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Executive Board Attendance

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A. Mountford, Acting Secretary
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Also Present

ECB: B. Kisselevsky. Asia and Pacific Department: T. Baig. European I Department: J.R. Artus, Deputy Director; T. Krueger. External Relations Department: M. Bell. Policy Development and Review Department: M. Fetherston, K. Hviding, G.R. Kincaid, J.-Y. Wang. Research Department: M. Mussa, Economic Counsellor and Director; R. Brooks, M. Kumar, P. Isard. Secretary's Department: S. Soromenho-Ramos, T. Turner-Huggins. Office of the Managing Director: A. Krueger, First Deputy Managing Director Designate. Advisors to Executive Directors: A. Baukol, M.P. Bhatta, W.-D. Cho, O.A. Hendrick, Liu F., F. Manno, H. Mori, E. Nyambal, H.E. Phang, K. Sakr, C.-P. Schollmeier, F. Zurbrügg. Assistants to Executive Directors: T. Belay, J.G. Borpujari, N.J. Davidson, M. Di Maio, R. Maino, T. May, L. Ocampos, J. Sipko, M. Walsh, D.B. Waluyo.

1. METHODOLOGY FOR CURRENT ACCOUNT AND EXCHANGE RATE ASSESSMENTS

The Executive Directors considered a staff paper on the methodology for current account and exchange rate assessments (SM/01/152, 5/24/01; and Cor. 1, 6/14/01).

Mr. Toyama submitted the following statement:

> Assessment of the exchange rate and the exchange regime is one of the core functions of the Fund. I welcome staff's report to the Board on the development of CGER applicable to industrial countries and on the newly invented methodology to analyze the sustainability of the exchange rate, in due consideration of the conclusion of the Board seminar in October, 1997. Misalignment of the exchange rate of major industrial countries could cause an abrupt correction, which would have serious adverse impacts not only on those countries, but also on the global economy in general. If the exchange rate of emerging economies is perceived to be unsustainable, capital could be suddenly repatriated, triggering a crisis. It is important that policymakers take such a risk into account in formulating and implementing policies. To assess equilibrium rates that are consistent globally and over the medium term would be a help to policymakers. Indeed, such an assessment could be placed at the center of Fund surveillance activities. CGER is a warranted effort based on such legitimate motivation.
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> However it is well refined, the methodology to assess misalignment or sustainability of the exchange rate must be based on some strong assumptions and constructed with a relatively simple structure, partly for the purpose of securing consistency among countries. First, to assess the equilibrium rate based on the country's current account balance is just one way of thinking. Second, to assess the underlying current position and S-I norms, CGER assumes that the potential growth rate will have been realized in five years in line with the WEO horizon, although room is allowed for judgmental adjustment. It is well known, however, that accurate assessment of the potential growth rate itself will be difficult. Moreover, the WEO projection has the drawback of global inconsistency. While the benchmark comparators that staff has begun to develop are expected to contribute to improvement in precision, they are no more than complementary methods. Accordingly, the result of CGER should be regarded at most as indicating a general direction.
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> As staff correctly points out, there are cases in which deviations of exchange rates from equilibrium levels would be helpful from the cyclical perspective or the depreciated currency reflects market concerns over the political capability to deliver the required fiscal adjustment. In either case, it would not be advisable to correct the misalignment through foreign exchange intervention or a change in monetary policy. If I am allowed to proceed further—or return to the starting point, I would like to stress that we should

not bend the goal of macroeconomic policies of the country: macroeconomic policies should be aimed at sustainable growth with price stability. A sudden unwinding of misalignment that would adversely affect price levels and economic activities should be taken into account as a risk factor. In case this risk, in comparison with other risk factors, is a dominant consideration, policymakers could set an intermediary goal of correcting the misalignment. However, I can hardly imagine a case where such a risk would become the predominant consideration for major industrial countries to the extent that international coordination in monetary policy would be urged. Even as in the 1995 case that staff illustrated, Fund advice is merely understood to be given as recommendation to major industrial countries to take policy actions against adverse impacts of the rapid exchange rate movement. If the recommendation for coordinated actions was meant to correct the misalignment itself, I would say the Fund advice was inappropriate.

It is appropriate that staff is developing a separate methodology for assessing the sustainability of exchange rates of emerging economies' currencies from that for industrial countries. I can agree that at this point the methodology for emerging countries is at best to assess the sustainability of exchange rates by applying several criteria since emerging countries may not have full access to their capital markets, a fact assumed for assessing I-S norms for industrial countries. I would like to call attention to a couple of caveats. First, while it is unavoidable for practical reasons to set numerical standards in applying the criteria, it should be duly recognized that they are no more than arbitrarily chosen yardsticks. Even when the line is drawn conservatively, a country should not be satisfied with the result that indicates the sustainability of the current level of the exchange rate, and, on the other hand, the result indicating that the exchange rate is difficult to be sustained should not cause unnecessary uneasiness in the market. Second, the relationship with the Early Warning System should be clarified. I would appreciate it if staff would explain the difference between the CGER and the EWS in their contents as well as usage.

Finally, outcomes of CGER should be seen as no more than reference material resulting from a particular idea and should not be regarded as something with precision on which the correction of misalignment is set as the primary goal of macroeconomic policies. Moreover, close attention will be required to the manner of dissemination of the outcomes so that they will not create a particular sentiment in the market in a self-fulfilling manner. I appreciate that the staff paper reflects such cautiousness, as it was already requested by a number of Directors in the previously mentioned Board Seminar. As this chair stated at that time, the limit of outcomes of this methodology should be duly recognized and those outcomes should be treated accordingly.

Mr. Portugal and Mr. Junguito submitted the following statement:

Surveillance and assessment of exchange rate positions of member countries lie at the core of the Fund's mandate. We commend the staff for continuously seeking to strengthen its analysis of exchange rates. Within this context, the assessment of possible exchange rate misalignments of major industrial country currencies is particularly important, given their implications to the world economy. Despite the imprecision and the many problems involved in this type of exercise this is a task that the Fund needs to perform.

Given the difficulties and limitations of this type of exercise, we are favorably impressed by the work that the staff has already been able to carry out with respect to industrial countries. The motivation of trying to identify the degree to which exchange rates are misaligned with respect to macroeconomic fundamentals seems appropriate, and the methodology used by the CGER appears to be systematic and transparent. The framework appears appropriate to inform qualitative judgments on exchange rate misalignments on a multilateral basis and is structured in a way that fosters global consistency of the estimates.

When compared to other methodologies, which use the "trade elasticities" approach, the Fund's methodology has the advantage that it does not specify the sustainable level of capital inflows on an ad-hoc way, relying rather on the national income accounting identity that equates the current account and the saving-investment gaps. Besides, the results have shown to be consistent with the Purchasing Power Parity (PPP) exercises.

As pointed out by the staff, the approach is based on highly simplifying assumptions to allow for greater comparability among countries and for global consistency of the results. There is also a substantial degree of imprecision of the results. For these reasons, it is imperative that deviations are interpreted on a case-by-case basis. The paper presents a number of examples where a mechanistic use of the findings would have led to inappropriate assessments and inadequate recommendations. As the paper points out, the quantitative estimates from the CGER's analysis should be treated just as the starting point for a judgmental assessment of how to interpret cases where the exchange rates appear to deviate from their medium-run equilibrium levels. Final judgments must take into account cyclical considerations and the extent to which the prevailing macroeconomic policies are appropriate.

For these same reasons, we believe that the results of these exercises should not be made public to avoid sending false alarms. The best use of the results would be to communicate timely and confidentially to the authorities concerned the Fund's views on possible misalignments. Foreign exchange markets are highly sensitive to statements by official institutions.

We consider it important that the staff continues to make a concerted effort to extend to emerging market economies the assessment of current account and exchange rate positions. The experience of the 1990's has shown that external sector imbalances and exchange rate misalignments can lead to serious and costly crises for these economies.

We also agree that some simplifying assumptions of the model used for the industrial countries do not seem to be applicable to emerging countries. In particular, the assumption that each country can borrow or lend an unlimited amount of capital internationally at a constant premium above world interest rates confronts the reality of more limited and volatile access of emerging market countries to international capital markets. Similarly, in emerging markets, structural changes can play a much more important role in shifting the position of the S-I line.

We are concerned, however, by the contrast between the approach that is adopted in the case of industrial countries, which appears based on theoretical considerations and empirical evidence and informed with the appropriate caveats, and the ad-hoc and over-simplified approach that is currently applied to emerging markets. While the assumption of unlimited international borrowing is certainly inappropriate for emerging markets, it seems to us that it is equally inappropriate to define a ceiling of 40 percent for ratio of net foreign liabilities to GDP. Even if it were possible to define an "adequate" level for NFL/GDP on a less arbitrary way than the one proposed by the CGER, there will still be a serious flaw given by the fact that two equivalent ratios could represent completely different degrees of external sustainability. A country where NFL/GDP is at 40 percent with a large position of long-term external debt and also a large position of FDI would be quite different from another one with the same NFL/GDP ratio, but with a large participation of short-term liabilities and an insignificant FDI position.

Similarly, comparisons of the projected current account deficit with the average experience of the previous decade may also be over simplistic, given that a number of emerging markets have undergone substantial structural reform in terms of trade opening and flexibilization of the exchange rate regime which would complicate such comparisons. Emerging markets that have implemented significant structural reforms and maintain an appropriate macroeconomic policy may exhibit high marginal productivity of capital, large investment demand and insufficient domestic savings, hence, large current account deficits. These comments would also apply to the export and import benchmark comparators, mentioned in Annex II, to be used to evaluate possible biases in the WEO projections.

Regarding the Chinn-Prasad study on the determinants of current account deficit, as stated in the staff paper, the CP norms are not applicable to a number of developing countries. It also seems somewhat surprising that terms of trade volatility does not adversely affect the current account and that the dummy for oil exporting countries is not significant as indicated Table 2 of Annex III. Additional work for more homogeneous groups of developing countries seems worth pursuing.

Another exercise that would seem worthwhile pursuing for emerging markets would be a PPP approach, similar to the one done for industrial countries using the same time intervals shown in Figure 2.

Given these considerations, we believe that, rather than start applying the described framework to emerging markets already this summer, it would be better if the CGER would try to develop for emerging market economies a more theoretically based approach that ensures global consistency and relies less on ad-hoc criteria. There is still much work to do in order to improve the framework for emerging markets in order to achieve the same level of robustness of CGER's methodology applied to industrial economies before it can be applied.

If, however, the decision to start applying the current methodology to emerging markets is maintained, we fully concur with the staff's recommendations that it would be necessary to avoid mechanical application of the criteria, that it would be inappropriate to consider that large current account deficits should always be resisted, and that the CGER should guard its assessments closely at this stage.

Mr. Lushin and Mr. Palei submitted the following statement:

We welcome the staff paper on the advances in the methodology used by the Coordinating Group on Exchange Rate Issues (CGER) for current account and exchange rate assessments. The issues addressed in the report are at the core of the Fund's activities, and continuous progress in this area is essential for improving the Fund's ability to provide its members with a sound advice on economic policy, and to prevent and resolve crises. We would like to make a few comments on the methodology used for assessments in industrial countries; on the use of the results of quantitative estimates; and on the progress in developing the methodology for the emerging markets.

Concerning industrial countries, the report states that since the previous discussion, in 1997, CGER has improved modeling techniques and expanded the coverage of the regularly conducted exercise to all industrial countries. In Appendix I the staff persuasively explain the benefits of a heavy reliance on the macroeconomic balance approach as opposed to other approaches. We welcome the recent attempts to refine the assessment process by introducing benchmarks for the individual components of the current account. This additional dimension of the analysis seems to be a useful test for a possible bias in WEO-based estimates of underlying current account balances.

In the report the staff quite frankly admit to the limitations of the methodology for current account and exchange rate assessments and quite appropriately call for a continued caution in the use of the generated results. Since the 1997 discussion of the methodology the quantitative estimates of exchange rate misalignments in industrial countries became a frequent element of Article IV consultations and even more so of the WEMD and other multilateral surveillance discussions. In our view, the current practices for disseminating CGER's assessments are appropriate and any attempts to go beyond them could be counterproductive.

