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CONFERENCIA: "THE FUTURE OF THE EURO"

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When I was here before –which, as I was reminded this morning as I walked in, was all the way back in 2002– I was working for Deutsche Bank and we were at that time the lead bank in the debt restructuring program that took place in 2002-2003. I also worked for Argentina in this part of the world, but that debt restructuring never happened, or at least it didn't happen for another 15 years. So this was my one success in this part of the world. I was also reminded that we never were paid in Argentina; there is still a bill outstanding for about a year of my work [laughs].

And that brings us to our topic today, there's another part of the world that is in serious trouble. There has already been one private debt restructuring. We can see it in the news every day: the riots and demonstrations in the southern countries (Spain, Italy, Greece) are clearly reminiscent of the 80s in Latin America. So I thought that an interesting way to approach the problem would be to see what lessons we might draw from the experience in the 1980s for the next ten years in Europe. Let us put ourselves in a mindset where we are in about 1983 or 1984, which is roughly where the Europeans are right now[2], trying to get out of this mess.

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2 November, 2012.

I would like to start out with a visual.

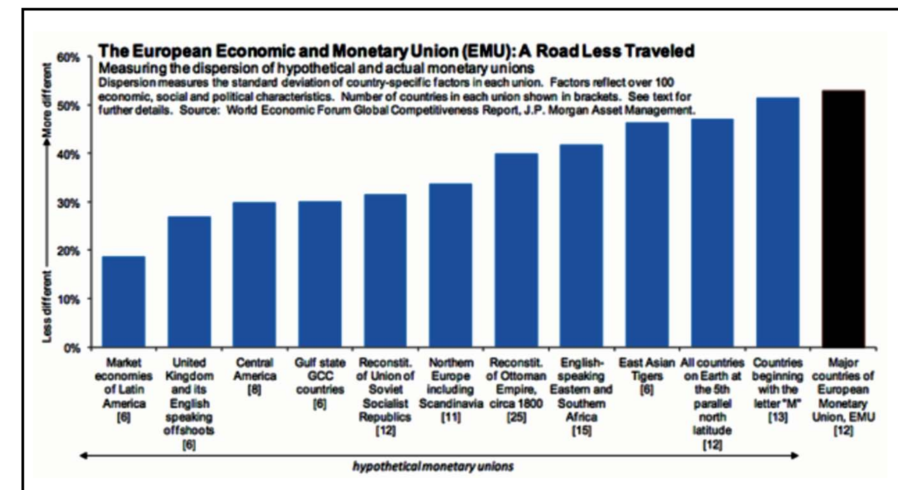
Chart 1

The gentleman on the right there is an Economics professor in Greece. The gentleman on the left is the finance minister in his new uniform [laughter in the room], notice that he has quite a lot of protection there. On a more serious note, the conclusion of my remarks is going to be that the race between the protesters on the right-hand side of the screen and the finance minister will determine what ultimately happens in Europe. But let us start at the beginning.

From 1971 through 1974 I was at the Federal Reserve as the Bretton Woods system was falling apart and I recall that the very first thing that the Europeans did in 1971-72 was to send a delegation to the Federal Reserve Board of Governors asking if the US Government would mind if they created a zone of exchange rate stability within Europe. Remember: 1971, big crisis, US dollar floats, everybody else floats. The very first reaction of the Europeans was to start to design or to put in place a zone of exchange rate stability within Europe. Our reaction as I recall, was "Ok, good luck." We could not care less as long as you do not all get together and do something that is contrary to our interests.

They had however a serious problem from an analytic point of view. Any exchange rate system is a promise, you are promising the world and your citizens that you are going to behave in such a way to keep rates stable or, in the case of the Europeans, to keep rates fixed. But you can default on that promise by devaluing the currency and everybody knows that. There are obviously some costs to doing that, but we have had lots of defaults on fixed exchange rate systems. The legal and contractual implications of that kind of default are almost second nature. We know who wins and who loses, you do not have a lot of lawsuits following saying "they really owe me more" once the exchange rate is changed. It is a pretty straightforward process and the implication is that when it becomes inconvenient to maintain the fixed exchange rate it does not cost the government very much to break their promise.

