The financial benefits of the IMF *

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1. Introduction

The large financial packages arranged by the IMF for countries affected by the Asian crisis and its aftermath have stimulated debate among both policy makers and academics as to their costs and benefits. Most of the debate, which was held in terms of a new international financial architecture, focused on the question of whether the size of the packages had been appropriate and whether the IMF, in the conditionality attached to its programs, had been following the right approach. The issue of the involvement of the private financial sector in crisis prevention and crisis management also ranked high on the policy agenda.[1] Until recently, less attention had been given to the fact that the interest costs of the IMF-sponsored financial packages are much lower than those charged to debtor countries seeking financing in the international capital markets on account of the prevailing high spreads for emerging economies. This may have provided an undue incentive for countries in financial distress to rely on official financing. With the exception of two recently created financing facilities (the Supplemental Reserve Facility – SRF – and the Contingency Credit Line – CCL), which follow market interest rates more closely, IMF credit has traditionally been relatively cheap. So far no estimations have been made of the level of this implicit subsidy.

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* Any views expressed in the paper are the authors' only. The authors wish to thank Greetje Frankena, Arend Kapteyn, Mark Roscam Abbing and Annemarie Sipkes as well as an anonymous referee for useful comments and Martin Admiraal for statistical support. Use of the J.P. Morgan data set is gratefully acknowledged.

[1] See Brouwer and Sipkes (2000) for a discussion on private sector involvement.

Discussion of the new international financial architecture has inspired a substantive review of IMF policies, leading to the elimination of four outdated IMF facilities, and it has clarified the mechanisms of private sector involvement in financial crises. However, it has not led to an overhaul of the international financial institutions, as originally proposed by some politicians. Instead, while the IMF's central role in the international monetary system has been reconfirmed, attention has shifted to a reorientation in the direction of its core functions. US Treasury Secretary Larry Summers' speech at the London Business School on 14 December 1999 set the stage, reflecting this back-to-basics attitude. The appointment of a new IMF Managing Director has also provided a natural focal point for reorientation. At the G7 meeting in Tokyo in January 2000 a comprehensive review of financing procedures used by the IMF was called for. The review would have to cover such points as the pricing of loans, the usefulness of special facilities with maturities extending beyond the standard short to medium-term time frame, and the repeated use of IMF financing by countries. In their July meeting in Fukuoka the G7 came up with more elaborate proposals.[2]

In this article we review the issues under discussion with respect to IMF financing procedures. Firstly, the benefits for the global economy of the IMF financing function are outlined and the rationale for the provision of credit at a relatively low cost is explained. We quantify the implicit subsidy of a number of the large credit packages which the IMF arranged over the 1997-99 period in the wake of the Asian crisis, and we discuss the relative merits of such a subsidy. In particular the question is addressed whether the implicit subsidy provides the right incentives for countries which could alternatively have sought private market financing. An element in this assessment is whether market discipline would have done a better job in restoring financial stability.

We show that the credit provisioning at relatively low cost is not a zero-sum game. Substantial financial advantages are attached to IMF credits because the debtor countries benefit from lower debt service costs. Moreover, the commercial banks often demand agreement with the IMF before lending is resumed, and will generally charge lower interest rates to countries with an IMF program. The

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[2] See Group of Seven (2000).

benefits attached to the IMF loan can be regarded as compensation for the policy adjustments which the debtor countries carry through. The reluctance shown by some governments in applying for IMF assistance is evidence that the policy adjustments, necessary as they may be in their own right, are seen in practice as a major political hurdle. At the same time, thanks to the unique role the IMF can play, the costs involved for the creditor countries seem fairly limited, as the opportunity costs of forgoing the proceeds of alternative investments are relatively small.

2. The IMF's role in financial crises

2.1. *Introduction*

We will first briefly discuss the rationale underlying IMF involvement in financial assistance to its members and more generally in financial crises. We then go on to discuss how IMF credit is financed at low costs by describing its unique financial structure. In fact, its cooperative institutional set-up enables the IMF to charge a relatively low interest rate to debtor countries.

2.2. *The rationale for IMF involvement*

The IMF's role in providing financial assistance to its members in overcoming short-term balance-of-payment difficulties has generally been uncontested. This traditional task is laid down in its mandate, which dates back to the Bretton Woods conference during the Second World War and has been updated on several occasions. At the time discussions focused on ways to avoid a repetition of the beggar-thy-neighbour policies characteristic of the Thirties. By temporarily providing finance and at the same time fostering adjustment, member countries were able to overcome external problems without overly detrimental measures either for their own population or for other countries. The world we know today is quite different from that of fifty years ago. The fixed exchange rate regime, generally supported by restrictions on capital flows, was replaced by flexible exchange rate regimes in the early Seventies, while deregulation and liberalisation

transformed the functioning of capital markets in the Eighties and beyond.

