

# General Discussion: Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence

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*Chair: Janet L. Yellen*

**Mr. Fischer:** Let me start with a few small clarifying comments. On *financial depth*, I'm not sure what the benefits of financial depth are to an emerging market economy. South Africa and Mexico have become an important part of the shock absorption mechanism of the emerging markets, because their financial markets are more efficient and more liquid than others. I'm not sure that Agustín would speak positively about the effects of Mexico being an emerging market where advanced economy investors who want liquidity quickly go to to get liquidity when they want it from the emerging markets. On *the trilemma/dilemma issue*, we need to think in terms of trade-offs. If you've got a floating exchange rate, you have to take into account trade-offs involving the exchange rate when policy actions are taken—for example in thinking through what happens in the economy when you change your interest rate to deal with capital inflows: it makes a difference whether only the interest rate changes or rather both the interest rate and the exchange rate change. So it's not going to be the case that you're in heaven if you have a floating exchange rate and in hell when you've got a fixed exchange rate. A floating exchange rate gives you an extra degree of freedom.

Finally, the key issue that H el ene Rey's paper raises is summarized in the handout, which says we cannot take the benefits of floating

exchange rates or indeed of international capital flows for granted. Here, I believe we have a lacuna in our way of thinking about the global economy. Let me put it on the table and then, since I don't know the solution, leave it for others to solve. The problem is that I don't know what the benefits of short-term capital global international capital flows are. I've tried to figure that out and let me tell you what I think the welfare economics of it is. The notion that countries should not intervene to affect their exchange rates implies that if something happens in one country, let's say, which causes it to reduce its interest rate, then the rest of the world should share in the adjustment to that shock by permitting its exchange rate to adjust to the lower interest rate abroad by permitting an appreciation.

I don't know about the optimality of that particular adjustment mechanism and having had to react to such a situation in 2008, I'm sure the nonintervention rule was not optimal for the Israeli economy at that time. Further I was not sure that it was optimal from the viewpoint of the global economy to allow an appreciation which would have reduced Israeli GDP even more than the coming global recession would have done—and we didn't know what the sum of those two things (global recession plus Israeli exchange rate intervention to limit the appreciation of the shekel) did to the global economy compared with a policy of nonintervention and greater appreciation of the shekel.

At present there is great concern about the possibility of capital flowing out of emerging markets when the Fed begins tapering. One question that arises is whether to seek to moderate capital outflows through raising domestic interest rates in the emerging market economies, or rather using controls. A second question is why countries didn't take care of this potential problem when the money flowed in, for example, by intervening and buying up some of the foreign exchange for later use in contending with potential capital outflows. And that, I think if you listened carefully, was what Governor Carstens said.

**Mr. Henry:** I think in particular, the point about leverage is really key here. On the benefits of capital flows, we can disagree about that. But I think that the basic argument for emerging markets is access

to capital, lower cost of capital. If you look at earnings/price ratios on average in the pre-integration period versus the post-integration period, I think it's pretty clear that there are benefits there. But the real issue is, How do we make sure the capital is allocated in a way that's efficient? And when we think about capital controls, the real issue is debt versus equity. And there are a host of incentives that are built in the international financial system that bias suppliers of capital to provide debt capital instead of equity capital. Jeremy Bulow has a paper in the Brookings economic papers, about 10 years ago, which he called "First World Governments and Third World Debt." And his basic point is that as long as equity holders in emerging markets are subject to local shareholder protection, and debt holders in emerging markets can take their cases to courts in New York and London, we're going to see more debt than equity. And debt, as we know, is really the source of crises. So, I think it's very important once you think about macroprudential regulation to really focus on this distinction between debt and equity, and allow countries to continue to benefit from portfolio equity flows and FDI, in particular.

**Mr. Kashyap:** It seems like the VIX is a magic variable that we don't really understand, but it sure predicts everything in sight. I'm curious as to whether you think forward guidance is a good thing. Forward guidance leads to a compression of views that then will be reversed. So merely tracking announcement effects is not going to be a helpful way to proceed because it's going to take a while for the reversal to show up. So I'm not even sure what an empirical strategy would look like to try to determine whether or not there's this kind of dark side to forward guidance, but I'd like to hear what you think about it.