Chart 2



One of the ways that economists think about this, as opposed to European policy makers, is that you are more likely to break your promise of keeping the exchange rates fixed if you have very dissimilar economies. If you are exposed to different shocks, if you have different structures, labor markets, and so on and so forth, then you are more likely to find yourself in a position where you want to break the fixed exchange rate commitment. A shock hits your economy, it does not hit the other economies, and you want to change the relative prices, the exchange rate. So, *ex-ante,* there is a

whole list of things that economists have come up with that say “well, these countries would make a sensible monetary union” or, in other words, “they are less likely to break their promise of keeping the exchange rate fixed because they are more similar economies.” Chart 2 shows some groups of countries that, *ex-ante* might or might not make sense as a monetary union.

On the far left side of Chart 2 market economies in Latin America are likely to be a successful monetary union. As we move to the right the collections of countries become less and less likely *ex-ante* to form a successful monetary union. On the far right we start to get more and more fanciful, ex-ante, monetary unions. The third from the last is “All Countries on Earth at the Fifth Parallel North Latitude” – that’s a bunch of countries [laughs]. We could rank that and, not surprisingly, it doesn’t score real high in the likelihood of being a successful monetary union. My favorite, “Countries Starting with the Letter M,” that’s the highest blue bar, so that doesn’t seem to provide a very good *ex-ante* rationale for a monetary union. The last one over there to the right is the actual European monetary union. We can see that, of even arbitrary groupings of countries, according to this criteria, this was the least likely to be successful or, put the other way, would experience the most difficulty in maintaining the promise to fix the exchange rates.

The dilemma is clear. There is a fundamental desire among the European countries for a zone of exchange rate and monetary stability, including inflation stability, of course, but they are very dissimilar countries. This led most US economists, as the euro was being discussed to say, “This is not going to work.” Probably Marty Feldstein was the most vocal and the most influential person to predict disaster. Europeans, on the other hand, for the most part, said “Look, we understand that ex-ante our economies are not very similar, but the whole purpose of this is to force them to converge into a common labor market economy, a common financial market that would work and we’ll do it. But we’ll need a commitment system to pull this off. “We’re going to put in place a commitment system that is so strong that, even though our economies are dissimilar, we’re going to keep this promise.”

The commitment mechanism was not a fiscal union. One of the preconditions for a monetary union is fiscal discipline among the participants.

Maybe not surprisingly the single currency system has not provided this in fact. The reaction is going to be more discipline on paper, but it is easy to doubt whether even more rules and regulations are going to be of much use. The set of problems they face are well known. Many of you are economists and I’m sure you know that, if you go out to dinner with other economists, you have to agree *ex-ante* on how to share the bill. If everybody says “OK, we’re going to share the bill equally” then everybody will order steak – and when everybody orders steak everybody ends up eating twice as much as they should, this is a real problem.

More important, and probably what you have not thought of, are the virtuous diners – the people who order hamburgers, do not break the agreement. You could say “OK, I’m not paying,” but you’d be thrown out of the restaurant because there are costs involved with committing to the thing in the first place. This is pretty much Germany and France. Everyone in Greece ordered two steaks. Germany cut their labor cost by 20% relative to their competitors. Now, *ex-post,* the question is how do you enforce this agreement. That is what we want to talk about.

Why is this a problem for Germany? Well, you have all got to pay the same bill. In technical terms, a part of the integration of the financial market means that the sovereign debts on the Southern countries are very widely held by the banks in the North. And what is now becoming generally known (it was kind of a mystery until a couple of years ago) is that, because of the way the ECB was set up, it automatically finances capital flight from the South to the North. If you pull a banking balance out of Greece, an euro deposit out of a Greek bank, and put it in a German bank, it costs you nothing, it is a very easy transaction, when that adverse clearing balance clears to the central banks. These are called Target 2 balances, it is a technical thing but it is huge, it is now almost a trillion euros of German liability to the Target 2 clearances. Suffice it to say that they set the banking system up to mimic the Federal Reserve System, interestingly enough. In the Federal Reserve System, if people in Chicago make net payments to people in Los Angeles, there is an automatic credit from one’s Federal Reserve bank to the other’s and it just stays on the books at the Federal Reserve. People in Chicago do not know that and it is probably a good thing that they do not. I do not think people knew it either until it got to be almost a trillion euros liability. So there is a direct financial connection between the countries.