Consequently the character of balance-of-payment problems has changed. Major imbalances are no longer solely concentrated in the current account, but the capital account has also been a major cause of balance-of-payment crises, especially for the emerging economies. Problems on the capital account have become relatively more important because of the high growth rates of capital flows in comparison with trade flows and the higher sensitivity of capital flows to changes in market sentiment. The greater variability of capital flows has necessitated adjustments to the IMF programs. Whereas the IMF programs originally focused on restoring a balanced current account position, and thus had very much to rely on restraining domestic demand through fiscal and monetary retrenchment, later IMF programs aimed at restoring a balanced capital account, giving greater weight to the soundness of the financial sector and the appropriate exchange rate policy. In revising its programs the IMF had to steer a middle course between a restrictive approach, with the risk of inflicting too much restraint on the real economy, and a liberal attitude, with the risk of undermining the disciplinary effect which financial markets have on policies.

There are two main reasons that justify the IMF's involvement in crisis management, and that of the official sector in general. In the first place, there is an increased risk of spillover effects of financial crises in modern integrated financial markets. A crisis in the large countries can have systemic impact, leading to extensive fall-out effects on the global financial markets and, by contagion, on other economies too. Secondly, official involvement is justified to restore orderly market conditions and remedy market failures. Disturbances in capital markets occur suddenly and may be at times characterised by herd behaviour, all the creditors scrambling for the exit at the same time, with consequent capital flight and overshooting of the exchange rate. There is thus a considerable element of public good in IMF involvement.

Although the international financial markets have become more efficient and the industrial countries no longer need have recourse to IMF financing, balance-of-payment problems are still a fact of life for many countries outside the industrial world today. Thus, despite change in the IMF's clientele and policy prescriptions, its basic function in promoting a stable and open international financial system has remained unchanged.

2.3. *The financial structure of the IMF*

Generally speaking, the IMF's involvement in crisis management consists in two elements: policy advice and the provision of loans. On these loans a relatively low interest rate is charged, which is possible because the IMF acquires resources at relatively low costs thanks to its special and fairly complex financial structure.[3] Most member countries pool part of their central bank official reserves and put them at the disposal of the IMF. This pool of quotas is used by the IMF to finance the credits it extends to other member countries (see Box 1). Creditor countries are compensated for this use of reserves by a remuneration which is largely based on the SDR interest rate, composed of the weighted three-month interest rate on government paper of the United States, Japan, the United Kingdom and France and the three-month interbank deposit rate in Germany.[4] Thus, remuneration on the use of resources by the IMF closely mirrors money market interest rates in the major industrial countries.

BOX 1

DRAWINGS ON THE FUND

Three quarters of members' quotas are paid in national currency and one quarter in internationally accepted reserve currencies (e.g. US dollars). In the case of a loan, the creditor's national currency is lent to the debtor country through the intermediation of the IMF. In most cases the national currencies will be changed into US dollars at the central bank of the creditor.[1] As a result, the balance sheet of the creditor country's central bank shows a decline in foreign exchange reserves and an equal increase in the claim on the IMF. The creditor country receives remuneration from the IMF on its so-called reserve position which consists of *a*) the initial part of the quota paid in foreign currency and *b*) the part of its quota in national currency which is used for loans to debtor countries. The remaining part of the quota denominated in national currency which is not used is non-interest bearing. This has no adverse effect, because at the time of the initial subscription the resources in national cur-rency were created by balance sheet extension, which is without costs to the central bank.

[1] The currencies disbursed by the IMF are taken from the quota deposits by member countries included in the financial transaction plan (the former operational budget). Countries are included on a voluntary basis if their financial and economic position is sufficiently strong.

[3] See IMF (1998).

[4] Relatively minor adjustments are made inter alia to make up for contributions to the reserves of the IMF and its operational costs.

Creditors accept the relatively low interest rate paid by the IMF for two main reasons.