The report confirms that the Fund still has a limited ability to assess the sustainability of current accounts for emerging market economies. It is clear from the staff paper, as it was from the one in 1997, that the methodology used for industrial countries is not up to the challenges in emerging market economies. We note the advances in developing criteria for assessing the sustainability of current account balances, including an interesting work by Chinn and Prasad, and we look forward to the application of the four criteria at the time of updating of the WEO projections this summer. Application of the proposed methodology and its refinement may eventually make it a useful surveillance tool. However, this approach suffers from some serious shortcomings. For example, for many countries the CP norm is questioned by the area departments; the criteria do not capture the extent of liberalization of the capital account across the countries; the choice of a common threshold for NFL/GDP stabilization at a level of 40 percent seems to be arbitrary; the ten years average CA/GDP ratio may not be helpful if significant structural changes took place in a country during the period under consideration. Overall, as far as emerging market economies are concerned, it seems to us that it would be a mistake to limit the CGER's efforts to the work on just these criteria.

Unfortunately, there is little discussion in the paper on the possible ways to improve the techniques for assessment of exchange rates developments in emerging market economies. Each major financial crisis of the recent years was accompanied by a heated discussion on the degree of misalignment of the exchange rates. While participating in these discussions directly or indirectly, the Fund was almost always on the optimistic side. For example, the depreciation of the Brazilian Real has far surpassed the initial estimates of the misalignment. Notably, the significant adjustment in the exchange rates took place against the background of a more favorable general economic outlook, including output growth, inflation, interest rates, and fiscal outcomes. On the one hand, the apparent bias in the estimation of the exchange rate misalignment could probably be explained by the Fund's role in providing large financing to the crisis-hit countries and its attempts to maintain confidence in affected economies at the time of extreme uncertainty. On the other hand, it certainly calls for an improvement of the Fund's analytical capacity and the quality of the Board discussions.

We agree with the staff that, for emerging market economies, it is hard to expect any single methodology to be uniformly successful. Contrary to the industrial countries, for emerging market economies there is no need to chose a better technique. The emerging market economies differ in the composition of exports and imports, in the degree of capital account liberalization, in access to international financial markets, in the availability and quality of data, as well in many other respects. Hence, a variety of techniques to assess the exchange rates should be used, including the extended PPP, reduced form models, in particular based on cointegration analysis. We note that the Draft Interim Operational Guidance to Staff for Fund Surveillance prepared last year clearly states: "To derive exchange rate level assessments, staff is encouraged to use a broad range of competitiveness indicators and reliance on diverse analytical techniques, including CGER or equivalent saving-investment frameworks." When reading and comparing country papers discussed by the Board we see uneven success in the use of the various techniques. It might be useful to prepare a separate paper reviewing approaches currently used by the staff for assessment of exchange rates and of competitiveness in emerging market economies.

Furthermore, to improve the quality of the exchange rate analysis in these countries, the staff papers, in our view, should pay more attention to the indicators tracking market expectations, especially when the short-term analysis is in the center of attention. Also, it would be desirable to move from the current practice of presenting to the Board of only the most plausible, from the staff's point of view, indicators. Instead, it would be more productive to include in the papers a variety of indicators, even if they present a mixed picture.

Mr. Djojosubroto submitted the following statement:

There is no doubt that a formal analysis based on the methodology used for the industrial country assessment exercises does have the merit of at least imposing an important degree of rigor in the assessment of possible tensions among currencies. Indeed, as part of the early warning system, it is useful to have a technique which can highlight cases where the exchange rates appear to be substantially out of line with macroeconomic fundamentals. Staff should certainly be commended for their efforts not only in developing the methodology but also in using other methods as well to compare the findings. While the congruence of findings from different studies does not guarantee that the findings are correct, it is still helpful, particularly if the different methods can help shed light on aspects that are not covered by the macroeconomic balance framework used by the CGER. Nevertheless, as staff have also admitted, the margin of error can be substantial in view of the strong simplifying assumptions behind the model and staff admit on page 49 that "a number of factors important in assessing medium term sustainability are precluded".

Since the main objective of this exercise to identify whether exchange rates are out of line with economic fundamentals is to provide an early warning of vulnerabilities to crises, it is important to ask ourselves whether the variables used to assess misalignment are in fact the best predictors of crisis? Looking back at the experience of the Asian crisis, many would admit that the episodes showed clearly that the composition of debt and reserves was at least as important, if not more important, factor than the level of debt and reserves in assessing vulnerability. This is one important weakness in the methodology employing the macroeconomic balance framework. Furthermore, in the present environment where the amount of portfolio capital that is shifted between countries can far outweigh the trade flows and have a significant impact on the exchange rate and market participants base their currency positions more on "technical analysis" than on macroeconomic fundamentals, the relevance of the CGER approach may perhaps be questionable, especially for developing countries.

In terms of transparency, the CGER approach may not score that high as a large element of judgment is involved. Where the exchange rate is found to be 10-15 percent out of sync with the "equilibrium exchange rate" it is still a matter of judgment, albeit informed judgment, if area department staff do have good and timely data, whether the misalignment called for policy action or whether it was due to structural factors which were not taken into account by the methodology. As acknowledged in the paper, it is often easy on hindsight and not apparent at the time of the assessment that the so-called misalignment was in fact not a misalignment but a reflection of structural change. In those cases, the call for a particular course of action may in fact become a self-fulfilling prophecy. This impact would be more poignant in the case of developing countries which have limited access to the international capital market. While staff have argued that this is true only for the short run and not the medium term, the fact remains that this short run may be long enough in certain cases to wreak havoc in those countries. Hence, while we consider the CGER assessment as a useful complementary tool as part of the early warning system, we would still advocate that the CGER keeps the Board informed of its assessments but that these should still be considered highly confidential. In addition, if staff are provided with these assessments when they go on Article IV surveillance missions, staff should be more transparent and provide the authorities with these assessments so that both parties can have a more open and informed discussion on the realism of the assumptions and the interpretation of deviations from the medium term equilibrium level as this will differ depending on a country's stage of development, cyclical considerations and the appropriateness of the country's policy response.

> The simplifying assumptions of the CGER methodology are not entirely appropriate even for developed countries but the problem is compounded in the case of developing countries. One very basic problem would be the lack of data as well as its quality. If this were the main problem, the solution would be relatively simple in the sense that staff could begin with the 22 countries referred to in footnote 39 and add other countries as data becomes available. However, a more fundamental problem is whether the existence of market imperfections in developing countries is so significant as to raise doubts on the appropriateness of the model. The capital markets in developing countries are largely underdeveloped, their access to the international capital market is limited and many are still in the process of important structural transformation, including the development of a strong and modern banking system. Since structural change significantly affects the position of the S-I curve and differences in the composition of debt, reserves and net foreign liabilities may be more important than the levels of these variables, perhaps stress tests to take into account varying levels of access to capital markets, projected levels of current account deficit, capital flight and so on might be more useful as the identification of major liquidity risks is more important for developing countries. However, in view of differences in microeconomic conditions across countries and the importance of monitoring external vulnerability, it is still useful to conduct these assessments in the context of a medium term scenario. Hence, it would be useful for staff to adapt the methodology that they have used for industrial countries by using the four criteria suggested in the paper and to provide a comparison of this assessment against that used for industrial countries so that Board members can evaluate if the assessment is a good complement to the use of macroprudential indicators as part of the early warning system. Nevertheless, in view of the sensitivity of these findings and the large scope for differences of interpretation of results, we feel that these findings should still be treated as preliminary work and should be kept confidential and be reserved for the information of the Board.

The staff representative from the Research Department (Mr. Isard), responding to Mr. Toyama's question on the difference between CGER's work and the work on early warning systems, considered that, in analyzing vulnerabilities, it was useful to have different perspectives and approaches at hand. CGER's work on vulnerabilities was much more narrowly focused than that on early warning systems (EWS). EWS focused on models that tried to relate the probability of crises to a broad set of explanatory variables. Some of those models found that current account imbalances and deviations of real exchange rates from their longer-term trends were important in explaining or predicting crises. CGER's work, by contrast, was, at the current juncture, limited to one explanatory variable, the current account and did not attempt to provide explicit estimates of probabilities for crises. The focus was on a variable that was at the core of Fund surveillance, and the objective was to develop a systematic approach for assessing when current account imbalances can be a source of vulnerability. CGER's work also contrasted with EWS analysis in its focus on the medium-term, CGER tried to assess whether current accounts and exchange rates were consistent with medium-run economic fundamentals, with no presumption that it could explain the short-run behavior of exchange rates. The aim was to make judgments, both for industrial and emerging market countries, on whether fundamentals implied that exchange rates and current account balances were likely to adjust substantially over the medium run. For emerging market countries, CGER would initially focus on the current account, not on the exchange rate. While Directors' suggestions for a focus on exchange rates and the use of the purchasing-power-parity approach were welcome, the staff was not in a position to use them at the current stage. The staff was still in the process of developing a set of criteria for assessing current account sustainability so as to avoid focusing only on a single indicator. With regard to the publication of the staff report, the intention was to streamline the material relating to emerging markets, as that was still to some extent work in progress. It was hoped that Directors would agree to the publication of the report focusing on the description of CGER's industrial country methodology along with some more technical material.

Mr. Abbott made the following statement:

> We are pleased to have an opportunity to review the CGER methodology since this chair is one of those cited in the paper that has had a change of representation since the last review.
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> Although our representation may have changed, this chair's views on the CGER methodology are not much different than those we presented at the October 27, 1997, review.
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> We continue to believe the CGER process represents an interesting methodology that contains elements of a systematic framework for reflecting on the consistency of domestic and external imbalances with assessments of exchange rates. The CGER process is a useful, technical exercise that can shed light on economic policies and their external ramifications.
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> Our endorsement of the CGER falls into the category of greeting that former Speaker of the House of Representatives, Tip O'Neill, used to refer to as a "medium hello." We are happy to acknowledge the work the staff is doing on the CGER and to encourage its further development. But we would stop short of a full embrace. And we would be a little reluctant to give the CGER estimates the seat of honor at the head table of IMF exchange surveillance.
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> A major attraction of the CGER process is that it imposes a globally consistent framework. Global consistency is a big step forward in thinking through exchange rate alignments and what, if anything, should be done about them. The IMF is quintessentially the forum for trying to see the world whole. But a consistent framework does not insure the accuracy or precision of the CGER calculations of medium-term exchange rates for any individual country. Staff itself does a very good job in highlighting many of the theoretical and empirical pitfalls of the CGER exchange rates so it is

unnecessary to belabor these points. If anything, it should be a lesson in humility, both for us at the Fund and for the economics profession generally, to read again how limited our empirical understanding of exchange rate relations really is. The CGER estimates may represent the state of the art but they do not have quite the same scientific standing as sequencing the genome.

I would like to hear more from the staff about two technical features of the methodology.

The major development since the last Board review of the CGER methodology in October 1997 has been the introduction of the euro. Yet the paper is almost silent on how the euro has been incorporated into the established methodology. Figure 5 shows saving-investment norms for the euro area, and paragraph 39 says these were constructed by aggregating estimates for individual countries. The arithmetic of the aggregation is clear enough but what can be said about the latent economics or the implications for the whole CGER methodology? Is there anything to be said about the robustness of the CGER exchange rate estimates in the face of such a major institutional change? Relativities are important in the CGER calculations. With the introduction of the euro, eleven of these relativities have been collapsed into one.

The second technical feature we would like to understand better is the role of fiscal policy. The write-up says that relative fiscal positions are very significant in estimating the saving-investment norms. It would be helpful to understand how this statement can be reconciled with the recent experience of several major countries. In the United States, we have had a sustained and substantial improvement in the government sector balance with no apparent impact on the estimated saving-investment balance, nor, apparently on our actual current account. Japan has had a very large and sustained deterioration in its fiscal position which does seem to have fed into its estimated saving-investment balance but does not seem to have had much impact on its actual current account. Canada as had a strong fiscal improvement which has been associated with a worsening of its saving-investment norm and its current account balance as well as with currency weakness.

The uncertain relationship between national fiscal positions and national saving-investment norms suggests some other behavior, perhaps Ricardian equivalence or animal spirits, is overriding fiscal influences on current accounts and exchange rates. Are our surveillance forensics being given a false lead by an overemphasis on fiscal factors in exchange rate determination?

On a third technical point, we believe that, even within a framework that emphasizes saving-investment balances rather than capital flows, foreign direct investment should be given more prominence in trying to estimate UCURs for emerging markets.

We strongly endorse the points made in section D: Applications in IMF Surveillance. The CGER estimates are just a point of departure for Fund exchange rate surveillance. Fund policy analysis and advice must be based on a case-by-case evaluation of individual circumstances, not a mechanistic view of misalignments. Not all deviations from medium-term equilibrium need to be corrected. And, where correction is deemed desirable, it is frequently not self-evident who should do the adjustment nor how.

