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COLLAPSE AND REVIVAL:
UNDERSTANDING GLOBAL RECESSIONS AND RECOVERIES

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P R O C E E D I N G S

MR. WESSEL: Good afternoon and welcome to Brookings. I'm David Wessel. I'm Director of the Hutchins Center on Fiscal and Monetary Policy here at Brookings, and I'm joined by my colleague Kemal Derviş from our Global Economic and Development Program in welcoming the IMF World Bank team here to really an extraordinary work, Collapse and Revival which I'll talk about in a minute.

You know, the global financial crisis and the great recession taught us at least two big lessons. I think one is that finance matters and it matters a lot more to the real economy than most macroeconomic models suggested.

And, two, more than ever, at least it seems to me more than ever, what happens in one country doesn't stay in that country. When housing prices fell in Dearborn, Michigan, and homeowners defaulted on their mortgages, the pain was felt in Dusseldorf.

Now, national business cycles have been studied intensely since the long ago days of Mitchell, Burns, Hansen, Schumpeter, and Zarnowitz. It's no accident that recessions in the United States are dated by the National Bureau of Economic Research.

But a lot less effort has gone into studying the business cycle as a global phenomenon. I think partly that's because as they point out in this book, most of the post-World War II period, if you kind of got the U.S. economy right, you got the global economy right.

But, of course, that's no longer true. And so what Ayhan Kose and Marco Terrones have done in their new book is analyze business cycles at the world level covering post-war history, measurement, theory, and the policy implications that follow.

They define for us really in authoritative terms a term that has not been widely, the definition of which hasn't been widely agreed, "What is a global recession anyways?" They say it's a contraction in the world per capita output accompanied by broad synchronized decline and a whole lot of other measures of economic activity, and they look over the period since 1960 and identify four truly global recessions, 1975, 1982, 1991, and 2009.

And I think what makes this project particularly interesting, and I say this as a former journalist, is that although it's empirically rigorous, it's very accessible. And, actually, the worse way to read it is on print because the

E-book has all these nice little videos where you can see all our policymakers saying things in real time that turn out, well, sometimes to be true and sometimes not.

So I think it's not only a great exercise in understanding the world economy as a world economy, but also in teaching us how new technologies, e-books, videos, can help us do a better job of explaining to people what's going on in the world around them which seems pretty scary a lot of time.

So what we're going to do this afternoon is as soon as I finish speaking just to emphasize the multimedia nature of the modern IMF and World Bank, we're going to have a couple of videos. Ayhan Kose, one of the co-authors, is going to give an overview of the book and the topic. Ayhan, of course, was for a long time at the IMF but is now at the World Bank.

Then we're going to have responses by Charles Collyns of the Institute of International Finance, and my colleague, Kemal Derviş. Then we're going to have a panel that will be joined by the other co-author, Marco Terrones, who's now at Fund. And then before we're done, we'll have a chance to take your questions.

You've probably noticed cameras here so this is on the record. Don't say anything you will regret seeing on YouTube in 15 minutes.

So why don't we run the videos and then the panel will come up.

(Video playing.)

VOICE: Around the (inaudible) the old recessions and recoveries, --

VOICE: This is a very important topic, but there has been a lot of confusion.

VOICE: A sudden cutoff of oil from the Middle East had turned the serious energy shortages we expected this winter into a major energy crisis.

VOICE: On October 19th, the bubble bursts.

VOICE: It's going down and down and down. Never stop.

VOICE: I guess the bull market's over, huh?

VOICE: Financial disaster up there.

VOICE: On what becomes known as Black Monday, panic sets in.

VOICE: Astonishing news from East Germany where the East German authorities have said, in essence, that the Berlin Wall doesn't mean anything anymore.

VOICE: Today, Germany is celebrating, but the cost of the formidable reconstruction ahead is already an election issue.

VOICE: (In foreign language).

VOICE: It is a very serious situation. Unprecedented in many ways.

VOICE: What's the worst case scenario?

VOICE: Stalled growth, high unemployment and potential social unrest as a result, and financial markets in disarray.

VOICE: What's a global recession? What's a global recovery? That's what this book is about.

(End of Video.)

(Playing of Video)

VOICE: Mr. Chairman, as you know, there are people demonstrating against Wall Street in New York City and other cities around the country, and I think the perception on the part of these demonstrators and millions of other Americans is that as a result of the greed, the recklessness, and the illegal behavior on Wall Street, we were plunged into this horrendous recession we're currently in. Do you agree with that assessment?

VOICE: Excessive risk taking on Wall Street had a lot to do with it, and so did some failures on the part of regulators.

VOICE: The stock market is now down 21 percent.

VOICE: It's right now down to 43 percent.

VOICE: What in the world is happening on Wall Street?

VOICE: Two-year note yields went from 190 to 166 in the blink of an eye.

VOICE: I have never (inaudible) looked at the Down Jones Industrial Board and seen a 600 point loss.

VOICE: Dow traders are standing and watching in amazement and I don't blame them.

VOICE: It was the worst day on Wall Street since the crash of 1987.

VOICE: From the financial capital of the world, the opening bell is going to ring in five seconds, and to be honest with you, we wish it wouldn't.

VOICE: Traders here working the phones say a lot of their customers are freaked out waiting to see how low the Dow will go. They're focused on the Dow not so focused on opening --

VOICE: Good evening. This is an extraordinary period for America's economy. Over the past few weeks, many Americans have felt anxiety about their finances and their future. We're in the midst of a serious financial crisis.

VOICE: (Demonstrators chanting "All day, all day (inaudible) occupy Wall Street."

VOICE: This is in part a shouting out throughout this country and throughout New York City to rediscover those connections of life and humanity.

VOICE: (Occupy Wall Street demonstrators chanting "We are the 99. We are the 99."

VOICE: This is the proudest I've ever been to be an American in my life, and we're going to be here for a while.

(Video concludes.)

MR. WESSEL: So Ayhan will kick this off.

MR. KOSE: Okay, thank you. Thank you very much for coming here today and joining us. I see a number of friends. I even see one of my professors from graduate schools. I'm very happy.

And I'm, of course, privileged to share the stage with this outstanding cast: David Wessel, Kemal Derviş, and Charles Collyns, and Marco Terrones. We greatly appreciate Brookings and IMF putting together this event.