The first reason is based on a public-good argument. The role of the IMF in the international monetary system is of strategic importance to both debtors and creditors, as explained earlier in this section. Therefore, in general, countries have been prepared to accept relatively low compensation as a kind of a membership fee to the IMF. Nevertheless, responding to domestic political pressures the industrial countries, and especially the United States, have questioned the IMF tariff structure. At the same time, some countries have become more interested in maximising the revenues on their official reserve holdings.

Secondly, low interest rates are accepted because claims on the IMF are highly liquid: the reserve position in the IMF can be drawn on immediately should balance-of-payments problems arise. Thus claims on the IMF can be counted as part of a member country's official reserves. The IMF can guarantee their liquidity, because IMF loans have a relatively short maturity and a revolving character, rotating between members as surpluses and deficits arise. Furthermore, as opposed to commercial banks, the IMF is not highly leveraged, and it keeps a close watch over its liquidity ratio (the ratio of the uncommitted usable resources of members in a strong position to its liquid liabilities). The strong external financial positions of most countries providing the resources minimise the risk to creditors drawing on their reserve positions collectively. The implicit credit rating of the IMF is therefore very high, making the remuneration on the reserve position in the IMF comparable with the returns a country normally earns in the financial markets on its short-term loans lent to counterparties with a low credit risk.

In summary, from the creditors' viewpoint the part of the quota that is effectively used by the IMF to provide credits to other members can been seen as an immediately callable SDR deposit on which a three-month interest rate is paid. At the same time, given the large pool of resources at its disposal, the IMF can make longer-term commitments without jeopardising the liquidity of its liabilities. The IMF's special financial structure is directly linked to its monetary character, implying that IMF loans essentially take the form of a temporary transfer of international liquidity (official reserves) from countries with a strong balance-of-payments position to those with a weak

one. The relatively low costs of acquiring capital are also due to the fact that the IMF itself does not borrow on the international capital markets, unlike the World Bank and the regional development banks, which borrow there to finance their loans.

3. Costs to creditors

3.1. *Introduction*

In this section we will argue that the interest rates charged by the IMF in normal circumstances can be relatively low because the special role of the IMF in the international financial system reduces the risks for the IMF itself as well as for the creditor countries which have provided the resources.

3.2. *Risk mitigation*

Because of its special position the IMF can mitigate the risks attached to its loans. Helped by its low funding costs, the IMF can charge debtor countries lower interest rates than private sector participants which have to charge high spreads because of the sovereign risks involved. Factors which reduce the risk for the IMF are:

– The Fund grants credit subject to the fulfilment of policy conditions. This conditionality basically serves two purposes: ensuring, firstly, that the debtor country actually adjusts its policies toward restoring equilibrium and financial stability and, secondly, that it will in due course be in a position to repay. By implementing the program, the country's repayment capacity generally increases so that the default risk decreases. Continuous monitoring, supported by disbursement of the loan in tranches, in principle ensures that the program stays on track.

– The IMF is a preferred creditor, which means that in case of default the IMF is repaid before other creditors are. Arrears on IMF

loans are rare and concentrated in a few low-income countries.[5] The sovereign risk, which can be substantial in the case of the emerging economies, is therefore considerably lower for the IMF than for private market participants.

Recent developments have somewhat undermined the mechanisms that normally support the lower interest rates and reduce the risk run by the IMF. The large front-loaded packages in recent years have diminished the effectiveness of the monitoring process and undermined the conditionality attached to the disbursements in tranches. Under the recently created SRF, access to IMF resources has increased considerably while disbursements have been front-loaded in the first year. Repurchases have to be made within 2½ years, but countries are expected to repay sooner. To compensate for the higher risk for the IMF and to increase the incentive for early repayment, loans under the SRF facility carry a surcharge of 300 basis points above the normal rate of charge which, after the first year of disbursement, is increased by 50 basis points every six months until a maximum of 500 basis points is reached.

At the height of financial crises countries generally have no access to the capital markets. Therefore, in spite of the higher rates, SRF loans have still proved attractive to debtor countries lacking any alternative financing route. Tentative calculations show that the rate of charge for financing under the SRF is comparable with market rates on commercial loans with an identical maturity in post-crisis periods.[6] Therefore, after a crisis countries are stimulated to replace the outstanding SRF loans with fresh commercial loans, which improves the revolving character of the IMF's resources and enhances the financial position of the IMF itself. Actual behaviour on the part of the member countries seems to confirm this: up to mid-2000 approximately 50% of SRF loans had been repaid early. In conclusion, although the SRF has increased the risk run by the IMF, the special features of this facility offset it in part.

