TRANSCRIPT

Transcript of Economic Forum -- One World, One Currency: Destination or Delusion? November 8, 2000

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Economic Forum
Wednesday, November 8, 2000

AGENDA:

Opening Remarks by Moderator Alexander Swoboda (#rem1)

Remarks of Maurice Obstfeld (#rem2), Professor of Economics,
University of California at Berkeley

Remarks of Paul Masson (#rem3), Senior Advisor,
IMF Research Department

General Discussion (#disc1)

Remarks of Robert Mundell (#rem4), 1999 Nobel Laureate and
Professor of Economics, Columbia University

General Discussion (#disc2)

Closing remarks (#close)

PROCEEDINGS

MR. SWOBODA: I would like to welcome you to this latest event in the IMF's Economic Forum Series, entitled "One World, One Currency: Destination or Delusion?"

My name is Alexander Swoboda. I am Senior Policy Advisor in the IMF's Research Department and the moderator of today's forum.

Before we start, let me just say that Robert Mundell will be here, with the grace of United Airlines or whoever is flying him in late into National Airport. But I think we should start without him; we expect him to arrive in 20 to 30 minutes.

The panel members are, as you know, Robert Mundell who is the father of optimum currency areas and has written

extensively on the history of the international monetary system, and played a significant role in the founding of the euro, a founding that gives rise, as I will say in a few minutes, to the topic that we are discussing today.

As you know, he is a professor of economics at Columbia University, and you also know that he is the recipient of the 1999 Nobel Prize for Economics, the last Nobel Prize of the last century.

On my right, we have our second panelist, Maurice Obstfeld, who is a professor of economics at the University of California at Berkeley. You probably all have his "bible" on your desk somewhere, opened or unopened, and that is now the standard treatise on open economic macroeconomics, which he co-authored with Ken Rogoff. Maury's interests are well-known to you; they are in international finance and in international macroeconomics. He has served as consultant to the IMF, to the World Bank, to the European Commission, and several central banks. Obviously, we will be interested in seeing whether he has the same point of view as Robert Mundell, but that is something that Mundell will have to find out, since Maury is going to go first.

The third panelist is Paul Masson, who in this hall does not need an introduction. He is Senior Advisor in the IMF Research Department where, as you know, he has played an extremely important role in stimulating research on international economic and international monetary issues. He has modeled the credibility of monetary policy, studied various aspects of European integration, written on exchange rate regimes, and most recently and interestingly in today's context on a project for a West African currency area.

The title of this panel harks back to a publication of the European Union or the Commission, a report which was, if my memory serves, called "One Market, One Money." And in fact it is the creation of that "one money" in Europe, the euro, that makes today's topic particularly relevant.

It starts from the recent moves toward regional groupings and asks the question, well, does that presage the move to a universal or world currency.

The question in a way is where do we go from here?

I suppose there could have been two titles, competing titles, for this panel. One would have been the title we are given, "One World, One Currency"; and the other could have been, "Many Governments, Many Currencies." Of course, the euro may be telling us that you can still have a few currencies or one currency with many governments, though the future will tell which way this will go.

Today's proceedings will follow the traditional Economic Forum format, which is that each one of our guest speakers will be invited to speak for 15 to 20 minutes. The discussion then will be open from the floor. Of course, we will also leave some time so that each speaker can respond to questions from the audience.

When putting your questions to the panel--I'll remind you of that later--please use the microphone in the armrest of your seat after first pressing the red button.

Finally, as a preliminary matter, a full transcript of today's proceedings will be posted on the IMF's internet web site, www.imf.org, early next week, and we hope to be able to conclude this forum around 4:30 p.m.

So without further ado, let me turn first to Maury Obstfeld.

MR. OBSTFELD: Thank you very much, Alex.

Our initial plan was to have Bob Mundell lead off with his views on the issue of a currency for the entire world. I will stick my neck out a little bit, taking the risk that when he arrives, he will completely contradict me--not for the first time--and hazard my guess at some of the things he may say just as a counterpoint to what I will say.

As most of you know, Bob's Nobel address was published in the June issue of the American Economic Review with the modest title, "A Reconsideration of the 20th Century." It is a very interesting piece which reviews 20th century monetary history in a very concise manner, and I gleaned from it some hints about what Bob might say, because he mentions the volatility of exchange rates as one of the remaining areas of the current international monetary order that is in need of repair. From this, I gather that he is probably in favor ultimately of the evolution of our world economy toward some sort of unified currency. I also gather from what he says that he sees a broader political benefit in this in terms of good international relations and peaceful world order.

Well, responding to Bob's hypothetical points which he may or may not make later, I'd like to recall the optimal currency area analysis which, as Alex pointed out, originated with Bob, and discuss some of its implications which I at

least take seriously as well as some of the ways in which that framework has been expanded, because many of the points that have been made on this problem have a very strong bearing on what we think about the desirability of a world currency down the road. So I think it's useful to have this framework before us, and in some sense, my remarks will be very much in the spirit of the wonderful monograph that Max Corden, who is with us today, wrote on monetary integration in 1972, I think it was. And I will bring things a bit further up-to-date even than Max's treatment.

Mundell's analysis of optimal currency areas was, of course, based on a tradeoff between essentially two factors--the benefits of a single currency in terms of reduced transaction costs, reduced uncertainty, network externalities, and so on, and the ability of regions to adjust to idiosyncratic shocks.

Interestingly, the benefits of a single currency interestingly receive very little discussion in the Mundell paper and in fact have received precious little attention in subsequent economic analysis. It is obviously a key and important issue; yet it is one that we don't understand very well. But it is really the basis for the belief that there are efficiency gains to be had from having larger currency areas.

We have a better handle, I think, on the adjustment issues. There, what Mundell pointed out is that if we think of two areas which join in a currency union when there is wage and price stickiness and no labor mobility, giving up the exchange rate prevents as smooth an adjustment to idiosyncratic regional shocks as might occur with exchange rate flexibility.

To bring this theoretical point home, we have no further to look than the current situation in the European Union where, within the euro zone, there are already signs of divergence, signs of the inability of a single monetary policy to address the problems of every constituent member.

I have a picture of inflation in the euro zone members, which is actually diverging compared to the position at the launch of the euro, and it is interesting to note that you can think of the inflation divergence in terms of the Maastricht inflation criteria. Take the average of the three lowest inflation rates and ask whether member countries in the euro zone who now have the single currency would still qualify for entry on the basis of the Maastricht criteria. And it turns out that Ireland is way off; its inflation rate is edging 4 percentage points above the average of the three lowest. Portugal and Spain are heading up to the limit point.