As much as we are here at this stage, there are a number of people who contributed these books behind doors: The Communications Department of the IMF, Technology and General Service Department of the IMF.

Of course, we are blessed to have excellent colleagues over the years: The United Research Department. We learned a lot from them and I think this is a reflection in the book our conversations and our learnings from them.

So, what is this book about? As you watched these videos, recessions are simply devastating events. At the national level, they take a very large toll on human lives.
Now you look at the global level, that toll is even larger.

When it comes to national recessions, we have a pretty good understanding. We have very articulated definitions of national recessions. In this country, there is even a committee tracks the U.S. economy, documents the turning points of recessions.

Simply put, a recession is contraction in economic activity. When we think about global recessions though, our understanding was quite limited. And this was very clear during 2009. Especially the last quarter of 2008 and the first quarter of 2009, we thought the global economy was on the brink of collapse.

So a global recession corresponds to a decline in per capita income in a year. It's accompanied by a synchronized slowdown in the number of other aggregates. Activity variants.
This is very similar to how we define recessions at the global level at least in this country that National Bureau uses, or in Europe, Euro Area CPR Business Cycle Committee uses.

What are those other aggregates is, of course, international production, global trade, global capital flows, employment, and energy consumption, as well as you look at the financial variables as well.

Now, when you look at these, there's these variables. Over a long period of time since 1960, there are four episodes that stand out. The one in 1975, '82, '91, and 2009.

There are two other episodes. Global economy came very close to having an outright contraction. 1998, of course, Asian financial crisis, and 2001 we saw a number of recessions in advanced economies.

But both of these episodes did not meet the criteria to become a true, global recession. In 1998, yes, we had contractions in Asian economies, but advanced economies did very well. In 2001, thanks to (inaudible) in a number of emerging market economies, including China, global economies escaped a recession.

The last episode was truly historic in the sense that it was the deepest recession. The global economy contracted outright. Led to the highest unemployment level at the global level, at the worldwide since the Great Depression. And it followed with a very painful, protracted recovery.

So what is a global recovery? Global recovery is the rebound in activity we observe one to three years after these episodes of global recessions.

In the book, what we do, we put this latest episode under microscope. The idea is that during this episode created tectonic shifts in our understanding of (inaudible) as well as led to a number of debates on a number of issues. And one of them was, of course, why this episode was so painful, and why the recovery that followed was so sluggish.

There are a number of reasons.   We go through each of these reasons. One of them was, of course, this episode was highly synchronized in the sense that very large number of counties experienced recessions. Almost all advanced economies. A number of emerging market economies, and other developing countries experienced outright contractions during 2009.

There were policies and we looked at the role of policies. At the beginning of the episode, all monetary policy and fiscal policy were expansionary. But after 2010, fiscal policy quickly become contractionary in a number of countries. There were good reasons why the direction of fiscal policy changed, but at the same time, the divergence of monetary and fiscal policy which we did not see before during the previous global recoveries led to, ultimately, a weak recovery as well.

Another reason was that (inaudible) was quit calm. Much as macroeconomic (inaudible), policy (inaudible) was high. The latest episode saw bouts of increase in (inaudible) in macroeconomic and financial markets, as well as in policy space.

But the (inaudible), the latest episode was associated with a very deep financial crisis. And the book explains when you have these types of crises and recessions associated with these crises, the outcome is that you will have deep contractions and weak recoveries. And the book discusses these issues in detail and then talks about the linkages between national recessions and global recessions.

Let me end with one positive observation. So, yes, we had four global recessions. And nowadays, there's a lot of talk of gloom and doom with respect to global prospects. But in every episode, global economy came back. Yes, there was a collapse, but that collapse followed by a revival. And that's the title of the book. Thank you.

MR. WESSEL: Thank you. Let's turn now to Charles Collyns. Charles is Managing Director and Chief Economist at the Institute of International Finance here in Washington.

MR. COLLYNS: Thanks very much. It's a great pleasure to participate on this panel, particularly since, in fact, I worked with both Ayhan and Marco a few years back in the Research Department at the IMF on many of these issue. So it's good to see fruition of a lot of the ideas that were being discussed at that time and, really, in a very rich, detailed, fascinating review and analysis of global economic history over the past 40 years. It's very gratifying to see the work which you've done and the excellent results.

In my comments, I thought I'd focus on two particular issues that arise from the book which are very much part of the current debate on the global economy, both of which were flagged by Ayhan in his opening remarks. One, the continuing weakness that we have seen since the global financial crisis seven years ago. And I think it's still an open question why this has been the case. And I think to some degree the factors that I had mentioned, the cyclical factors, are important. But I would also flag a number of structural factors that I think are also coming into play. And I think the policy recipes that you would subscribe to really depend very much on how you adjust, how you assess the balance between the cyclical and the structural factors.

And then, secondly, pick up on Ayhan's final point, are we now on the verge of a new global recession? A number of commentators recently have flagged the dangers facing the global economy as we went into the LEMA annual meetings both Larry Summers and (inaudible) both expressed extreme concern about the state of the global economy and raised the issue that, perhaps, this time an emerging market crisis could lead to a global recession for the first time.

So let me briefly discuss those two issues. On the first issue, I think, I certainly subscribe to the four explanations that Ayhan gave as contributing to the depth of the recession and the protracted nature of the recovery, but I don't think that's the whole story.

In fact, the global economy continues to disappoint seven years after the crisis, and we're continuing to see a widening gap between global output and the pre-crisis trend. And I think that's really symptomatic of the fact that there's other factors also in play here. I think there are structural factors. Factors, in fact, were beginning to have an impact even before the crisis, but are continuing to hold back the economy and perhaps to an increasing degree.

I would mention the aging of populations not just in the advanced economies, but also in many emerging economies. The fact that the growth benefits from extending global supply chains seems to be petering out. That the benefits of globalization following trade reform, trade opening, and technological progress, seem to be losing their impact.

I also see some deterioration in policy frameworks, both macro policies and also a storing of structural reforms, and the end of a commodity super cycle that boosted a number of emerging markets, commodity exporting countries.