THE CURRENT EURO MESS

So what is the commitment mechanism? In my view it is the uncertain but probably huge economic costs of issuing a new currency. Devaluation is impossible without issuing new currency and currency reform, sometimes called reform or introduction of a new currency, is a nightmare. Do we know what the cost would be of introducing a new currency? Obviously, instead of devaluation, Greece could, in principle, issue a new currency and retire euros. Remember I pointed out that the reaction in markets to devaluation was well known? We all know who wins, who loses; there is very little legal implication for private contracts. But if you issue a new currency, first of all, we have almost no experience with this –the last time somebody did this was a long time ago. But we have the following problem: suppose a German company in Greece is issued an euro bond held by a French bank, denominated in euros, and suppose the Greek government issues a new currency. Is that contract payable in euros in Germany or France or is it payable in new Greek drachmas? Some contracts will not be a problem. By law, Greek government bonds will be paid in drachmas, the Greek government could, in principle, simply redenominate both assets and liabilities of some Greek banks into the drachma and there would be winners and losers there, but the legal implications of private contracts between private individuals, residents in Greece and elsewhere, would be completely unknown. I've talked to lawyers about this and their only conclusion is that they sure hope it happens, because it will increase the income of lawyers in Europe for a decade [laughs].

If you believe, as I do, that the real cost of a devaluation is the disruption of the financial markets that follows, then the disruption of financial markets when we issue a new currency would have unknowable and maybe huge effects. There has been a lot of research about what are the consequences of devaluation. But we have no way of knowing the consequences now of issuing a new currency

For the academics among us, we talk about trade restrictions, we talk about loss of reputation and so on and so forth, those are what all the models are based on. Those are really weak. First of all, we do not see those costs, we do not see trade wars following devaluations or defaults, we do not see much of a loss of reputation, people get into markets again fairly frequently. But what we do see are long and severe recessions in the defaulting country.

So, if you devalue, if you default on your sovereign debt, your financial markets break down for a long time. I actually wrote about this ten years ago: What is the likelihood of a successful speculative attack on a monetary union? That is what presumably would happen to force a new currency. The problem with that is that we do not know who the winners and the losers would be following the issue of a new currency. It would be an arbitrary decision by the government which contracts would be redenominated in the new currency and which would not. The Greek government, for example, would not be able to enforce their will in a foreign court, so a Greek euro bond subject to UK law would not automatically be redenominated into drachmas. If there is anything that the financial markets don't like, it's that you know that there's a loss between the two parties but you do not know which one. As Mario Draghi said, now that I have stuck my toe into the private markets, if there is anything my traders do not like is uncertainty about who is dead [laughs]. They do not care if people are dead, they do not have any particular interest even in how many are dead, but what they really do not like is not to know who is dead and who is alive. So, it seems to me you can argue, completely out of the air, that the costs in terms of lost output, of financial disruption, of issuing a new currency are huge.

Now let's go back. Why did they do this in the first place? Why did they go from a fixed exchange rate system to a monetary union? It was to increase the cost of breaking the promise. And now they've done it. What they've said is "We're not going to break this promise and, if we do, we've got a gun and we're going to shoot it right into our heads." So others say, "I'm impressed, that's really a promise." I think that's where they are. They've now got the problems, but they've got a really, really good commitment mechanism not to break the promise of keeping the exchange rate fixed between Greece and Germany. When I say that the introduction of a new currency is a nightmare that is what I mean. I mean it is literally a nightmare in the sense that you do not know what will happen but you think it is pretty bad. This could happen, but –as I will argue towards the end– only in extreme circumstances, you are really going to have to push it. It could happen, but it is a huge barrier.

OK, clearly monetary policy is the same for all; the definition of a monetary union is one central bank. That leaves fiscal adjustment. Fiscal adjustment is something that we have experience with. We know how that works and we know that it does not work [laughs]. Why does not it work? For

a long time I believed and I have written several (probably unconvincing) articles about this, that the real interest rate is the issue. The real interest rate facing the private sector of the debtor country, in this case Greece is the endogenous variable that drives the system. I am going to argue, contrary to most of my friends, that the driver is not the real exchange rate. Most of you have probably heard that the critical problem with the euro is that they cannot adjust relative prices. I do not think that's right. I think the real interest rate is much more important.

