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Preventing Financial Instability and Currency Crises

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Abstract: Financial crises can have a severe impact on the real side of the economy with countries losing up to 20 percent of GDP. The paper studies rules that prevent financial instability and currency crises. These include institutional arrangements for a solid banking system, prudent regulations and appropriate principles of monetary policy. The paper studies the role of the IMF in light of the past experience in preventing currency crises and a systemic breakdown of the world's financial system and points out necessary IMF reforms. It discusses how the IMF should adjust to the structural changes in the world economy.

Keywords: Financial instability, rules for monetary stability, hedge funds, exchange rate crises, IMF, IMF quotas.

JEL classification: E5, F33, G2, P00

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Preventing currency crises and financial instability

Horst Siebert

In the monetary and financial area of the world economy, rules are necessary because money is not neutral. If money simply were a veil that only hides the real side of the economy, the veil could be lifted, and then the real side of the economy, untouched by money, would become visible. Since money is more than a veil, the real economy is affected by such monetary phenomena as inflation and hyperinflation, deflation as well as by financial and currency crises. Consequently, the correct institutional arrangement for the monetary and financial system is a major question.

The national aspect of the non-neutrality of money has to be dealt with by national institutional arrangements. To avoid inflation requires a sound monetary policy and the independence of the central bank. These conditions also apply to asset price inflation, i.e. to financial bubbles. To prevent a bank run in a country requires rules for banks and other financial institutions and makes national supervision necessary. If national policy does not establish the correct rules or if mistakes are made, the negative impact on the real side of the economy is first of all felt by the country in question, but, of course, it may also spread to other countries.

When there is the risk of contagion and of a systemic crisis for the world's financial system, global rules for the international monetary and financial system become necessary. The links between national phenomena of monetary and financial disturbance are: inflationary or deflationary movements in the price levels, abrupt changes in the exchange rate as the price of national monies, exchange rate crises spreading from one country to another and threatening to develop into a systemic crisis, financial crises moving from the financial center in one country to that of another, or bank runs extending from one country to another.

Note that these rules for international financial stability are in addition to the rules for real capital, discussed in my Kiel working paper 1381. There we have argued that there is a pecking order between trade and the movement of factors of production, especially between real capital and labor. If we interpret for a moment "capital" as real capital plus portfolio capital, there is also a pecking of these capital flows if we use volatility, or more precisely capital flow reversals, as a criterion. In this hierarchy, viewed for instance from the vulnerability of an emerging economy, foreign direct investment is the least volatile. Capital flow reversals are less likely if investors have invested in a firm, even though capital outflows are possible.

Capital flow reversals are more likely for portfolio capital, which can leave a country instantaneously. Here we can differentiate between equity and bonds and short-term credits which are the most volatile.

Severe impact on the real side of the economy

Monetary-financial crises have caused severe hardship in the past. In the Great Depression 1929-1933, the US has lost one third of its GDP, industrial production halved and unemployment jumped from 1.8 percent in 1926 to 24.9 percent in 1933. Stock prices collapsed from an index above 350 in 1929 to 70 in 1932. Consumer prices fell by 20 percent, thus indicating a deflation. The Great Depression represented a major shock to the world economy. World trade declined to about one third of its 1929 level and the depression spread to the European countries. The entire global financial system got into disarray. In a more recent financial crisis, Argentina lost 20 percent of its GDP in 2001/2002. Economically speaking, the country shrunk. Real wages fell with a similar percentage. Such calamities with a massive impact on the real economy usually go hand in hand with a political crisis. Other recent crises were the Swedish crisis in 1992, the Mexican Peso-Crisis in 1994, the Asian currency crisis in 1997 in Thailand, Indonesia, Korea and other Asian economies, the Brazilian crisis in 1999 and the Turkish crisis in 2001. In these currency crises, the nominal exchange rates were changed abruptly with devaluations of 50 percent and more. GDP growth rates became negative.

Not all monetary-financial crises spread to other countries. An example is the negative impact of the bursting of the Japanese bubble in December 1989, showing up in a poor Japanese growth performance and increased unemployment in the 1990s, but remaining limited to Japan. In the period 1992-2003, the Japanese economy has been nearly stagnant (with the exception of 1996), the average annual GDP growth rate standing at 1.2 percent. Japan slid into a severe recession in 1998/1999. Japan's accumulated GDP loss for the period 1992-2004 amounted to US\$ 13 trillion (in constant 2000 prices), if one assumes that Japan would have continued to expand at its average GDP growth rate of 3.94 percent from the 1980s for the period between 1992 and 2004. This loss constitutes three times the 1990 GDP (Siebert 2007b, Ch. 7). Apparently, the negative impact for Japan had second-round effects on other countries in Asia and on the world economy since the demand stimulus coming from Japan was reduced. However, the Japanese financial crisis did not directly affect other countries.

It is argued that financial markets have become more efficient and can deal with risk much better than years ago. However, while risk management of financial institutions has improved,

new risks have arisen, for instance in the derivative market. As the collapse of the hedge fund “Long Term Capital Management (LTMC)” in 1998 shows, masterly expertise may not be sufficient to anticipate all possible outcomes. And the near-collapse of two German banks in August 2007 in the context of the US subprime crisis and the problems caused by structured investment vehicles or conduits through which banks have shifted risky business from their balance sheets indicate that risk does not disappear completely. Moreover, quite a few risks for the financial markets consist in changes of politics, which may alter the economic environment completely. Also business cycles still create uncertainty. It would not be wise to base monetary and financial policy on the premise that financial crises and currency crises will be gone for good.

In the following we distinguish rules preventing monetary and financial instability, for instance the collapse of banks, and currency crises, although both disturbances can be interrelated. Note that such rules have the property of a public good: the financial stability they provide is consumed in equal parts by all.

Rules for monetary and financial stability

Institutional arrangements are needed to prevent or minimize disruptions that can arise in the monetary-financial system.

A solid banking system. To prevent monetary and financial crises requires a solid and robust financial architecture. Inflation and hyperinflation can be prevented by adequate institutional arrangements for the central bank and the banking system and by an adequate monetary policy. The independence of the central bank is of utmost importance. A basic rule is that public budget deficits must not be financed by printing money. This condition has been repeatedly violated in Latin American countries in the past. In industrial countries, the interrelations between politics and the central bank are more intricate. The position of the central bank must be strong enough to resist political pressure for an easy money policy. Governments with high debt will push for low interest rates to reduce their debt burden. This also often holds for governments which face elections. A central bank giving in to this pressure jeopardizes price level stability. It loses credibility that is a crucial precondition for stable money. Moreover, an excessive credit expansion endangers monetary stability.

Prudent supervision. The financial system of a country has to be constrained such that a crisis is unlikely to start or to be reinforced. This involves setting standards for commercial banks and other financial institutions including investment banks. The correct expression of risks in

risk premia, reliable accounting and auditing are relevant issues. The financial sector needs to be robust so that an economy is not easily affected by shocks. Solid fundamentals are needed because without them inflationary expectations and expectations of a depreciation start to develop. This is the lesson that we can draw from the currency crises in the Asian countries.

Prudent supervision is an important aspect of preventing bank failures and financial crises. When a bank run occurs and when customers lose confidence in the reputation of a bank and withdraw their deposits as quickly as possible in order not to lose their funds, it is too late. Regulation of the financial market includes a broad spectrum of policy instruments, ranging from capital adequacy requirements, margin requirements and bank reserve requirements to restrictions on financial products, price controls and governmental fees. Rules intend to improve information for the investor and to assure the stability of the system over time. Regulations thus can generate benefits. Apparently, they also involve costs for banks and ultimately for the customer. Consequently, banks tend to develop new products in order to avoid the control of regulators.

Regulators compete with each other since financial institutions and investors can avoid a regulatory regime by doing their transactions in another country. In this case, regulation may drive the financial industry or a financial product out of a country. Regulation should make use of the self-interest of market participants to monitor and control the performance of financial firms, for instance through credit ratings and specialized media. This approach of market supervision relies on the attention of market participants who want to prevent potential losses through improved information. The approach may help to control offshore markets that are less regulated.

Standards for financial solidity. The Basel II Framework of the Basel Committee on Banking Supervision, agreed upon in 2004, has established capital adequacy requirements for banks. Banks have to back their claims on the non-bank private sector by an overall limit of eight percent capital endowment (in terms of shareholders' equity or retained earnings), permitting a differentiation between different types of risks of claims. External ratings and standardized internal control mechanisms can be used to assess credit risks. National supervisory authorities are now implementing these rules through domestic rule-making and adoption procedures. Basel II is an attempt to establish common standards for the banking industry. The Basel Committee has addressed the home-host information sharing requirements in a 2006 paper that are necessary for Basel II implementation.