And it is ironic that having to some extent, certainly in the Irish case, relied on some policy independence to get down to the level of convergence in inflation that was needed to enter the euro, now with the single currency, some of the regions are actually diverging. And of course, this reflects the fact that there are idiosyncratic developments, that the single currency is not going to produce the same inflation rate in all regions, or the same rate of output growth, or the same situation with respect to employment and unemployment.

This is the kind of phenomenon that needs to be considered against broader gains from the efficiency of using a single currency when one contemplates whether a single currency is a good idea or not, and does the cost-benefit analysis.

Other examples one could look at in the world economy would be Argentina versus Brazil, when Brazil was in the run-up to its crisis, and subsequently many commentators said Brazil needs a currency board like Argentina's. Right now, Argentina is hurting as a result of its link to the dollar. Brazil is doing much better. Argentina has had idiosyncratic shocks, among which are the behavior of Brazil's exchange rate.

Now, there are benefits to Argentina's currency board which I will get to in a moment, but this example shows both the importance of idiosyncratic shocks and also, I think, the difficulty of single countries moving to some sort of regional currency regime when their important neighbors do not. In some sense, it is easier if it is coordinated, and that in itself raises important issues.

Now, the literature subsequent to Mundell and almost immediately following the publication of his paper in 1961 raised issues which, if they were in his paper, were there in a subtle form (but some of them were totally absent) and which are important in thinking about this issue of currency union versus currency autonomy.

McKinnon in his contribution of 1963 looked at the case of a country which was very open to international trade, and whose wages and prices might respond rapidly to devaluation, and pointed out that for such an economy, you really have very little monetary autonomy anyway. This points to an important issue--how flexible are your prices in fact, how open is the economy, and what is the extent of trade with partners to whom you might peg. To the extent that the gains of a single currency are realized through enhanced gains from international trade, other things equal, economies which trade a lot with each other should be thinking about joining into a currency area.

Subsequent work has looked at the issue of whether a currency area could in itself increase intra-union trade, thereby creating the conditions under which the currency union becomes more nearly optimal; and here, we really know very little, I think, from looking at the empirical work. There have been a number of studies; some say yes, some say no. If you look, for example, at the situation as between Ireland and the UK in their international trade, it is hard to find evidence that trade between those countries has suffered as a result of the Irish punt leaving its very rigid peg against sterling in 1979 and entering the EMS.

But again, there are a number of studies, and they conflict. Similarly, another area on which there is little agreement is the endogeneity of the production structure. If you have a single currency, and that causes greater regional specialization-this is a point due to Paul Krugman -with greater efficiencies through economies of scale and concentration of specific industries in specific areas, does this not also increase vulnerability to region-specific shocks? We don't know. It's really an open question.

Mundell's work focused very much on labor mobility but said less about capital mobility. But this is a very relevant issue. Here, I think the question of whether capital mobility enhances the gains from a single currency or not depends very much on the type of capital flow that is being considered.

Max Corden, I believe, pointed out that if you think, for example, of FDI flows and imagine that you have two areas which join in a currency union without labor mobility but with an ability for capital to move between areas, you might actually be worse off, because a region that is hit with a negative shock suffers an outflow of capital which could actually exacerbate the effect of the shock.

On the other hand, other types of capital mobility which might actually be enhanced by a currency union--but again, we have theoretical models which show the opposite--can be very beneficial. Here, I refer to trade and equity-like instruments: basically, risk-sharing within a currency union.

I have always thought that the original Mundell argument was really an argument about the completeness of asset markets and the sharing of currency risks, both domestically and internationally. Mundell's argument was that if an area hit by an idiosyncratic shock lets its currency depreciate, it would be exchanging a rise in unemployment, which is really localized among individuals--those who are unemployed are hurt; those who retain their jobs are not hurt as much--for a terms-of-trade deterioration which is broadly spread among the population. So basically, the risk of the adverse event is not avoided, it is just spread among the population in a way that is more acceptable.

Now, of course, if domestically you have very efficient risk-sharing through asset markets, it may not matter very much. In fact, if you have very efficient risk-sharing internationally through asset markets, that is even better, and to the extent that a common currency would promote such international trade and risky assets, some of the negative effects that Mundell identified would be reduced.

A related issue which Peter Kenen raised has to do with fiscal federalism, and Paul Masson has written on this quite a bit. We think that in fiscal federations, governments provide some of the regional risk-sharing that asset markets may not provide; and so in some sense, they may be a substitute for asset markets. But if you don't have these within a currency union, you are at a relative disadvantage.

Seigniorage, I believe, did not figure in Mundell's story. It is a consideration, although one that can really be handled by negotiation, so I don't regard it as really a major issue.

And one very important issue that is quite a new issue in terms of thinking about fixed exchange rates is the issue of credibility, the issue of pegging to a low-inflation country and importing credibility. This is really a new argument for fixed exchange rates that is very much a creature of the 1980s and that, of course, has figured very much in the discussion of EMU.

Now, this last issue, the credibility issue, raises a host of political issues, and I think these are absolutely critical for thinking about the likelihood of a world currency, how such a currency would operate, whether it could be negotiated, whether it would be beneficial.

One of the major points of Mundell's paper, the point which he basically highlighted for its shock value, as it were, was the point that economically sensible boundaries for a common currency area need not in theory correspond to national boundaries.

Now, this is a very nice theoretical point, but the political boundaries are indeed facts. The countries exist. And when we think about joining in a common currency, there are immediate issue of burden-sharing and the like.

We can think of Ecuador, for example, as simply adopting a foreign currency, pegging to the dollar. Argentina has through its currency board effectively done the same. It has been able to sustain this because there is a broad consensus based on the calamities of past monetary mismanagement that this is something that is good for the country, and in fact, over the long term, it probably is a good thing for Argentina.

But when we think of major industrial countries or industrial country areas, we are not likely again to see a situation such as the Bretton Woods system where one superpower runs the show, and everyone basically lets it call the monetary shots.

So in terms of setting up any sort of currency area there is a serious issue about who runs monetary policy. In the European context, this was solved, of course, through the establishment of the European Central

Bank. But in Europe, the supranational organization has run way ahead of the political organization. There are legitimate concerns about the accountability of the Bank. There are concerns within Europe about the scope for individual governments that are democratically elected to make decisions in the interest of their populace, and this is reflected in the Danish "No" vote, the recently more nuanced view that the Blair Government is taking about ultimate entry into EMU, and so on.