What happens when it is uncertain what the sovereign is going to do in terms of repayment affects all the private sector participants in that country. The way a market person would say that is that the large corporates never trade inside the sovereign. What they mean by that is that you start with the sovereign spread and then you add idiosyncratic spread for the corporate borrowers. Interestingly, there are almost no exceptions to that. If you go around the world, even where the residence of the firms are hard to identify because they are multinationals, if they issue a security in that market, it will carry a spread a little bit higher than the sovereign.

Now we are going to go back to Economics a little bit. How many real investment projects can promise a high enough return to pay the sovereign spread plus an idiosyncratic spread? Let us think about real things, factories. How many factories are there that can promise that the rate of return on that project is high enough to plausibly pay this spread? And for how long? We are talking about spreads on ten, fifteen, twenty years sovereign. It is not just a short-run thing for you have to be willing to promise to pay a 700-800 basis-point spread for twenty years. I think there is a clear answer to this question in all countries and that the level of investment consistent with this condition is zero, everywhere and always. There is no investment project that can plausibly make this promise, so investment goes to zero (or at least private investment goes to zero) and that lasts as long as the uncertainty over the resolution of the sovereign debt problem remains, that spread is going to be there. As long as that spread is there you get no investment, if you get no investment you cannot grow.

MULTIPLIERS

Suppose you have fiscal expansion and suppose you are in a country like Greece, or Spain, or Italy, where the sovereign spread is very sensitive to people's expectations about the debt stock. Well, a bond-financed

increase in government spending increases the debt stock relative to the GDP, the sovereign spread rises, the multiplier could be negative. But here is good news. Fiscal contraction could be associated with a positive multiplier. Think about it. Suppose that I reduce government spending and that affects expectations about debt stock. That could lower the sovereign spread and actually get more private investment. So, if there is a negative multiplier on expansion, there is also a negative multiplier on contraction. How much do we know about either one? Almost nothing. So multipliers are just a different way to do a reduced form estimate of the effect of fiscal shock on the economy. Looking at economies that are not debt constrained is useless in thinking about this problem.

I am going to take a very unorthodox view about the exchange rate, a very simple view, just two minutes. It is certainly true that the real exchange rate and the nominal exchange rate in Latin America in the 80s fell by half and it was very persistent. In other words, all the nominal exchange rates depreciated a lot, there was not an immediate price level response, so the real exchange rate also fell by half in most countries –plus or minus something, obviously– and it persisted for a long time. What is interesting is that they did not do much good. The current account deficits were cut because nobody would finance them, mostly by a fall in imports, so you have now this more favorable price situation but you need investment in the export industries to generate an output, a quantity response. If you cannot get any investment in the export industries, it does not do a lot of good to have a favorable relative price position. At the limit, it does harm – you are selling for less.

So, again, *my conjecture is that the important variable is the interest rate, not the exchange rate.* The exchange rate can provide incentives for export growth, for substitution, but you have to have the capacity to do it. And the capacity to do it requires new investment, but, if new investment is in fact stopped dead by the interest rate, then there is no adjustment. Very roughly speaking, that is my reading of the experience here in emerging markets in the 1980s.

So, the exchange rate is not changed, which would probably help. Is there enough financing to get these guys through this mess? There is a huge amount of attention, every day -- this morning was no exception. So, we have a lot of attention to the dribbling of official money. But this misses

the point, and the main analytic point I want to make this morning, the main historical point, is that these official loans are simply replacing private loans as the private loans mature (See Chart 3).

Chart 3

RETROSPECTIVE ON THE DEBT CRISIS

TABLE 7.2
Real Debt of Developing Countries with Debt-Servicing Difficulties (billions of 1982 U.S. dollars)

	To Comercial Banks	To Official Creditors
1982	278	115
1983	290	129
1984	286	143
1985	276	162
1986	278	187
1987	283	224
1988	254	232
1989	241	236
1990	222	251
1991	213	251
1992	200	252