So if you think these factors are important, then I think you would come a very different policy conclusions. If you think the primary reason for slow growth now is the continuing impact of cyclical factors, then I think you could argue for more aggressive macro policy support including keeping interest rates at zero-bound for even longer which is something that Janet Yellen has referred to in her remarks as a possible advantage of delaying the liftoff. That there are (inaudible) effects at work in U.S. labor markets and in business investments. That a period of sustained growth even above potential could help to reverse.

But on the other hand, if you think that the real problem is on the supply side, then this could be a very dangerous strategy because you could be faced by a buildup in bottlenecks and supply side. Bottlenecks and, indeed, inflationary pressures, in fact, could fall behind the curve and we could see a quite destabilizing need for the Fed to catch up after a long period of very easy monetary policy.

So that's one issue. The other issue, are we now about to be tipped into a new global recession because of the weakness in emerging markets, particularly China. In the book, there is an excellent analysis of global spillovers, the channels of the spillovers, trade channels, financial channels.

But I think one of the interesting features of the book is in the four global recessions we've seen, the center, the source of the recession is really in the advanced economies. And as Ayhan mentioned, the biggest emerging markets downturn that we saw in 1998, in fact, had rather little impact on the advanced economies and, therefore, we didn't suffer a global recession.

But I think the world has changed since then. This time is different. The weight of the emerging markets in the global economy has doubled since 1998. Emerging markets now account for50 percent of global activity on PPP basis, 40 percent on a market exchange rate basis.

Moreover, emerging markets have accounted for at least three quarters of global growth since the global financial crisis, substantially higher than previously. So I think the global economy depends much more than in the past on what's going on in emerging markets. And we saw a reflection of that in the really severe turbulence in financial markets in August and September related to heightened concern about the course of the Chinese economy, concerns about whether there would be a hard landing, concerns about what would be the policy that the Chinese took towards their exchange rate.

Now, it's hard to analyze what happened in August and September using our standard macro models used at the IMF or the Fed or elsewhere. But I think what that underlines is the importance of the financial channels and the uncertainty channels that you emphasized in the book, and I think this is going to be an area where continued research is going to be needed to deepen our understanding.

Do I think that we're about to tip into a global recession as a result of what we've seen so far? I don't think so. I think there is sufficient resilience at this point in the U.S. and in Europe. There is still some room for policymakers to respond to the extent that there is greater drag from emerging markets. Liftoff can be delayed. The ECB, the BOJ can extent their QE.

There are also some built in stabilizers to the extent that commodity prices will tend to be weaker and that's a positive factor for commodity importing countries like Europe and Japan. And in the end, I think we've all been reassured that at least by now China is going to able to provide sufficient stimulus to keep its economy going and to avoid a hard landing.

But I think these are the issues that are going to continue to be relevant in the future. I think the next global recession may well be one that caused from the emerging markets rather than the maturing economy. So I very much look forward to the next chapters of this book when we have another global recession to document and analyze. Thank you.

MR. WESSEL: So I was waiting for the glass half full part, but he never quite got there.

Kemal Derviş, of course, is vice president and Director of the Global Economy and Development Program here at Brookings, but while Charles had some experience at the U.S. Treasury, Kemal brings us a lot of experience on the policy side, both at the international level and, of course, with the government of Turkey. So, Kemal.

MR. DERVIŞ: Well, thank you very much all of you, and particularly, of course, Ayhan and Michael for having written this really fantastic book. I did read it this weekend, most of it, and it's very readable, and very data rich, very many details, but the use of the data is very skilled and very analytical. So really, congratulations.

And it's on a topic, of course, we here at Bookings, whether it's economic studies or the global program, we're extremely interested.

So let me try to make a few point. The first point is this directionality of interaction. Arthur Lewis (inaudible) about 40 years ago, some of you may remember, not remeber40 years ago, but have read his quote where he said, "Will it always be that developing and emerging countries," he only used developing at that time, "will depend for their growth upon advanced countries?"

And David in his introduction said, in summarizing it and stating that once you got the U.S. economy into good shape, more or less, I mean, as a basic story, the rest followed for quite a while.

I think there has now really been a very deep structural shift over the last 15 years or so. As Charles said, when we had the Asian crisis in '97, it remained an emerging market crisis. It did affect Russia, it did affect Argentina, Turkey, and so on, but it really didn't affect advanced country growth in a significant way as we also see in the book.

We now have a change. We roughly have the emerging countries and developing countries accounting for about half of world GDP, at least the PPP and (inaudible) market prices. So what happens there is going to have more or less, you know, an equivalent, not necessarily equal, but a very strong effect backward back towards the advanced countries or from the advanced and then back towards the advanced again.

Of course, it is mainly at this point still a Chinese phenomenon. I think one shouldn't forget that. I mean, 80 percent of the story, roughly, I think is about China. China, a country that has really done something that nobody did before, growing at about 10 percent for three decades. And China which now is equal to the U.S. in PPP terms and a little bit still below in market terms, but even if you're somewhat conservative about China will roughly equal the U.S. size in terms of the overall economy.

So what happens in China is going to be very important in how you view the whole Chinese situation. But it's clear that a significant slowdown in China will have similar effects to a significant slowdown in the U.S. Somewhat different channels probably. The financial channel won't be quite as strong as it is in the case of the U.S., but in terms of trade, it may even be stronger commodity prices and so on.

So that's the first point. The second point, and there I'm not quite clear, maybe I haven't read it carefully enough yet, is has the correlation for the cyclical component in the word business cycle actually increased or not?

Some years ago, the IMF in its World Economic Outlook, actually had a graph where it showed that the cyclical component had increased quite significantly over time. And one question I want to kind of throw up for discussion, I mean, putting the trends aside, is do we have information in the data that the cyclical component is increasing or not? I think it probably will, but I don't think the data are very clear on it.

The third point which hasn't come up but has come up dramatically in the video is income distribution and what it means. Now, of course, the dramatic concentration of income at the top in the U.S. is not a worldwide phenomenon, but there is this trend more or less overall in the world, maybe a little bit less in Latin America, which starts as very unequal.

And you probably know that the very well-known radical economist, Larry Summers (laughs) with his secular stagnation hypothesis puts income, thee concentration at the top as one, as the first factor threatening circular stagnation through a structural, chronic excess savings over investment.