I think these considerations are working against the original dream of an EMU that is coterminous with the European Union itself. It may be that the EU will proceed now on the basis of some sort of flexible integration. But basically, there is the issue of reconciling the politics with the economics. There is no doubt that EMU has gotten its impetus from a desire for closer political union, from the desire to avoid the conflicts of the past and to really solidify the gains that have been made in Europe in the post-war era. And these are very worthy goals, but they are not necessarily economic goals. Will EMU succeed as a purely economic experiment? I think it is too early to tell, and it will probably be many years before we can tell.

What about the world? What will happen? Mainly because of the political constraints, the fact that countries will want to do their own thing, I don't really see a world currency any time soon. I don't think it's feasible. I don't really see how the adjustment burdens could be coordinated, or that there is a willingness to do that.

I share Bob's concern about the high and inexplicable volatility of exchange rates. One hopes that as more countries move to some sort of inflation targeting regime, volatility will decline, but the recent behavior of the euro probably belies that hope, at least for the immediate future.

I think we'll see a world in which even some larger developing countries such as Mexico may continue to float. And it's not clear to me that this is going to be a terrible way to run the world economy. We have moved to a really new, more democratized political regime in which electorates demand policies that are oriented toward national goals. I don't think this need be a source of international conflict, and conversely, international standards such as the gold standard certainly did not prevent wars such as World War I.

So I would come down for the foreseeable future on a world in which smaller countries may opt for joining some union either through a currency board, euro-ization, or dollarization; larger countries may float; and then we have the big currency areas--the euro zone, the yen zone, and the dollar zone--pretty much coexisting, with occasional disagreements, occasional attempts at coordination and intervention, but basically with national governments acting in what they perceive is the national interest.

MR. SWOBODA: Thank you.

Paul?

MR. MASSON: Thank you very much.

As we have already heard, the creation of the euro out of 11 national currencies a little more than a year and a half ago, the prospect of dollarization in several Latin American countries, the creation of currency boards, which is the next best thing to adopting another country's currency and in fact may have some advantages relative to that--all of these things open the possibility of a radical reduction in the number of currencies in the world.

Is this trend likely to continue to its logical conclusion? That's really the question of this roundtable--namely, the creation of a single world currency.

I think that to consider this question adequately, one really needs to look at the roles of money in the world economy

and at the national and international levels.

At the national level, the traditional analysis considers three roles for money--as a means of payment, store of value, and unit of account. At the international level, in parallel with this but really a separate analysis, looks at the use of an international currency either for invoicing trade, denominating assets and liabilities, as a form of holding foreign exchange reserves, as a vehicle more generally for foreign exchange transactions, and also as the currency to which other currencies are pegged, as an anchor, essentially, for other countries' monetary policies.

I would argue that technology and globalization are blurring the distinction between national and international uses of money to some extent and have the potential for changing these uses radically. Let me give a few examples. Multinational corporations doing business in many countries make transfers between their branches or subsidiaries which have no relation to the currencies in which the profits or revenues are earned. Multinationals often report their financial results in both local currency and in U.S. dollars or pounds sterling, in particular if they have ADRs listed in New York or shares listed in London.

As we are all aware, currency swaps allow the transformation of denomination of capital flows, and derivative instruments permit sophisticated hedging of currency risk.

Third, internet use--e-banking, if you will--increases the potential for payment to be made across borders without passing through a traditional banking system: it may at some stage involve a payment through such banks, but it need not, and this possibility is increasingly being studied.

And also, I think both retail and business transactions will be increasingly made using technologies where prices can be quoted in multiple currencies with exchange rates potentially being continuously updated.

As a fairly trivial example, in Europe at the moment, it is standard to bill in both euros and the national currency--that is, the unit of account, the euro, may be different from the means of payment, the national currency, which of course will in a few years be replaced by the euro itself.

In addition, payment and settlement systems are increasingly run by private financial institutions and are not under the direct control of the central bank; and debit and credit positions at the end of the day, or whenever they are settled, may not necessarily require settlement through central bank balances.

And as has already been mentioned, the creation of the euro has fundamentally altered the relationship between national sovereignty and national money.

For some time now, people have been speculating on another development, which is that technology and financial innovations have been leading to the possibility of essentially a zero-cash-balance society, as for instance, credit cards and, internet/e-banking economize on the use of cash and bank deposits--traditional money. And when one looks at financial institutions, reserves on bank deposits have been reduced--required reserves have been reduced in many countries, and excess reserves or clearing balances have been reduced almost to zero, shrinking the size of high-powered money and also, arguably, the potential effectiveness of monetary policy.

There are some stylized facts which have direct implications for how we should view the evolution of international moneys in the future.

What do these trends mean for the international monetary system? I would argue that there may well be several implications.

First, payments may be increasingly made outside the direct control of governments and central banks.

Second, the notion of competing moneys may be given greater scope: I refer to the idea and proposals which have long been considered, that allowing individuals and companies to choose between moneys would be a way of making sure that the best money won out. I think that the increasing channels available outside the direct control of governments may allow the competing moneys idea to be given greater sway; and perhaps network externalities, which are, as Maury mentioned, a raison d'etre of money, though very hard to model, may be given more scope.

So for instance, one may find that just as it increases the use of the English language, the internet may favor the more widespread use of the U.S. dollar.

Third, because, the scope for monetary independence has been reduced by increases in capital mobility, countries may be less reluctant than in the past to give up their national currency provided, of course, that the dominant world

currency or the regional currency exhibits the necessary stability in terms of purchasing power.

Those three factors I think suggest forces leading to fewer currencies, if not necessarily to a single world currency. However, I would also argue that going the other way is the fact that technological advances that allow separation of the means of payment, store of value, and unit of account roles for money may make the coexistence of different currencies in any given country or monetary area easier. And I would further argue that the forces of globalization are not stamping out nationalism. A currency remains an important symbol of national or regional sovereignty, even though in practice it may not be associated with much monetary independence.

So I, like Maury, do not think that currencies will disappear en masse. But I think there is a sub-question which is also interesting, which Maury has touched on, and that is the question of regional blocs and the elimination or the consolidation of currencies within regional currency areas.

I think that in reality, the major regional currency blocs that exist at the moment are really those centered around the U.S. dollar and the euro. The euro bloc will no doubt develop further, mainly because of a political motivating factor, namely, membership in the EU and also, though to a lesser extent, because of the economic factor of close trade links with the existing countries of the euro area.

For the dollar, I would argue that only the economic factor comes into play since the U.S. has steadfastly refused to share monetary or other forms of sovereignty, and with only a few exceptions, its trading partners decline to abandon their own currencies in such a one-sided relationship.

And the examples of Canada and Mexico show that trade and other strong linkages with the United States can thrive even without a common currency. I expect that unless the political reality changes, this situation will continue.