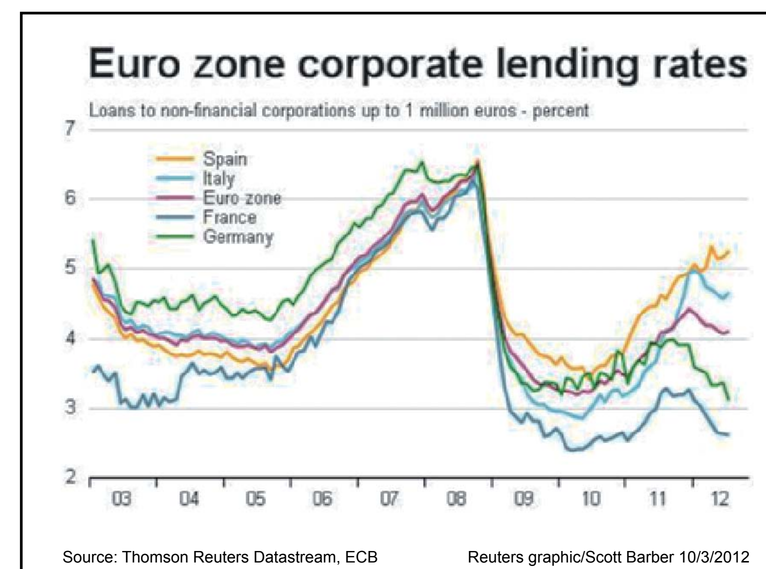
Source: IMF. World Economic Outlook

Simple finance: I am a private investor, I have a claim on the Spanish government, it falls in market value but there is nothing I can do about that. When it matures, however, I can demand my money back and if they do not pay me it is a default and all kinds of costs are involved. So I want to hang on to maturity. Where is the money going to come from when my private position matures? It is going to come from the Spaniards, but they do not have any money, so it is going to come from the Germans. So, official credit is extended, it is merely replacing the private credit that is being withdrawn. When you hear that Greece is going to run out of money next week, that is what that means. Greece has been out of money for a long time. Spain has

been out of money for a long time. What they mean is that they have got to come up with cash to pay off a private creditor because, if you do not pay off that private creditor, then that is a default event and all these bad things start to happen. If the German government does not want the default event, then they have got to come up with the money. Governments used to call it new money, it is not new, there is no such thing as old and new money, it is just money.

The analytic point is that the EC, the ECB, the creditor governments in the Union are replacing the private creditors slowly. Why slowly? Well, only as debt matures. But there is no promise that they are going to keep doing it. So, in the terms of my friends Rogoff and Bulow made many years ago in a different context, they are not paying off the marginal debt, the margin is still there. I am still waiting to be paid, I am on the margin. The fact that somebody else got paid today comforts me a little, but not very much because they can stop. If they stop, I am the odd man out. So I price… the marginal price of the bond is largely not affected by these successful but slow payouts. Well, if the price is not affected, then the yield is not affected; if the yield is not affected, the sovereign spread stays where it is even though very large amounts of official money are being pumped into the system, but it does not resolve the uncertainty about the marginal debt. So it does little to alleviate the problem.

Chart 4



TO BRING THIS BACK TO HOME

Chart 3 is from a paper I did after the debt crisis, “A Retrospective on the Debt Crisis.” One of the things about debt crises is that everyone has a different retrospective, this is mine. Mine is that in 1982 we had a pretty big chunk of money due to the commercial banks, the official sector –in this case it was the US Treasury– said, “We will not help you, help yourselves.” The Baker plan was “Adjust! Austerity!” and, in particular, “We’re not going to forgive you your debt or pay off any creditors, this is the market’s problem.” But what actually happened was the commercial banks amortized their debt quite rapidly. Where did the money come from? It came from official credits. So what I argued at the time and afterwards was that the creditor governments were doing slowly what they would not do quickly, and by doing it slowly there was always the chance that they would stop doing it and therefore the marginal value of the debt was unaffected by very, very large official transfers.

So, the position of the US government in particular, but even the position of the German government, in 1982 was “This is tough luck for the private creditors, we are not helping.” But the private creditors, the banks, actually were a lot smarter. They said, “OK, we’ll sit here with our debt, and, as it matures, we’ll threaten default each time, then you’ll come through with official aid.” And they did. So they were paid off slowly. The problem for the banks, but even more the problem for the countries, is the marginal value of the debt, however, remained very depressed. This was because we had a game here where you go around in a circle and there are ten kids but only nine chairs and when the music stops all the kids have to sit down… This is what we are doing here, we are all running around the chairs, we know somebody is not going to get a seat but we do not know who, until the marginal value is low. That is what happened in the 80s.

