructuring insolvent financial firms and has the power to socialize part of the total cost as a condition to get through the restructuring process, is in the best position to be the leader of the crisis management system.

CONCLUSION - THE FUTURE OF THE IMF

This paper has emphasized the link between monetary and political sovereignty. A lender of last resort requires a political legitimacy. As long as the model of a world currency issued by an international central bank is banned, the international lender of last resort will remain a conundrum. Yet an international prudential regulation must be found for financial globalization to be viable. In the last two decades, the G7 or the US Treasury alone took the leadership in international monetary matters in times of crisis. The IMF was more an executive agent than the central international institution drawing its political leadership from the universality of its membership. Therefore the future of the IMF lies in the transformation of world politics.

One trend, whose consequences for the international LOLR have been acknowledged above, is the aftermath of the euro. It could give rise to other forms of monetary integration. The world would then move closer to a monetary oligopoly. What is known of currency competition makes one think reasonably that a leadership is a recipe for stability. If the leadership cannot proceed from the sheer strength of one of the participants, it must be the outcome of an international concertation between the powers whose financial systems have a global impact on capital markets. The capacity of the IMF to exercise a leadership will depend on the degree of concertation in the oligopoly. There is a potent force in the world economy which could radically alter the relationship between creditors and debtors, making the formation of a monetary oligopoly more likely : the catching-up process of non-OECD countries.

In the decades ahead there are serious reasons to consider that world growth will depict a far different pattern from the one of the last twenty years. The general but highly differentiated ageing process of world population will open a sustained opportunity for intertemporal trade. Whereas labor force growth is going to slow down markedly and even decrease in most OECD countries, it will speed up for a while both in absolute and in relative terms to total population in non-OECD countries. As this trend will occur in successive waves modulated by the speed of ageing, a potential for higher growth and higher rates of returns in quite large non-OECD countries than in the OECD area is a distinctive prospect. The growth differential might be enhanced by a technological catching-up process. Indeed information technology channeled by world networks and multinational companies exhibits both decreasing transfer costs and decreasing transaction costs in access to world markets.

Assuming that these trends will take grounds, the distribution of economic and financial power in the coming decades will look different from the present state of affairs. If risk-adjusted real rates of return are higher in large non-OECD countries which make the institutional overhaul required to mobilize their human resources, financial savings and technology will be attracted where human capital stands. The pattern of capital flows, current account balances and net foreign assets will change accordingly.

As favorable as they could be in the long run, there is no reason to believe that these structural changes would arise without upheavals and disruptions. Former episodes of international capital expansion in the XIXth century were plagued with financial crises. But the whole process was regulated in a world monetary order which delivered a remarkably smooth profile for the leading long-run interest rate and related spreads. As mentioned earlier, there is no way that the international monetary system will evolve toward a world

currency, in the medium-to-long run, be it a commodity or a fiat money. Subsequently the world monetary oligopoly will become more complex with the rise of China, India, Indonesia, Brazil and the come back of Russia. All those big powers will have large financial markets in national currencies which will not be linked to any of the former key currencies. The most likely hypothesis to retain is that of multipolar monetary interdependencies. Spontaneous dynamics in oligopolistic currency competition are rigged with large shifts in the holding of assets and giant fluctuations in exchange rates. Exchange rate crises will go on spoiling the balance sheets of financial intermediaries and insinuating fragility in banking systems. The international crisis management system will need a political leadership in place of the obsolete G7. In this nexus of forces the IMF could play a major political role.

The political legitimacy behind the international lender of last resort to thwart systemic crises will be asserted in the central institution gathering the monetary authorities most concerned. However there should be drastic changes in the statutes of the IMF if its mandate were to exert a prudential governance in the international financial system. The IMF should reflect the upcoming changes in economic power. Revisions of quotas should be enacted. A political committee with effective authority over the services should be set up at last. It would be the locus of strategic decisions to deal with crises of worldwide dimension. If and when the IMF could acquire a legitimacy as the political center of prudential governance in the global financial system, Keynes's utopia about world money might become an issue in world politics in the remote future of the XXIth century.