It is amazing that banks have circumvented the Basel-II rules by inventing off-shore structured investment vehicles or conduits as independent subsidiaries with a negligible capital endowment, specializing in securitization. For instance, the conduit buys up mortgages (or other papers), bundles them up “securitizes” them and offers them on the market to investors as asset backed securities. The conduit receives funds from investors, because the bank of the conduit grants a credit line to the conduit. In this way, the bank takes the conduit off its balance sheet, as the near-collapse of the German Industrie Kreditbank (IKB) in August 2007 has shown.¹ Then banks actually no longer know how much credit risk they have hidden in their books. Nor are markets informed on the risk collected in the banking system. The International Financial Reporting Standards must make absolutely clear that balance sheets of banks have to be consolidated and must include all risks that a bank has. Moreover, financial supervision has to sharpen the rules for the consolidation of off-balance-sheet vehicles and of the risks associated with them. Transparency has to be improved. We need to know which part of the credit remains with the sponsor and which part is taken over by the vehicle company or by secondary or tertiary banks to which the assets have been sold. Bank managers violating these rules have to go. Finally, rating agencies have to improve their ratings. Financial supervision should compare *ex-post* the quality of ratings.

The Financial Stability Forum, also hosted by the Bank for International Settlement in Basel, brings together senior representatives of national financial authorities - central banks, supervisory authorities and treasury departments, international financial institutions, international regulatory and supervisory groupings, committees of central bank experts and the European Central Bank. It seeks to co-ordinate the efforts of these various bodies in order to promote international financial stability, improve the functioning of financial markets, and reduce systemic risk.

Sequencing. It has now been accepted that there is a sequencing problem in liberalizing the banking sector and the capital account. If the capital account is liberalized and if, at the same time, the banking sector is not adequately regulated with respect to prudential standards, an over-expansion of credit may result. Sweden with its crisis in 1992 and Thailand in 1997 are two examples. Due to the complementarities in institutional reforms, the liberalization of the

¹ It is reported that it is difficult to determine the risk allocation between the credit guarantor, i.e. the sponsor, and the vehicle company. The risk allocation is found in a sentence on page 92 of a 400 page contract (as was the case with IKB, the German Industrie Kredit Bank), and is worded in such a way that it is difficult even for legal experts to understand what it means.

capital account should be preceded by an appropriate prudent regulation of the banking sector. For China, for example, this means that the capital account can only be liberalized after the banking industry has been made sufficiently robust.

Hedge funds. The term hedge fund denotes institutions that specialize in financial arbitrage, exploiting unused financial market opportunities. This includes among other things currency arbitrage, arbitrage in time (long and short positions), between locations (seeking assets that are mispriced relative to global alternatives), between products (a convertible bond and equity, buy and sell undervalued securities) and between securities that have deviated from some statistically estimated relationship. Derivatives, i.e. financial contracts whose value is derived from other contracts using leverage, play an important role. Besides derivatives currency arbitrage is another example. For instance Hedge funds take credits in yen at an extremely low interest rate, swap yen against US dollars and euros with higher interest rates and exchange these back into yen (“carry trade”). This depresses the yen and fuels the other currencies.

Sometimes the term hedge fund is used to include private equity funds which collect financial capital in order to buy up enterprises. Indeed, hedge funds have some similarity to equity funds when they are involved in merger arbitrage, i.e. in arbitrage between an acquiring public company and a target public company. Nevertheless, equity funds should be considered as real capital flows (see my Kiel working paper 1381).

Hedge funds play an important role. In specific market segments, for instance in trade with credit-derivates, they supply risk capital and allow to limit credit risks for individual investors, for instance when a discount certificate introduces a floor in the stock market index, thus providing some certainty for individual investors. In this way, they permit a more efficient risk allocation. They can lower market risk by spreading it on more shoulders. They make financial markets more liquid and ease price formation, providing information on risk-taking behavior of individuals. For institutional investors, as pension funds and insurance companies, who have invested in hedge funds, they represent an interesting opportunity. Also banks provide capital to hedge funds in the form of credits. The number of hedge funds world wide is estimated at 9000. Their assets are put at 1.6 trillion US dollar.

In contrast to improving risk allocation, hedge funds can represent a risk for the stability of financial markets. This is the case when the risk positions taken show up to be unsustainable, i.e. in the case of a misjudgment. This will for instance happen if the statistically estimated relationship that is used to determine the deviation of the value of securities proves to be

wrong. This happens when market trends change and when the change is not incorporated in the econometric models. A case in point is the „Long-Term Capital Management“, which lost 4.6 billion US dollar in a few months. It had to be bailed out by the Fed. In 2006, Amaranth, speculating on natural gas prices, burnt 6.6 trillion US dollar within a week. Market risk increases when hedge funds with wrong estimates move in the same direction. Then a financial crisis will be amplified. It then no longer holds that market risk is reduced. This is the issue of systemic risk for the global financial system caused by hedge funds. Accordingly, the ECB (2006: 142) warns that "... the increasingly similar positioning of individual hedge funds within broad hedge fund investment strategies is another major risk for financial stability which warrants close monitoring despite the essential lack of any possible remedies. This risk is further magnified by evidence that broad hedge fund investment strategies have also become increasingly correlated, thereby further increasing the potential adverse effects of disorderly exits from crowded trades."

Hedge funds have unusually high returns. However, it should be noticed that quite a few hedge funds have short lifetimes. If returns only reflect funds that have survived, the performance of the industry is overestimated.

Hedge funds cater market participants who are willing to take on high risks if they get high returns. Whereas the typical public investment company in the US, for instance a mutual fund, is required to be registered with the Securities and Exchange Commission (SEC) and underlies a set of limitations, hedge funds are open to accredited investors only. Usually, they are exempt from any direct regulation by regulatory bodies. Moreover, hedge funds flock regulatory havens, such as the Cayman Islands, Dublin, Luxembourg, the Channel Islands, the British Virgin Islands and Bermuda. The Cayman Islands are estimated to be home to about 75 percent of world's hedge funds, with nearly half the industry's assets under management.

Given these conditions, policy measures to reduce the systemic risk arising from hedge funds are difficult to come by. One approach is to require hedge funds to register in a country; if they then go offshore, it signals to the customer that a higher risk is involved and that these funds will not be bailed out. Another approach is to make national banking systems, including all financial intermediaries, more robust. Accordingly, credits given to hedge funds and derivatives should be adequately reflected in the risk evaluation of banks and their balance sheets. A dialogue with the hedge funds industry, possibly with the largest 100 funds, should lead to a code of conduct of hedge funds. The global hedge fund industry should review and enhance existing sound practice benchmarks for hedge fund managers in the light of expecta-

tions for improved practices set out by the official and private sectors. Part of such a code of conduct can be a self commitment of the industry to submit to an external rating. More systematic and consistent data on core intermediaries' consolidated counterparty exposures to hedge funds should be developed as an effective complement to existing supervisory efforts (Financial Stability Forum 2007).

National approaches versus international rules. International rules require ceding sovereignty. That is why nations try to rely on national policy instruments in order to avoid abiding by international rules. Thus, they accumulate reserves in order to stay away from the IMF (see below). Cases in point are China and other Asian economies, among them Japan. Total accumulated reserves are estimated at US\$ 6.5 trillion at year end 2007 (Morgan Stanley 2007). These sums are different from those we have seen in the past when reserves have melted away quickly as soon as a currency got under attack. Moreover, countries are more cautious in liberalizing their capital account.

Reducing portfolio flows. As another approach it has been suggested to reduce the size of capital flows, especially of portfolio flows. The most prominent suggestion is the heavily discussed Tobin-tax (Tobin 1978). The issue here is to what extent the benefits of capital flows will be decreased and whether a universal Tobin tax, if ever possible, will hurt real capital inflows (Siebert 2007b). In the case of Chile, severe entry conditions for portfolio capital requiring a non-interest bearing deposit of 30 percent had a negative effect even on the inflow of equity capital and had to be given up. Malaysia's entry constraints of 1998 for portfolio capital could only be used temporarily. Moreover, countries that have successfully developed financial centres are reluctant to obstruct them.

Rules for monetary policy?