**Mr. Ingves:** It's argued in the paper that a higher leverage ratio would be a good thing. Let me just point out that a leverage ratio is the equivalent of using fixed risk weights. And in that sense, the real issue sort of under the surface is whether one should look at a leverage ratio as a kind of floor for risk weights. Similarly, it's argued, and it was also argued yesterday that stress testing would be kind of a substitute for risk weights. I'm not so sure because in one sense, in order to get to proper risk weights, you have to do stress

testing because these are sort of interconnected. But setting aside the plumbing aspects of how to get to the right numbers, ultimately what we are actually arguing about is, What is the proper level of equity in the financial sector for society as a whole? That's really, really the underlying sort of key to all of this. And if we're worried about the financial sector going bust once every 10 years, or once every 20 years, we really should do a lot more work on what then would be a proper number, in addition to just arguing that any higher number would be better than what we have today. But there is an awful lot of plumbing work that has to be done to get to that conclusion.

*Ms. Rey:* I think we are agreeing in some sense Terry, that inducing global monetary policy corporation is a very hard thing to do, but indeed, there are some conflicts between global financial stabilities and the domestic mandate, which are very hard to square. And that on top of that, sometimes one cannot at the same time ask the central countries for more restrictive monetary policy on the ground of too much capital flows, and at the same time at the expense of aggregate demand management in the central countries, which obviously is also systemically important. Therefore, there are very difficult trade-offs there. And this is probably why I still think it's very beneficial to have a forum in which we have these discussions of and spillovers on global monetary policy stance and make these things more transparent. Maybe issue a report and indeed discuss these issues and understand them better. But this is why I was pushing a little bit more, maybe in the paper, of a macroprudential side, for the policy response. It is also true, and this will also connect to the comment of Anil Kashyap, about the VIX being a magic variable. It's not only the VIX. I mean there are lots of risk measures which happen also to be closely correlated with the VIX, but I took the VIX in this paper. It is true that we have these strong correlations from a lot of these financial variables and flows with the VIX, so these are correlations. So obviously, correlations doesn't imply causality even when one tries to put a little bit more structure and that is done in the paper by thinking about the link between the cross border flows of leverage and the monetary policy VAR exercise and then again you need some identification assumptions, and there are various you can make. And when you do that, you do find that there is this link between a federal funds rate

and the VIX. Now how much of a variance of the VIX is explained of a federal fund rate is sensitive to a specification of a VAR, a number of the variables that is put in the VAR. So there are three studies doing that so far and we find results in between roughly 10 percent of a variance and 30 percent; it depends on the specifications. I think this clearly deserves more investigation, but there seems to be something there which seems to be somewhat economically significant.

Now on top of that, I think to go back to this issue of when forward guidance and the VIX. So I think typically what we can see from the VAR is indeed that if you have a lot of credit growth, this stands to compress the measured risk. So you see that, right? So when the issue, and you see that in the credit growth as you have in the leverage. So lots of leverage growth tends to compress the measured risk. You see that in the VAR. Now what we have to investigate further is to what extent does forward guidance induce in turn more leverage? And that would be the mechanism if indeed forward guidance has this trade-off, or this side effect of leading some financial intermediaries to leverage more, then we see that in the compression in the VIX and then we go back to this cycle. And that's the way I think to try to get a handle on this.

So, very good points on the welfare issues of international capital flows. I do think like you do Stan, that we have a lot more work to do. So, in the traditional models, where we've thought about welfare gains to international capital flows, so we have the increased allocative efficiency, capital flowing to where the marginal product of capital is higher. That was one type of potential welfare gains, and then the second one is traditionally the risk-sharing channel. So, now if we look from the point of view on the theoretical side in trying to quantify these models, allocative efficiency, in the end because it's only about speeding the transition to a steady state capital stock, the welfare gains are not very high. That's what quantitative evidence would say for this type of welfare enhancing channel of capital flows. Risk sharing, so it's not as clear, but it depends a bit on the specifics of a model, but it looks also like the risk sharing benefits in calibrated models are not very high, of international flows. Now on the other hand, we also have evidence coming from event studies and panel