So maybe within the framework of the book and the data, one could say a little bit more about that. How much is that part of this recession as opposed to past recessions? Is there also a structural change in income distribution that we need to worry about?

The fourth point is about emerging markets. Charles already referred to it and reflected kind of the LEMA, the current LEMA consensus, that to the contrary of the end of the book where the emerging markets actually are doing very well at the end of the book, right, because it reflects the data of two years ago, three years ago, when the recovery from the great recession of 2008-2009 was much more vigorous in emerging countries, but now it seems to have turned around. And it seems like, if anything, they emerge, as Charles put it I think, are exerting somewhat of a drag on the world economy.

So while this is not necessarily reflected through the world business cycle as such, are there some structural features that argue for another change here that this strong convergence is not going to take place anymore, and some people like Danny Rodrick, for example, are arguing that.

I'm putting it as a question again for discussion. A lot depends on China, but it's not all about China. I personally am quite a bit more optimistic than my compatriots, Danny Rodrick. I think that both China and the developing countries will rebound. But it's a question mark. And the LEMA consensus was rather iffy about that.

And to end, I think it has a lot to do with how we analyze it. My latest piece in Project Syndicate makes that point. Technological change to date. The type of technology and how it will affect the catch-up hypothesis, or the catch-up process.

There may well be -- there is a paradox. I mean, if you read the business literature, if you talk to people from Silicon Valley, I mean, this is fantastic. We're entering the fastest growth period in world history since the Industrial Revolution with intelligent machines, robots, coding everywhere. Markets, new markets through coding and so on.

So you wonder where all this incredible productivity growth is when you look at the numbers because it's nowhere to be seen in the macro numbers. And yet, concretely, it exists.

So that's my fifth point. I think some of the analysis of how we look at future growth somehow has to come to terms with why we don't see this tremendous technological progress in the economic data.

MR. WESSEL: Thank you, Kemal. I'm going to turn now to Marco Terrones, who is Deputy Division Chief of the Research Department of the IMF and, of course, one of the coauthors. And I'm sure you're going to want to respond to some of what Charles and Kemal said, but at the end of the book you do have four policy conclusions, and I wonder if you could just briefly lay those out, and then we'll answer Kemal's very good questions.

MR. TERRONES: Thank you, David. Thank you, Charles and Kemal for your nice comments. I will first start talking about the main policy lessons coming from our analysis of the global recessions and global recoveries.

The first lesson is that countries who have a large policy space in order to respond to these events. As we know, any countries that has policy space can respond to any of their shock. This knowledge is becoming more important when these countries are affected by a global shock.

One of the findings that we have in the book is that national business cycles tend to respond more deep to a global recession. So the importance of having substantial policy (inaudible) when facing globalization is very important.

For instance, the 2009 recession show us this. On the one hand, we had the advanced economies many of them entering to the globalization with little policy space. In terms of monetary policy, this country is reducing interest rates and soon they hit (inaudible) so they had to implement extraordinary monetary policies to continue helping economic activity.

In terms of fiscal policies, initially, advanced economies applied polices, fiscal expansionary fiscal policies. But in the year 2010, some of them had to apply constructionary polices because they ran out of policy space and this has weakened the recovery.

In contrast, the emerging market economies have plenty of police spaces both in the monetary and fiscal front, and they were able to respond both with expansionary monetary and fiscal policies and their effects on the economies were mitigated by these policies and they didn't suffer a lot compared to the advanced economies. So large policy spaces is very important when entering into a period of globalization.

The second lesson is the importance of having polices (inaudible) micro financial instability. One of the findings in the book is that recessions coming from a financial crisis tend to be deeper and longer. So policymakers have to be monitoring developments in the financial sector and address exuberance in the differing financial markets.

For that (inaudible) , there has been progress in designing micro prudential measures to try to contain excesses both in the credit market, also in the housing market, and the stock market.

So by applying these macro prudential measures, the risk of having financial turmoil is reduced and, therefore, the possibility of affecting economic activity tends to be reduced as well.

So it's important to be monitoring developments in the financial sector and applying macro prudential measures whenever needed.

The third lesson coming from the book is the importance of having a balance growth strategy, meaning that countries who have to not only the paying one engine of growth. Many countries only they paying of exports. They should have two engines of growth. They shouldn't depend on exports but also on domestic demand. So the more balanced the growth, the less possibilities that a global recession will have a serious effect on national growth.

For those countries that are flying only with one engine, what they need to do is diversify their export base and also they should diversify their markets. The more diversified these economies are, the less potential effects on their economy.

The fourth lesson that we learned from all the four episodes of globalization is that policies should be coordinated. When a country is affected by a shock, they could apply polices if they have room and they don't need to coordinate polices.

But whenever the world economy is affected by global choke, several countries are affected and the interactions are very important. And, again, the 2009 globalization was an example of this. At the very beginning of the recession which was triggered by a financial crisis, countries coordinated the response. And that (inaudible) a global, or depression in may economies. Unfortunately, the countries didn't continue coordinating the policies and that weakened the reaction afterwards. So policy coordination is very important whenever there is a global choke.

Now, regarding to some of the issues that were rose by Charles and Kemal, I agree in many of them. In terms of that the structural factors are important and that seven years after the crisis the gap between actual and (inaudible) is growing.

Indeed, this is the case and we don't dispute that. But effort in the book was to define the cyclical turning points of the global economy, meaning finding the peaks and drops and we have examined (inaudible) and after three years after the recovery.

So obviously, this is entering to the period of expansion and that's why we don't cover in detail in the book, but we mentioned that there is effects on potential on trend.

However, we also mentioned that there is a hot dispute on this topic. Some people argue that the effects are there, (inaudible) in particular. Other people mention that, like Rogoff, that mainly there should not be an effect on the trend.

So obviously, they show us that (inaudible) analysis is needed, and I will leave it there. We didn't cover that topic because it was seven years after the recession.

MR. WESSEL: Why don't you pause here and let me come back to you in a minute? I wanted if Ayhan can answer one question or you can, Marco, as well.

So Kemal asked basically an empirical question. Is there more correlations of the cyclical component of this over time, or less?

MR. KOSE: Should I answer?

MR. WESSEL: Please.