We agree with the current policy with respect to dissemination of CGER assessments but believe there have been some lapses in implementing this policy. The concluding remarks from the October 1997 Board discussion of the CGER methodology say that: "Directors emphasized that, in discussing exchange rate misalignments, it was important to take into account the broader macroeconomic context." This context has not always been provided. For example, the 2000 Article IV Report for the United States contained the following simple statement. "According to the latest Coordinating Group on Exchange Rates (CGER) assessment, the dollar in mid-2000 is at least 20 percent stronger than its medium-run equilibrium level" (page 18). No further background or context was provided. As we discussed with the staff at the time, such unexplained, matter of fact statements about misalignment are inconsistent with Board policy about dissemination of CGER assessments. I have the impression that casual references to CGER estimates of misalignments are more and more frequently creeping into statements by IMF officials. I would hope that the 1997 policy regarding caution in discussing misalignments would be reemphasized.

On the last point for discussion, we share the staff's view that the CGER methodology used for industrial countries is not necessarily appropriate for emerging markets. We support the further work the staff proposes with respect to assessing current account sustainability in emerging markets.

Mr. Kelkar made the following statement:

Let me first thank the staff for a well-written paper, showing the progress that the Fund has made in developing a methodology on current account and exchange rate assessments. We also believe that the surveillance and assessment of exchange rates is a core activity of the Fund, and we support the efforts made by the staff to improve the CGER methodology continuously and on an empirical basis. I agree with the comments made by Messrs. Portugal, Toyama, Djojosubroto, Lushin, and Abbott—especially regarding the observation about the importance of a case-by-case approach and the need for a careful assessment of movements in the exchange rates among the three major currency areas, yen, dollar, and euro.

With regard to the assessment of industrial countries, given the difficulty and complexity of quantifying the equilibrium exchange rate, the methodology adopted in the staff report to estimate the magnitude of misalignments by using both the macroeconomic balance framework and the PPP approach appears to be reasonable. It is clear that there is a substantial element of judgment involved in this exercise. It would be useful if the staff could explain how the two methodologies are combined in forming a view about the degree of misalignment. Could the staff also indicate the implicit or explicit weight that is given to the respective indicators? Perhaps, the staff could indicate in Table 1 the difference in the exchange rate indicated by the PPP-based approach.

With regard to the staff's explanations as to why CGER has chosen not to rely on some of the other approaches, we are of the view that the productivity differences between sectors and among countries have a significant bearing on the behavior of exchange rates. This should be considered in future work. The need to refine the analysis by incorporating the Balassa-Samuelson effect is justified, particularly for countries in transition and for developing countries. Much more work needs to be done on what you call the exchange rate PPP analysis, incorporating Balassa-Samuelson framework.

We concur with the staff's argument that market participants have a shorter time horizon in their judgment of exchange rate behavior, and that the day-to-day adjustment of exchange rates may not be consistent with the underlying parameters. This argument is valid not only for industrial countries, but also for a number of other countries where exchange markets are relatively thin and where short-term factors play a dominant role.

On the assessments concerning emerging market economies, I agree with the point raised by Mr. Portugal regarding the rationale for using 40 percent as a ceiling for the NFL-to-GDP ratio. I would also like to associate myself with Mr. Djojosubroto's observation that the composition of the liabilities is more important for the exchange rate determination than their level. Perhaps the staff would like to respond to these two important observations.

We understand that the work in this area is still preliminary at the current stage. For instance, the econometric analysis requires much more work, and the characteristics of different countries have to be taken into account. Individual country studies may be also extremely useful in that context.

Before I conclude, I would like to plead with the staff to conduct this work for developing countries and emerging market economies based on PPP models, because we believe that this provides an important perspective on the exchange rate situation of countries which are undertaking structural reforms and thus improve productivity in the nontradables sectors. I agree with the Paragraph 6 of Mr. Lushin's statement where he requests a separate paper on the different approaches used by the staff.

Mr. von Kleist made the following statement:

The assessment of Exchange Rates and external stability quite obviously lies at the core of this institution. It would be carrying coals to Newcastle to stress the absolute importance of sustainable exchange rate arrangements for macroeconomic stability.

The Fund's analysis of exchange rates is, however, only one (very) important part of Surveillance activities. There are other indicators and instruments available—like ROSCs and FSAPs—to identify and to assess the "external vulnerability" of economies and their structural weaknesses. Therefore, it would be excessive and too narrow to focus the vulnerability analysis exclusively on exchange rates and current account issues.

In most industrial countries, the exchange rate is only to a small degree a variable, which can be directly influenced by policy makers. With monetary policies focusing on domestic price stability, the exchange rate is a "residual variable." For countries with open and unrestricted capital flows, the exchange rate is more often than not an endogenous variable, which is set by the markets and market forces. Expectations by market participants most certainly play a major role in shaping short-term exchange rate developments, which is, of course, the basis for comments about the desirability of a "strong" exchange rate by policy makers. Policy makers target other variables to attain a stable macroeconomic environment and sustainable growth, and in the medium to long term, exchange rates will mirror these fundamentals.

After these more general remarks, let me turn to the issues for discussion:

The shortcomings of the current models, including the "balance model" are well known. Deviations of the actual exchange rate from a medium term equilibrium do not necessarily reflect misalignments; it may be, that cyclical factors or a need for adjustment are the real causes behind the deviation.

Let me mention three general shortcomings:

First, the equilibrium real exchange rate is calculated on the basis of internal and external balances, i.e. flow variables. A portfolio equilibrium, i.e. stock variables, are not taken into account. However, these stocks even without changing might also influence the exchange rate developments. The stock of bad loans of Japanese banks might serve as an example here.

Secondly, the determination of a long term equilibrium is partially based on WEO-projections, which – as we all learned recently – can err (substantially). Major uncertainties have to be taken into account, impairing the quality of the projections.

Thirdly, our central point of concern is the exclusion of international capital flows. We regard this as the main weakness of the analysis: In a world of increasing international capital flows, which are to a large extent detached from the financing of traditional exports and imports. We still rely on a 1970s-based Mundell-Fleming approach. A model only based on current account factors falls short of reality. Current account deficits can be sustainable under dynamic economic circumstances as long as capital inflows are sufficient to finance the external deficit.

In our view, the current practices for disseminating the results of the CGER's assessments are appropriate. It is reasonable to use the results for the WEO or in country documents and to publish them in the previous manner. However—given the already mentioned caveats—we have reservations to publish the results on a broader basis. We have to balance transparency issues on the one hand against fair and confidential discussions in the board on the other hand.

We fully support staff's view that in cases of substantial deviations of exchange rates from the medium–run equilibrium, levels need to be interpreted on a case-by-case basis. A closer look to the underlying factors will be indispensable, to analyze the driving forces like monetary policy, cyclical effects etc. before coming to conclusions.

We certainly see the necessity to extend the current account positions and exchange rates analysis also to emerging market economies. This could contribute to a deepened analysis and more reliable forecasts of potential crisis situations. The needed research should—by all means—be propelled forcefully.

To sum up, exchange rate assessments are at the core of our mandate. We appreciate the work done by the Coordination Group on Exchange Rate Issues and we strongly encourage further improvements on the methodology. This is an essential basis for our internal assessments in the framework of bilateral and multilateral surveillance. However, we should be cautious with regard to interpretation of the results and publication.

Mr. Fidjestøl made the following statement:

Exercising firm surveillance over exchange rate policies of members is one of the core responsibilities of the Fund, and this activity has a sound basis in Article IV of the Articles of Agreement. I therefore appreciate that staff has continued the work on methodology in this area, although I must agree with staff that quantification of equilibrium exchange rates is still a somewhat murky area of economics. Given the murkiness of the subject I would commend staff for the lucid exposition of the subject in the document. I think the methodology represents a useful starting point for making assessments concerning exchange rate and current account viability. I fully agree on the motivation of the industrial country assessments.

On methodology for industrial country assessments I think it is appropriate to base it on a macroeconomic balance framework. Since the concept of equilibrium may be subject to different interpretations it is also quite necessary to test the results against other approaches such as the purchasing power parity framework. The influence of fiscal policy on the calculated equilibrium, as emphasized by Mr. Abbott, seems particularly important. The testing against alternative approaches is an important safeguard that serves to mitigate the inherent imprecision of the results to some extent. I think that the systematic and transparent framework provided in the staff paper can impose an important degree of multilateral consistency as well as consistency over time on staff assessments. Given the imprecision of the results of the exercise I think current practices for disseminating these assessments are appropriate.

History has shown that substantial deviations from calculated equilibrium exchange rates can have quite different interpretations and policy implications. In some cases deviations may even be helpful from a short run perspective. In other cases such deviations may reflect unsustainable monetary and fiscal policies. Like other speakers I would emphasize that deviations of exchange rates therefore must be interpreted on a case by case basis.

It seems clear that the challenges of assessing the appropriateness of exchange rates for emerging market economies are even greater than for industrial countries. The methodology employed for industrial countries does not seem appropriate in this case. In these circumstances the cautious approach taken by staff in adopting four criteria seems appropriate. This work is within the core of the Fund's responsibilities and it should provide a useful tool for Fund surveillance. I therefore encourage staff to develop their work in this area further.

Mr. Wei made the following statement:

At the outset, we would like to thank staff for providing us a very interesting paper to assess the exchange rate movement in both industrial countries and emerging markets. We welcome today's discussion, which can be seen as a review and extension of the last discussion on this issue in October 1997.

I would like to offer some general remarks on the surveillance over exchange rates and current account and then go through the issues raised by the staff.

First, the issue of whether exchange rate is at an appropriate level, or whether current account is developing along a sustainable path, is of great significance to the stability and development of an economy. In particular, the relationship among the major currencies is of critical importance for the world economy, trade and capital flows, and therefore, has a significant impact on the stability of the international financial system. We are of the same view that developing methodology in the Fund to assess the appropriateness of exchange rates and sustainability of the current account is imperative, given that safeguarding the international financial system and surveillance over members' exchange rate positions are at the core of the Fund's mandate. We commend staff for their efforts in developing these approaches and criteria.

Second, exchange rate volatility of the major currencies can be very detrimental to global economic activities, especially to the developing countries many of which are relying on trade. We have been emphasizing that the Fund's role on exchange rate surveillance over the major industrial countries should be further enhanced in today's world where economic and financial integration is accelerating, especially for the developing countries which need a stable environment for developing their economies. Thus, we call on the major industrial countries to coordinate their macroeconomic policies, especially exchange rate policy, so that volatility could be reduced.

Third, as recognized by the staff in paragraph 17 of the paper, "CGER's analysis is subject to considerable limitations in generating definitive estimates and to various caveats in interpreting the assessments". Therefore, it is not realistic to rely on CGER's assessment results to make judgment on the exchange rate misalignments and in particular to make policy decisions. In this regard, I associate myself with Mr. Portugal and Mr. Junguito that CGER's analysis should be treated just as the starting point for a judgmental assessment. There are many elements influencing exchange rate changes besides those reflected in CGER's model. Judgment should be made with a broader perspective, incorporating additional factors like cyclical factors, changes in productivity, terms of trade, and so on.

Fourth, it seems to us that the four criteria as proposed in the paper are not quite sufficient to assess the sustainability of the current account of an economy. Like Mr. Portugal and Mr. Junguito, I also think the ceiling of 40 percent for net foreign liabilities (NFL) to GDP ratio somewhat arbitrary and does not take into consideration the different maturity of liabilities. We are of the view that, when current account deficit goes up, more attention should be given to the analysis of its reason. Moreover, the increase of current account deficit is not necessary a negative signal. How the deficit is financed is more important. If financed by long-term loan and foreign direct investment, concerns can be eased to some extent. In turn, if a large amount of short-term capital flows in, substantial vigilance is well warranted.

Now, let me turn to the major issues raised by the staff.

The method and model developed by CGER in assessing exchange rate viability in industrial countries have made good reference of the extensive research on exchange issues by the academic circle, and have been utilized in both bilateral (Article IV consultations) and multilateral surveillance context (such as WEO and WEMD). Notwithstanding some critical technical difficulties to gauge the degree of exchange rate misalignment precisely, the CGER model can at least offer theoretical reference to the equilibrium exchange rate benchmark. We share the view that such an approach is helpful in terms of strengthening staff's assessment on exchange rates. Thus, staff is encouraged to make further efforts to improve CGER.