data. So there we have a bit of some contradictory evidence. Some of it points toward benefits like Peter Henry mentioned, so there's a lower cost of capital. And so probably some of these benefits are there and probably depends on the specific type of flows, FDI maybe, etc. Event studies of course, the issue is always that we look at the short run and so single lower cost of capital in the short run. So first we can have excess credit growth. As we know there can be a cost to it, but also we can see reversals. I mean, in order to assess the welfare benefits, we have to look at the whole puff, not only just after liberalization but until the whole steady state puff and so that's not clear there. So I think indeed, we cannot take benefits at this point of international capital flows for granted, is where we are.

On leverage ratios—indeed, it's not a replacement for everything else, the way it's proposed here. It's just making the point that has been made also by many others, given that there's a considerable uncertainty on risk weights. But there are ways of manipulating risk weights. But it seems like leverage ratios are indeed a robust instrument that on top of the other machinery, is a kind of clear cut way of addressing the issue, and that's in that spirit. And same thing for stress testing. I think the stress testing in the paper is more seen as a way of evaluating the timing of intervention from macroprudential policies. So, when we want to use these macroprudential tools, it's hard, we know. There are lots of experiments around the world. We don't know exactly what works, but the timing of intervention is a very important element. Now, when do we do that? We cannot be sure that there is above all developing. So we have to stress test ahead and we don't care if it's above all or not above all. All that matters is that the stress test shows that there are some vulnerabilities, then that's the time to put the brakes. And so that's in the spirit that I'm in some sense insisting on stress testing.

**Mr. Blinder:** I have two things, of which the first has been well covered. So I'll be very, very short. It's about debt and leverage, which Stefan Ingves covered nicely and H el ene Rey answered well. I just wanted to point to some very striking evidence of a global financial cycle—which I'll come back to in a second. We had an equity cycle in 1998-2000, and it did very little damage to the world economy.

Then we had a debt cycle, and we saw the difference, so it's leverage, leverage, leverage.

Second is a question. H el ene Rey's paper referred very briefly, I think—I was reading it fast—to the literature of decades ago about international macro cooperation. I think the answer that the profession took away from that debate is that, while international cooperation is a nice thing, if each country would pursue good fiscal and monetary policies, the marginal gain from international cooperation was minor. I wonder if there's a similar result for international financial cooperation, so that once again, if each country pursues sound financial policies—for example, it would have been nice if the United States did so before 2008—then again the marginal gains from international cooperation, which is so hard and contrary to the laws of many countries, is actually small.

**Mr. Taylor:** One of the very nice things about this paper is the list of policy options and recommendations. I think there are problems with a couple, like the capital controls and distortions that those can cause. The countercyclical macroprudential is really untested for the most part, and can cause problems. So the most promising proposal to me is to act on one of the sources, which is monetary policy. And this sort of ties into the coordination issue. If you look at the charts and think about the results, you can see that a lot of the movements are due to excessive, I would call it excessive, swings in monetary policy. You can see, 10 years ago, you can see that very low interest rates in the U.S. were driving the VIX down. That's probably where a big part of your correlation comes from. So it seems to me, a real improvement would be to remove some of those excessive swings. In fact, the last 10 years, we've seen much more of these swings than in the previous 20 in the U.S. So it seems to me, it's more evidence that a real improvement would be to go back to more rules based or, more predictable policies. I know there are differences of opinion on that. Also, it answers Alan Blinder's question about coordination. The theorems that say that you don't need international policy coordination if monetary policy is run optimally from a domestic viewpoint are still true. I feel the problem recently, quite candidly, is that the policy

has not been that optimal. So this is another way to think about your suggestion on monetary policy.