An Asian currency bloc has been much ballyhooed, but I think the fundamental question is around what currency. Japan is the region's largest economy, but in a few decades will probably be overtaken by its much more populous neighbor, China. In the meantime, that country needs to emerge further from the rigidities of state control, create a convertible currency and a modern financial system, and settle outstanding frictions with neighbors and territories before the renminbi can lay claim to being an international currency.

So I would argue that political factors mitigate against either country forming the nucleus of a strong regional grouping.

So I am not holding my breath for the formation of an Asian currency bloc, nor do I expect that these countries would join a dollar or a euro bloc.

So to sum up, I see a world where currency use is increasingly dictated by private choice, not government fiat, where two major currencies--the U.S. dollar and the euro--will coexist, perhaps uneasily and in competition with each other, but there will also remain a slew of minor currencies. But I would say that the number of currencies will matter less because individuals will have greater options for hedging or choosing the currency in which to transact and will have less need to hold cash balances and hence are less likely to suffer the confiscation by inflation engineered by an irresponsible central bank.

So in conclusion, I think that the "one currency or many" question may become somewhat less important than it may have been in the past, because there will be further potentially radical changes in the national use of moneys.

Thank you.

MR. SWOBODA: Thank you very much, Paul.

I am told that Bob Mundell has landed and that he is on his way, that he'll get here in about 10 minutes. I would propose that we open the discussion while waiting for him--it's going to be his loss not to have heard our two speakers so far. I think you have given us enough meat for questions and discussion, so let's take 10 minutes until Bob Mundell arrives to pick up any questions and comments from the floor.

QUESTIONER: With all these difficulties of managing a global currency, how is it that the United States manages to do this with 50 different states? How does that work out in the terms of your framework?

MR. MASSON: My answer would be that clearly, there is a political framework within which the Federal Reserve operates and has a monopoly over the power to create money and to implement monetary policy, and that's really the fundamental question for constructing a currency union or replacing many currencies by one currency.

So yes, it's not really a technological limitation, the size of the currency area; it's really the political structures to ensure that there is a single monetary policy.

The associated question is whether there is public support for that monetary policy. And that, of course, gave rise to a great debate, in Europe, on whether solidarity among the countries, and similarity in their views as to what monetary policy should be, really created the public support for a common monetary policy. So those would be what would distinguish, I think, a successful United States currency union from some potential currency unions that have been proposed, including a global one.

MR. OBSTFELD: I agree with what Paul has said. I would just add, I guess, three points, in no particular order.

First of all, in the United States, the currency union is also supported by a remarkable degree of labor mobility even among distant parts of the country, which is a very important part of our internal adjustment mechanism.

Secondly, I would point out that there definitely are noticeable idiosyncratic regional shocks. In the early 1990s, shortly after I moved to California, we had one such in which the Californian economy lagged the rest of the U.S., falling into recession--partly as a result of defense downsizing--and so there was a noticeable regional shock. Many people left the area and moved to Nevada, to Oregon, or farther east. The state of California even attempted to run an independent monetary policy by issuing I.O.U.s, which were later ruled unconstitutional, and paying state workers with them.

So we do have episodes like that in the U.S.

And the third point I would make is that, if you look at the early history of the Federal Reserve System, it was really not smooth sailing. There was really considerable dispute among regional feds, and concern over whether the locus of power should be in Washington or in New York or somewhere else. You had situations in which there were breakdowns of cooperation--for example, between the New York Fed and the Chicago Fed in the early thirties when the dollar was under attack.

So there was definitely a period of learning in getting to the situation we are in now, where the legitimacy that Paul mentioned for the Fed and its policies as the national central bank is widely accepted.

MR. SWOBODA: You didn't mention fiscal transfers, and I was surprised at that.

QUESTIONER: As you nicely summarized, the main contribution of Bob Mundell was to show that asymmetric shocks across countries provide the main economic rationale for a currency area. And then you mentioned that there are also very important political issues that one should take into consideration.

But if we look at, say, the last 30 years--it might apply to a longer period--the political willingness to peg the exchange rate seems to be strongly correlated with how big shocks at the worldwide level were. The sixties were good years, and so Europe started planning more integration; they even had the Werner report in 1970. Then the seventies came, with its big shocks, and people stopped thinking about integration. Then, in the eighties, they started pushing the process forward, and you ended up with a monetary union. This is for developed countries.

For the developing countries, recently we saw that big shocks like the Asian crisis make people re-think the importance of pegging for gaining credibility, and so they started moving to flexible exchange rates again. So it seems that one may argue that political willingness to peg or to fix may be correlated with shocks once again.

So one may link economic rationale and political rationale and say, well, in a sense, they might both lead to the same conclusion--that asymmetric shocks or similar business cycles and so on, may matter.

Could this be embraced at a wider level? And if so, will the effect of globalization on asymmetric shocks decide whether, in this century, we will find a monetary integration at the worldwide level or not?

MR. OBSTFELD: There is no question that in some sense, it is easiest to enter these--well, I don't want to say that too quickly. Certainly in Europe, it has been easiest to push forward with unification either when there is an absence of asymmetric shocks or when times are good. But also, I think if you look at the origin of the Werner report, you will see that it was partially inspired by some of the instability in the late 1960s as between Germany and France: you know, you had the shock of the French events in 1968 and so on. So in that case, there may be a contradiction with what you are saying, that that was definitely an asymmetric shock but one that I think helped move the discussion of the common currency in Europe forward.

As to the effects of globalization, do we yet observe more coherence as a result of greater ties? I would argue that in some sense, the extent to which globalization has really occurred is somewhat exaggerated. The bigger economies, or the bigger currency areas, are somewhat insular as judged by a number of criteria such as home equity bias, price deviations, home bias in trade, and so on.

So what happens down the road when we get more integration, as we surely will--I think it would be very speculative to try to answer that.

MR. SWOBODA: Yes, please.

QUESTIONER: In line with Mr. Masson's remarks about globalization, isn't there a volitional element in this development? There may be an authority--the United States Government, for example--that issues a money called U.S. dollars, and there are some who wish to use it, and there are some who wish not to use it. Chances are that with the greater openness of economies, there may be a few competing, in quotes, "large currencies" of this nature crowding out smaller currencies, and this may well happen in a very short period of time, quite voluntarily, to the extent that electronic globalization or other globalization materializes.

If you have any comments, I would appreciate it.