In monetary policy, an equilibrium can be understood as being the result of an implicit agreement between the major central banks, the Fed, the ECB, the Bank of Japan and the Bank of England. Central banks usually follow a stability target. While in principle they have a choice between price level stability and the nominal exchange rate, only smaller countries can choose to fix their exchange rate, normally to an anchor currency. Larger countries or regions would have to follow suit in their monetary policy to the policy of the anchor country. For instance, if the Fed applies an expansionary strategy, a constant exchange rate would

force the ECB to follow suit, allowing the price level to rise. The ECB then would lose its independence.

Among the central banks, the Fed has a special position since the US dollar is the dominating currency, the euro, newly established in 1999, coming in second place. A leading currency or an anchor currency comes into existence if a country has a high share of world output, trade and capital flows. Another important condition is that the currency is stable. Such a currency has the prospect of being accepted in many countries (dollar standard, dollarization). Of the total transactions in the international currency markets in April 2007, 86 percent have the US dollar on one side of the transaction, 37 percent the euro where the sum of the percentage shares of individual currencies totals 200 since two currencies are involved in each transaction. The yen and the sterling follow with 17 percent and 15 percent respectively. The daily average turnover on the foreign exchange market amounts to US\$ 3.2 trillion. This figure is adjusted for double counting. The by far most traded currency pair was the dollar/euro – amounting to 27 percent of global turnover; the dollar/yen accounted for 13 percent and the dollar/sterling for 12 percent (Bank for International Settlements 2007). Of the total reserve holdings of all central banks in April 2007 that can be allocated to a currency (identified reserves), 64.8 percent were held in US dollars, 25.6 percent in euro, 2.8 percent in Japanese yen and 4.7 percent in British pound. Total reserves including unaccountable reserves total US\$ 5.7 trillion. Euro holdings only amount to a value of 936 billion US dollar. (IMF 2007a)

The anchor country enjoys several advantages: It has lower transaction costs because many transactions are done in its currency. It also has the advantage of seigniorage since foreign central banks and market participants hold its currency. Moreover, the country's financial industry benefits from the currency position. Finally, the US can follow a strategy of benign neglect ("The dollar is your problem and our currency"). This means that the US does not have to intervene in the foreign exchange market to keep a specific value of its exchange rate. It can use its monetary policy for internal goals without worrying about its balance of payments deficit (or its exchange rate) and it does not bear the burden of financing its balance of payments. It may be tempted to strategically play with the external value of its currency, for instance riding out of international debt through depreciation.

In following this line, it risks to lose the role as anchor. This then would reduce the option to finance its balance of payments deficits in the long run. Nevertheless, the anchor country may take recourse to this way out in special circumstances. Witness the US giving up its role as anchor after the Vietnam War which then led to the termination of the Bretton Woods system.

A similar case might arise when the US will lose part of its strong economic position with the ascent of China, possibly not scaling down its military expenditures to its new position and financing the deficit through outside money. Apparently, this would put extreme pressure on other central banks, for instance the ECB, to stand to their price level targets.

Such extreme cases show that monetary policy actually only is a rather fragile equilibrium. We do not have institutional rules for restraining the behavior of the central bank of the anchor currency. (On the role of banks as a lender of last resort see below). This point was discussed at several instances, for instance by Rueff (1972). However, a return to the gold standard is not feasible. Attempts for a reference zone system (Williamson 1993) or an universal money (Mundell 2003) are not too promising.

Rules preventing exchange rate crises: the mission of the IMF

Since exchange rate crises with an abrupt fall in the external value of a currency cause a major damage to the individual country affected by the crisis and since they involve the risk of contagion of other economies and endanger the stability of the global financial system with systemic risk, rules and institutional arrangements are necessary to reduce the probability of such currency crises. It is apparent that national arrangements in favor of a solid and robust banking system and in favor of the solidity of public finances are important preconditions to avoid currency crisis. Therefore all the conditions discussed under the heading of financial stability at home are relevant in preventing currency crises. These national conditions, however, are not sufficient on an international scale. After all, a currency crisis caused by one country can be thought of as a border-crossing negative externality, doing damage to another country, so to say representing a monetary-financial acid rain. Therefore it is necessary to prevent such negative spillover and keep them from developing into a systemic crisis. Moreover, using the same analogy, once a crisis has erupted it is not too helpful to call upon the polluter-pays-principle. The international community must stand by to support the nation affected, similarly as a doctor must help a patient even the patient himself has caused his illness.

The core goal of a global rule system for financial stability consists in preventing the start and development of such crises, and, once a crisis has begun, to hinder it from escalating into a systemic financial crisis of the global economy. Fending off currency crises has become the main mission of the International Monetary Fund (IMF) since the introduction of flexible exchange rates in 1973 that went along with the increased importance of portfolio capital flows. In a world where exchange rates in the short and medium term are determined not only by the

trade in goods but also by volatile and rapidly reversing flows of capital, the fight of currency crises is the IMF's top priority, consistent with its main purpose of fostering the stability of the international monetary system and, thus, enable good conditions for successful economic development. Additionally, the IMF provides an institutional framework for discussions of international currency problems. Originally, when the IMF was founded in 1944, its role after World War II was to assist countries that had gotten into temporary balance of payments difficulties by providing bridging loans to them. In this manner the exchange rates could be kept more or less stable in the Bretton Woods exchange rate system.

The IMF would be misguided in its mission to base its operations on the assumption that there will be no currency crises for a lengthy period of time. It is the characteristic nature of currency crises that they occur unexpectedly. We realistically have to assume that in spite of all efforts made, there will be currency crises in the future (Siebert 2007b; 2007c).

The IMF as an organization finds itself in an orientation crisis, facing four dilemmas.² A first core issue is that most of the IMF facilities - Stand-by Arrangements, Extended Fund Facility, Supplemental Reserve Facility, Compensatory Financing Facility, Emergency Assistance and Exogenous Shocks Facility – are only applied after a currency crisis has broken out. The typical pattern is that capital markets no longer provide liquidity to a country in crisis, since the country is unable to meet its payment obligations (debt service, repayment of loans). There is a moratorium, and negotiations with creditors are started which result in the creditors losing part of their loans. To enable emergence from the crisis fresh capital is the priority need; it is provided by the IMF in the form of liquidity assistance. This is the IMF's fire-fighting function. IMF loans bear interest, some with a surcharge, and are to be repaid. The existing financing instruments limit the amount which can be drawn as loans to 100 percent of the quota on an annual basis and to a cumulative total of 300 percent, net, with consideration being given to negotiated repayments; in exceptional cases these limits may be exceeded.

Ex post assistance has serious shortcomings. It always has a negative incentive effect for the future behavior of borrowing countries and lenders. If generous assistance is granted *ex post*, governments are hardly going to make great efforts to avoid a currency crisis ("moral hazard"). Creditors will act with less prudence in granting loans. Governments, political parties,

² There is far-reaching agreement by now that in case of a currency crisis it is not advisable to defend at all costs a non-sustainable exchange rate that is not supported by economic fundamentals. Instead, devaluation is one of the instruments to exit from the crisis and to avoid distortions in exchange rates, the correction of which would ultimately be enforced by the markets through a currency crisis.

but also creditors such as banks and other lenders can rely on having a currency crisis become less serious because the IMF will be offering assistance. Accordingly, efforts to avoid a currency crisis will be less vigorous. The willingness to enforce institutional rules, for example, in the area of financial surveillance or limitation of public debt, is lessened. Thus, *ex post* assistance can increase the probability of currency crises. Although currency crises are a short-term phenomenon, they always have causes that have evolved over a long period.

A second major dilemma for the IMF consists in the characteristics required by the *ex-post* approach, namely “conditionality”. Since in case of a currency crisis the IMF cannot simply give money to a country without a change in the country’s policy, the loans entail conditions for the borrowing countries. It is not possible to control a currency crisis in a crisis country without conditions that reverse absorption. However, conditionality has been thought of as too harsh in the Korean crisis. Ironically, this has been expressed in the fact that, as in the Asian currency crisis, an IMF country team of only some persons fly into crisis country and sets conditions to a country’s government, and often a democratically elected one. Governments do not want the IMF to be their taskmaster.

A third dilemma is that governments walk away from the IMF. This is the fall out of the IMF’s attitude in the Asian currency crisis. Countries have paid back their loans earlier than scheduled and rely on accumulating international reserves. The IMF is without customers (Lerrick 2007). Its legitimacy is at stake. For the IMF, this has had the consequence that its income from interest payments has declined; it receives interest for the outstanding loans by the countries affected by a currency crisis. Consequently, the IMF has less revenue to cover its operating expenditures. As of July 31, 2007, total outstanding loans stood at US\$ 11.2 billion (7,355 million SDRs) in contrast to US\$ 91.3 billion in 2003. The lowest lending volume in 25 years has resulted in one of the lowest incomes in the Fund’s history. In 2007, only Turkey *de facto* still paid loan interest. Accordingly, interest income amounted to only US\$ 1.0 billion in 2007 whereas it had been US\$ 3.2 billion in 2003.