MR. KOSE: That's a very good question with a surprising answer. With a surprising answer. Over a very long period of time when you look at the global business cycles, they become, indeed, more synchronized. The correlation has increased. It's all natural. And you see that, you know, increased trade linkages supporting that, increased financial linkages supporting that. Countries tend to employ similar policies. A number of countries now they are trying to target the inflation. They have similar monetary frameworks, in some cases fiscal frameworks.

But when you look at the data very carefully, what you see there is at the same time synchronization within advanced economies and within the emerging markets, and the extent of that synchronization has been becoming more pronounced over time. More pronounced over time.

You also see increased synchronization at the regional level. So that is regional business cycles. Then you look at Europe, of course, they are trying to integrate. Their business cycles are becoming more correlated. You look at Asia, they move around (inaudible) supply chain. Their business cycles are becoming more correlated. You look at North America, of course, the big countries in the region, the U.S., Mexico, Canada, they have major trade arrangements, their business cycles are becoming more synchronized.

But synchronization becomes especially more pronounced during periods of financial stress. And what we saw during 2009 was an extreme example of that.

MR. WESSEL: So you say in the book, correct me if I'm wrong, that recessions are more likely to be synchronized across countries than expansions. Is that right? Why is that?

MR. TERRONES: Well, over the globalizations -- it depends really on initials of a shock, but whenever you have a global recession, a large number of countries tend to be affected by the choke, and there is all these linkages, trade and financial linkages that tend to propagate the shock. So the affecting to be very rapid.

While in the case of the recoveries, some countries like in 2009, the recovery of the emerging markets was very fast while the recovery of the advanced economies was not as fast reflecting precisely the nature of the shock because the advanced economies have been hit by a financial crisis and they were fighting the legacies of this crisis while the emerging markets didn't have this problem.

So in the downturn everybody is hit, but in the upswing (inaudible) the pains of the shock.

QUESTIONER: Can I just --

MR. WESSEL: Yes.

QUESTIONER: Just to understand, why in the downturn doesn't the financial shock also affect the emerging countries?

MR. TERRONES: Yeah, because in many effects, the economies where (inaudible) increase so much. Where you had exuberant health prices, where you have exuberant equity prices, and so whenever the crisis happen, there all these adverse effects happening in these economies which affect the other economies mainly through the trade channel and, potentially, through the financial channel, but these economies are healthy in terms that they don't have to face these problems. So they don't have these adverse loops working on the economies that were affected by the crisis.

QUESTIONER: That means that the recession should be less then in them too.

MR. TERRONES: In the countries, yeah, in the emerging markets should be less. That's why in 2009, you had the effects of the recession were much less than in the case of the advanced economies.

(inaudible) obviously you had the policy space. You know, the emerging markets got policies to react to each other.

MR. WESSEL: But that's not necessarily a permanent condition. They just --

MR. TERRONES: Yes.

MR. WESSEL: -- we had at that time. We're fixing that problem now.

MR. WESSEL: Charles, if I were trying to figure out which side of this argument you were on, is it secular or cyclical, it sounded a lot like you were more heavier that this is secular. And maybe I don't have that right, but if that's true, why is it so hard to get a little inflation going? I mean, one of the things that's striking about this recovery is the central banks have printed all sorts of money and nobody is meeting their targets and they don't seem to be any prospects of meeting their targets anytime soon.

So how is that consistent with we have some supply constraints?

MR. COLLYNS: I think that's a good question. I do emphasize the secular. And even more within the secular, I would emphasize the weak performance on the supply side. Whereas, somebody like Larry Summers continues to (inaudible) on the demand side and, therefore, his remedy is policies that boost demand which I think is actually more important to address the supply side constraints, so why aren't we already seeing inflation?

I guess because the hole that was dug in the financial crisis was so deep it's taken a long time to get close to the point where supply side constraints begin to bite. But I think we are getting close to that point at least in the advanced economies. In the U.S., the unemployment rate is now down to what most people think is the equilibrium rate. It's within probably about another year of expansion of the previous floor of the unemployment rate.

We have seen some signs of a pickup in wage pressures. I would agree that they haven't been sustained. But I think there is a serious risk that as the unemployment rate continues to fall, and as the labor markets continue to tighten, we will finally see a pickup in wage pressures.

Now, there is, of course, another structural factor which is increasing trade openness and increasing mobility of production which I think has meant Phillips curves have typically tended to flatten. But I think the concern is that although the Phillips curve is flatter than it used to be, as you get closer and closer to the floor of unemployment, you're going to see some steeping in that Phillips curve and the tradeoff is going to be less favorable.

MR. WESSEL: Ayhan, the world has changed a lot since 1975, and you do a very nice job of examining each of the recessions and explaining what were the particular shocks, oil shock and so forth. But it struck me that one of the things that made this last episode different was that we have far more countries with flexible exchange rates.

And I wonder if you look at all about what difference that made in the nature of the recession and the nature of the recovery?

MR. KOSE: Yes. The flexible exchanges (inaudible) were very important during the last episode, especially in the context of emerging market economies. How they were able to respond to the recession. And since they didn't have these rigid exchange rate regimes, they didn't have the problem of the type of currency attacks they used to have. And ultimately, they came to this recession, the global recession, prepared. They were able to respond. They were able to respond not just to fiscal policy but through monetary policy.

In most cases, it's very difficult for these economies to employ countercyclical monetary policies. The first time ever we saw a number of emerging market economies to employ countercyclical policies. And having a flexible exchange (inaudible) gave the room to them to basically take the shock.

A part of the shock was mitigated by the change in the exchange rate (inaudible). And then they were able to employ policies, their monetary policy, and in some cases macroprudential polices. And through the kind of the package of policies, they were able to smooth the shock.

Let me just talk a little bit about this question in respect to secular stagnation. I think we economists need to be very humble when we think about these episodes. The book --

MR. WESSEL: I think that might disqualify Larry Summers. I'm not sure.

MR. KOSE: Larry is in a different league, of course.

Every other episode we saw after 1975, there was expectation of a prolonged period of downturn. '82 was like that. '91 I actually experienced that episode. I came to the United States '92 and I saw the students leaving Ph.D. program and they were all pretty much unemployed. I was scared, of course. I came to the market in '97. It was a wonderful market because the nineties were (inaudible) years for productivity growth in this country.