MR. MASSON: Well, one of the reasons that I argued that the choice of moneys may be left more up to individual choice, rather than governments imposing legal tender requirements with individuals not having much option, is that we have seen a considerable increase in cross-border deposits and use of currency. This may have occurred in many cases because of high inflation, so it's really a way of getting around the confiscation of inflation. But such use has not declined even in countries like Argentina, which of course allows the use of the U.S. dollar and in some sense encourages as well as tolerates it.

But in other countries as well, holdings of foreign currency have not declined as domestic inflation has declined. So I think it's partly that technological changes have made it a lot easier to use another country's currency, and I would expect that trend to continue.

QUESTIONER: Maury mentioned that we understand better the monetary independence side of a trade-off than the transaction cost side, and Paul Masson mentioned that the U.S., Canada, and Mexico are gaining from regional integration even without entering into a monetary agreement.

But there is recent evidence that these transaction costs are actually quite large. There is evidence from trade between Canadian provinces and provinces, and trade between Canada and the U.S., that suggests that two Canadian provinces trade as much as 20 times as much as a Canadian province with a U.S. state, controlling for other factors. And there is also recent evidence from Andy Rose that suggests that other things being equal, two countries that belong to a currency union trade three times more than two otherwise similar countries that do not belong to the same currency union.

I wanted to know what you make of this evidence and how does it affect your views regarding the convenience of currency unions.

MR. OBSTFELD: It seems that some of these numbers from recent research have a shock value that exaggerates what is happening. In the U.S.-Canada example, you're taking a very large country and a very small country, in terms of economic size, and looking at trade diversion. Let me put it this way. Imagine an infinitesimally small economy: it should be basically in a world of costless trade, consuming none of its own products, as a first approximation. To the extent that you see any trade diversion at all for a very small economy, it is going to show up as a huge trade diversion effect. And I think these studies of the U.S. and Canada are in part measuring that effect, that it is really distorting what you would find if the U.S. and Canada were really of the same size.

In terms of the Andy Rose findings, I think there is something similar going on, because much of the power of his regressions comes from very small countries. Who is in the currency unions? It is very small countries. So I think we have to look very critically at those results.

That is not to deny that there are not some effects there, that you can't find some effects of exchange rate volatility that seem to point in the direction of hampering trade. I think how large those effects are is somewhat mysterious, and from a theoretical point of view, we really don't understand them very well, either. We are just starting to develop models in which you can show that volatility in exchange rates will reduce trade, but those same models for different parameter configurations also give you the reverse result. So I would say that this is still an area where we are starting to develop

models where we might be able to get a handle on this, but there is still a lot of work to be done.

MR. MASSON: If I could add a note as well, I would question whether it is really showing that there are large effects of transaction costs, because Andy Rose's work attempts to control for transaction costs: over and above that, there seems to be this large effect of being a member of a currency union. Then the obvious question is that there must be something else linking these countries that explains the greater trade, over and above what Andy Rose controlled for. There is an enormous number of possible candidates, apart from transaction costs, like common regulations, a common language, or whatever, linking the countries concerned.

MR. SWOBODA: Max, if you want to identify yourself.

MR. CORDEN: Okay. Max Corden, Johns Hopkins University.

Can I make a comment, and then the question is: do you agree? There are two issues that we have discussed here. One is, is it desirable to have a currency union or one money for the world? And secondly, is it likely? It's got a bit mixed up. Much of the discussion has been more on is it likely, is it politically feasible, and so on. But I just want to come back to the main, original optimum currency area question: is it desirable?

The one argument that is qualitatively overwhelming is that it is a great advantage for Maryland and California to have one currency for trade and capital movements. Even if you can't measure it, it can only be positive. It's an inconvenience to have to change money and so on. And that's the sort of thing that Bob Mundell bases all of his arguments on.

But there are other things as well, and the main other thing in my mind is the fact is that when significantly large countries have devalued in recent years, say, it has had significant real effects on output and employment. It has shifted the role of prices of tradeables and non-tradeables. A nominal variable has had real effect for a significant time.

One could discuss why that is, but it has happened. And if you take away that opportunity, then you take away a major ability to adjust. This is a fundamental issue and comes from a short-run Keynesian model, and one has to remember that aspect as well as the other side of it.

Here he comes.

MR. SWOBODA: Maybe we'll ask Bob to answer your question--he can answer it without having heard it, I'm sure.

[Laughter.]

MR. MUNDELL: My answer is yes, I agree.

[Laughter.]

MR. SWOBODA: We have heard some things about optimum currency areas, the likelihood and the desirability, as Max Corden just put it, of having one currency for the world. We have been speculating about what your views might be on those things, but I guess the best thing is to have your views rather than our misrepresentations of them.

MR. MUNDELL: Thank you, Alex.

I apologize for being late. The first problem was that we were number 10 in line at LaGuardia Airport, and that started things off; then, when we got to Ronald Reagan Airport, there was another aircraft in our spot, and we had to wait 15 minutes for that; then, we got additional news that the controllers' computer was down, and they hadn't been able to signal the other aircraft. But finally, after about another 40 minutes' wait there, I got off.

Now I have used a minute almost of my valuable time. But I begin this way because I thought it was a wonderful metaphor for the international monetary system, how the systems of coordination can break down and what great tragedies they lead to.

I think again of the airports, that especially when you are at Kennedy Airport in New York, the airports inside are beautiful and very efficiently run, but between the terminals, they are a terrible mess, and getting from one terminal to another or going to get a taxi or something is a complete mess compared to everything that works nicely inside. So that is like flexible exchange rates between the terminals.

The title of this forum is "One World, One Currency," as you know, and then, "Destination or Delusion?" I am tempted to

imitate Bill Clinton and say that, of course, the answer depends on what you mean by "world" or "one" or "currency".

[Laughter.]

But I don't know anyone who has actually advocated a single currency for the world. I guess maybe there was one case of it--the Italian, Scaruffi, in the 16th century, from Viareggio in Italy, who advocated a currency that he called "Altifono", which was a Greek word meaning true light, and if all the world had a single currency, this would give true light to all transactors.

But Europe has moved toward a single currency, and this was a great surprise to many people. When the Delors report came out in 1989 and proposed a single currency for Europe, which is very different from proposing a common currency for Europe that would be shared by each country, but co-exist with national currencies, the draconian suggestion that each European country scrap its national currency--something which some of them have had for over a thousand years--was a remarkable event.

I myself think that the European currency would not have come into existence had it not been for the stimulus, the political stimulus, given to the whole episode by German unification. That gave a political payoff to the single currency idea, because that was an intensely political movement.

"One world, one currency" could exist in a dictatorship or a world empire, but I couldn't imagine a world democracy with a single currency. I couldn't imagine that system.