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[5] Currently, only four countries have arrears to the IMF (exclusively ESAF loans): the Democratic Republic of the Congo, Liberia, Serbia/Montenegro and Sudan. All these countries have been or are still involved in armed conflicts, illustrating that arrears only arise in exceptional circumstances.

[6] See Appendix 1 for a comparison of the SRF interest rate and market interest rates.

3.3. *Risks and compensation for creditors*

Because of the strategic role of the IMF, countries do not usually calculate the costs of IMF membership. These costs can be considered as a kind of insurance premium for liquidity support in case of balance-of-payments problems and, for creditor countries, as an insurance premium against systemic crises. Individual countries can reap the public-good benefits of a stable and open world economy provided by the IMF with improved export opportunities and lower risk premiums in the capital markets.

If the IMF uses the resources of a creditor country, the foreign exchange reserves of this country, and thus the total yield on these reserves, decline. On the other hand, the claim on the IMF is remunerated. Is this remuneration sufficient to compensate for the revenue forgone? Generally speaking, official reserves invested by central banks in US Treasury bills and similar instruments are replaced by short-term SDR claims. This entails some risk in terms of currency and interest, which may or may not enhance total yield, depending on the development of the US$/SDR exchange rates and interest margins. Since the portfolio management of central bank assets is based on expected returns, risk and liquidity, and on strategic targets, it is uncertain whether this very liquid but relatively low-yielding claim on the IMF fits in with the optimal portfolio. If this is not the case, there will be opportunity costs for the relevant creditor central banks.

More importantly, the IMF and, therefore, its members run a risk by lending to countries in crisis. Member countries are not compensated for the risk of non-payment in the form of a spread, and the absence of such a spread can be seen as an implied cost to creditors. The financial position of the IMF is protected against the costs of payment arrears via the so-called burden-sharing mechanism, under which the rate of remuneration for creditors will decline in case of payment arrears. Thus the costs of payment arrears are transferred to the members. It is somewhat perverse that creditor compensation diminishes when risk increases, but this reflects the fact that both debtors and creditors are members of the same cooperative institution.

Apart from these considerations, the costs to creditor countries implied by IMF financing are relatively minor and have not played a major role in recent discussions. The debate is not so much about in-

creasing revenues for creditor countries as on the appropriateness of charging relatively low interest costs to debtor countries.

4. Financial advantages of IMF loans for debtor countries

4.1. *Introduction*

In Sections 2 and 3 we discussed the mechanics of IMF lending at relatively low rates of charge to debtor countries. In this section we outline the conditions on the international capital markets for emerging economies during the crisis years, thus affording some insight into the possible costs these countries would have faced if they had borrowed on such markets. We then calculate the financial advantages debtor countries derive from IMF loans by simulating the costs that would have been incurred by comparable loans on the international capital markets.

4.2. *Crises in emerging economies*

During the years preceding the Asian crisis capital inflows into the emerging economies reached all-time highs. Spreads and thus borrowing costs for the emerging economies came down to historically low levels from the high peak reached during the peso crisis in 1995. In July 1997 the Asian crisis got underway when the Thai baht was forced to devalue. The financial markets saw parallels with the position of several other countries and investors started withdrawing capital from South East Asia. The near-collapse of several countries in a single region hitherto considered stable and governed by responsible governments rocked the financial markets. The supply of new capital to the region dried up, causing markets to become illiquid, and Asian spreads very rapidly increased. Through contagion other emerging economies outside the region were affected as well. After Russia announced its debt moratorium in August 1998, investors increasingly showed risk-averse behaviour, shaken out of their comfortable conviction that countries like Russia were 'too big to fail'. Once this as-

sumption proved unfounded, portfolios were reallocated to safer instruments and the 'flight to quality' reduced the supply of capital to all the emerging economies.

Spreads on emerging market debt temporarily rose to 1700 basis points over US Treasury bills, equalling the 1995 highs, and the emerging economies found it increasingly difficult to raise new capital. In fact, at that time most of the emerging economies had no access to private capital. Subsequently, when the IMF programs succeeded in restoring confidence, spreads started to decline gradually and market access was regained. The Brazilian crisis brought spreads back to very high levels for the Latin American countries, but it had a relatively minor impact on Asian spreads.