The Fund primarily finances its operations from the difference between interest received from countries who have taken out loans plus interest on SDR holdings minus remunerations (Table 1). The main sources for operational income are interests and charges for outstanding credits. The IMF levies periodic charges on member’s use of outstanding credits. The basic rate of charge is set at the beginning of each financial year as the SDR interest rate plus a margin expressed in basis points determined by the Executive Board. The SDR interest rate is determined weekly by reference to a combined market interest rate, which is a weighted aver-

age of yields on short-term instruments in the capital markets of the euro area, Japan, the United Kingdom and the United States. In addition, the IMF earns interest on its SDR holdings. Although SDRs are not allocated to the IMF, the IMF may acquire, hold and dispose of SDRs. The IMF receives SDRs from members in the settlement of their financial obligations to the IMF and uses SDRs in transactions and operations with members. Operational income is obtained from investment as well. With nearly US\$ 300 million the position “Net income from investment” represents the second largest income source of the IMF.³

The largest portion of Fund expenditures are personnel costs, which, at about US\$ 700 million in 2007, amount to almost three fourths of the Fund’s administrative expenses. Administrative costs also include about US\$ 50 million for capital investments in buildings and information technology. The IMF pays interest, referred to as remuneration, on a member’s reserve tranche position. A member’s reserve tranche is equivalent to its total quota less its subscription payment to the IMF. A member’s reserve tranche is considered as part of its external reserves and a liquid claim against the IMF.

In 2007, the operating loss stood at 100 million US dollars. Costs have been rising on the expenditure side while income has steadily declined since 2002. The practice until now has been to set the basic IMF interest rate level in such a way that interest income at least covers IMF expenditures. For its budget, the IMF has reserves in the amount of about nine billion US dollars. But the actual financing situation can hardly be called sustainable if the current trend of declining lending volumes were to continue. The near doubling of expenditures and the doubling of personnel in the last ten years will necessarily have to be corrected.

Table 1: IMF consolidated budget, fiscal year ending April 30, 2007, in Mio US dollars

Operational Expenses		Operational Income	
Remuneration	738	Interest and charges	1047
Administrative expenses	928	Interest on SDR holdings	190
		Net income from investments	295
		Other charges and income	25
		Operational loss	109
Total	1665	Total	1665

Source: IMF (2007c).

³ These investments are held in the Investment Account (US 9,531 million at April 30, 2007) and MDRI-I Trust (US 459 million at April 30, 2007) of the balance sheet and are managed by external investment managers. The IMF invests in fixed-term deposits; short-term investments and fixed income investments, which include domestic government bonds of the euro area, Japan, the United Kingdom, and the United States; and medium-term instruments issued by the Bank of International Settlements.

A fourth dilemma is that the IMF cannot get out of this dilemma by looking for new tasks which are not covered by its core mission, for instance playing a greater role in developing countries. While monitoring, advising and giving financial assistance during balance of payments problems belong to the traditional IMF mission in these countries, the approaches pursued in recent times have gone far beyond the core IMF mission. This applies especially to debt relief for the poorest developing countries, which has been provided jointly with the World Bank. It is true that by using this instrument the IMF can silence criticism of some NGOs; and the argument is valid that the situation of developing countries and their balance of payments problems can be improved by loans. But the IMF mission does not include general lending in advance; this blurs the division of labor between IMF and World Bank. As welcome as such an initiative may be and as much as debt forgiveness improves the financial constraints of the poorest countries – this is no measure to prevent a currency crisis. Therefore it is not part of the IMF mission and should be left to the World Bank or a coalition of industrialized countries. Assuring currency stability is such a central mission for the world economy that the IMF as institution responsible for it should not be overburdened with other tasks, and its mission should not be diluted. Otherwise the IMF loses its focus. Another important aspect is that these new peripheral tasks use a considerable number of staff and make expenditure containment more difficult.

To get out of this dilemma, it is necessary to refocus the IMF. It should stick to its mission of fighting currency crisis. In order to lose the image of a disciplinarian of countries, it should clearly give preference to *ex-ante* prevention and to create conditions *ex ante* that preclude development of a currency crisis than to rely on *ex post* measures, especially liquidity assistance. *Ex ante* measures embrace financial monitoring by national supervising authorities and Central Banks; international coordination of financial oversight and its standards within the scope of activities of the Bank for International Settlements and the Financial Stability Forum (all of this not explicitly IMF missions) and an IMF early warning system. In early warning, the IMF instruments comprise monitoring economic development and advising national governments (Article IV consultations), usually called “surveillance“. This incorporates analysis and assessment of currency risks and signaling an impending currency crisis. Information has to be given to the markets. It should include data on the balance of payments situation; capital flows and their structure; foreign exchange reserves of a country and their special characteristics (are they “swapped“ as they were in the case of Thailand?); foreign debt and its type (direct investments, bonds, bank loans); national public debt and indebtedness of the private

sector; maturity structure of such debt; composition of debt with respect to currencies, explicit and implicit indebtedness including hidden future liabilities; the consolidated annual statements of the financial sector; its most important segments and the largest enterprises; and “off balance sheet liabilities“. One crucial aspect of transparency is the information about the extent to which international banking rules and financial supervision rules are observed and whether a national deposit insurance fund exists. It is necessary to sound the alarm before an incident has occurred. And it is preferable to accept a minor crisis if in this way one can avoid a major crisis. Under no circumstances may the IMF withhold information. It must resist the interests of national governments for whom the news may be inopportune. There is much to be said for regular publication of data, including statistics (e.g. “country financial sector fact sheets“), without any consideration being given to national political calendars, such as election cycles. Admittedly, this early warning function is not easy to perform since financial markets may overreact. Care must be taken that trivial news items grow into a major crisis. ✓

With its publications - World Economic Outlook, Global Financial Stability Report, and the Country Reports under Article IV - the IMF contributes to an analysis of the global economy and currency risks. The intention of the IMF leadership makes sense to include financial market data in the Article IV Reports and to pay attention to the possible effects of large national economies (IMF 2006a). The request to publish the results of country consultations has to be seen in this light. At this time, however, about fifteen percent of the member nations reject such publication, even 30 percent in the Western hemisphere.

As an additional approach to get out of the predicament of *ex-post* measures would be to reward adherence to *ex ante* standards in determining access to loan facilities in case of a currency crisis by offering more favorable conditions, either with respect to loan amounts or interest rates. In this way, the IMF can cause nations to create preconditions for a stable currency system. In order to reach this goal, it is advisable to follow the Meltzer (IFIAC 2000, Meltzer Report) Commission’s proposal, according to which the IMF may give loans only to those countries which have established adequate conditions for stability, among them organized banking supervision and financial market regulation as well as the regular publication of the country’s debt structure (see above). No further conditions would have to be required; conditionality could be eliminated. Nations not accepting this condition would not receive any loans. This would be the case even when there is the risk of contagion for other economies. An alternative to this proposal would be to provide more favorable loan access to those countries which meet certain conditions of good fiscal management. Thus, the Council on Foreign

Relations (1999) speaks of a club of good economic governance (“good housekeeping club“), whose members get better conditions. The IMF has also proposed preferential access to loans in cases of good economic governance (IMF 2006a).

Furthermore, it is necessary to improve the allocation of risk. It is recommendable to specify for bank loans and bonds in advance which creditor majorities will be required to change a loan agreement with a sovereign debtor in case of a crisis, and to approve any losses of lender capital (so called “sharing clauses“, rules on collective representation, British-style trustee deed bonds instead of American style bonds). This raises the risks for lenders and therefore reduces their willingness to offer loans; hence, loan costs increase for borrowing countries. But at the same time risks are internalized in advance and the probability of currency crises is reduced. All of these rules are designed to replace discretionary decisions (preferred by the US) by automatic actions (preferred by the Europeans). Farther-reaching proposals to create an insolvency law for sovereign debtors and to establish a type of global bankruptcy trustee have not gained acceptance so far. This applies to the concepts suggested by the IMF itself. The reason for rejection is that there is no bankruptcy law for sovereign debtor nations because sovereign nations are not willing to submit to arrangements that would provide that the IMF would play the role of bankruptcy trustee and could declare a nation illiquid. Lenders equally do not find it acceptable to have the IMF play a role in which it, analogous to a bankruptcy trustee, could decide the creditors’ loss ratio during an illiquidity (or even an insolvency) of a sovereign debtor. There is resistance to such a concept even if the crisis country itself could declare a moratorium; by acting as loan monopolist, the IMF in the final analysis would gain considerable direct power over sovereign nations. In contrast, institutional arrangements of collective decision making offer the lenders the advantage that they correspond more to decentralized market type processes.