I don't want to quibble with that language there, because I think it is a wonderful idea to raise consciousness about the importance of a world currency and I have been an advocate for a long time of a world currency, and my 1968 testimony to the Joint Economic Committee contained a plan for a world currency. And of course, I regard regional currency developments like the euro area as sort of a second-best process. Whenever there is a political handle to latch on to, that gives some additional focus.

I think it is more interesting to talk about not "one world, one currency," but "one world, one currency area," defining a currency area as a zone of fixed exchange rates. I would define the gold standard not as a single currency but as a single currency area.

If you think of a country like Panama, Panama has two currencies. It has the balboa and the U.S. dollar. It uses the U.S. dollar as a paper currency and the balboa as a coin. It still has a separate currency, but for all practical purposes, most transactions are conducted in U.S. dollars.

If you look at Luxembourg, the Luxembourg system for 80 years has been a monetary union with Belgium, and it didn't have a central bank, it had a monetary institute, and suddenly only last year it had to be upgraded to a central bank so that the head of the Luxembourg monetary authority could sit on the Governing Council of the European Central Bank. So Luxembourg suddenly got a central bank even though it doesn't have any more power than it had before; it has no monetary policy. But Luxembourg, for 80 years, has had two currencies--the Belgian currency and the Luxembourg franc. There is a certain amount in existence, but you certainly wouldn't call the Belgian-Luxembourg monetary union a single-currency union.

I think that if we think in terms of a world currency, there is no need whatsoever to have a single currency. I think you could only do that with a complete rupture or change in political circumstances--maybe if we were invaded by Mars, they might impose on us a single currency, but each country would still want to keep its own currency.

Let's start at the end point. Suppose we did have a single currency in the world, a single currency maybe produced by the IMF, or it could be the U.S. dollar. Let's take the U.S. dollar because that's a little closer to reality than the IMF having a currency that covered the world. Suppose the U.S. dollar covered the whole world but that each country was a sovereign country. The whole world is dollarized. What would be the upshot of it? Would that be a stable relationship? I think not. It wouldn't be stable because every country outside the United States would then want to go and create its own currency and gain the seigniorage from doing so.

But how could they do that? Well, how much could they create? Imagine that the money supply in a particular country--it doesn't matter which country--is $10 billion; the high-powered money supply is $10 billion in a particular country, and that country is using U.S. dollars. Well, then, that country could issue its own currency, its own dollars. Let's say they are Canadian dollars. Let's say the country is Canada, and the high-powered money supply in Canada is $10 billion. The Canadian Government could issue its own money. It could issue the Canadian dollar equal on par with the American dollar. And as long as they produced less than $10 billion, and they didn't create any sense that they were

going to push it to the hilt and displace it, those Canadian dollars and American dollars could circulate side-by-side in exactly the same way that the Luxembourg franc can circulate side-by-side with the Belgian franc, in exactly the way the Scottish pound has been able to circulate since the Act of Union for almost three centuries with the British pound.

You don't need to have a single currency in the world. Every country can have their own currency in the world, and you can still have the benefits of a common currency because you are all using the Canadian dollar, the Mexican dollar, et cetera, et cetera.

That would be a solution that would imply, because it is the U.S. dollar, some kind of domination, and that might not be acceptable to the world. Canada doesn't want to dollarize with the U.S. dollar. Mexico doesn't want to dollarize with the U.S. dollar. But they can gain the benefits from this to a large extent, or different dimensions of it. There are always different dimensions of currency unification, like the transparency of pricing, a common unit of account--better monetary policy is, of course, the ultimate payoff from it.

So let's suppose--let's go south of the border and think about Mexico as a country--obviously, dollarization would be a possibility for Mexico. But it would be expensive, and it would be an affront to the Mexican people to have to use the U.S. dollar. They would feel they had lost something that was quite important to them, even though they haven't managed to keep their own peso stable since they left the system of fixed exchange rates. Remember, Mexico had a fixed exchange rate system from 1954 until 1976, and throughout that period, it had the rate of inflation of the United States. But when they devalued in 1976, they started a whole process in which Mexico--and they had just discovered oil--lost their monetary stability and even went to the need for a currency conversion, et cetera. So it has just been a big mistake. They have lost that sense of monetary stability.

But suppose they wanted to get back to it again. What should Mexico do--what could it do if it wanted to get the benefits of U.S. monetary policy? It should do what it did between 1954 and 1976, during those 22 years of a perfectly functioning fixed exchange rate system, no different from what Austria had relative to Germany for dozens of years, what the Netherlands had with respect to Germany, and so on.

So let's say they fix the peso now at 10 pesos equals one dollar, and follow a kind of currency board system of monetary policy. They would keep their own currency and it would be very convenient, because choosing 10 would give it a kind of decimal relationship, so the peso would be like an American dime, a 10-cent piece, so it would have a lot of good properties.

Well, we move forward to the question of what countries need to do when they form a currency area. Europe's example has given us a lot of good lessons for it. There are five things you need to do when you form a currency area, and Europe has done all of these things. You need first of all to have a common target for monetary policy--it may be an inflation target. It has to have a common measure of inflation--EUROSTAT has created the Harmonized Index of Consumer Prices--you have to have the same index measuring inflation in each country. Then, you need to lock exchange rates, and then you need a common monetary policy, and then you need a system for dividing up the seigniorage.

That provides the framework, the ingredients, the tool kit, for creating a currency area. In order to do that, when you lock exchange rates, the countries that lock exchange rates don't have any other monetary policy except that dictated by the head authority of the whole area.

Now, if we think of a global currency area like that, could we do all those things? I don't think we could do that quite in that way, including dividing up seigniorage at the global level, but we could go back to locking exchange rates.

But whatever you have to do in the world economy, you have to have a common anchor. There has got to be an anchor for policy, and there are three types of anchor that you could use in the world economy. One would be gold, again. Nobody is interested in that too much. Gold would be an anchor that would be good and would be effective provided you set up an institution for making sure that gold was stable in terms of commodities. You have to have a stabilization authority in order to make gold stable, but gold would be useful if that occurred.

A second possibility would be to have a virtual kind of common currency, an indexed SDR--take the SDR, a basket of four currencies now, that are inflating, index it for inflation, and make that the world unit of account. It would be stable, and it would be in a way effective.

The third possibility is to have a big power, or two or three of the big currency areas in the world, getting together and forming a common monetary policy and using that as the anchor for the world currency. That is the one that I am the

most interested in right now, because I think the others aren't going to get anywhere at the present time. I think that if we took the G-3 area--the euro area, the dollar area, and the yen area--and fixed exchange rates among these areas, it would work very well.