We agree that substantial deviations of exchange rates from medium-run equilibrium levels need to be interpreted on a case-by-case basis, taking into account cyclical and policy factors to provide a comprehensive assessment. As to whether to take policy action to correct deviation, we incline to agree to adopt a case-by-case approach, we believe that decision should be made by the member country authorities, given the wide range of reasons for the deviation and the concrete situation.

Here I have a question regarding the application of CGER methodology to assessing euro exchange rate. I guess the euro area has been taken as a whole in measuring its saving and investment balance and current account balance, but I wonder whether this model, which is originally based on a single economy, can appropriately reflect the economic feature of a monetary union which is not simply an aggregate of each individual economy. Staff comments are welcome.

We share staff's view that the methodology that CGER uses to assess industrial countries, which was abstracted from the common economic features of industrial countries, is not appropriate for emerging market economies. This is because, first, the economic structure of emerging markets is substantially different from that of industrial countries; second, most emerging markets are experiencing wide and deep structural changes, the highly simplified model could not capture these changes, which themselves are difficult to be quantified; third, as staff rightly pointed out, the emerging markets do not have the same good access to the international capital market as that of industrial countries. Therefore, we support the staff's efforts to develop a separate methodology for emerging market economy assessment. Current development in doing this is encouraging but far from satisfactory. Further development is needed, including that of the work on the criteria to be used in assessing current account sustainability.

Given the imprecision of CGER quantitative assessment, in particular the fact that assessment on emerging markets is still at the research and testing stage, we do not think it appropriate to disseminate CGER's assessment to the public.

Mr. Alosaimi made the following statement:

I thank staff for a useful update of the Coordinating Group on Exchange Rate (CGER) methodology for assessing the current accounts and exchange rates of industrial countries. A clear understanding of the methodology and its caveats, as well as how the results will be interpreted and disseminated are most important as exchange rate surveillance is at the heart of the Fund's work. Recognizing that our predictive ability regarding equilibrium exchange rates has not changed much since these issues were discussed in 1997, I will only add a few brief comments.

I am in broad agreement with the methodology used by staff. As this Chair has noted in the past, the macroeconomic balance approach has a number of advantages over the Purchasing Power Parity (PPP). Nevertheless, empirical estimation using the macroeconomic balance approach is still vulnerable to substantial margins of error. Therefore, I agree that in assessing the appropriateness of the exchange rate, it is important to supplement the macroeconomic balance approach with PPP considerations and a large dose of judgment. Indeed, this provides a useful framework to assess whether exchange rates are broadly in line with economic fundamentals, and imposes a degree of consistency in staff assessments. However, this latter aspect should not be exaggerated given the inherent uncertainties in these exercises and the substantial judgment needed.

That said, it is essential that the CGER methodology is not used to pinpoint an equilibrium exchange rate. Indeed, even calculating a range could be subject to large errors. It is also important to be careful when interpreting deviations from the calculated exchange rate. Due to countries' specific circumstances, conventions, and policies, interpretations of the deviations from a calculated rate will necessarily vary from country to country. Thus, like other speakers have stated, responses to substantial deviations from the medium-term equilibrium exchange rate should be addressed on a case-by-case basis.

I welcome the extension of the CGER methodology to smaller industrial countries and the efforts to extend the exercise to emerging market economies. Here, it is clear that the framework for the industrial countries is not appropriate for emerging market economies, in view of its unavailability to capture structural changes that happen in these countries. Therefore, a separate methodology is needed. The staff has made some progress in this area, but more work is still needed.

Finally, it is essential to fully recognize that the tools to assess the appropriate level of real exchange rates with a good degree of confidence are not yet available. Thus, we have to be very careful in making public pronouncements about the misalignment of existing exchange rates.

Mr. Siegenthaler made the following statement:

We very much welcome today's discussion and we fully endorse the work that has been done so far by the Coordinating Group on Exchange Rate Issues (CGER). The reasons why we think that today's topic is a very important one are at least threefold. First of all, the Fund has been urged, including by this chair, to better focus its activities on the core areas of its mandate. Exchange rate and current account assessments are clearly an essential part of this core area. Second, the Fund has sometimes been criticized for not having a clear line on its recommendations and policies regarding exchange rates and exchange rate regimes. If we admit that this criticism does have some basis, then this should motivate us to work particularly hard on this issue. Finally, exchange rate misalignments have been an important element in most of the recent balance of payments crises. In a world of increasingly liberalized global capital flows, trying to support misaligned currencies has proven to be a very risky strategy. It is therefore crucial to have as precise an idea as possible about a viable exchange rate level, not only for the Fund's surveillance work but also for the use of Fund resources.

The staff paper is focused on technical, methodological issues. I have little to say on these, not least because I believe that the staff has an outstanding know-how in this area. I am sure that the staff is doing every effort to remain up-to-date on developments in academia. Unfortunately, there is no consensus in the economic profession on how to detect and measure exchange rate misalignments. It would therefore seem unwise for the Fund to adopt one particular concept. Rather, the staff should try to diversify its efforts. The CGER has developed an appropriate methodology for assessing the current accounts and exchange rates of industrial countries, based on the macroeconomic balance approach. Applying this methodology to emerging markets and developing countries might not be entirely appropriate, as stressed by the staff and other directors. It might thus be advisable not to rely exclusively on this macroeconomic balance approach but to make use of a variety of approaches. For the same reason it also seems sensible to interpret computed misalignments on a case-by-case basis, taking into account specific circumstances. However, we will not get around the problem of assessing current accounts and exchange rates in all member countries, whatever the shortcomings of our methods. We simply cannot afford the luxury of not taking decisions and provide policy advice because we feel that an assessment of a particular current account or exchange rate is somewhat flawed. All we and staff can do in this situation is producing this assessment in an as systematic way as possible and to reveal to the authorities and the Board—and maybe ultimately the public—how this was done.

This brings me to the most delicate question we have to deal with today, namely the publication and dissemination of the CGER's assessments. I think we all agree that no surveillance exercise will be complete without an assessment of the viable level of the current account and the exchange rate. At least for industrial countries, we would expect this information to be systematically included in Article IV consultation reports. Since an increasing number of these reports are published, this will automatically solve parts of the dissemination problem. But this chair would also be in favor of publishing Fund estimates of industrial markets equilibrium exchange rates in the WEO. I am aware that this will raise problems of presentation since these estimates—as many colleagues have pointed out—are imprecise ana include judgmental elements. Furthermore, as the paper rightly argues, even if a particular exchange rate or current account seems misaligned, this does not automatically call for policy action. All these elements would have to be explained—possibly in a separate chapter of the WEO—in order to avoid misunderstandings.

The publication problem is more difficult with regard to non-industrial countries and particularly to the Use of Fund Resources. As mentioned by many of my colleagues and admitted by the staff, the methodology for emerging markets is much weaker than for industrial countries. We should thus be very careful with regard to dissemination. However, here again I would argue that it is hard to see how the staff, the management and the Board can decide about supporting a program without making an assessment of the exchange rate and the current account, particularly in the case of fixed exchange rate regimes. However, if this is true, is it feasible and desirable to keep this information confidential? Or, would it not make more sense, given our policy on transparency, to ultimately communicate it to the public? As I said above, the tricky question would be how to present such information in order not to give false impressions about its precision and reliability. In principle, however, this chair would favor a more systematic communication of the Fund's assessment of current accounts and exchange rates even in emerging markets; not least because a case-by-case approach appears too arbitrary. It seems to us that secretly discussing misalignments with the authorities and the Board will just increase the risk of leakages, which are unpredictable and potentially very damaging. In contrast, a systematic and continuous dissemination of information would minimize sudden and abrupt market reactions by guaranteeing that the markets are continuously taking into account the Fund's assessments.

Mr. Josz made the following statement:

I welcome this update of the staff's experimental work on the estimation of equilibrium exchange rates in industrial and developing countries. This is certainly a complex subject on which it is difficult to reach precise conclusions or policy recommendations, but it is an area that the staff must continue to thoroughly investigate because it lies at the core of the Fund's mandate.

For all these reasons, and in view of the solid work undertaken by staff, it also an intimidating subject to comment on. I will nevertheless risk a few comments or questions.

First, just as were my predecessors on the Board nearly four years ago, I remain puzzled by the reaction of the staff model for industrial countries to an improvement in medium-term fundamentals. Indeed, figure 4 implies that an improvement in the equilibrium saving-investment balance, as a result of an improvement in the structural fiscal balance or the GDP per capita, would be accompanied by a reduction in the equilibrium real exchange rates. This is both counterintuitive and does not seem to be supported by empirical evidence in industrial countries.

An increase in a country's relative per capita income mostly results from higher relative productivity growth, and I would expect this to lead to a higher real effective exchange rate, instead of the lower rate predicted by the model. Another issue is the reaction of the real equilibrium exchange rate to an improvement in the relative structural fiscal position. Experience in industrial countries, notably in Italy in 1995, seems also to indicate another reaction than the one predicted by the model, namely a concomitant strengthening of the real exchange rate and the fiscal position, contrary to what the staff's model predicts. The staff's comments to help resolve this puzzle would be welcome.

Second, work done on real equilibrium exchange rates by Hansen and Roeger[1] at the EC Commission, inspired by work done by Alberola at the IMF, leads to different fundamental determinants of the equilibrium saving-investment balance, and consequently to a different estimation of the undervaluation of the euro compared to its equilibrium value. In their model, the equilibrium exchange rate is a function of the net foreign asset position and the relative productivity, but the relative fiscal position is not found to be a significant factor. Their estimation suggests an undervaluation of the Euro of about 15 percent in the third quarter of 1999, as a result of the rise in the net foreign asset position in the Euro area. As the staff acknowledges, there is still room to improve their model specification. This work by the EC Commission may be useful for that. The number of times work by Rogoff is quoted in the paper bodes well for an improvement of the Fund's model specification in the years ahead, when he will be in charge of the Research Department. Another way to improve the Fund's model is to publish the paper and to elicit external comments, which I support.

Third, because I have not yet had the benefit of a Board discussion about the causes of the global current account discrepancy, and this discrepancy explains an important part of the gap between the market and equilibrium exchange rates calculated by the model, I would welcome a short explanation by the staff about the reasons for that discrepancy or a reference to a paper about that.

Fourth, I welcome the work undertaken since the last Board discussion on the specification of sustainable current account positions for developing countries. Obviously, this work is still at the early exploratory stage. The threshold level chosen for net foreign liabilities to GDP to assess the sustainability of the current account positions of developing countries is arbitrary but nevertheless a valid reference, as it corresponds to the 75th percentile of the distribution observed for the 22 selected countries. I agree with MM. Portugal, Junguito and Abbott that the sustainability of current account positions greatly depends on the way deficits are financed. I expect that these considerations will be fully taken into account when the Board will discuss staff work on early warning systems next September.

Finally, in view of the still exploratory stage of this work both for industrial and developing countries, it is not advisable to give more publicity than envisaged by the staff to the results of these models. These tentative results should continue to inform confidential discussions between the staff and the authorities during Fund surveillance or programs, and Board discussions on World Economic and Market Developments.

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[11] Hansen, Jan and Roeger, Werner, Estimation of Real Equilibrium in Exchange Rates, Directorate General for Economic and Financial Affairs, European Commission, Economic Paper Nr 144, September 2000.

The Acting Chairman (Mr. Fischer) noted that Mr. Rogoff's most famous paper on the subject of exchange rates had concluded that it was impossible to predict them.