Now, with about 2009. After 2009, advance economies had the weakest, weakest recovery. There's no question about that. Emergency market economies, they had the strongest recovery when you compare with other episodes. And their growth rates are still hot. China is growing at 6.9 percent. It's a good thing. We can debate China's growth numbers, but we should be mindful of the fact that it takes time to recover from these episodes. Especially that financial markets go through a cardiac arrest. That's exactly what happened in 2009.

It takes time to repair the balance sheets. And, of course, we focus on 2009. There was another crisis. The largest currency union in the world, your area, had the major debt crisis. Came to the brink of collapse.

Now, China is slowing down. But at the same time, this is very healthy for the global economy. What they are trying to do is very difficult. And they are trying to do that from a very high base. And they are trying to transform their economy at the same time. We see vibrant service sector in China. And manufacturing, of course, is struggling.

But still we should realize that the growth in China quite remarkable. Emergency markets quite remarkable. Things look rather somewhat gloomy right now. There are structural reasons. There are cyclical reasons. In the case of China, I think there is quite a bit of policy space so China can still provide stimulus as Charles mentioned.

So I think we need to put things in context. There are structural factors, there are cyclical factors, but it’s difficult to make a judgment call right now whether we are in the midst of a true circular stagnation.

MR. WESSEL: Finally, a little optimism. Kemal, policy coordination is kind of like one of those things like I ought to exercise more. Everybody thinks we ought to have better policy coordination, but I’m not sure we actually know how to do it.

In the worst of the crisis, there was a remarkable degree of coordination, but then again, everybody understood that the only thing, we were in trouble and everybody had to do the same thing. Everybody need to expand. Everybody was terrified. We even had a coordinated central bank rate cut.

So it’s easy for me to understand the times of terror how, and especially when the direction, everybody wants to go in the same direction, you can have policy coordination. But in a world where half the world GDP is from emerging markets, a big chunk of that is from China, and the other half is from advanced economies which don’t always agree on what day of the week it is let along what the right mix of fiscal monetary policies, is policy coordination actually possible? And if so, in what form and how do we get there?

MR. KOSE: Well, I think, you know, it is an excellent question and the IMF made a lot of efforts in the direction of providing data and studies of spillover effects on the benefits of policy coordination. The G-20 made a big effort to have scenarios and the IMF was really behind (inaudible) work of showing that a coordinated approach could actually produce more welfare, more GDP for the world. But all of this hasn't gone very far, unfortunately.

I do believe that at the end of the day the IMF is the key international organization. You know, the G-20 can help and can lead in terms of ideas and so on, but in terms of actual work and analytics and coordination, it should happen within the IMF framework, I believe.

But it is very, very hard and one shouldn't also exaggerate it. I think the empirical work of the IMF shows that there are some benefits, but they're not, they're in terms of one or two percentage points of GDP. They're not five, six percentages points of GDP.

MR. WESSEL: What does it even mean? Does it mean that we agree to cut our budget deficit if you agree to cut your interest rates? What does it mean, policy coordination in practice?

MR. KOSE: Well, I think one thing that it meant, as you said in the beginning was that fiscal policy and debt have prisoners dilemma elements in it. If Europe said okay, you, U.S., expand, increase your public debt and we'll benefit from it without increasing ours, obviously you get a suboptimal outcome.

So there are, I think, game theoretic situations where designing a policy which counters the business cycle in a coordinated way, and that is the most obvious example, produces better outcomes for everybody. But there is a distribution of the burden element like in any of these coordination problems.

There are other cases when I think exchange rate policy, interest rate policy come in also among the mix of monetary and fiscal, and it becomes quite complicated. But I think one can build models which show that cooperation (inaudible) is a better outcomes.

Finally, without taking more time, I do want to underline that China did a lot of the lifting in 2009. I can't remember the exact percent of GDP, but the Chinese fiscal package was something like 15, 16 percent of Chinese GDP. And, of course, that produced a tremendous effect not only on China itself, but on all the country's exporting from China.

So I just, you know, in terms of coordination, it wasn't something the IMF decided on, that was decided on at the IMF (inaudible) or something, but it's something that happened partly with G-20 kind of moral help, but it will be much harder even for China to reproduce that kind of stimulus. So I do believe that we are in a situation where whatever we can get from coordination should be gotten.

And one final thing, you didn't ask that question, why the unemployment rate, we all know this, it's from the newspapers and all that, but while the unemployment rate is low the labor force participation rate in the U.S. is also very low. So it's not clear how the two provide a floor. And (inaudible) on median incomes again underlines, you know, I think it was that since 1983 --

MR. WESSEL: Median wages of year round male workers has not gone anywhere adjusting for inflation since 1973?

MR. DERVIŞ: Yeah. So again, I do repeat my point --

MR. WESSEL: I'm going to get to the income inequality.

MR. DERVIŞ: -- emphasizing the video that we do face a different situation. In the old, in the past, productivity and wages moved together. Now, we have a situation where there is a real gap. Now, it may close. It may not close. But it's not the situation we were in 20, 30 years ago.

MR. WESSEL: Charles.

MR. COLLYNS: Let me try to give a glass half full in response to your question.

MR. WESSEL: Okay.

MR. COLLYNS: I've sat around the big table that is the G-20 too many times and been as frustrated as everybody else have about the lack of progress towards true coordination, and I tend to agree with Kemal that the only really good example of policy coordination recently is the coordinated fiscal response to the crisis. But in more normal circumstances, coordination is really hard because countries have different interests and different domestic constituencies that are hard to trade off against each other.

But I would emphasize two other long complicated C words where I think greater success can be had, cooperation and communication. I think in both of these areas that there is room for improvement

Cooperation in the sense that countries sitting around that big table can communicate better to their peers what they are doing, and they can listen to their peers and understand the potential spillovers from their policies and take those into account when they're setting their policy frameworks.

And second, on communication, I think it's increasingly important for policymakers to be very clear in their communications. I think that's well understood here in the United States by the Fed which has been working very hard to improve its communications. I think it less well understood in some other countries. And I think in China at this point is a very serious problem of insufficiently clear communication.

I think one of the reasons why what happened in August had such a big impact on global financial markets was because the change in exchange rate regime in the beginning of August was not well communicated. No one really understood what the true intent of the Chinese authorities was in making this change.