4.3. *IMF programs*

When the Asian crisis erupted, the assistance of the IMF was requested to provide loans and help design policies to get the emerging economies back on track. IMF resources were made available under a number of facilities, depending on the type of underlying balance-of-payments problems. In order to calculate the financial benefits of IMF assistance for debtor countries, we use a sample consisting of seven countries which were heavily affected by the Asian crisis and received large IMF loans: Indonesia, Korea, Thailand, Argentina, Brazil, Mexico and Russia. In most cases the traditional stand-by and extended arrangements (SBA and EFF) were used, occasionally supplemented by the more recently established reserve facility (SRF). On some occasions financing under the Contingency Financing Facility (CFF) was provided as well.

TABLE 1

OUTSTANDING IMF LOANS 1997-99 (IN MILLIONS OF SDR)

Country	Type of loan	Size of loan		Date of approval
		Commitments	Actual drawings [a]	
Indonesia	SBA	3,669	3,669	November 1997
	EFF	5,383	3,798	August 1998
Korea	SBA	4,100	4,100	December 1997
	SRF	11,400	10,313	December 1997
Thailand	SBA	2,900	2,500	August 1997
Argentina	EFF	2,080	0	February 1998
Brazil	SBA	3,908	7,869	December 1998
	SRF	9,117		December 1998
Mexico	SBA	3,103	1,034	July 1999
Russia	STF	1,528	1,528	May 1994
	EFF	6,901		March 1996
	EFF	2,306	5,780	July 1998
	SRF	4,000		July 1998
	CCFF	2,157	2,157	July 1998
	SBA	3,300	471	July 1999
Total		65,852	43,219	

[a] Since some programs run on after 2000, the amounts actually drawn reflect the position as of end-1999.

Source: IMF, *International Financial Statistics*, various issues.

BOX 2

MAIN IMF PROGRAMS

- Stand-By Arrangements (SBAs) provide short-term balance-of-payments assistance for deficits of a temporary or cyclical nature. The program normally covers a period of one to two years and repurchases are made over a period of 3¼ to 5 years after each purchase.
- The Extended Fund Facility (EFF) is designed to give assistance to countries with balance-of-payments problems over longer periods. The program covers a maximum of three years and repurchases are scheduled 4½ to 10 years after the date of each purchase.
- The Supplemental Reserve Facility (SRF) is a recently developed short-term facility. It is activated in case of exceptional balance-of-payments difficulties resulting from a sudden and disruptive loss of market confidence reflected in pressure on the capital account and member's reserves. Unlike the other facilities it has no ceiling in terms of maximum amount possible. To compensate for the additional risk involved for the IMF the interest rate charged is higher than usual.

4.4. *Calculation*

We will estimate the financial advantages for debtor countries by estimating the additional interest costs the emerging economies would have faced if, instead of turning to the IMF, they had resorted to private market financing. This we do by comparing the costs of loans in the international capital markets and the costs of IMF loans and multiplying the difference by the amount of IMF loans actually drawn. Because quite a number of sometimes heroic assumptions have to be made, the result can be no more than a rough estimate.

For the first variable, the cost of financing for an emerging economy when borrowing on the international capital market, a proxy is used. If a country regularly issued loans with the same amount and maturity as the IMF loans, a simple comparison between the interest rates on the international capital market and the IMF would suffice. However, most of the emerging economies do not issue regularly and it would be a coincidence if the maturities corresponded exactly. Hence, a proxy is needed. For the purpose of this study we have used the sovereign yield of the Emerging Market Bond Index (EMBI) developed by J.P. Morgan, which is an index of the average secondary market price of emerging market loans on the international capital market.[7] This index can be used under the assumption that prices in the secondary market are in line with the costs the emerging economies face when issuing on the primary market. This is contrary to the observations of some other studies, which show that in general primary spreads are lower than spreads in secondary markets.[8] However, these studies also show that in times of market pressure, countries with high spreads stop issuing altogether. In our calculation countries, including those facing a crisis and confronted with higher spreads, would have to find alternatives to the IMF loans and therefore would have to resort to the international capital markets, even if the spreads were increasing. In our case, secondary market spreads are used as an indication of what the spreads on the primary market would have been.