Mr. Le Fort made the following statement:

> We thank the staff for a very interesting paper that offers the possibility to discuss a crucial subject for Fund surveillance, as are the conditions for external sustainability and exchange rate equilibrium. Exchange rate misalignments in large industrial countries in general have systemic implications, in many cases implying an additional burden to the adjustment process of developing countries. Misalignments in emerging market economies in general are of importance only for particular countries, however, they may eventually have systemic implications to the extent they end up giving rise to a financial crisis and contagion.
>
> Selecting the methodology for current account and exchange rate assessments is, no doubt, a difficult and controversial issue in which the agreements may be relatively scarce. The macroeconomic balance approach is systematic, transparent and has yielded consistent results for industrial countries and certainly superior to traditional approaches for exchange rate assessment. Nevertheless, we concur with staff and other Directors that the assumptions and simplifications of the current macroeconomic balance approach, chosen by CGER's, to assess industrial countries, in general, do not apply for developing countries. As a result, the simple extension of the approach to include emerging market economies will not yield reliable results.
>
> One of the main limitations is related to the lack of consideration of the responses for changing risk perceptions on capital flows and the country-specific interest rates premia. The model assumes no restrictions to borrow or lend capital abroad at the given interest rates. In the last twenty years, we have seen several cases of capital flow reversals and volatile country risk premia as to continue believing in the validity of such an assumption.
>
> Another critical aspect that the industrial countries' model lacks is the linkage between structural reforms and the saving-investment norm. Such reforms play a very important role in the development process and have significant implications for the desirable evolution of the saving-investment position of emerging markets. In addition, other important factors in the assessment of the external position of developing countries, as the evolution and volatility of the terms of trade, as well as their access to official external financing, and direct foreign investment should also be considered.
>
> We appreciate staff's candidness to recognize that such limitations still impede sufficient progress in developing a framework for emerging market economies, and that so far it has not been possible to find an acceptable criteria for assessing the sustainability of current account imbalances. After

analyzing the paper, it is clear that a brand new methodology should be developed for emerging market economies. The methodology adaptations proposed to deal with such limitations, are not convincing. In this regard, we concur with Messrs. Portugal and Junguito that additional work is needed to develop a more robust methodology to assess the external position of emerging market countries.

Working directly on current account sustainability and net foreign asset position may be more promising than the patched extension of the industrial country model. In this regard, it is important to understand the sources of possible deviations in current account positions, focusing in the factors of key importance in emerging markets, including terms of trade and other external conditions, cyclical and other structural factors and productivity.

Although the CGER methodology is systematic and transparent, and yielded consistent results for industrial countries, even for these, there are clear limitations. Namely, a misalignment value implies neither the need for an urgent adjustment nor the risk of a rapid and harmful realignment. The fact that the S-I norm represents only long-run relationships and that deviations from them can take a long time to be corrected, limits the policy value of the assessment. Consequently, additional work on the dynamics of the misalignment could shed some light on the issue of unsustainable external positions.

Finally, the public dissemination of the assessment may contribute to the solution of the problem, to the extent that the assessment results are accurate and prompts market reactions that help correct the misalignments. An inadequate assessment, however, may create problems that did not exist before. In the particular case of emerging markets, much progress is needed to improve the adequacy of the assessments before considering their dissemination. We attach critical importance not to add to informational problems or to erroneous judgments of external unsustainability that adversely affect already very sensitive financial markets.

The staff representative from the Research Department (Mr. Isard), responding to questions from Messrs. Abbott and Wei as to how the euro area had been incorporated into the analysis, said that euro area variables had been constructed by either adding up the amounts for all member countries or by using weighted averages, depending on the specific variable in question. Thus variables expressed as a percentage of GDP had been constructed as weighted averages. However, the staff recognized that the euro area as a whole was structurally different from the sum of the individual countries. In particular, it was less open than the individual member countries. Therefore, intra-euro area trade had been removed from imports and exports in the work relating to the saving-investment balance. The individual countries had been retained in the regression analysis, because there had been individual countries historically and as that also provided more degrees of freedom.

However, when constructing the saving-investment norm for the euro area as a whole, the staff had used the common equation and had constructed a euro area-specific intercept coefficient as a weighted average of the country coefficients. The methodology used assumed that real exchange rates among the euro area countries stayed constant, which amounted to treating the euro area as a single country. Thus, movements in real exchange rates owing to inflation differentials between countries were being ignored.

On a question raised by Mr. Abbott on how the staff's results could be reconciled with experiences in the United States, Japan, and Canada, the staff representative referred to Figure 5 on page 23 of the staff report. That figure indicated that there was little movement over time in the U.S. norm despite a substantial improvement in the fiscal position, whereas there was considerable movement in the norm for Japan along with a deterioration in the fiscal position. The contrast reflected several factors. Almost half of the movement in the norm for Japan reflected slow growth in per capita income, while about 60 percent of the movement in the Japan norm and all of the movement in the U.S. norm reflected changes in the fiscal position. The amount of improvement in the U.S. fiscal position as a percentage of GDP was about two thirds of the deterioration in the Japanese fiscal position. However, one had to take into account that the fiscal variables used were relative fiscal variables. While the U.S. position improved, that of other countries on average was also improving. By contract, Japan's fiscal position had been deteriorating in absolute terms and even more strongly relative to the average. Those developments largely explained the patterns shown in Figure 5.

The Acting Chairman (Mr. Fischer) wondered whether the staff's model also incorporated private savings.

The staff representative from the Research Department (Mr. Isard) confirmed that the model referred to the overall saving-investment balance, but noted that the variables that changed were relative fiscal positions and relative per capita income levels. Any offsetting movements in private savings were not explicitly captured in the staff's model. There was considerable scope to improve the saving-investment model that was currently being used. As it stood, it represented a reduced form and related the overall saving-investment position to the fiscal position. The fiscal position was not an exogenous variable, and it would be desirable, at a deeper level of analysis, to relate the saving-investment balance to exogenous fiscal variables, such as tax rates.

Updating the estimates of the parameters from a sample period ending in 1993 to a sample period ending in 1999 produced changes in the fiscal and other coefficients, particularly in the country-specific intercepts, the staff representative noted. Care had been taken to avoid discontinuities in the norms. In a number of cases, using the estimated country-specific coefficients had not affected the norms that were generated for the points in time at the end of the WEO horizon. In other cases, some judgmental considerations had been added to adjust for any discontinuities.

The staff representative from the Policy Development and Review Department (Mr. Fetherston) considered that private saving-investment flows would be reflected on average in the country-specific constant terms that appeared in the equations for each country's overall saving/investment balance.

Mr. Abbott wondered how the model could be used to arrive at actual policy implications. There was a need to clarify what fiscal relativities actually meant in terms of the need for adjustments in exchange rate policies. One could also challenge the appropriateness of focusing on fiscal limitations as the dominant factor in exchange rate relations.

The staff representative from the Research Department (Mr. Isard) responded that the staff aimed at building a framework that would not produce a change in any country's current account position when all countries improved their fiscal or their income per capita positions in equal proportion. Whatever the individual variables in the model, it had to be ensured that the framework would show that such an equi-proportionate improvement in countries' fiscal positions would not lead to a change in any country's current account, given that the sum of all current account positions worldwide had to be zero.

With regard to the question as to whether the focus on the fiscal position was appropriate, the staff representative noted that, in past efforts, only demographic variables had shown any significant explanatory power, in addition to that of the fiscal and income per capita positions, in the reduced-form equations. While there was scope for improving the reduced-form model that the staff was currently using, it was not clear whether any change would substantially affect the final assessments. There was considerable merit in having an equation that could be used consistently across countries and with some consistency over time. Increasing the sophistication of the model would not alter the historical data that the model aimed to explain. To a large extent, one would be explaining the same historical data by adding explanatory variables and thereby reducing the explanatory power that, in the current model, was attributed to the country-specific constant terms.

On Mr. Josz's question relating to the way in which the different explanatory variables affected the assessments under the model, the staff representative noted that, in the staff's reduced-form framework, the large tax cut in the United States meant that the saving-investment balance for the United States should become more negative, as private savings would not completely offset the change in the fiscal position. Those correlations were an explicit part of the reduced-form framework. The effect of the change in the fiscal position on the absorption of the U.S. economy and thereby on the current account was reflected in a less explicit way in the framework in the form of revisions to the WEO projections. The balance of those effects determined by how much the tax cut would affect the assessment of the deviation of prevailing exchange rates from their medium-term or equilibrium levels. If the tax cut led to a short-term reaction in market exchange rates, that additional effect would be taken into account as part of the assessment. There were also occasions on which other variables or considerations that were not explicit in the reduced-form framework had to be taken into account when generating the assessments.

The Acting Chairman (Mr. Fischer) considered that the main question was how it could be explained that fiscal policy, in one set of cases, had produced one effect on exchange rates, but had had the opposite effect in another set of cases. That question raised by Mr. Josz was also related to the question of how fiscal contractions affected output. There had been cases in which fiscal contractions seemed to have been expansionary, and, for a while, the Fund had liked to think that this was generally the case, given that it had provided a perfect excuse to recommend fiscal contraction in all circumstances. However, it had become clear that this was not the case. The question was therefore how the staff's framework took account of those differences, and whether that was that done via the WEO projections that were used by CGER.

The staff representative from the Research Department (Mr. Isard) clarified that there was no explicit feature in the staff's model to take account of those factors. That had been an important issue in the staff's work on Italy in 1995 when there had been a plan for fiscal consolidation. Market data at the time had reflected concerns about whether the fiscal consolidation would be delivered. The staff had assumed at the time that, if the fiscal consolidation would be delivered, there would be a good chance for lower interest rates which would stimulate the economy, and that this would produce a different sign for the effect of the fiscal consolidation than the reduced-form model had produced. While it would be desirable to reflect such nonlinearities in the response of the overall saving-investment balance to changes in the fiscal position, the current model did not do so.

The staff representative from the Policy Development and Review Department (Mr. Fetherston) noted that the WEO projections that were used in the context of CGER captured the anticipated impact of current policies (including fiscal policies) on the macro economy over the medium term. These WEO projections were produced by the individual country desk economists and reflected their best judgment of the underlying current account position. That estimate was compared with CGER's saving-investment norm to calculate the implied misalignment of the exchange rate. In that way, the judgment of desk economists about the effect of fiscal policy on the evolution of the current account over the medium term was indeed reflected in CGER's work.

The staff representative from the Research Department (Mr. Isard) added that the model explicitly captured the long-run effect on the saving-investment norm, while the important effect on the underlying current account was not explicitly reflected in the model, but was taken into account via revisions of the medium-term WEO projections as a measure of the underlying current account. The framework did not explicitly reflect the short-run effects of fiscal policy.

Mr. von Kleist considered that, regarding the case of Italy in 1995, it could be argued that the causality went in the opposite direction and that the fiscal deficit declined because interest rates had dropped owing to Italy's commitment to joining the euro area. With markets believing that the euro would come into existence and that the lira would be part of it, a downward adjustment of Italian interest rates toward the lower average in the prospective euro area was the consequence of what could be called a self-fulfilling prophecy. That in turn helped Italy achieve the Maastricht criteria. Hence, there had been an additional external factor in the Italian case which made it especially difficult to assess it in a general framework.

The Acting Chairman (Mr. Fischer) noted that, in the literature, the view had been expressed that there had been a fiscal contraction independent of the interest rate effect at that time, and that the developments at that time had not all been the consequence of strong expectations regarding the introduction of the euro and Italy's participation.

The staff representative from the Research Department (Mr. Isard), responding to comments on the work on emerging market economies, stressed that the results presented in the staff report were preliminary and related to work in progress. However, the staff regarded it as useful to inform Directors at an early stage on the course of their work so as to receive the Board's reaction. The many concerns expressed by Directors were directly related to the fact that the work was at a rather early stage and that a number of fundamental issues still needed to be resolved. The staff would take account of the concerns raised by Directors. The first objective was to find ways to address the issue of current account sustainability in a systematic fashion in the context of surveillance. If the current account of a country was deemed to be unsustainable, that would have implications for the exchange rate. However, at the current juncture, the staff would not yet aim at producing numbers for equilibrium exchange rates. Once that would be done, considerable importance would be attached to Balassa-Samuelson effects, and various methodologies would be employed at that stage. The staff was acutely aware of the difficulties of interpreting the various criteria per assessing current account sustainability. Those difficulties were partly the reason for attempting to find a set of multiple criteria that could be applied collectively. That set of criteria still needed to be developed further. The 40 percent threshold for the net foreign liabilities-to-GDP ratio used to assess the sustainability of current account positions of developing countries corresponded to the 75th percentile in the distribution of the 22 countries that were part of the analysis. Some Directors had regarded that figure as perhaps too low, and the staff had data on a larger set of countries, for which the 75th percentile was higher. The staff regarded 40 percent as a preliminary choice that might be charged at a later stage after further consideration.

Responding to the concern raised by some Directors that a fully fledged methodology should be developed before applying the framework, the staff representative conceded that there were problems entailed in using the results of the preliminary analysis of current account sustainability in the absence of a developed methodology. However, the initial results would help throw light on problems that needed to be tackled in the further work on the criteria. It was, therefore, acceptable to work with the proposed preliminary methodology if the results obtained in its application were interpreted with the necessary care. Also, the assessments would have to be guarded closely at the current stage. However, without applying the methodology even in its current rudimentary form, further progress would be impossible.