Were they just trying to make a minor technical adjustment to get the RMB within the STR basket, or was it a more fundament shift in approach to the exchange that would imply a sustained and substantial depreciation of the RMB?

I think it was the uncertainty over that crucial issue that led to the really large spike of volatility and risk aversion that had a global impact in August. I think that's something that needs to be avoided in the future.

MR. WESSEL: Marco or Ayhan, maybe I can ask you to respond to Kemal's point about inequality. So we know that if you look at the globe as a whole, the lifting millions of people out of poverty in China and to some extent India has reduced the amount of inequality on the global level, but within countries, and within this one, within China, there's been an increase in the gap between the winners and losers. So to what extent is that an economic issue that has to do with, has some connection to the pace at which we can grow? And to what extent is it not an economic issue. It's a political and social one that we should deal with but we wouldn't have to worry about it when we're thinking about the pace of growth or global recessions and recoveries?

MR. TERRONES: It's clear that whenever there is recessions (inaudible) tend to deteriorate. That's a well-established fact that people have reported.

Now, there are two questions related to this finding. First, how much is this deterioration? How significant is? And the second one has to do with the (inaudible) of income distribution.

They are not good measures of raw data bases that measure income distribution around the world and that makes comparable you know in these events. So one has to go by with whatever is there. And in these cases, indeed, he thinks that income distribution deteriorates.

Now, should we worry about income distribution? Well, we have found that globalizations tend to last one year. That means that expansion periods is the difference. So most of the time economies are growing and if there is a positive relation between improvements income distribution and growth, you know, the trend

The trend is that for income distribution to improve for the long term, there will be setbacks whenever there is a recession, but over long periods income distribution will continue improving.

MR. WESSEL: I think Kemal's point was that income, the unequal distribution of income may restrain the pace of growth. Wasn't that your point, Kemal?

MR. DERVIŞ: Yes. That's -- sorry, two things. I mean, it is absolutely clear that within country income distribution has deteriorated over the last three decades pretty much everywhere. So there is no correlation in that type of income distribution.

Now, there is catch up in developing countries, but I think you formulated the question very well. We can worry about income distribution for ethical, social, political reasons. Let's put that aside. I would rather worry about it, but let's put that aside.

But is there a macroeconomic reason or a slowing down the expansion reason for worrying about income distribution. And there the, you know, the arguments are not, the arguments for and against that proposition.

The main argument is that the top one percent, two percent, whatever, save a lot more. And as their share increases, there is a kind of chronic excess saving in a Keynesian sense. And the recent data seem to show that at least in the U.S. and some other rich countries that's the case.

It is also while there are similarities, I mean, has there been a period in the last 30, 40 years where with zero real interest rates in terms of main markets? There is no inflation worth speaking about, and there is no signs of it. I mean, Charles said in the years we may have inflation, but, frankly, people have been saying that for the last five years and there's no inflation on sight. So are we in a different kind of structural environment which has a lot to do with income distribution?

MR. WESSEL: Before we go to the audience, I wonder if I could ask each of you to give you, just one brief answer to this question. So the IMF has said quite clearly that the risks to the recovery are on the downside and there is widespread concern, as Charles suggested, that this isn't all cyclical. That the potential rate of growth of the world economy, both advanced and emerging markets, has come down and it's not all demographics. That something else unhealthy is going on, unhappy is going on.

So if you were going to recommend just one thing that policy could do to increase the rate of growth over the next, over the medium term, over the next five years, what would be at the top of your list? Want to start?

MR. TERRONES: Well, obviously, whenever there was boom, (inaudible) care of the structural reforms in many markets. Obviously, I cannot throw a blank recommendation so you have to go go to each country case and -- sorry -- perhaps reforms in the final sector, reforms in the labor markets, reforms in the private sector, improvements in the process of decisions on public investment which has been neglected by many governments around the globe.

So I would have to look at the particular case, but I will go --

MR. WESSEL: Okay. Kemal.

MR. DERVIŞ: Well, I think -- can I say two things?

MR. WESSEL: Absolutely.

MR. DERVIŞ: Instead of one. I would say first a massive effort on the education and skill side pretty much everywhere to try to have skills that are adapted to what I really think is coming which is a vast technological revolution about how economies work and how production takes place. And I think that's pretty much everywhere.

And second, and I think it's linked, a state budget, a government budget, a multi-level, local and federal and, you know, budget which is much more redistributive in an intelligent way. In other words, closing loopholes, if you can lower income taxes, do it by increasing direct taxes, but definitely close loopholes and concentrate the spending on skills, education for everyone, particularly for those who have no access to it, as well as health. I think that kind of package to me would be the most growth-promoting package.

MR. WESSEL: Charles.

MR. COLLYNS: If I can have three quick ones. I'd endorse Kemal --

MR. WESSEL: We're up to five by the time to Ayhan.

MR. COLLYNS: I would certainly endorse Kemal's call for greater investment in education and skills. I would also say that in many countries, not in all countries, in many countries it certainly makes sense to follow Larry's prescription of greater investment in infrastructure, whether it is direct on the government's balance sheet or through private sector PPP. And that certainly includes the U.S.

And thirdly, immigration. I think many countries, including U.S., including Europe, including Japan, would greatly benefit from more open policies towards immigration, and, perhaps, Europe will actually get a growth benefit from the refugee crisis as a normal social costs, but it actually may increase the rate of growth in Germany and elsewhere.

MR. WESSEL: Ayhan. Somewhere between one and four you get.

MR. NOSE: Since this the last question, I must say whatever we said here, especially me and Marco, are our own views. Not the view of the IMF and the World Bank and any entity affiliated with these institutions.

There is one single thing I would recommend. Not just emerging markets, not just the developing countries, not just low income countries, I would recommend that to advanced economies here in the U.S., European Union, improve governance. That is going to be critical.

Improve institutions. Make sure government is functioning. Make sure whenever government invests whether it's infrastructure, whether it's education, whether it's health, that investment is efficient. That ultimately depends on the governance. That is something lacking in everywhere you look at.

MR. WESSEL: So I guess I was tempted to say that America is an exceptional country, but when you come to dysfunctional governments, I think we may be right up there with the Politburo.