What also happened in the 80s was no growth, in spite of very large real exchange rate changes. So, if you’re going to draw gross historical lessons from all this, what you can say is “Gee, a really big exchange rate change did not do much good in resolving the issue, there was no growth.” Why not? I think it was because of the elevated marginal interest rates as there was no certainty for the resolution of the debt.

IS THERE A WAY OUT?

Sovereign default is the obvious answer and it has already begun. The so-called Greek exchange was the most aggressive treatment of the private sector in 30 years, it was very, very punitive to the private sector, me! The deal they put in place was much more aggressive than you would have expected from historical data from similar countries around the world. But private sector “involvement” will not be enough. Even if private debt was zero, Greece is insolvent, and so there has to be some official debt forgiveness. I said this in Europe a couple of months ago and I received a storm of protest that it could not be done because it was not legally possible. It is a particularly dogmatic view of the world that it can’t be done because it’s not legally possible. Well, it is going to have to be done. I think the objective of the policy makers is to delay it, to push it into the future, because it is less politically costly to the existing people in power in the creditor countries in Europe to push this down the road. But, as we saw here in the 8os, that will mean no growth in the euro system for the foreseeable future. So, they are deferring their losses. Moreover, they are probably increasing the present value of their losses by deferring them since the countries themselves will behave less well.

SO WHAT IS THE OUTLOOK?

First of all, it is pretty clear to me the default on the private debt, even draconian defaults, are not going to do a lot of good, they are not going to be sufficient to restore solvency. The mess and the associated economic contraction will last for several years, not months, not days… several years. All new credit for the Southern countries is going to come from the ECB and the creditor countries. In my view, the countries involved will probably not exit the common currency because of the unknown level of costs.

Why not just drop out and take these costs now rather than suffer years of depressed economic activity? There is a race between official debt forgiveness, which is now unthinkable in Germany, and social unrest in the debtor countries. I would have said before the last couple of weeks that this race would eventually be won by official debt forgiveness, partly because officials often forgive debt without admitting it. My reading of history (and I think that this is also something where some research might me interesting)

is that governments do not ever collect from other governments, or almost never. If you think about the game between two governments over sovereign debt, there are always other things the debtor country can offer –friendship, military bases.

The principal of official debt seldom gets written down, the present value of the debt gets adjusted all the time. So, my guess is that the present value of the debt will be adjusted at some point dramatically downward, at that point the private debt will be essentially zero. Here is the condition for a takeoff in Spain. Sovereign debt in the hands of the private sector outside the Spanish banking system, which is really owned by the government anyway, will be essentially zero; it will have been replaced entirely by official debt. The officials will get together and say "OK, let's set an interest rate of 1% on this, call it ODA." At that point, the private sector will come back in, at that point I will say there are no other private creditors, I will come back in. But that process will take five to ten years.

I do not think there's any practical way to speed up the official debt reduction, so, if the political economy gets nasty enough within the country, they will be forced out and then we will have the nightmare scenario. By far, to me, most likely this will drag along the bottom for ten years. We will wake up one day, maybe we will have some good luck and we will get out of all this.

OK, that concludes that part of it. There is another… Let me just mention it very quickly... One puzzle is why the Euro has been strong throughout all this, it really has, and it is been remarkable. I guess there are a couple of reasons for this. One is that the Euro area will become one big current account surplus area, the weak countries cannot borrow, Germany will continue to run the surplus and, even if somebody drops out, it is not clear that the remaining currency union might be stronger or might be weaker.

QUESTIONS AND ANSWERS

Question: Very interesting presentation, Mike, thank you. You do not think there is much possibility of countries exiting the Euro in the short term,at least they will not exit for the wrong reason. So, what are the options then? That the Central Bank will increase inflatin in the medium term? And then, what is the possibility for other countries getting tired of the Euro on the other end of the incentives scheme and getting out, for example Germany?