Now, immediately, I see gasps of astonishment and horror at the thought of fixing exchange rates between the dollar, the euro and the yen. But think of it: you need fluctuations in exchange rates if you have different rates of inflation, but by and large, you have in these three areas three zones of stability. But before you can have a unification of these three currencies--and I'm not proposing here a single-currency monetary union, I am proposing a three-currency monetary union or maybe even a four-currency monetary union if you have an outside unit of account for the rest of the world to use, but the process would be exactly the same-you have to lock exchange rates. Well, right now, the biggest currency area is the U.S. dollar area, with a GDP of $10 trillion. The euro area is $7 trillion, and the yen area is $5 trillion. So choose the U.S. for the present, because it is the largest, as the core center country, and let the Bank of Japan and the ECB lock exchanges rates to it-so that 100 yen equals a dollar, and one euro equals a dollar, let's say again, the convenience of the numbers gives you some benefits in terms of a transparency of pricing and so on.

But fix those exchange rates, and then have a pool of the three countries. They become the open market committee. Then, choose the common inflation target. Right now, Japan has a lower inflation target than the United States or Europe, so that would create a problem. And you couldn't have a monetary union if there is not an agreed common inflation target. But if you got that, there is no reason whatsoever why that monetary union of those three countries would be any more difficult to manage than any of the single currencies are today. Every country that has to manage its own affairs, its own inflation targeting, gets into difficulties at some point. The United States has had a terrible history in the recent period--the great, terrible Depression of the 1930s, the big inflation of the 1970s--but the U.S. has now gotten back to a system of management that could work very well, and it would not be more difficult to have those three countries doing it.

Well, then, you do that, and you then have the three ways of getting to the world currency. After you have done it, you could also take the SDR, and you could unify all those three areas. Once you got over the big hurdle of unification of the G-3 currencies through a three-currency monetary union, you would then be able to mesh that with the other things.

Now, obviously, there are political difficulties about this. The first difficulty and the most telling one is that the United States is going to say no at the beginning. Immediately the current administration is going to say absolutely not, we aren't going to touch anything like fixed exchange rates. So the second-best thing would be to have Japan and Europe do it. Then, Japan and Europe would have a currency area that is more important than the U.S. dollar, and maybe then it would be of more interest for the United States to go into it.

Remember that throughout monetary history, the superpower has always rejected international monetary reform. The big opponent of monetary reform in the 19th century was always Great Britain. The United States and France were always for it, but Great Britain was always against it. And the United States is the country that has been opposed to a world currency in the 20th century. Remember that both the White and the Keynes plans that led to the formation of the IMF, at Bretton Woods, each contained a provision for a world currency, and that got scrapped because it was decided that it was against the U.S. interest to have a world currency because the dollar and gold would preferably suffice.

But now the situation is different because the euro area has created for the first time the chance of a change in the power configuration of the system, and it is now time, and useful and in the United States' interest, I think, to move toward and to provide some leadership toward the development of a world currency area--but not a single-currency area.

MR. SWOBODA: Thank you very much.

I think we can now take a few minutes for questions.

QUESTIONER: What Professor Mundell described as a three-country monetary union with a three-country open market committee sounds to me like a single monetary policy for three countries, just as you have a 12-member open market committee for the U.S.

And in fact what I thought he was describing was exactly the situation we have in the euro area at the moment, which is a single monetary policy but 11 different circulating currencies until 2002 at least.

So I really don't see that there is any actual distinction between what you call a three-currency monetary union and a single monetary policy, which is single-currency monetary union, effectively. I mean, in the euro area, it will become a true single currency once the national notes and coin are withdrawn.

So are you actually describing anything different than that, and if you aren't, then don't we fall back into the obvious overarching political difficulties of losing monetary sovereignty or pooling it in that way?

MR. MUNDELL: Well, there is of course a world of difference between a three-currency monetary union and a one-currency monetary union. The difference is sovereignty. And of course, Europe is in that stage right now where it is in an 11-currency monetary union, moving to a one-currency monetary union--that will be a very big jump in terms of people's feelings and so on, but it is presumably worth doing, and it is better in a way than an 11-currency monetary union-there are a lot of benefits from transaction costs and transparency issues and things of that nature. That's a big plus--and also, for Europe, it is more: I'm not going to say it is irrevocable, but it is much more irrevocable than if you keep your own currency. That was the argument that the Delors committee made, that a single-currency monetary union would be more irrevocable.

So I think that there is a world of difference between a three-currency and a one-currency monetary union.

Now, any kind of monetary union has to have either a single monetary policy or a coordinated monetary policy.

Right now, Europe has the European Central Bank that coordinates the monetary policies of those 11 countries. It's as if all of the 11 countries are now operating with currency board systems for all practical purposes, with the currency board rules changed to allow for expansion of the money supply as deemed to be necessary.

But one thing that one should note about Europe, which a lot of people seem to have missed it in the face of the euro going down, as it has, is that every country in this zone has now got a better monetary policy than it had before. Since the locking of bilateral exchange rates at the beginning of 1999, there has been zero speculative capital movements between the mark and the lira, and the peseta, and the franc, and those other currencies. Fixing the exchange rates credibly has completely abolished speculative capital movements. The hedge funds can't make a dime on the intra-European currency arrangements anymore. That is a big change. And yet people haven't learned that lesson. I heard the head of an important central bank in the Davos meeting in Switzerland saying that if there is anything we have learned over the last few years, it is that fixed exchange rates cause crises, which is absolutely the opposite of the truth, because in Europe, the intra-European crisis has been completely eliminated.

Quite apart from that, the gains from agglomeration and size have deepened the capital market. Suddenly, the European capital market has multiplied several-fold, and it has been a great benefit to Europe.

MR. SWOBODA: Yes, please.

QUESTIONER: I have a question to Professor Mundell. I think the preferred way of fixing the exchange rate, especially to regional currencies, would be currency boards.

Especially in the context of transition economies, the currency board seems to have a lot of benefits. One is the result of the currency board in Bulgaria.

But one of the major problems standing in the way of broad application of currency boards in transition economies, especially in the CIS, besides political problems, seems to be the vulnerability of these countries to shocks, especially because they are mostly commodity exporters.

In the past, the metropolitan countries used to be the financiers for such emergency needs. So my question is: isn't the IMF a natural institution to help with that, because most of these shocks are temporary, reversible shocks but have very symmetric consequences for monetary policy--when they need expansion, the currency board actually does the reverse?

So, for example, are IMF facilities designed to help those countries interested potentially in currency board arrangements deal with these reversible shocks?