Mr. Abbott's suggestion to pay more attention to foreign direct investment and the maturity composition of debt was welcome, the staff representative continued. However, Directors should bear in mind that CGER's objective of assessing current account sustainability had a rather narrow focus and did not amount to replicating the more comprehensive work on early warning systems.

Mr. Kelkar wondered how the staff captured phenomena like Dutch disease in emerging market economies.

The staff representative from the Research Department (Mr. Isard) noted that the staff's current saving-investment model for industrial countries did not have a feature able to capture such phenomena, as the saving-investment balance was assumed to be independent of the exchange rate and thus could be graphically represented as a vertical line. In a more complete framework one would consider how the exchange rate affected productivity in the manufacturing sector in the case of a resource shock that triggered Dutch disease, and then try to capture how that would affect the saving-investment balance for the country as a whole. The reduced-form framework that the staff was currently using for the preliminary assessment of the situation in emerging market countries did not have those features. However, the framework was nonetheless of considerable value, if the results that it produced were interpreted with care.

Mr. Josz considered the staff's assertion on paragraph 45 of the staff paper counterintuitive, according to which the model for the determination of the real equilibrium exchange rate would predict a decline in that rate in case of an improvement in GDP per capita. It would be useful, if the staff elaborated on the factors behind that observation.

The staff representative from the Research Department (Mr. Isard) noted that the shift in the saving-investment balance captured only one part of the effects of an improvement in GDP per capita. The underlying current account position would also shift as a result of effects on the level of medium-term potential output.

The staff representative from the Policy Development and Review Department (Mr. Fetherston), responding to Mr. Siegenthaler's question of whether the staff's assessments of current accounts and exchange rates should consistently be published, considered that this issue would probably need further discussion in the period ahead, as it went well beyond the scope of CGER's work that was being deliberated in the current Board session. As far as the framework used for emerging market countries was concerned, the staff felt currently not comfortable with publishing its results, given that the process of generating those assessments had only just begun. To the extent that staff was assessing current account situations and exchange rates in the context of bilateral surveillance and program work, the dissemination of the assessments was already covered in many cases by existing transparency policies.

Mr. Siegenthaler said that his earlier comments had been intended mainly as food for thought, given that the Board was convening in seminar, and he recognized the problems concerning the publication of the paper with regard to the assessment of emerging market countries' current accounts. However, there had apparently been the suggestion in concluding remarks of a Board discussion four years earlier to include the assessment of industrial countries in the WEO. While there had been no majority in favor of that suggestion at that time, it would be useful to hear whether the staff would be more comfortable with such a suggestion than they might have been at that time.

The Acting Chairman (Mr. Fischer) noted that staff pronouncements on exchange rates in the WEO were somewhat more frequent than in the past, but that they did not reflect an increased emphasis on the CGER methodology.

The Director of the Research Department and the Economic Counsellor (Mr. Mussa) noted that the CGER analysis of exchange rates was discussed thoroughly every six months for the major industrial countries and, on a much more limited basis, for the smaller industrial countries. Strong efforts had been made by the staff to extend an equal level of analysis to the smaller industrial countries, but difficulties remained in that area. Estimates relating to key emerging market countries were not yet of a quality to be presented publicly and on the basis of a regular schedule. The staff was currently not sufficiently confident about drawing firm conclusions from the work of the CGER, as it had developed so far, for exchange rates in emerging market countries. The staff paper focused on the analysis of actual current account positions, however, without attempting to proceed to the same level of analysis and forecasting that the staff applied to the major industrial countries and that tried to reach conclusions not simply about the sustainability and equilibrium characteristics of current account positions, but also about the direction and magnitude of exchange rate adjustments that might be needed in the medium term in order to align actual current account positions with their estimated equilibrium positions. The methodology used for the major industrial countries was adequate to draw such conclusions and to use them in policy analysis, although they should still be qualified. For emerging market countries, the staff did not have the same degree of confidence in the methodology that was currently available.

The Economic Counsellor stressed that—as the staff indicated on the occasion of each CGER discussion and as had been indicated in the staff paper—the staff's policy analysis of exchange rate issues was not restricted exclusively to the framework of the CGER methodology. The staff paper also included purchasing power parity measures of exchange rates adjusted for Balassa-Samuelson effects and for other factors that might be relevant in particular cases. In a case like that of Norway, a country with large and persistent oil export revenues, the thinking about the exchange rate needed to be adjusted to take account of that factor. In the most recent WEO, chapter two had focused on the question of how capital flows out of the euro area toward the United States might be influencing the dollar-euro exchange rate. Thus, the analysis of exchange rate issues contained in individual Article IV reports and in the WEO attempted to draw on the CGER work where that was relevant. However, the staff's analysis was not restricted to that particular framework.

With regard to the Acting Chairman's comment on Mr. Rogoff's famous paper written together with Mr. Meese on the predictability of exchange rates and the capacity to analyze them, the Economic Counsellor noted that that paper had focused on short-term predictability and had revealed that practically no existing model provided much help. The literature had advanced somewhat since that paper had been published and, if one looked beyond the short term to the medium- and longer-term behavior of exchange rates, some predictions appeared possible.

It was not yet possible to verify the work of the CGER empirically, the Economic Counsellor noted. However, the Fund was in a position different from that of the academic community, given that the Articles of Agreement mandated that the Fund should exercise firm surveillance over its members' exchange rate policies. When he had taken up the position of Economic Counsellor and when the Fund had been faced with the ERM crisis, there had been a realization that the Fund's work on exchange rate analysis had been in dire need of being carried further in view of the Fund's mandate for surveillance. At the time there appeared to be a consensus among the staff and management that the situation could not be permitted to persist. The consequence of that realization had been the continuing efforts by the staff from the Research Department, the Policy Development and Review Department, as well as from area departments to build a better analytical basis for the judgments about exchange rates and exchange rate policies. While that basis did not permit extremely refined judgments about exchange rate issues for the entire range of the Fund membership, it had proved helpful in some key episodes, for example when the dollar had declined in early 1995, when the yen weakened substantially in 1998, and again when the yen threatened to fall below a value of 100 yen to the dollar 18 months later. On all those occasions, the staff had been able to conclude that, from the viewpoint of the CGER framework and on the basis of nearer-term policy considerations, those developments were threatening to become decidedly unhelpful for the international financial system. The framework that was in place had thus shown to be of some value when applied to the major industrial countries. The success of efforts to extend the framework to the smaller industrial countries had been limited, and the efforts to extend the framework to emerging market countries was currently only at a preliminary stage.

Mr. Kapteijn wondered whether there had been a structural break in 1990 with regard to the estimation of deviations from the equilibrium saving-investment balance for the euro area. While the practically flat line in Figure 5 seemed to result from aggregating the individual saving-investment balances for all euro area economies, the change in the slope of the line depicting the underlying current account balance in Figure 4 would still change as a consequence of collapsing eleven rather open economies into one economy that was almost as closed as that of the United States. That should have some effect on the resulting exchange rate estimates.

The staff representative from the Research Department (Mr. Isard) noted that the staff had not noticed a structural break in 1990. The reason was probably that the individual countries of the euro area had been on average close to their equilibrium saving-investment balances. However, it was correct that a shift in the slope of the underlying current account would point to a structural break.

Mr. Rouai made the following statement:

> I would like to thank the staff for their continued efforts to strengthen analysis and surveillance over exchange rate policy and current account positions. For the Fund as the central institution of the international monetary system, and an institution with a global perspective, this is a task that needs to be performed continuously. I concur with the view that the motivation for assessments of exchange rate policies in industrial countries is appropriate and that the CGER methodology is transparent and systematic. Nevertheless, I

share the staff's and Directors' views on the limitation and imprecision inherent in this exercise. As a consequence, a substantial element of judgment is required, and there is room for different explanations and interpretations. Therefore, policy implications arising from substantial exchange rate deviations from medium-run fundamentals need to be considered on a case-by-case basis and in the light of country-specific circumstances.

I welcome the plan to extend CGER's work to emerging market economies and agree that, given the need to avoid a mechanical application of the criteria, it may take several assessment exercises before an acceptable process is reached. Until such time, the CGER should guard its assessments closely. Like Mr. Portugal and Mr. Junguito, I am somewhat concerned with the arbitrariness of some of the numbers used in the CGER methodology, and I hope that this exercise will be refined taking into consideration the comments made by Directors, in particular by Mr. Djojosubroto.

On the dissemination of the CGER assessment, current practices are appropriate. I share other Directors' call for caution and encourage the staff to share their findings with the authorities concerned on a timely basis.

Mr. Schlitzer made the following statement:

This seminar is a useful occasion to review our work in an area—that of current account and exchange rate assessments—that falls squarely in the Fund's core business. The staff paper highlights well the important improvements that the CGER has achieved in its methodology for the industrial countries, and the efforts to extend it to emerging market economies.

While there is not an universally agreed methodology, the Fund has an obvious comparative advantage over other public and private institutions. Therefore I would like to underscore the importance of disclosing the Fund's approach to the public at large in order to stimulate a discussion that could provide a useful feedback. We therefore wonder whether the new advances in the Fund methodology should be published in an occasional paper.

Notwithstanding its limitations, we think that CGER assessments provide useful clues for the evaluation of misalignments, in both qualitative and quantitative terms, ensuring consistency over time and across countries to the extent possible. For this reason we think that the use in surveillance of such assessments, which has been somewhat limited so far, could be extended and made more systematic. This should be especially true for the analysis of the major currency areas.

The extension of the methodology to emerging market economies is not, as recognized by the staff, a straightforward exercise, the main difficulties being perhaps the absence of perfect capital mobility and the neglect of the link between exchange rate and structural reforms. The technique that staff has developed seems a very good starting point but it may deserve further consideration, as pointed out in most interventions. Again, we believe that an outreach effort could help ascertain the robustness of the Fund's approach. This being said, it may nonetheless be useful to start testing how the new methodology performs in practice. Therefore we can support the idea to begin applying the methodology according to the modalities suggested by the staff.

Mr. Chelsky made the following statement:

I want to commend the staff on a clear and informative paper, which, as Mr. Abbott suggested, shows an appropriate degree of humility with respect to the progress made in this area. The recommendations are prudent, and the fact that there have been few, if any, significant deviations in Directors' views from those expressed in the staff paper after 15 interventions highlights that there is little we can tell the staff with respect to the limitations of the analysis that the staff do not already know. This chair is acutely aware of some of those limitations, since Canada has allegedly had a significantly undervalued exchange rate for a period of five years now, if not for longer.

I am pleased to hear that the staff will publish the paper. I note that the intention is to delete the material relating to emerging markets. I agree with that for the most part. However, it might be useful to maintain at least the discussion in the paper on why the methodology cannot reliably be extended to emerging markets at this time. If that is not explained, that question will remain open and we may find others trying to extend the methodology inappropriately.

The staff paper could be made much more informative and useful, if there were more explicit references to historical studies or estimates for industrial countries that illustrate the importance of balancing both quantitative analysis and judgment—a point raised by the staff a number of times. There may be scope to expand considerably the reference to individual cases in Paragraph 59 that and to add text boxes on particular episodes of misalignments well into the past. That can be useful in showing what the CGER methodology would suggest and how that reflects on the policy recommendations that were made at the time.

I would like to congratulate the staff on the good work.

Mr. Collins made the following statement:

This is a well-written paper which sets out a sensible and well-established methodology for estimating exchange rate misalignments. It is closely related to the fundamental equilibrium exchange rate or FEER approach. Given the considerable uncertainties involved in this approach, it would be interesting to see how the results compare to those derived from alternative methods, particularly as the implemented framework makes numerous simplifying assumptions.

Three levels of comment are possible. The first relates to the use that could be made of the analysis; the second is a broad-brush commentary on the approach; and the third is a reaction on a more detailed technical level. I will confine myself to the first two levels, and pass other comments to the staff bilaterally, which will spare my colleagues a lot of very tedious remarks on econometric issues.

On the use which can be made of the analysis, first of all, now that I have worked out that CGER is not the name of an economist, which I thought from Mr. Isard's first remarks, I can certainly endorse what you might call the CGER procedure. The text is careful to state in numerous places that the numbers cannot necessarily be used normatively, and there is some discussion of possible policy issues in Paragraphs 57 to 62. In general, I find these remarks to be appropriately measured and cautious. But given that this is really the core of the question, the issue would benefit from a much more detailed treatment. To a large extent, the policy response would depend on the shock driving both short-term and medium-term exchange rate movements, and the framework has very little to say on that question. That is recognized in Paragraph 61, but it is not discussed whether the estimation approach itself is subject to the same objection. The question is whether the estimated equilibrium rate will always tend to act as an attractor for the future rate, or whether that occurs only sometimes under a particular shock, or not at all.