The needed refocusing of the IMF mission described here makes clear that the “Poverty Reduction and Growth Facility“, introduced in 1999, should be abolished. It is not unusual that facilities are terminated. For example the “Contingent Credit Line“, which had also been introduced in 1999, ended in 2003. This facility had been designed to protect member nations from contagion. But it was not accepted by members because those countries that might have signed up for it were afraid to send a signal to the markets that a crisis was to be expected.

The instrument acted as a stigmatization. The other facilities, the "Stand-by Arrangements"⁴, "Extended Fund Facility"⁵ and "Supplemental Reserve Facility"⁶, "Compensatory Financing Facility"⁷, "Emergency Assistance"⁸ und die "Exogenous Shocks Facility"⁹ should be continued in principle except for the reorientation discussed in this study.

The insurance facility proposed by IMF staff has some similarity to these proposals; it is to provide automatic access to IMF funds for emerging countries with a sound economic policy in case there is a financial crisis. But this instrument seems to be rather similar to the abolished "Contingent Credit Line". Negative signalling effects are probable in the markets. Moreover, IMF funds would have to be committed which then would not be available during a currency crisis. Thus, this instrument runs counter to a re-focusing of the IMF mission. √

Any re-orientation of the IMF has considerable impact on the staff. Insiders refer to the fact that IMF staff can prove themselves in the use of *ex post* instruments, especially if they have participated in *ex post* crisis control. This is how they advance their career. There is little glory to be gained with *ex ante* instruments. This creates a hard-to-control incentive problem and bias for *ex post* instruments in the entire organization. Insiders talk about a bloated bureaucracy. The mission and expenditure structures have to take into account that the IMF as an institution is moving away from crisis management toward crisis prevention, and that this results in a sizable decline in lending volume. Although a partial sale of gold reserves as considered by the Crocket Commission (Committee to Study the Sustainable Long-Term

⁴ Created as the first facility, the "Stand-by Arrangement" serves to bridge temporary balance of payments imbalances. Member countries may draw on up to 100 percent of their quota within a limited period of time usually 12-18 months, up to three years). The loan must be repaid in 2¼ to 4 years.

⁵ The "Extended Fund Facility", established in 1974, is designed for structural balance of payments deficits that require a longer adjustment period. It contains greater liquidity assistance than the "Stand-by Arrangements". Repayment must be made within 4½ to 7 years. Surcharges are applied in case of high loan amounts.

⁶ The "Supplemental Reserve Facility", created in 1997, is designed for large short-term financing problems and exceptional balance of payments problems such as during the Mexican and Asian crises. Repayment is to occur within 2 to 2½ years. The interest rate starts at 3 percentage points above the IMF borrowing rate; interest rate rises over time. This facility was created in response to the new type of currency crisis characterized by a reversal of capital flows.

⁷ The "Compensatory Financing Facility", introduced in 1963, provides liquidity to countries which experience a sudden collapse of their export prices or an increase in their import prices for grains due to fluctuations in global market prices. The conditions of the "Stand-by Agreement" are applicable.

⁸ The "Emergency Assistance Facility" provides funds to countries affected by natural disasters. The interest rate here is the IMF borrowing rate. Exceptions are made for countries that qualify for the "Poverty Reduction and Growth Facility". Repayment is within 3½ to 5 years.

⁹ The "Exogenous Shocks Facility" provides low income countries confronted with an exogenous shock with economic policy and financial support. It is available to countries who also qualify for the "Poverty and Shock Facility (PRGF)". Financing Conditions correspond to those of the PRGF program.

Financing of the IMF, 2007b) would provide relief on the income side, this would only be temporary. The need for reform would lose its urgency. Besides, it is difficult to ring-fence this approach in order to prevent future “sins”. Reinvestment of profits, a “better“ lending strategy and the introduction of an investment fund for existing Fund reserves are potential strategies. It does not seem advisable to pursue the idea that the IMF should charge service fees for economic policy analysis in member countries (Country Reports). The IMF would find little favor among its members because its advice is often not welcome. Thus the IMF would quickly face a catch-22 situation of buying acceptance by giving positive assessments. Moreover, the IMF does not have a monopoly on these analyses; it competes, i.a., with the International Bank for Settlements, the World Bank, the OECD and the Rating Agencies. Other than by reducing expenditures, the IMF’s financing problem could be solved for the long term only by an increase in capital. It is doubtful, however, whether the shareholders are willing to do so since they rightly fear this option to get out of hand. It is therefore necessary to drastically reduce expenditures, to end non-core missions, and to reduce staff accordingly, in order to assure the IMF’s financing for the long term.

In delineating the mission and the options of the IMF in fending off a currency crisis, it should be remembered that the IMF has only a limited capability to fight a currency crisis. The IMF cannot be a “lender of last resort“. Here we need to differentiate between a lender of “last liquidity“ (who provides liquidity) and the ultimate bearer of costs (who in effect bears the costs of the currency crisis in terms of income losses and taxation, usually the population of a crisis country). The IMF is neither of the two. It does not have sufficient financial funds to prevent a systemic crisis; its one-year forward commitment capacity amounts to 190 billion US dollars, with total usable resources standing at about 250 billion US dollars. During a systemic currency crisis the three most important Central Banks, the Fed, the ECB and the Bank of Japan, must act in concert to provide liquidity (as they did when the attack on the World Trade Center occurred on 11 September 2001). The rules for this function should preferably not be specified and published *ex ante*; it would permit speculators to play against the Central Banks. But during national currency crises the IMF may provide liquidity without assuming the costs of such a crisis. The real burden of a currency crisis is borne by the citizens of the crisis country, for instance in losses of real income. Thus, somewhat like a pawn in a game of royal chess, it acts in the pre-field of the Central Banks as lender of last liquidity, thereby preventing a national crisis from escalating into a systemic crisis.

The IMF needs to be clearly differentiated from national or regional Central Banks, such as the Fed and the ECB, by the nature of its mission. The objective of Central Banks is to keep the value of money stable, i.e. to have a stable level of prices; that of the IMF is currency stability, i.e. controlling currency crises. The stability of the value of a currency and currency stability are closely linked because a loss in the value of a currency always goes hand in hand with a currency devaluation (if the rate of domestic inflation is higher than abroad), and analogously, a stable exchange rate requires a stable currency. If we understand currency neutrality to mean that a currency does not have a negative impact on the real economy, then the IMF is responsible only for one aspect of such currency neutrality, namely currency stability. The other aspect, the stability of the value of money is the responsibility of the Central Banks.

Rules to prevent currency distortions

A new aspect of its mission was introduced by the IMF in its 2007 Decision on Bilateral Surveillance (June 26). In this subtly worded document replacing the 1977 Decision, the IMF develops a new approach to exchange rates. The concept of “external stability” is at the center of the Decision. “External stability” refers to a balance of payments position that does not, and is not likely to, give rise to disruptive exchange rate movements. Each IMF member collaborates with the IMF and other members to promote stable exchange rates (which the IMF calls “systemic stability”). This is achieved by the member countries adopting policies that promote their own “external stability” - that is, policies that are consistent with members' obligations. In its concept of dialogue and persuasion and its approach to bilateral surveillance, the IMF “will clearly and candidly assess relevant economic developments, prospects, and policies of the member in question, and advise on these. Such assessments and advice are intended to assist that member in making policy choices, and to enable other members to discuss these policy choices with that member.” External stability then serves as a guide line to determine misalignments. Four principles support this approach: A Member “shall avoid manipulating exchange rates...” (A) , “should intervene in the exchange market if necessary to counter disorderly conditions...” (B), “should take into account in their intervention policies the interests of other members...” (C) and “should avoid exchange rate policies that result in external instability...” (D). This represents a considerable change of the IMF mission. It includes monitoring exchange rates.