REFERENCES

- AGLIETTA M. et DENISE C.**, 2000a, Les dilemmes du prêteur en dernier ressort international, *Revue Française d'Economie*, 1^{er} trimestre.
- AGLIETTA M. et MOATTI S.**, 2000b, *Le FMI : de l'ordre monétaire aux désordres financiers*, Economica.
- ARRIAZU R., CROW J., THYGESEN N.**, 1999, *External evaluation of IMF surveillance*, International Monetary Fund.
- BERGSTEN C. and KENEN P. eds**, 1995, *Managing the World Economy : fifty years after Bretton Woods*, Institute for International Economics.
- CALOMIRIS C.**, 1998a, *Blueprints for a new global financial architecture*, Joint Economic Committee, US Congress, Washington D.C., October.
- CALOMIRIS C.**, 1998b, The IMF imprudent role as lender of last resort, *Cato Journal*, vol 17, n°2, February.
- CAMDESSUS M.**, 1998, Towards a new financial architecture for a globalized world, *Royal Institute for International Affairs*, May 8.
- Committee of Twenty, 1974, *International Monetary Reform*, IMF.
- DENIZET J.**, 1987, Keynes en 1943 : négociateur et prophète, in Zerbato M. ed, *Keynesianisme et sortie de crise*, Dunod.
- EICHENGREEN B.**, 1999, *Towards a new international financial architecture : a practical Post-Asia Agenda*, Institute for International Economics, Washington D.C.
- FISCHER S.**, 1999, Reforming the international financial system, *Economic Journal*, November.
- GIANNINI C.**, 1998, Enemy of none but a common friend of all? An international perspective on the lender-of-last-resort function, *Temi di discussione*, n° 341, December, *Banca d'Italia*.
- GOLDSTEIN M.**, 1997, *The case for an International Banking Standard*, Institute for International Economics, Washington D.C.
- GOODHART C.**, 1999, *Myths about the lender of last resort*, FMG, LSE, roneo.
- JEANNENEY J.M.**, 1994, De Bretton Woods à la Jamaïque : contestations françaises, *Economie Internationale*, n° 59, 3^{ème} trimestre.
- KELEHER R.**, 1999, An International lender of last resort, the IMF and the Federal Reserve, Joint Committee, US Congress, Washington D.C., February.
- KENEN P.**, 1996, From Halifax to Lyon : what has been done about crisis management ? *Princeton Essays in International Finance*, n° 200, October.
- KEYNES J.M.**, 1941, Proposals for an International Clearing Union, reprinted in *The Collected Writings of John Maynard Keynes*, vol XXV, *Activities 1940-44, shaping the post-war world : the Clearing Union*, Mac Millan for the Royal Economic Society, London 1980.

- KRUEGER A.**, 1998, Whither the Fund and the World Bank, *Journal of Economic Literature*, vol 36, December.
- LELART M.**, 1995, *Le Fonds Monétaire International*, PUF, 2° ed.
- MELTZER A.**, 2000, *Report of the International Financial Distribution Advisory Commission*, US Congress, Washington D.C., March.
- MISHKIN F.**, 1998, *Systemic Risk, moral hazard and the international lender of last resort*, NBER, April.
- PADOA-SCHIOPPA T.**, 1993, *Tripolarism : regional and global economic cooperation*, Occasional Paper n° 42, Group of Thirty, New York.
- ROGOFF K.**, 1999, International Institutions for reducing global financial instability, *Journal of Economic Perspective*, Autumn.
- SCHWARTZ A.**, 1999, Is there a need for an international lender of last resort ?, *Cato Journal*, vol 19, n°1, Spring.
- SUMMERS L.**, 1998, Building and international financial architecture for the 21st century, *Cato Journal*, vol 18, n°3, Winter.
- TRIFFIN R.**, 1964, The evolution of the international monetary system : historical reappraisal and future perspectives, *Princeton Studies in International Finance*, n°12.
- TRIFFIN R.**, 1976, Jamaica : major revision or fiasco ?, in Bernstein E.M and alii, Reflections on Jamaica, *Princeton Essays in International Finance*, n° 115.
- TRIFFIN R.**, 1978, Reshaping the international monetary order, *International Social Sciences Journal*, vol XXX, n° 2, UNESCO.
- VAN DORMAEL A.**, 1978, *Bretton Woods : birth of a monetary system*, Mac Millan.
- WILLIAMSON J.**, 1977, *The failure of world monetary reform 1971-74*, Thomas Nelson and Sons.

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