In this connection, it might be useful to calculate the implied bilateral misalignments. Clearly, these would be even more uncertain than the effective misalignments. However, the relative bilateral movements can be quite revealing, and may be useful in policy discussions. In fact, the paper cites various other papers which implement this type of approach.

Turning to what I call second-level comments, the paper stresses large uncertainties associated with each step. In particular, the saving-investment imbalance approach is subject to the same need for judgment as any other method for calculating equilibrium exchange rates. Moreover, the understanding of saving-investment flows in the medium term is subject to considerable uncertainty. We have already discussed this to some degree. Even if you agree on a conceptual framework, identifying the structural shocks to savings, for example, is difficult ex post as well as ex ante.

An important weakness of the paper is that it does not do enough to quantify uncertainties. For example, it would be useful to have a set of standard sensitivity experiments for each country to assess the vulnerability of the calculation to certain assumptions. In particular, the analysis of FEER calculations suggests that they are particularly sensitive to the assumed current account norm and that variations by one percentage point can change the estimated FEER by between 5 and 8 percentage points. Also, this type of exchange rate calculation is perhaps less sensitive to assumptions about trend output. These assumptions are important, but they are fraught with uncertainty. It would, therefore, be interesting to assess their sensitivity as well. This may also be interesting in the light of questions regarding the appropriate trend growth rate in the United States.

At various points the report mentions that ad hoc adjustments to the calculations have been made, for example in the discussion of current account norms in paragraph 24 and the adjustment of purchasing-power-parity perspectives. To make the implications of these adjustments clear, it would be useful to have the estimated misalignments pre- and post-adjustment, even if the adjusted number is preferred.

On emerging market economies, I agree that a modified approach is required, and I would encourage the staff to proceed along the lines outlined in the paper.

Finally, I would just like to say a word on the question of publication. Mr. von Kleist made some teasing remarks earlier about sterling and the euro, and I am not going to respond to them. But, if this paper is to be published, I would request care in the language, especially as it is acknowledged that this work is primarily for the private edification of the staff and the Board in the context of surveillance. For example, the last sentence in Paragraph 14 hypothesizing about the United Kingdom entering the euro area is innocent in itself, but is nonetheless gratuitous and unnecessary to illustrate the point being made, which is that you get different purchasing-power-parity estimates with different deflators. Therefore, if the paper is going to be published, that sentence could happily be omitted.

Moreover, would we normally expect to make public the assessment shown in Table 1 on page 28 in the bold way shown there? That table is a reduced form of the table that appeared in the document circulated on March 28th, under the confidential rubric, which contained the latest assessments by CGER that were sent around the Board. There was no question of publishing that, and yet, the staff was about to publish a reduced form of that table in this paper. I would urge a certain amount of caution on that. In any event, I would request plenty of advance notice about the exact time of publication of whatever is to be published, so that my authorities can at least be prepared for any press comment that will be inevitable in my country at the moment.

Mr. Shaalan made the following statement:

The paper before us represents what I would call a valiant attempt by the staff to seek to strengthen the analytical capabilities in the assessment of exchange rates among the Fund's members in a most uncertain area. Comparing the progress in this area since we last discussed the subject in 1997, I find that, beyond the extension of coverage of the assessments and the clearer recognition that the assessment of exchange rate levels of emerging market economies require a different methodology from that used for the industrial countries, the most important contribution of the paper is that we do not know much about exchange rate levels, the reasons why they may be misaligned, particularly among the major industrial countries, and the manner in which corrective actions are administered.

A brief observation on that fact is that there have been, in the past, and we notice it in many Board discussions, statements by the staff about deviations of exchange rates from their medium-term equilibrium levels that do not call necessarily for corrective action for reasons given in the paper. Measuring the degree of misalignment in an exchange rate is a most difficult task, since it attempts to measure the deviation from unobserved variables, namely the equilibrium exchange rate, which is itself a moving target. In addition, there are differing views on what constitutes an equilibrium exchange rate. And these differing views have been changing during the past several decades. Also, as one of our colleagues mentioned, using different assumptions in calculating the equilibrium exchange rate yields vastly different results.

These considerations lead me to two conclusions: First, that we need to exercise caution in assessing exchange rates and their misalignment, and more importantly, in the policy recommendations emanating from these recommendations. I think this point has been brought up rightly by many Directors and by the staff. The Fund has too often spoken of misalignment between major currencies that the markets or the authorities needed to correct. But, in many cases, this has not materialized. In this context, I would cite the relationship between the U.S. dollar and the euro, where we have reiterated in different fora the observation that the dollar was overvalued in relation to the euro. Moreover, in the last *WEO*, when this was again discussed, we were at a loss—at least that is the way I read the *WEO*—to explain the relationship between the two major currency blocks and why this misalignment continued to exist. Some might argue that misalignments can exist in the short term, but that they are less likely to continue to exist in the medium term. Then we have to define whether a year and a half or two for major countries represents the short term or the medium term, if we accept the fact that those two major currency blocks are misaligned. These considerations would suggest that there is to date no meaningful generalization that can be operationally applied to the membership in this area. Rather, we have to keep in mind that there is much that we do not know and that there is considerable judgment exercised in attempting to formulate policy recommendations even if we use a case-by-case approach.

This same consideration would also underscore the misgivings some of us have—and I include myself among them—with regard to public announcements, even though, as the chairman said, the fact that we give a wide range somewhat alleviates possible negative implications. However, it is also possible to indicate overly wide ranges. If one said that an exchange rate is misaligned by 5 to 7 percent, nobody would take notice, whereas indicating that they are misaligned by 30 and 80 percent might raise some eyebrows. The degree of misalignment may have an impact and should be taken into account when thinking of public announcements, which I find difficult to accept for now.

One further point relates to a request by the Board, which was included in the summing up of the 1997 discussions, namely to the policies of the major countries and countries with systemically important characteristics and potentially important spillover effects on other countries. This theme has been repeated by many Directors in relevant discussions, and there was a call for more work on that issue. In this connection, I would hope that the staff paid more attention to that issue, a request that was also expressed by Mr. Le Fort.

While the paper makes a distinction between industrial countries and emerging market economies, it is rather silent on the majority of countries which are neither emerging markets, nor industrialized. There is no talk of exchange rate levels and misalignments for those countries. What is to be done about the countries that fall in this category, that probably form the majority of Fund members.

Finally, I agree with Mr. Kelkar to extend the use of the purchasing-power-parity approach in the assessment of exchange rates.

Mr. Kapteijn made the following statement:

For a long time now, I have had Occasional Paper 167 on the top of the pile on my desk labeled “important to read.” The paper before us today is a new and improved version of the earlier paper—and I thus thank staff for having reduced the size of my “to read” pile. I very much enjoyed reading the paper. More generally, it is of course important to be kept abreast of the latest developments in our exchange rate assessment methodology. The paper makes clear how little we still know about assessing exchange rate positions, and certainly makes one more careful about characterizing a currency as “overvalued” or “undervalued.”

This is a highly technical subject matter and while that in itself is inspiring, making many technical points might not be. The paper in a very balanced manner lays out the many pitfalls and caveats which underlie the CGER methodology—there is no need for me to repeat them here; they are adequately summed up in the paper.

I have just a few brief remarks.

The paper discusses the so far unsuccessful attempts being made to extend the CGER methodology to emerging markets. One question that arises in this respect is: what about the other developing countries, which form the majority of our membership and program countries? Emerging economies and developing countries are by no means homogenous, and it would be interesting to hear from staff if we are making any progress in this area.

My second point concerns the way individual euro area shares have been aggregated in the methodology. In speaking to staff, I understand that post-1999 an adjustment has been made to eliminate intra-EMU trade to account for the reduced openness of the euro area as a bloc, as opposed to the much more open individual euro area countries. This raises the question in my mind as to whether there was a structural break in our exchange rate assessments in 1999. While saving-investment norms would be unaffected by the adjustments and are simply the aggregate of individual country saving-investment norms (Figure 5), the elasticity of current account balances to the real exchange rate has changed quite dramatically (the slope of the UCUR curve in Figure 4). Could staff shed further light on the extent to which our estimates of deviations from equilibrium changed in 1999?

A possible enhancement to the paper could be to take a more dynamic approach with regard to the saving-investment norms presented in Figure 5. My guess is that these saving-investment norms are frequently adjusted and that Figure 5 ten years ago looked very different (looking five years forward) than it does now for those same years. This particularly holds true for Japan and Switzerland, which since 1990 have seen a substantial decline in what is deemed to be their sustainable balance. One could thus transpose the estimates of different years to show how vulnerable the estimates are to changes in estimation. This could introduce further humility about our ability to forecast the future. Mr. Abbott also raised some interesting points about the seemingly contradictory shift in saving-investment balances following changes in fiscal policy.

Turning then to the global current account discrepancy. The way the model deals with this discrepancy, or as Mr. Mussa put it in his *WEO* press conference "our trade with the extra-terrestrials" is to calculate the degree with which all effective exchange rates on our planet should uniformly depreciate in order to equalize the global discrepancy. However, an important drawback of this approach is that the global discrepancy may be concentrated with a single major country or just a few countries. By definition we of course have difficulty in allocating the global discrepancy to countries. But if the global discrepancy were not to be due to the United States, for instance, one would expect to see much more substantial adjustments in equilibrium exchange rates than the uniform 4.4 percent now applied. Like Mr. Collins, I believe that the paper could be even further strengthened by having a bit of sensitivity analysis with regard to the assumptions.

Finally, on the issue of how we apply this in our surveillance, I agree with Mr. Lushin and others that we should look at a range of indicators, including market estimates of exchange rates. Even though we may believe our own model to be superior, the market view of exchange rates is often what affects capital flows. Thus we should spend as much time looking at their models as our own, as a sign of potential trouble ahead. I note for instance that Goldman Sachs apparently uses single equation reduced form models to make its forecasts. It could be useful at some stage to provide an overview of the exchange rate methodology of other key financial players.

Mr. Rustomjee made the following statement:

I welcome this important and valuable contribution from staff in what is clearly a set of issues at the center of the Fund's work and I welcome both the clarity and the candor of staff's presentation. As most colleagues have already spoken, I can be brief.

As to the applicability of the CGER methodology to industrial countries we see the methodology as outlined in the paper which relies primarily on the macroeconomic framework, to be systematic and transparent for the purpose of this group of countries. Staff has been candid in describing the imprecisions which are inherent in these exercises and subject to these limitations, we consider the methodology to be appropriate.

As regards the application to emerging market economies, we share the many reservations expressed by staff and the many additional reservations expressed by colleagues this morning.

Among the range of reservations raised, I particularly share the concerns expressed that emerging markets do not have access to unlimited international capital at a constant premium above world interest rates; in addition, I share the point raised by Messrs. Kelkar and Portugal, and Junguito, that the proposed 40 percent ceiling for the ratio of net foreign liabilities to GDP is indeed arbitrary; and that of Messrs. Portugal, Junguito, and Djojosubroto that relative levels of FDI and relative shares of short-term vs. long-term liabilities are crucial factors which need to be taken into account in making cross-country comparisons.

Mr. Djojosubroto in the last paragraph of his preliminary statement lists a series of additional factors which probably further limit the applicability of the CGER methodology in emerging market countries. Particularly important in our view are the facts that it is quite likely that the composition of debt reserves and net foreign liabilities may be more important than the levels of these variables; and that many emerging markets are very much in the midst of structural transformation. For these reasons we found Mr. Lushin's suggestions that a separate paper be prepared, to view the various approaches currently used by staff to assess exchange rates and competitiveness in emerging markets, a useful suggestion which we would support. We would also support Mr. Djojosubroto's proposal that, where this is not already happening, staff share with the relevant authorities the CGER assessment during Article IV missions, as this would contribute to an open, informed discussion on the realism of the assumption underlying the model.