Bilateral surveillance with the sequence “systemic stability - external stability – misalignment” will prove to be an extremely tricky task for the IMF who does not have any sanctions against misaligned exchange rates. Politically, it seems to come at a point where an undervalued Chinese renminbi is a bone of international contention. The IMF will inevitably fail if it promotes itself as the referee of exchange rates and attempts to set „reference rates“ for the most important currencies. This strategy, favored by concepts as developed by John Williamson (1993; 2006) and supported by ideas of Fred Bergsten (1988), can lead the IMF astray. The Fund does not have the necessary information for it; *ex ante* it cannot take on the role of market processes in determining exchange rates. Setting reference rates also presupposes that equilibrium exchange rates are determined and that the lines of monetary policy, fiscal policy, wage policy (in countries in which wages are set by labor and management) and of the entire economic policy are specified in detail (Siebert 2007b, chap. 6). This would be arrogance of knowledge addressed by Hayek. Moreover, it seems that economists do not have a model on which they agree in determining the exchange rate. In any case, if there are disequilibria in the balance of payments, it is the real exchange rate that counts. Moreover, the real interest rate is relevant. As Corden has pointed out, if the Chinese current account surplus is at the heart of the issue, a lower Chinese surplus would increase the world’s real interest rate, with unpleasant effects for many countries including the US (Corden 2007). This approach to determine the equilibrium (real) interest rate all too easily yields to the temptation of passing the buck to individual countries to bear the burden of adjustment. And often there is no political agreement on the economic paradigm to be used as basis. Finally, the experience made with the Louvre Accord and Plaza Agreement in the 1980’s and on their impact on the development of the Japanese bubble in 1989 suggest that great caution is necessary.

Similar reasons lead to the conclusion that the IMF cannot be an international coordination agency for national economic policies. The idea of having international macro-economic coordination is based on quite a bit of naiveté. All macro-policies would have to be coordinated, including monetary policy, fiscal policy and wage policy. What has been unachievable in a regional integration such as the European Union, i.e. harmonization of economic and financial policies within the euro zone, will work even less in a global organization. Moreover, this would move the IMF close to being an international economic government; these proposals are similar to ideas suggested for the European Monetary Union. But the IMF does not have any legitimacy for this function; it would take the place of parliaments and democratically elected governments.

However, no objection exists to having a barometric coordination, in which governments exchange their views during multilateral consultations on the economic situation and on technical policy actions planned by them. This includes the analysis of interdependencies of economic policy actions. Also, there is nothing wrong with having the IMF promote in the member countries suitable institutional conditions which prevent the development of a currency crisis. The IMF can also focus its instruments on promoting the establishment of such institutional measures. With respect to shaping national economic policy, the IMF has the role to explain the consequences of national decisions for currency crises to politicians, the public and the markets. This also applies to excessive current account deficits of individual countries (such as the U.S. in 2007) if they can lead to crisis-like adjustment processes. In such a case the IMF has the role of a trusted adviser. In any case, there is a very thin line between barometric coordination and the umpire on exchange rates.

Adjusting the Bretton Woods Quotas to new international conditions

Quotas of member countries should reflect the changes in the world economy and a new quota formula should be developed. Quotas determine the rights and obligations of the 185 IMF member countries. They specify the capital subscribed by a country, its voting power, its access limits to financing, with arrangements for exceptional situations, and its share of Special Drawing Rights, which represent a reserve currency created in 1969 when the two other reserve currencies, gold and the US dollar, were in tight supply. Quotas also represent the weight of the voting power of members when decisions in the IMF are taken by the Board of Governors, which meets twice a year. Each member nation appoints a Governor and an Alternate (in most cases the Minister of Finance, the Secretary of the Treasury or the Head of the Central Bank). Each country receives 250 basic votes plus one vote for every 100 000 Special Drawing Rights in its quota. The day-to-day business is managed by the Board of Executive Directors, which consists of 24 Directors. The US, Japan, Germany, Great Britain, and France appoint one Director each, the remaining 19 are nominated by groups of countries.

Country quotas are determined in accordance with the Bretton Woods Formula and its variations, five formulas in total, comprising five factors, i.e. gross domestic product, currency reserves, current account balance transactions, one factor measuring the variability of current revenues and the ratio of current revenues to gross domestic product. Although this formula has repeatedly been adjusted it is not transparent and is too closely tied to the Bretton Woods

System. An external commission, appointed by the IMF for the first time, the Quota Formula Review Group (IMF 2000), of which I was a member, therefore proposed a single simple linear formula to determine the quota, namely: $Quota = aY + bV$, where Y is the gross domestic product, V is a measure for the external variability of current revenue and a and b are relative weights. Gross domestic product is an expression of the efficiency of an economy in financing the IMF and is to have twice the weight of variability ($2/3$ and $1/3$). Variability of current revenue, which characterizes the vulnerability of an economy, is to include the variability of long-term net capital flows. Both criteria also express the substantive interest of nations in having an effective institution. Economies with a high GDP might lose much in absolute terms in currency crises but the vulnerability factor is also an indicator for the interest of nations in having an effective IMF.

If gross domestic product were measured in purchasing power parities the non-tradable goods sector would be overvalued, because purchasing power parities give this sector a greater weight. GDP should therefore be computed in market prices by calculating three-year averages in constant prices. In principle, a country's global market share might be used as a possible criterion in the Bretton Woods Formula. However, market share values fluctuate strongly with the exchange rates even if averages over several years are used; an upward revaluation of the US dollar leads to a mathematical increase of US market share and reduces market shares of other countries before the higher US dollar reduces US exports over the longer term in a second-round effect. Moreover, if the focus was only on global market share, no consideration would be given to the total productive capacity of a country's economy; the entire area of non-tradable goods would not be covered by the formula. It also should be noted that gross domestic product or global market share cannot represent the sole criteria and that other aspects are relevant, such as vulnerability.

Currency reserves are not a useful criterion for calculating quotas. The experience with currency crises has shown that reserves melt like snow in the spring sun during a reversal of capital flows and that any decline in reserves that becomes public knowledge worsens the situation like in a vicious circle. In addition, large currency reserves are of little use if they represent insurance for a fragile banking system (like in China); reserves therefore would have to be corrected for the stability of the banking system and other factors. Using population figures as an alternative criterion for gross domestic product would express neither the financial effectiveness nor the vulnerability of an economy. Moreover, the principle of "one

country - one vote“, as applied in the WTO, e.g., would not meet the material interests of member countries and would so jeopardize the financing of the IMF.

The current quota allocation no longer corresponds to the actual conditions in the world economy. It does not reflect the growth of important emerging countries and their welcome integration into the world economy. On the basis of the most recent data China, e.g., has become the third largest economy in the world as measured by its gross domestic product at market prices (in 2005 its share in global economic output amounted to 5 percent); but it has an IMF quota of only 3.72 percent (Table 2). In Asia, China, Japan and Korea are underrepresented in their quotas if the 2005 gross domestic product in current prices is used as a basis. The current quota allocation prevents underrepresented members from developing an interest in the IMF as institution, especially when they expect to have strong growth. Over the long term this weakens the IMF's *raison d'être*, i.e. its acceptance. Consequently, the quotas have to change, and they have to accommodate the rising share of developing countries in world GDP in the future.

Quota allocation is always a zero sum game: An increase for some countries necessarily results in a decrease for others. On the basis of the gross domestic product criterion, it is especially the smaller countries of the European Union that are over-represented, such as Belgium, the Netherlands, Sweden and Switzerland; Spain is underrepresented. The quota of the European Union actually corresponds to its production share. This also holds for the European Monetary Union. Europe provides the Managing Director who heads the IMF and is chairman of the Executive Board (including the Deputy Managing Director and the 24 Executive Directors). The United States have a quota of 17.09 percent with a share of global economic output of 28.05 percent (2005). If gross domestic product is used as criterion, North America, and in particular the United States, are underrepresented; however, no change in US quota is currently planned. But the US has the advantage that the IMF is headquartered in Washington, that the US appoints the Deputy Director. Moreover, the “peer group“ of American economists (it is often desirable for staff to have a Ph.D. from an American university) exerts a not-inconsiderable influence on the IMF's direction. In Latin America, when measuring shares of global gross domestic product, Brazil and Mexico have a slightly low quota while Venezuela has a quota that is too high. The quota of Africa is markedly higher than its share in production output. The quota of Asia is higher than its production share. Other countries, such as Saudi Arabia and Russia also have large quotas relative to their shares in production.

During the Singapore meeting of the IMF in September 2006, the quotas of China, Korea, Mexico and Turkey were adjusted in a first step; they were increased by 1.8 percentage points. The quotas of the other countries were proportionally reduced. China's quota was increased by less than one percentage point to 3.719 (IMF 2006d). A second step aims at reaching a political solution in which basic votes are to be increased (see below). To this end, the US might relinquish one percent of its voting share without giving up its blocking minority shareholding of a little over 15 percent if Europe in parallel relinquishes some of its voting power and, like the US, does not insist that its economic production share be used as guideline.