MR. MUNDELL: I have been very disappointed in the way the IMF has treated currency board arrangements, by and large. I think they should have grasped onto it. After all, let's suppose that apart from the fact that the United States dollar would be at the center of this thing, you could imagine a world of currency boards, where all central banks operate like currency boards--not currency boards, but currency board systems. After all, that's what the gold standard

was--it was what people nowadays call a currency board system. That's what the adjustment mechanism was. It was automatic until countries decided in the 1930s to go off on independent monetary policies; then they got off on the wrong track.

I have been disappointed in the way the IMF has been--maybe it is changing recently--very antagonistic to anything connected with currency boards or fixed exchange rate systems. I think they have really been a source of instability.

I was in Indonesia recently, and the IMF in Indonesia was insisting that the Indonesians have a monetary target, not just a monetary but a money-base target, and that should be the basis of their monetary policy. That is a terrible system for Indonesia. A money-base target is a good kind of system in a country with hyper-inflation, or very rapid inflation, because you know they have to stop printing money. But for countries that have gotten down to 15 or 10 percent inflation, it's a terrible system to have. And Indonesia still has a currency crisis.

MR. SWOBODA: What I'd like to do now is perhaps ask the last questioner--and I think I have seen your hand before--to do it very quickly if you can, and then I'll give one minute to each of our three panelists to respond, including to your question.

QUESTIONER: This question is for Professor Mundell. In your opinion, does Africa have the necessary qualifications to qualify for what you call an "optimum currency area"?

MR. SWOBODA: Thank you.

Maybe we'll ask Professor Mundell to answer that first, and then we'll go back to the one minute per speaker.

MR. MUNDELL: Which--all of Africa?

MR. SWOBODA: All of Africa.

MR. MUNDELL: Well, in my African days--in 1970, I toured Africa and did a study for the UN in Addis Ababa of the effects of currency devaluation, particularly the British and French devaluations, on African countries. In that process, I argued that it would be a very good idea if Africa did have a common currency. Now, this is 30 years ago, and this is in 1970, when the world had a system of fixed exchange rates, and it wouldn't have been nearly so hard. Remember, when you've got a world of fixed exchange rates, it's easy to create a common currency. You don't have big convergence conditions that are hard to cope with as Europe had, because countries are already converged through their fixed exchange rates; they have a common inflation rate and they have common interest rates, as Europe did up until 1971.

So if Europe had created its common currency and had gone about doing it in 1969 or 1970, it would have been far easier than it was to do it in the 1990s, when all currencies were floating.

But the big issue for Africa--and this could be also for Asia; does Asia need a common currency? Does Latin America need a common currency? Does Africa need a common currency?--the big issue is how to arrange for the anchor of it. It would have to use an anchor, because there is no dominant power in Africa with a dominant economy. It wouldn't be an African-produced anchor. It would have to use maybe a basket of the three G-3 currencies as the anchor and then form some kind of monetary grouping around that.

QUESTIONER: What about gold?

MR. MUNDELL: I am a great enthusiast of using gold, but a quarter of the world's stock of gold above ground is in central banks, and if central banks have the idea that they are going to sell it and buy it, they can destabilize gold, and this could create a lot of problems. So gold itself wouldn't be as appropriate as an anchor to the three major currencies unless there is some way of relating gold to those other currencies.

MR. SWOBODA: Thank you very much.

So, a concluding note rather than statement, I suppose. Let me take it perhaps in the order in which people spoke.

Maury?

MR. OBSTFELD: I would just like to take my minute to express more reservations about the idea of a sort of tripartite agreement among the yen, the euro, and the dollar, as Bob sketched it.

I think the analogy of that type of fixed exchange rate regime to the euro is not really a good one, because as far as the

euro is concerned, the exchange rates are enforced by a single decision-maker who has been put irrevocably in charge of all currency decisions. So the exchange rates between the euro zone members, the legacy currencies, are pretty much like the exchange rate between the U.S. dime and the U.S. dollar. It is not really analogous to what a U.S.-European-Japanese condominium would produce.

Secondly, I am also a bit skeptical about the ability of common inflation targets to produce harmony in a fixed exchange rate system. If we look at Germany, for example, during the sixties, their faster rate of productivity growth compared to the U.S. required them to accept a faster incipient rate of inflation. The fact that they had a common, similar inflation target meant that they were constantly trying to sterilize, to reduce money inflows, and so on so they could actually keep inflation down while fixing the exchange rate. That's a problem which we see in the euro zone today as well.

MR. SWOBODA: Thank you.

Paul?

MR. MASSON: I'd just like to return in the one minute to Max Corden's question which I think is the crucial one--is it desirable to have a single world currency?

I would say the answer must be related to the question is it desirable to have a monetary policy that we can work with and effect economic activity and other things that are important.

If one doesn't believe monetary policy has those effects, clearly, there is no value, but I think most people do, and so there is some value to having the independent monetary policy that separate currencies allow.

MR. SWOBODA: Thank you.

Bob, one minute.

MR. MUNDELL: I'll just comment on Maury's comment. When I make this plan for a three-currency monetary union of these countries, I absolutely mean that you have to have a common authority. There has got to be a common authority like the ECB for Europe. That's what I mean. I didn't talk about creating a global institution. What I did was for the moment, just in a process, to get the effect of it. The three countries form the joint authority that make monetary policy, and the open market committee makes the monetary policy of this committee, while the countries that are doing the fixing have no independent monetary policy at all. So that argument doesn't apply.

On the question of whether you can you have common inflation targets when countries have different productivity growth, well, I think we have in the United States and Canada these areas--if California grows more rapidly than the rest of the country, some prices in California will tend to rise; but by and large, when those things have happened, you don't have big differences in inflation rates between California and New York and the other areas. Germany in the 1960s--I don't think that is a good example, because the big problem for Germany in the 1960s was that there was an asymmetry in the adjustment process, and effectively, the United States, which was the deficit country in this period, was having a rate of inflation that was increasing in the late 1960s. A deficit country was already setting the bar at a much higher level, to something like a 3 percent inflation rate, in the late 1960s. And Germany, in order to have an appreciation of its real exchange rate--and I agree with you that productivity growth in the export industries had a big effect on this need for an appreciation of the real exchange rate--meant that that additional excess inflation was imposed on Germany.

The big problem in the 1960s with that system is that the United States, the pillar country, the center country, was too inflationary.

MR. SWOBODA: Thank you very much.

I am sure that we will have an opportunity to return to these questions. I would just like to thank our three panelists for a very, very good session and, I think, a very interesting one.

Thank you very much.

[Applause.]

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