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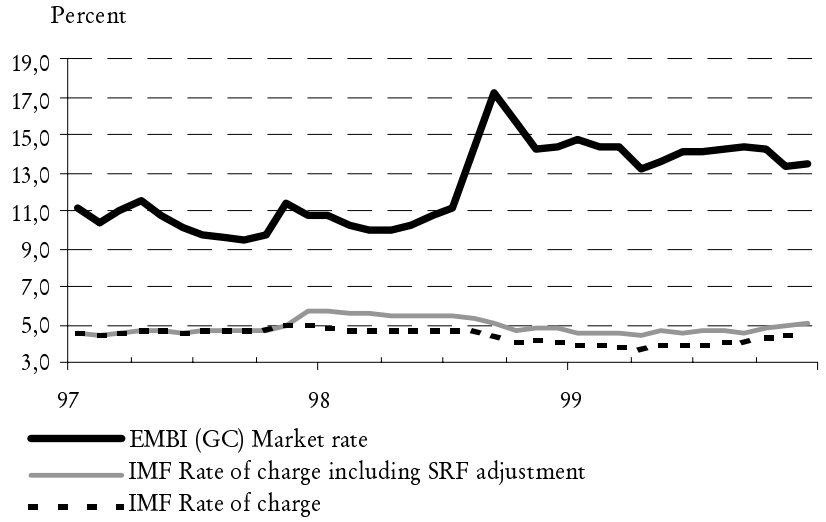
[7] We have used the EMBI Global Constrained (GC), which is an improved version of the globally used EMBI and has a relatively better-balanced distribution over regions. Since data series for the EMBI Global Constrained are only available since end-1997, the EMBI (normal) is used for the year 1997. We have corrected for the break between the EMBI and the EMBI Global Constrained.

[8] See Eichengreen and Mody (1998).

For the second variable, the costs of the IMF loans, we take as our basis the 'adjusted rate of charge', i.e. the interest rate charged by the IMF on all facilities except the SRF.[9] Figure 1 shows the yield of the Emerging Market Bond Index and the adjusted rate of charge of the IMF from 1997 until the end of 1999. We also show the IMF rate of charge adjusted for the higher SRF interest rate.[10]

FIGURE 1

EMBI GC AND THE ADJUSTED RATE OF CHARGE



Source: J.P. Morgan, www.jpmorgan.com and IMF, *International Financial Statistics*, various issues.

We simulate that the actual amount of IMF loans borrowed by the debtor country be financed on the international capital markets in the 1997 to 1999 three-year period, which coincides with the start of

[9] For the recently created CCL facility, too, a different interest rate is charged, but no disbursements have taken place under this facility yet.

[10] The adjusted rate of charge is basically determined by two elements: the SDR interest rate and the burden-sharing mechanism. The SDR interest rate is raised by a factor (1.07 in 1999) to generate income for the IMF to add to the reserves. This so-called basic rate of charge is further adjusted with a surcharge for burden-sharing to offset income losses as a result of members with overdue obligations. Through this burden-sharing mechanism the financial position of the IMF is safeguarded against members in arrears.

the Asian crisis and its aftermath. The difference between the market yield and the IMF rate of charge is multiplied by the actual IMF loans outstanding to the seven countries in our sample for each month in this three-year period.

TABLE 2

INTEREST MARGINS AND FINANCIAL ADVANTAGES [a]

	EMBI (GC) yield in %	Adjusted rate of charge (corrected for SRF) in %	Difference (1) - (2) in %	IMF loans (in billion US$)	Advantages (in billion US$) (3) x (4)
	(1)	(2)	(3)	(4)	(5)
1997	10.4	4.8	5.7	22.6	1.3
1998	12.6	5.3	7.4	40.9	3.0
1999	14.0	4.6	9.5	43.7	4.2

[a] Monthly averages of the EMBI (GC) and the corrected Adjusted Rate of Charge are weighted by the IMF exposure in the corresponding month.

The total financial advantages accruing to the seven countries in our sample over the three-year period until the end of 1999 turned out to be of the order of US$ 8.5 billion. To put the magnitude of the financial advantages into perspective, this would have amounted to 4% of the total interest paid on all the foreign loans of these seven countries in the 1997-99 period. Interest payments for these seven countries in this period totalled US$ 200 billion. Put differently, if instead of the IMF rate of charge the market rates had been paid, the difference would have been equal to somewhat more than half a percentage point of export earnings annually.