**Mr. Buti:** Having been brought up with the trilemma when we worked on economic and monetary union, it is refreshing and sometimes in a certain sense was a bit troubling that this is all that is called into question. But I think the paper argues convincingly that what we were thinking about was probably a bit on the optimistic side. Coming toward the end of the different sessions, as a policymaker, I was thinking about, a bit of red lines through the various sessions, what kind of policy conclusions one would draw. I think not much discussion on the fiscal side, fiscal policy. What Claudio Borio said before in the previous session I think is very sound. I think there is possibly, with somewhat generously, an emerging consensus on macroprudential policies. I think we may find some common ground there. And then we come to monetary policy and monetary cooperation. And here there are many, many questions. I mean if you listen to yesterday's discussions today, and also in the previous session, Hélène, there are those who think that it is going beyond what we have is undesirable altogether. Others think the desirable are not feasible and you find all possible combinations here. I think we have to go forward and try to specify what cooperation or coordination means. I think here there is one issue of discussion between central banks, I think, and what is the right forum for that. A question here, is the G-20 the right forum for this, or is it too broad for this type of discussion? This one question may be also for the panel later. There is the issue that was forcefully put forward by Christine Lagarde yesterday that this coordination communication to have clarity on that prompt, but should we go beyond that? And here, the issue was put forward by Claudio Borio in the previous session, is namely, is there a full feedback loop or are we talking only about spillovers from the Fed to the rest? If there is a feedback loop, so it means that there is an element of influence of the behavior of the others onto the outcome of the Fed. Then set the optimal policy at the national level would imply that you have to take that into account. So my question is, What are the conditions for this full feedback loop actually to take place? Are we in those conditions or not?

**Ms. Malmgren:** What I found most striking about the paper is that you demonstrate the strong correlation between low volatility and a higher propensity to engage in excessive risk taking. And yet, the recommendations all involve the suppression of volatility. Wouldn't it be easier to allow volatility to act as a brake on risk taking? Not excessive volatility, but normal volatility, instead of the more invasive policy approaches, such as capital controls?

**Ms. Rey:** So on this last point, the recommendations are about dampening excessive credit growth and leverage, which I guess is not the same thing as dampening volatility.

The remarks by Marco Buti on the trilemma also made me think again of the comment that Stanley Fischer made before. On free floating, is it really, so there is this trade-off between exchange rate, letting exchange rate free, how much you want to manage it and how much constraint. I think in some ways that makes the point, that the trilemma is really not, because we think of the trilemma as if you have a fully free floating exchange rate, you are completely insulated from the external. That has been my interpretation of a trilemma. I mean what sense what we are saying is that, you don't see that. So you don't see insulation in the data, you don't see total insulation from this cycle. So then, how much you let your exchange rate float is in a sense just a consequence of that. You have a constraint on your monetary policy that comes regardless of the exchange rate regime.

In terms of what the right forum would be to discuss these issues, in the paper I kind of propose following a CIEPR report, some gathering more of a systemic central bankers, because I think it's a small group of central bankers who could probably productively discuss these issues, but this is an open question. And again, maybe the panel could also have some input on this.

Is it a full feedback loop? Again, a lot of research needs to be done. What I can say from the VAR is that when the VIX goes up, you see down the road a reaction of the federal funds rate. So to the extent then that we can build a channel, which we are not there yet, we don't have a fully encompassing model that is going to give all the links there. But what you do see in the VAR is this: When the VIX

goes up, the federal funds rate reacts down the road. So that suggests some feedback loop, how strong it is, it's to be established.

On Alan Blinder, yes, indeed that was the spirit of a former macroeconomic literature on cooperation. So I'm not so sure here that would work to the extent that if you really need, even if your house is in order, that you do need a very weak loose monetary policy for your country because the channel of transmission goes through these leveraging and these global banks, etc., so even though you have your house in order, you can still have these important spillover effects. And therefore, I'm not sure the arguments from the former literature would apply and that it would be so marginal here.

On global monetary cooperation, there are various views on this. I think again, one can, regarding how realistic this is, one can have different views on that.

**Mr. Checki:** I think I have some sympathy for where Pippa Malmgren was coming from with her comments. The tendency to try to override markets, as opposed to working with the incentive structures and working with the grain of the markets, is generally something that should be indulged only very carefully.

And Alan Blinder, I agree with what you put forward. I just think it's something much to be wished for, and I hope that we someday see the day when we get there.