A quota is not perfectly identical to the weighted voting power. For example, Germany's quota is 5.99; its share of votes is 5.88. For the US the comparable figures are 17.09 and 16.79 (January 4, 2008). These differences are caused, among other things, by the fact that basic shares are independent of quota. Each IMF member has 250 basic votes plus one additional vote for each SDR 100,000 of the quota. Accordingly, the United States has 371,743 votes (16.79 percent of the total), and Palau has 281 votes (0.01 percent of the total).

Table 2: Current IMF Quotas, Quotas According to the Shares in Global Economic Output, in World Trade and in a Combined Indicator

	Current Quota 2007 ^a	Calculated Quota ^b	Share of global GDP 2005 ^c	Share of global trade 2005 ^d	Combined indicator 2005 ^e
G7	45.27	45.90	60.87	40.73	53.99
US	17.09	16.28	28.05	10.19	22.02
Japan	6.13	7.01	10.24	5.40	8.60
Germany	5.99	6.85	6.31	8.99	7.19
UK	4.94	5.24	4.97	4.60	4.83
France	4.94	4.13	4.80	4.45	4.67
Italy	3.25	3.32	3.98	3.72	3.88
Canada	2.93	3.07	2.52	3.38	2.80
European Union (EU 27)	32.30	37.77	31.65	40.12	34.11
Eurozone (15)	23.04	27.62	23.47	30.09	25.68
North America (ex Mexico)	20.02	19.35	30.56	13.57	24.82
Asian countries (ex Japan)	18.91	20.81	13.71	25.24	16.50
China	3.72	6.14	5.04	6.71	5.59
Korea	1.35	2.51	1.78	2.68	2.08
Transformation countries					
Russian Federation	2.74	1.70	1.73	2.15	1.86
Middle East					
Saudi Arabia	3.21	1.03	0.70	1.51	0.97
Turkey	0.55	0.75	0.82	0.70	0.78
Latin America	7.62	5.15	5.50	5.16	5.37
Brazil	1.40	1.07	1.80	1.07	1.55
Mexico	1.45	1.84	1.74	1.84	1.77
Venezuela	1.22	0.43	0.32	0.46	0.36
Africa	5.84	2.65	1.90	2.40	2.06

^aJanuary 4, 2008. – ^bJuly 11, 2007 (IMF 2007a, Table A 5). – ^cGDP in current prices. Source: World Bank, World Development Indicators. 2007. – ^dTrade in goods including services in current prices; Source: World Bank, World Development Indicators. 2007. IMF, Balance of Payments Statistics, January 2008. – ^eWeighted Indicator: 2/3rds share of global economic output and 1/3rd share of global trade.

There is no agreement on whether the European Monetary Union should have a common representative in the IMF. This would ultimately mean that Germany and France would not be

represented by their own directors, neither the UK if it were to join the euro area. Moreover, the other seven of the fifteen Euro Member Countries (2008) would not head their respective constituencies. The IMF Statutes stipulate that only nations can become members of the IMF. The arguments in favor of a joint representative are the common monetary policy, increasing harmonization in banking supervision and the essentially coherent economic area. A currency crisis of the euro would affect the countries' common currency. It is also hypothesized that a single representation of the monetary union could allow Europe to play a pivotal role and swing the votes in the Executive Council (Bini Smaghi 2006) and to give Europe more say. Moreover, it is pointed out that some coordination of European countries is already taking place inside the IMF through the SCIMF, the subcommittee on IMF related issues in the Economic and Financial Committee, preparing work for ECOFIN, and through EURIMF, the informal committee of EU members represented in the IMF (Ahearne and Eichengreen 2007). However, this last argument is hardly significant.

Arguments against such a move are: the commitment of capital provided to the IMF has to be made by individual countries; the capital is paid from national tax revenue; balance of payments as a macroeconomic budgetary and financial restriction has remained a national function; balance of payments problems have to be solved on the national level. Even a currency crisis of the euro could ultimately not be controlled by the European Central Bank; it does not have the policy instruments for it, for example in the financial policy area. Instead, the member countries of the European Monetary Union would have to use these national policy instruments and bear the costs of such a crisis by using tax revenues to control the crisis. In case of liquidity assistance by the IMF, any potential conditionality would have to be directed at national governments. This applies in particular to the tax and budget policies of member countries. Large areas of economic policy have remained national responsibilities in the European Monetary Union. Last but not least, European countries are reluctant to delegate sovereignty in this area to the European Union since it also impacts on their authority to tax. These are the reasons why the European Union is not represented in the IMF as a single member. This is different from the WTO where the EU has harmonized important instruments of trade policy, such as tariffs and the negotiation of trade treaties.

Within Europe, there are diverging views. A common representative undoubtedly would add pressure toward further European integration, including toward a unified economic government in the European Monetary Union. But it is doubted whether this argument, which has been raised especially by French economists, would represent a desirable development within

the European Monetary Union where the French concept of economic government is controversial. There is, however, no doubt that the European countries have to play according to the rule that the weight of directors has to follow the economic relevance of countries and that a reorganization of the Executive Board itself is not tabou (see below). It is yet a different question whether the EU will in the future be faced with demands that it eliminates its intra-EU trade from its calculation of global trade. In this case EU quotas would be considerably lower.¹⁰

Institutional Rules for Decision Making

In addition to the orientation of the IMF, an adjustment of quotas, there is also a debate about changes in the institutional rules for decision-making processes. Plans exist to voting rights to increase the basic shares of currently 250 basic votes, which apply to all member countries, and to correspondingly reduce all shares above the basic votes that depend on the quota. The Board of Executive Directors has, for example, proposed (IMF 2006b, 2006c) to raise the basic voting rights to a minimum of 500 in order to give low-income countries a bigger share. In total, the basic votes of the 185 members would then rise from 2.1 percent of total votes (amounting to 2 178 037 million) to 4.2 percent. Taken to the extreme, increasing the role of basic votes would result in each country having the same basic vote and all members having the same voice (“one country - one vote“). √

But in contrast to other international institutions, the IMF is an institution whose special nature requires it to have sufficient capital at its disposal to prevent currency crises. Moreover, it is an institution that must take rapid decisions when a currency crisis is developing. The IMF mission and its capacity to react quickly would be restricted if basic voting shares were greatly expanded. Countries would have little interest to contribute to its financing. The institution would become less attractive; its ability to perform would suffer. So there are some good arguments for keeping the current approach for determining quotas. Hence, an increase in basic voting shares is possible to a limited extent only. √

The procedure for appointing the 24 Executive Directors changes when quotas are adjusted to the new weights in the global economy. This also applies to the possibility to establish groups of countries (constituencies). Members with a voting share of more than 4.17 percent would have the right to appoint a director to the 24 Director positions if the Executive Board continues to have 24 Directors. A comparison with the current Board seat distribution confirms that

¹⁰ Based on the Foreign Trade Statistics for 2004, this would mean a decline for the EU 25 by 66 percent in the world trade indicator.

the US, Japan, Germany, France and Great Britain could continue to appoint one executive director, each in accordance with Table 2. This would change if the country's weight would fall below 4.17 percent of the votes, i.e. 100/24. In addition, China, which already has an executive director, would have that right. But Russia and Saudi Arabia could actually no longer form a constituency by themselves.

In the remaining 16 constituencies with more than one IMF member country, these countries may appoint an executive director from within their country group if they are able to organize an appropriate voting share by forming coalitions. In principle, the procedure of forming coalitions makes sense. Various groups use different methods for it, rotation procedures are applied and also regular elections are used. There evidently is one difficulty that some countries who are not willing to form coalitions for political reasons and insist on their own seat in spite of having a low share of votes, for instance Saudi Arabia. Moreover, it is noticeable in the current allocation of Board seats that the country with the largest voting share among its constituency provides the Executive Director or his Alternate in 11 of the 16 constituencies. Since these are often the smaller European countries, such as Belgium, the Netherlands or Switzerland, these nations have an above average influence on appointing that Executive Director. The voting power of an Executive Director on the Executive Board is weighted according to the voting power of the country or constituency he represents. Hence, the US Executive Director has 17.09 percent of the votes on the Executive Board, whereas the small African constituency has an Executive Director on the Board with a voting share of less than two percent.