4.5. *Limitations*

Two factors for which we cannot correct lead to an overestimation of the financial advantages of IMF financing for the emerging economies. Firstly, the EMBI yield may not be representative of the normal costs of borrowing on the primary markets at the height of a financial crisis when spreads take on an extraordinary magnitude. However, this period is fairly short and the spreads come down relatively quickly from the extreme highs. The overall effect on the results presented here is limited. Secondly, the average maturity of the EMBI yield is around 12 years, which is longer than the average maturity of

the IMF loans of around three-and-half years. Normally, a longer maturity would imply higher spreads. The difference in maturity would have had a moderating effect on the EMBI yield of around 45 to 200 basis points, which in turn would have reduced the financial advantage for the seven countries in our sample by approximately US$ 0.45 to 2.0 billion.[11]

On the other hand, the financial advantages of IMF financing are also somewhat underestimated. IMF involvement itself affects the EBMI yield, because loans provided by the IMF reduce the country's total financing needs in the short run. At the same time the attached conditionality reduces the risk of sudden changes in macro-economic policies, which in most cases reduces the risk premium charged by commercial banks. This lowers the country's overall borrowing cost on commercial banks. These factors would have had a moderating effect on spreads as measured by the EMBI yield. The lower spreads and the increased chances of an early return to the private capital market make for difficult comparison with the counterfactual situation, with no program.

The results obtained on the basis of a sample of seven countries cannot be easily generalised. Under normal circumstances the seven countries in our sample have access to international capital markets, in contrast with a large group of other countries that also have IMF programs, but have no access to the international capital markets. Without such access there is no benchmark available for funding costs, and the calculation method can therefore not be applied to these countries. Typically, the poorer countries with large structural problems have no private market access and can resort to the Poverty Reduction and Growth Facility (PRGF) of the IMF.[12] The maturity on these loans, up to 10 years, is exceptionally long, and the interest rate is only half a percentage point. Given the long maturity and the very low interest rate, it is clear that in relative terms the advantages for this group of countries will be much greater than for the seven countries in our sample. However, concessionality is intended to this group of countries.

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[11] See Appendix 2 for the influence of maturity on spreads.

[12] Formerly known as the Enhanced Structural Adjustment Facility. The PRGF is funded in a different way from the facilities previously mentioned in this paper. Our calculation method can therefore not immediately be used for the PRGF.

5. Conclusions

IMF financing entails substantial advantages. The seven large countries in our sample affected by the Asian crisis and its aftermath have saved around US$ 8.5 billion on interest payments in the last three years. This is a substantial amount and equals 4% of the total interest payments of these countries in the corresponding period, a 'benefit' made possible by the relatively low rates which the IMF charges on its loans compared to market loans. Indeed, it may actually be larger, as overall commercial borrowing costs are often lowered because of adoption of an IMF program. The IMF is able to charge relatively low rates because of its cheap funding and its ability to reduce risks. The unique financial structure of the IMF, drawing on surplus official reserves of financially strong member countries, ensures that IMF credit can be provided at relatively low cost. Creditors are willing to lend at a low rate because claims on the IMF are very liquid and, moreover, the risks on claims on the IMF are low, because the IMF can combine its loans with adjustment programs which increase the debtor's capacity to repay, supported by the preferred creditor status of the IMF.

The relatively low interest rates charged by the IMF can lead to moral hazard behaviour on the part of the debtor countries. This is largely reduced through the tough policy measures which the IMF imposes as a condition for its programmes. In practice, most countries do not turn to the IMF if not forced by adverse circumstances. The stronger the conditionality, the lower is the probability that a country will run into payments arrears. Therefore, strong conditionality reduces both moral hazard behaviour and risks for the IMF.

We have argued that the important financial advantages coming with IMF financing can be regarded as compensation for the harsh measures member countries are normally required to carry through. In its Fukuoka report the G7 advocated surcharges to discourage protracted or larger use of IMF resources. In this context, graduation of the rates of charge on the SRF and the CCL over time should be maintained in order to encourage member countries to repay early and seek alternative private-sector financing. These facilities target the emerging economies, which should try to regain access to the international capital markets as quickly as possible. However, we would not encourage using the rate of charge as the primary instrument to dis-

courage unduly large or long use of the traditional IMF resources under the SBA and the EFF. In the first place, conditionality – and not interest charges – is the instrument to discourage such prolonged or unduly large use. Countries that are persistent users of IMF financing have apparently failed to pursue sufficiently ambitious policies to address their balance-of-payments difficulties. In these circumstances, tighter policy conditionality would be more appropriate than raising debt service payments. Secondly, raising the cost of IMF borrowing conflicts with the cooperative character of the IMF and would imply that the IMF acted as a *de facto* commercial bank. Thirdly, as the tentative calculations of the financial benefits of IMF financing have shown, the costs of higher rates of charge could be substantial for debtor countries, especially for those that do not have ready market access. More in general, higher rates would discourage countries from turning to the IMF at an early stage. This could have negative effects on the global economy and make the IMF's task more difficult.