Michael Dooley: On the first point, I do not think that the ECB or the political consensus will opt for inflation. It is clear, they have created a lot of central bank money, and I think they will retire that without too much trouble. I think the relative price adjustment will come in labor market prices falling in Euros in the Southern tier. At one point, say a year ago, when I first started thinking hard about this, I thought "Gee, the most logical thing would be for the Germans to opt out," they are the ones that are paying very large transfer costs. However, in talking to some Germans who are influential, to say the least, Germany sees the European Union as a political call for reunification of Germany and –this actually surprised me a little bit– their view is that the political commitment of Germany to the economic union is not really an economic one, it is a political one, in that, from World War II on, the main policy objective was reunification and the monetary union was a pre-condition for this. I am told that they do not consider breaking that agreement. Again, this does not have anything to do with economics or the technical details of this, so I would certainly agree with you that if somebody was to drop out at the least cost it would be the Germans, but I don't think they will.

Question: You know, from this corner of the world we have been following Europe for many years and, as far as we understand, Europe has two different problems. One problem is the one addressed in most of your exposition, which is the fiscal mess, so we deal with this problem, how we get out of this, and the problem is that you can get out but hurting a lot of people. So, even if you fix this problem, it is going to be a painful fix. Perhaps, if we had addressed this problem some years in the past, it would have been much easier. At this moment it is very complicated. Now, Europe has a different problem, even outside the problem of the fiscal situation, which is the problem of the productivity differentials. You have addressed

indirectly this point saying that exchange rates are not so important and that interest rates are really important. I may agree with that. The point is that, so far, they cannot fix the fiscal problem. There is a perverse behavior in interest rates because the countries with more productivity are those who are paying interest rates that are higher, so I don't see any way to get out of this problem.

Michael Dooley: I agree with that, it is a tough problem. When you are trying to balance these things, there are political issues and then there is the economic reality. I agree with everyone who says that the economic reality is very tough. So, for the political constraints I rely on just talking to the Europeans. There, I get two different answers: from the Northern Europeans I get the answer "We're going to stick this out, this is it, we're committed to this" and from the Southern officials we get the same thing, but the people in the street obviously have a different view. That is the race. Watch the six o'clock news… If you see more people in the street, then this is going to break up. But no one should welcome that, I don't think... I think it's going to be just chaos, literally chaos in the financial markets for a long time and maybe not just in Europe.

I have been very impressed since 2008 with the idea that if you throw the solvency of important counterparties into doubt –which this will do–, then you get a very wide spread, a very negative economic reaction. I think we are so afraid of that that we will stay away from it, but we will see the potential insolvency of some very highly leveraged institutions and you do not know which ones. On that day I will retire from the hedge fund business, I will put my money in cash.

Question: I just want to make one comment. Because I always like the parallel between the European Union and the monetary union that you have, in fact, in the US, you have 51 states with large productivity differentials, with different histories, and you have transfers every day because you have a fiscal pact. It is probably difficult to get to that point, but it is not impossible. Of course, pact dependency could also work, so it is much more difficult to get to that from the current European situation, but apparently there is some tiny light at the end of the tunnel, I do not know. When the State of California broke just in a few days the situation was essentially figured out because of the monetary, fiscal, and political pact they have in the US. So, we are probably very far from that in Europe, because when transfers are very transparent –as it has to be in Europe by now– it is much more difficult to process these transfers between countries. Do you have any comparison with that?

Michael Dooley: I think that is obviously an important mechanism for making these things work. I think people in the US would be just astonished at how large the transfers they make people in other states. If they knew, they would probably stop it.

Question: You would need 51 Congresses to approve one transfer.

Michael Dooley: That would be hard. I mean… There was a calculation done some time ago. There was a huge housing cost in Texas, in the oil patch, somebody at the Dallas Federal Reserve Bank did a kind of tongue-in-cheek accounting for the transfer between the Chicago Federal Reserve Bank and the Texas Federal Reserve Bank. It was a huge number: several billion dollars. And nobody knew about that at all, just as nobody knew about Target 2 transfers in Europe before it became a big issue. I think that one of the maybe discouraging things about that, however, is that labor mobility, although it is much higher in the US than it is in Europe, we still do it mostly by transfers. People tend not to move, they stay for at least one generation, they are tied to housing, and they are tied to various things. So there may be a light at the end of a long tunnel, it may well be the transfers that have to do it.