For all these reasons, we would support staff's proposal to delete the reference to emerging markets when publishing the paper—we would suggest fully and not partially as proposed by Mr. Chelsky, given the many uncertainties associated with the analysis; and we would also support the proposal of several chairs this morning that it would make a great deal of sense to defer applying the proposed framework for emerging market economies until after a more robust theoretical framework has been developed. Staff propose beginning to apply the methodology at the time of the Summer updating of the World Economic Outlook (WEO) projections. We would suggest that the paper, along the lines suggested by Mr. Lushin, should precede application of the methodology. This would also offer staff an opportunity to consider the many suggestions put forward this morning.

Penultimately, we share the remarks made by I think all previous speakers that a case-by-case approach should be applied as a general rule.

Finally, Chair, I wanted to reiterate one concern, which I believe I raised in an earlier WEO session in a slightly different context which is the assumption that economies are operating at potential output. This is a heroic assumption, which I am not sure holds good in fact. There is also the important point raised by Mr. Toyama that it is very difficult in any event to calculate potential output. This presents a further limitation to the CGER methodology.

The staff representative from the Research Department (Mr. Isard), responding to questions from Mr. Collins and Mr. Shaalan on whether the estimated equilibrium exchange rate should be considered a good attractor, noted that for the episodes that were considered the major misalignments from the mid-1980s through the mid-1990s, including the strength of the U.S. dollar, which persisted for a number of years, retrospective applications of the staff's methodology generated estimates of substantial misalignments, and those misalignments were eventually corrected. It was possible that the staff had been persistently wrong in its estimates over the past several years. Alternatively, the failure of those estimates to materialize may reflect that misalignments can persist for considerable time.

On Mr. Collins's suggestion that the staff should also calculate implied bilateral misalignments, the staff representative noted that this was already being done and that summary tables with those calculations had been provided to Directors in March and in August. The staff was also taking into account the uncertainty underlying the assessments and their sensitivity with regard to the assumptions. It was correct to suggest that there was considerable sensitivity of the exchange rate assessment to the saving-investment norm, particularly for relatively closed economies.

While the staff intended to extend the analysis to a greater number of countries, there were resource constraints, both in the relatively small group that spearheaded the analysis and with regard to the contribution from country desks in area departments, the staff representative continued. The staff had identified a group of 22 countries with which one could proceed initially, while the required data were already available for as many as 60 countries.

On Mr. Kapteijn's question regarding Figure 5 and on how the respective chart would have looked for the euro area if it had been plotted for 1990, and how frequently the saving-investment norms were revised. The staff representative noted that revisions to the WEO projections occurred every six months, each time leading to corresponding changes in the CGER assessements. However, the basic estimates of the saving-investment equation had only been updated once, in order to incorporate data for six additional years and to take account of a major revision to the historical GDP statistics of the United States, which is a reference country for the relative per capita income variable. The staff had carefully considered the discontinuities that were introduced by reestimating the equation.

On the question relating to the global discrepancy and on whether the exchange rate assessments would be different if allocated differently, the staff representative responded that it would indeed be different, at least to a moderate extent. However, there was no way of determining how the discrepancy should be allocated more correctly. The staff had, therefore, allocated it in a way so as to affect all country assessments uniformly.

On questions relating to the publication of the staff paper, the staff representative considered that Mr. Chelsky's suggestion to add more insights on how judgment was used in different specific cases could be accommodated. Directors did not seem to have a uniform opinion on whether there should be any reference to emerging markets in the published version of the paper, and the staff would further consider that issue. With regard to the concerns expressed by Mr. Collins on publishing Table 1, the reference to the United States, the euro area and the United Kingdom and other country names could be omitted, and Figure 3 could also be taken out.

Mr. Abbott considered that accepting all suggestions for deletions from the paper could leave it rather truncated, and he wondered whether the staff could indicate what would be left of the current text, once those requests had been accommodated.

The Acting Chairman (Mr. Fischer) asked whether Directors agreed to publish the paper with the section presenting the considerations regarding the methodology for emerging market countries, but excluding the actual material on emerging market exchange rates.

Mr. Portugal agreed to maintain Section 3A, while eliminating Section 3B of the paper, and considered that there was no agreement that the four criteria presented in Section 3B, such as the value of 40 percent for the ratio of net foreign liabilities to GDP, could be considered as "critical values", as the staff had suggested.

Mr. Josz wondered whether it would be useful to publish at least an outline of the staff's considerations on the new methodology, so as to allow outside researchers to provide a response to those efforts. The level of net foreign liabilities in terms of GDP could be excluded from the publication as that appeared to be a delicate issue.

The Economic Counsellor (Mr. Mussa) noted that the staff had initially attempted to take the analysis for emerging market countries as far as that for industrial countries and to arrive at estimates for exchange rate adjustments needed to restore equilibrium on the basis of the estimated saving-investment balance and the five-year ahead current account projections. However, the results of those initial calculations had not seemed to be reliable. Thus, for Indonesia, the exercise suggested an exchange rate adjustment to about 20 percent above the level seen before the Asian crisis. Obtaining anomalous results like that for a few countries had caused the staff to call into question the reliability of the entire methodology. The staff paper reflected the staff's reappraisal of the appropriateness of the methodology for emerging market countries, and the objective advocated at the current stage was much more limited than the staff had envisaged at the outset. Rather than aiming at quantifying the exchange rate adjustment needed to restore equilibrium, the aim was merely to discuss criteria for achieving medium-term sustainability.

While he did not feel strongly about whether the paper would be published in its entirety, the Economic Counsellor expressed a general concern about the phenomenon of excessive sensitivity and about the suggestion that, if the paper were to be published without any change, it posed a serious risk of producing adverse market reactions. Such concerns were exaggerated, and market participants would be perfectly capable of reading and interpreting the paper correctly. While the nervousness of some Executive Directors was understandable, it was desirable to keep deletions within reasonable limits. On the other hand, deleting some part of the material that was particularly sensitive in the views of Executive Directors would not damage the usefulness of the paper for outside researchers. However, stimulating outside researchers to examine those issues and to reveal to them the direction of the Fund staff's work was an important objective of the publication. It would be regrettable if that objective were defeated by deleting so much of the content that it would be practically impossible for the academic community to have an idea of what the crucial issues and problems were. Clarifying those research problems to as wide a community of researchers as possible would help illuminate the issues that were of central importance to Fund surveillance.

The Acting Chairman (Mr. Fischer) noted that two proposals regarding the publication of the staff paper had been put forward: Mr. Josz had suggested to take out the number of 40 percent for the net liabilities to GDP ratio and to try to work around that. That suggestion seemed to be close to the thinking of the Economic Counselor. The other suggestion was to include Section 3A and leave out the rest of part 3 of the paper.

Mr. Abbott agreed with the Economic Counsellor that it would be useful to ventilate the issues outside, as it was impossible for the Board to have an in-depth discussion about the technical and econometric aspects of the questions raised. The academic community would be best placed to evaluate those questions professionally, and minimal deletions from the staff paper before publication would therefore be preferable.

Mr. Couillault agreed with Mr. Abbott.

Mr. Palei said that he had no objections to publishing the staff paper with minimal deletions, but suggested that it might be useful to produce two papers, one focusing on industrial countries, the other focusing on emerging market countries.

The staff representative from the Research Department (Mr. Isard) considered that it would be preferable not to split the paper into two parts.

The Acting Chairman (Mr. Fischer) suggested that the staff would take into account the concerns expressed by the Board and would redraft the respective sections of the paper and circulate them to Directors.

Mr. Portugal agreed with the Acting Chairman's suggestion and considered that, in addition to the number of 40 percent for the net foreign liability-to-GDP ratio, the list of 22 countries included in the respective sample and the information in Paragraph 71 on countries that exceeded the supposed critical values, should also be deleted. Given that it had not been proven that those values were of a critical nature and given that Directors considered them as arbitrary, it would not be appropriate to publish those findings.

Mr. Wei supported Mr. Portugal's proposal, in particular eliminating the list of the 22 countries' names.

The Acting Chairman (Mr. Fischer), responding to Mr. Lushin's recommendation to prepare an additional paper, noted that Management had agreed that, before accepting a request for a staff paper arising from a Board discussion, Management would like to consider that carefully, given the already heavy workload for the staff and the already tight Board schedule. Rather than addressing the issues in another detailed staff paper, the matter could be dealt with in a note that simply collectsthe different approaches that are being used.

Mr. Palei agreed with the Acting Chairman's suggestion.

that carefully, given the already heavy workload for the staff and the already tight Board schedule. Rather than addressing the issues in another detailed staff paper, the matter could be dealt with in a note that would simply collect the different approaches that were being used.

Mr. Palei agreed with the Acting Chairman's suggestion.

The Acting Chairman (Mr. Fischer) made the following summing up:

Executive Directors welcomed the opportunity for this discussion. They supported the improvements and extensions that had been made in the staff's methodology for assessing industrial country current account positions and exchange rates since it was last discussed by the Board in October 1997, and encouraged the staff to continue to develop and test its methodology. They also welcomed the progress that had been made in developing a methodology for assessing the sustainability of the current account positions of emerging market countries. At the same time, further work was clearly needed before these assessments could be used in a manner comparable to those for industrial countries.

The industrial-country assessments by the Coordinating Group on Exchange Rate Issues (CGER)—which are based on a framework that imposes multilateral consistency on the assessment process, as well as consistency over time in the staff's judgments—were regarded as a useful mechanism for strengthening the exercise of the Fund's central surveillance responsibilities. Directors felt that the extension of the assessments to all industrial-country currencies was welcome, as was the trend toward a greater focus on these assessments in area department dialogues with national authorities and in Article IV Staff Reports. In this regard, they called for more consistent use of the CGER estimates in informing the staff's position in Article IV discussions. Directors also suggested that the CGER analysis be used to examine more thoroughly the exchange rates among the U.S. dollar, Japanese yen, and euro since the introduction of the euro.

Directors stressed that the CGER assessment should be the starting point for a more complete analysis, and that apparent inconsistencies between exchange rates and macroeconomic fundamentals need to be interpreted on a case-by-case basis, and in the context of considering the extent to which monetary, fiscal, and other policies are appropriate from a broader perspective. It was emphasized that deviations of exchange rates from medium-run fundamentals are not necessarily inappropriate from a cyclical perspective and, when they are considered undesirable, may sometimes be a reflection of inappropriate policies rather than market myopia.

Directors emphasized that while the assessment exercise has provided a disciplined and consistent approach for analyzing how well exchange rates are aligned with medium-run fundamentals, the methodology involves elements of judgment and does not yield precise estimates of equilibrium exchange rates. Accordingly, there was general agreement that the main motivation for the industrial country assessments should be to identify cases in which exchange rates appear to be substantially out of line with macroeconomic fundamentals. Directors welcomed the use of alternative indicators (including purchasing-power-parity based measures) to complement the macroeconomic balance framework. It was further suggested that the relationship between countries' fiscal positions and the saving-investment norms should be further investigated and that other variables, including flows of foreign direct investment, should also be taken into account. They agreed that any descriptions of the quantitative results should be expressed in terms of approximations or ranges.

Most Directors felt that prevailing practices for disseminating CGER's assessments were appropriate. They stressed that any publication of CGER's assessments of industrial country currencies should be handled with caution, on a case-by-case basis, and as part of a broader analysis of the policy framework.

In reviewing CGER's efforts to develop a methodology for emerging market countries, Directors agreed that the framework for the industrial-country assessments rests on assumptions and simplifications that are not entirely appropriate for most other countries. In particular, the industrial-country framework implicitly assumes that countries have perfect access to international capital markets, whereas emerging market economies generally confront limited and varying access to capital.

Directors agreed that no single criterion for assessing current account sustainability is likely to be appropriate in emerging market economies, and noted the usefulness, as a starting point, of the set of criteria that CGER proposes to apply to its assessments of these countries. However, they emphasized the relative heterogeneity of the emerging market economies and the need to incorporate case-by-case judgments into the assessments; and some were concerned about the precise values and oversimplified nature of some of the identified criteria, and about the prospects for developing an approach that would gain wide acceptance. Nevertheless, most Directors strongly supported the effort to develop a disciplined and consistent approach, and encouraged CGER to continue its work toward that objective.

Directors also suggested that staff undertake further work on exchange rate issues for the non-industrial, non-emerging market economies; that is, for the bulk of the Fund membership.

As regards publication, most Directors considered that it would be desirable to publish an edited version of the paper that would include the methodology for industrial countries along with an explanation of the difficulties in expanding this methodology to emerging market countries and an indication of the direction that the staff is taking in its preliminary work on the emerging market countries.

SHAILENDRA J. ANJARIA
Secretary