In this respect the recent decisions taken to change IMF's tariff structure at the Prague Annual Meeting can be considered as an acceptable compromise between these considerations and the original, rather far-reaching G7 proposals. When credits are arranged with the IMF from now on an expectation of early repayment will be formulated, which can be waived in adverse circumstances if the external position has not improved sufficiently. Moreover, a surcharge is levied if credits surpass a certain threshold (100 basis points on credit outstanding above 200% of quota, 200 basis points above 300%). Presently, mainly emerging economies with private market access would be affected, while other developing countries generally would not exceed these thresholds. In this way the terms of the traditional stand-by arrangements and EFF have been adapted in such a way that IMF credit for unduly large amounts or for unduly long periods is discouraged, while at the same time the financial benefits of IMF credits under 'normal' circumstances are maintained. Thus a fine balance is struck between keeping in place the proper incentives for countries to turn to the IMF for conditional financing in a timely manner and avoiding the moral hazard attached to providing ample resources at too lenient terms.

APPENDIX 1

A comparison between the SRF interest rate and private market interest rates

In order to compare the SRF interest rate and the interest paid in the international capital market, the actual interest rate paid on a yearly basis under the SRF facility is first calculated.

$$\text{average yearly interest rate SRF} = \frac{\sum [(ARC_t + i_{srft}) * SRF_t)]}{\sum SRF_t}$$

ARC_t = Adjusted Rate of Charge in month t;

i_{srft} = extra interest rate added in month t (300 basis points plus 50 basis points for every half year);

SRF_t = amount of SRF outstanding in month t.

	Korea		Brazil	
	SRF*	Benchmark bond**	SRF*	Benchmark bond**
Interest rate/yield	7.6	7.8	7.1 (est.)	8.1
Maturity	1.8	2.2	2.0 (est.)	3.9

* For Korea, which repaid ahead of schedule, actual repurchases are used. The SRF of Brazil still being current, the average interest rate and maturity have been estimated.

** As benchmark bonds the Korea Development Bank 7.9 (semi-sovereign bond), due 02/01/2002, and the Republic of Brazil 8 5/8 (sovereign bond), due 03/03/2003, have been used.

The yields of the benchmark bonds are the average yields of the period from three months after the crisis until final repayment (Korea) or the end of June 2000 (Brazil). The benchmark bonds have been chosen in such a way that the maturity of the benchmark bond approximates the maturity of the SRF loans. We conclude that in the case of Korea the interest rate charged in an after-crisis situation is comparable to the SRF interest rate. In the Brazilian case the SRF interest rate is somewhat lower. However, because of the longer maturity of the benchmark bond in comparison with the SRF, the yield of the bond should be somewhat higher. Thus in the latter case, too, the interest rates are more or less comparable.

APPENDIX 2

Maturity transformation

The average maturity of the EMBI Global Constrained is about 12 years. The average maturity of IMF loans in our sample is about 3.5 years. On a typically upwardly sloped yield curve a longer maturity would imply a higher spread. In a mature financial market, swap curves can be used to calculate the influence of maturity differences on interest rates. These are not available in emerging markets. By using three different methods, we can approximate the impact of differing maturities on the calculations. The difference is relatively limited in comparison with the absolute spread, because the yield curves of the emerging economies tend to have a steep slope in the short-term segment (up till two years) but are generally less steep in the longer segments.

1) Eichengreen and Mody (1998) have estimated an equation with explanatory variables for the development of emerging market spreads, including a variable for the influence of maturity on spreads. Using this coefficient, the difference between the EMBI maturity and the average IMF loan maturity would lead to differences of approximately 45 basis points.

2) Kamin and von Kleist (1999) have also estimated the determinants of emerging market spreads. Their coefficient, which measures the influence of maturity on spreads, is also dependent on the rating of the issuer. The median unweighted credit rating of the countries in our sample during the period 1997-99 was Moody's B1 and Standard & Poor's equivalent B+. Using this coefficient the difference of maturity will lead to an additional spread of approximately 200 basis points.

3) Finally, we calculated the yield to maturity difference for six Latin American countries for a duration extension of 8.5 years, starting from 3.5 years onwards by means of a weighted yield curve analysis. The average effect was around 80 basis points.

On the basis of these simulations, we conclude that the effect of the maturity difference on the spread will be in the range of 45 to 200 basis points.

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