A characteristic of the IMF is that IMF management and the interests of member countries are closely intertwined. This can be interpreted in a positive way insofar as the nations must ultimately provide a guarantee with their capital shares and that they gain benefits from the IMF's successful crisis management in other countries for their own foreign trade and capital transactions. This holds for important exporters, for importers, their banking industries, and other parts of their economies, and even for growth and employment. To this extent, the interest of member countries in the IMF's work is legitimate; it is also consistent with the basic principle of quota determination. It would be unrealistic to demand that countries all of which have a strong interest in a positive development of the global economy could not combine to form coalitions; even if this results in a situation where the G-7 hold almost half the votes. It is a completely different matter if the IMF is used for foreign policy purposes of a single member country, such as the US. In the framework of the existing quota system this can be thwarted only by an appropriate resistance by the other member countries, such as the Euro-

pean Union. On balance, these arguments lead to the conclusion to stay with the institution of Executive Directors; the number of 24 is not untouchable.¹¹

It is still unclear whether regional IMFs might form in parallel to the disintegration of institutional arrangements within the WTO due to bilateralism and regionalism, as the efforts in Asia seem to suggest. As far as security networks against financial crises are concerned, a hierarchy of such security networks in national systems, for instance safety nets for savings and loans, is recommendable. But with respect to networks for regions of the world such as Asia it is difficult to design such a network in a way that is consistent with the IMF's structure. Furthermore, currency crises by their nature are not limited to a region but are interdependent through multiple mechanisms (Siebert 2007b). Unfortunately, the exchange rate, which is at the core of the IMF's activity, has been considered a political tool. Any regionalization of institutions must necessarily result in a further fragmentation of the world economy.

The proposals to fundamentally change the decision-making process and to make IMF management more independent are more far-reaching. The proposal made by the Governor of the Bank of England, Mervyn King, (2006) returns to some Keynesian ideas: Accordingly, the IMF is to be managed by a Managing Director with a markedly strengthened role who would be responsible for the IMF's proper functioning. The Executive Board would be eliminated or it would lose substantially in importance; this would solve or defuse the problem of how the 24 Executive Directors are appointed. The Managing Director would be supervised by the Board of Governors whose national members would meet in Washington more frequently than now, e.g. six to eight times a year. The Board of Governors would be composed of representatives of the national Ministries of Finance or Central Banks and, thus, would not reside at headquarters. King pointed out that the lines of authority in the Fund are not clearly discernible in the current structure. Moreover, he makes that point that Executive Directors have a work load (300 pages of documents per working day) which makes them dependent on his national experts.

A major criticism raised against the King proposal is that the individual countries would have to cede important decision-making authority to the Managing Director. For example, they would have to be willing to support his decisions on loans even if this might mean a financial

¹¹ In principle, there is no systemic reason why the Executive Board is to consist of exactly 24 directors. It is also possible to imagine an Executive Board composed of less than ten members. Then the position of the US appointed director would approximate the US capital shareholding. Such a proposal would again cause the question to be raised of limiting the representation of the European Monetary Union nations to one representative. But then the ties between individual member countries and the IMF would be weakened, and the interest of countries in the institution would be less strong.

liability for them. In case of a currency crisis the Managing Director would probably have to be granted far-reaching authority to enable prompt decisions. With a non-resident Board of Governors it might be difficult to supervise the Managing Director. On the whole, supervision becomes more complicated if the current resident Executive Board is replaced by a non-resident Board of Governors. Furthermore, the United States would gain greater influence because of its presence at headquarters.

To avoid the problem of a non-resident Board of Governors Eichengreen (2006) suggested appointing an independent committee, perhaps consisting of five persons who would be the decision-makers. The Managing Director would be an equal among equals (“chairman of the board”). Similar to a Central Bank Board, the members would vote on important issues. They would be appointed for a six year term; the decisive criterion would be their qualification. The number “five“ is derived from the five major regions of the world, Europe, North America, Latin America, Africa and Asia. However, members would not be selected by their regions of origin. Under this proposal Europe would lose the prerogative to appoint the Managing Director; the US would lose the prerogative to select the Deputy. The quota system would be suppressed in this IMF decision-making process. This structure, based on the model of a Central Bank Board, such as the Central Banks with federal elements like the Federal Reserve Bank or the ECB, would represent a marked shift of the decision-making authority from shareholders to the IMF.

While the decisive argument for establishing an independent Central Bank, i.e. the depoliticizing of the money creation process, is that politicians may abuse the control over money for their own purposes (like Hitler in financing military expenditures during the re-armament for World War Two or like governments trying to maximize the votes they get) so that monetary stability suffers, there is no similarly strong argument for an IMF institution to be completely independent of its shareholders. The proposal implies a considerable relinquishment of sovereignty by major national economies which depend on global trade and global capital flows, but also by medium-sized and smaller open economies which derive their wealth from global trade and global capital flows. It is possible to imagine regulatory mechanisms, similar to those of the European Monetary Union, which would obligate countries to contribute capital while they would simultaneously be protected from excessive domination by IMF management. Such regulatory mechanisms would be similar in quality to the Growth and Stability Pact but they would be much more complex and would have to regulate both the relinquishment of sovereignty by member countries, for example during contributions of additional

capital, and also IMF oversight within an international treaty. It is hard to imagine a pragmatic solution here. King's and Eichengreen's proposals, which aim at strengthening and depoliticizing the IMF, have little chance of being implemented. The IMF is, after all, the resultant force in a force field of member countries with extremely different fields of interest.

References

Ahearne, A., B. Eichengreen (2007). External monetary and financial policy: a review and a proposal. In A. Sapir (ed.), <i>Fragmented Power: Europe and the Global Economy</i> , Bruegel Books (2007), p. 128-155.
Bank for International Settlements (2007). Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in 2007. Basel.
Bergsten, C. F. (1988). The Case for Target Zones. In <i>The International Monetary System: The Next Twenty</i>
Corden, W. M. (2007). <i>Exchange Rate Policies and the Global Imbalances: Thinking about China and the IMF</i> . Paper for James Meade Centenary Conference, Bank of England. Revised Version Aug. 2007.
ECB (2006). <i>Financial Stability Review</i> . June.
Eichengreen, B. J. (2006). <i>How to Really Reform the IMF</i> . Speech held on February 23. Available from: http://www.econ.berkeley.edu/~eichengr/reform.pdf
International Financial Institution Advisory Commission- IFIAC (2000), Meltzer Report. Washington DC.
International Monetary Fund (IMF) (2000). Quota Formula Review Group, <i>Report to the IMF Executive Board of the Quota Formula Review Group</i> , April 28.
— (2006a). Press Release No. 06/189, September 1.
— (2006b). Press Release No. 06/205, September 18.
— (2006c). <i>Report of the Executive Board of Governors. Quota and Voice Reform in the International Monetary Fund</i> , August 31.
— (2006d). <i>The Managing Director's Report on Implementing the Fund's Medium-Term Strategy</i> . Available from: http://www.imf.org/external/np/pp/eng/2006/040506.pdf
— (2007a). Statistics Department COFER Datatbase. COFER is an abbreviation for Currency

Composition of Official Foreign Reserves,
— (2007b). Crocket Commission (Committee to Study the Sustainable Long-Term Financing of the IMF 2007)
— (2007c). Financial Statement For the Years Ended April 30, 2007, and 2006. Waschington, DC. www.imf.org
King, M. (2006). <i>Reform of the International Monetary Fund</i> . February. New Delhi.
Lerrick, A. (2007). What is left for the IMF? Wall Street Journal. April 13.
Morgan Stanley (2007). <i>G 10 Currencies. Tracking the Tectonic Shift in Foreign Reserves and SWFs</i> . Morgan Stanley Research. March 15.
Mundell R. A. (2003). <i>The International Monetary System and the Case for a World Currency</i> . Lecture Series. Available from: http://www.tiger.edu.pl/publikacje/dist/mundell2.pdf
Rueff, J (1972). <i>The Monetary Sin of the West</i> , New York, Macmillan.
Siebert, H. (2007a). <i>Reforming the IMF</i> . Occasional Paper. Konrad Adenauer Foundation. Washington. February.
— (2007b). <i>The World Economy: A Global Analysis</i> . 3rd edn. Routledge, London und New York, 2007.
Tobin, J. (1978). A Proposal for International Monetary Reform. <i>Eastern Economic Journal</i> , 4 (3/4): 153–159.
Williamson, J. (1993). Exchange Rate Management. <i>Economic Journal</i> , 103 (416): 188-197.
World Bank. World Development Indicators. Various Issues. Washington, DC. www.worldbank.org