All right, we have time for some questions. There's a mike coming around. Please tell us who you are. And we have a lot of people here so lean on the side of questions rather than speeches. Starting with the gentleman here.

MR. MENSCH: I am Gailhart Mensch and I'm a professor of economics and of management in the area of innovations research, mainly innovations research for financing, for investors. Institutional and private investors.

I have two questions. One is to the authors, and it relates to Chapter 9 where in a wonderful and summarizing way you come to, "Milk the data available in the best possible way." I can say from the perspective of, to use David Wessel's word, from the Schumpeterian perspective.

And I'm coming to the question after going through Kemal's deeper question, that is, is that difference in the downtrends and deviations from the downtrend, is that a macro phenomenon and is it correlated to a procedural process cyclical thing or is it structural in the sense deep down to what makes major industries be international so that the microeconomic and the real economic forces, that's the micro forces provide what Warren Buffet says (inaudible) security.

And I'm a member of a more than a hundred universities in various countries coordinated by every second year we have NATO sponsoring that. They're interested in real economic and social security which from the monetary's point of view is outside the box. But security is now inside the box because we are scared --

MR. WESSEL: I'm not sure I'm getting (inaudible) uncertainty, so can you get to your question?

MR. MENSCH: Yeah. The question is if you expand on that Chapter 9 thing showing the weakness and the strength in some countries and regions, would you agree on Schumpeter that the (inaudible) is the question whether the differences in the downside is because an old (inaudible) cycle lost steam and a new one is delayed and hasn't come in yet, and is a hidden detractor and would you see it in your financial data? We see it in our investment data. Do you see it in your economic data?

MR. WESSEL: I understand. Did you follow that enough to answer?

QUESTIONER: I think that these cycles, the Schumpeter and Kuznets played a role. I mean, there should be three in cycle when we think about it created destruction stores of Schumpeter. They're all relevant now, but are we in a position to make a call whether the Kuznets cycle has arrived --

MR. WESSEL: The Schumpeterian cycle is creative destruction. The Kuznets cycle is what?

MR. KOSE: That's the thing that I am trying to understand.

MR. WESSEL: Okay. The gentleman here?

QUESTIONER: Hi, my name is Inian. I'm a (inaudible) student in economics at American University. And we just discussed about a slowdown in China. And one of your points was that the slowdown in Chinese economy would drag down a world economy. But the past data has shown that China maintained its growth throughout the crisis in
08-09.

And the thing is the recent slowdown is dragged down by world economy or China can have (inaudible) to lift it up in a world economy. That's my question.

And the second one is about policy coordination. World central banks have been lowering their interest rates to near zero level for quite a long period of time. And what would be the ramifications if not in years one, two, or even five years or later? And is inflation will be a problem for us?

The last one is about the --

MR. WESSEL: Why don't we stop at two?

QUESTIONER: Okay. Sorry.

MR. WESSEL: So I think the China question, Kemal, is is China suffering because the world economy is not buying enough of its stuff and so it can't recover without, it can't grow faster without the world economy picking up, or are we now at a stage where China has to generate domestic demand and help pull the world economy out of the slump?

MR. DERVIŞ: I think China cannot possibly continue to grow at 10, 11 percent. You know, there is a base effect which will take, which obviously means that gradual Chinese growth decline because it is after all part of the world economy and Chinese exports have to be absorbed and all that.

I think there is need for structural change. I don't think, frankly, I mean, that the need is dramatic in the sense that it can take place over a number of years. I don't think China has to kind of lower its investment rate to 30 percent overnight. But I do believe there is a change of the structure of growth which is needed which is mainly also linked to the trade because the world cannot absorb the kind of Chinese export growth that it did in the nineties.

Now, I do believe that the Chinese problem of growth strategy shift is made more difficult by the fact that Europe is not growing much, Japan is unable to recover very fast, and the U.S. is recovering but not quite as strong. Obviously, it's a two-way street. If the advanced countries were able to grow by one percentage point fast, probably the Chinese economy would also be able to grow by one or two percentage points faster. So they're both, both factors are at work.

MR. WESSEL: Right. But, Marco, I took your point on the policy conclusions when you talked about balanced growth. That looking to the future, China is an example of a country that's going to have to look less towards exports and more towards domestic demand, correct?

MR. TERRONES: Yeah. In part, the slowdown we are seeing in China is result of these re-balancing that economy is experiencing. They are moving away from investment towards other, towards consumption. And, also, they are trying to move away from the external towards the domestic sector. All of that brings the rates of growth of this country down.

Now, China is still growing close to 7 percent. Obviously, the puzzling effect is how this slowdown in China is affecting all of the emerging markets, you know, the severity that is being experienced. That's kind of puzzling. People are still trying to figure out what's happening. What are the linkages that are making so powerful these effects of the slowdown in China on the rest of emerging markets? I don't have an answer for that.

MR. WESSEL: Charles, I think the question about inflation was we kind of get that the world central banks all can move in the same direction when they want to lower interest rates and pursue quantitative easing which has now become a transcontinental, transpacific, transatlantic phenomenon.

How much confidence do you have that the central banks have the technical capacity and political spine to react if we do get this dreaded increase of inflation?

MR. COLLYNS: I don't think we're going to get a global increase in inflation anytime soon. I think if it does occur, it will be first seen in the U.S. and the U.K. I think the Fed and the Bank of England certainly do have the technical capacity and spine to react.

I think that the bigger problem is the reverse one, more broadly, that despite central bank action, we are seeing continuing deflationary pressures, and I think a big part of the problem is that the central banks are being asked to carry too big a part of the burden. That they're the only policy institutions in many cases that are sufficiently flexible to respond effectively to the problem and I think the greater support from fiscal policymakers and from some structural reforms and from legislatures I think that's the real problem.

MR. WESSEL: There's a woman here, and then we'll move to the back a little bit.

QUESTIONER: Thank you. My name is Satina. I'm an undergraduate student at the University of Utah. Came all the way here to ask you this question today.

MR. WESSEL: I hope you had something else to do in Washington.

QUESTIONER: I did not, sir. So this is slightly off topic but it kinds of touches on point that you made towards the end about getting, governing and (inaudible). This question I've had in my head for quite a while. A lot of people have said since the 2009 crisis if we had allowed AIG to fail, if we had allowed a couple of other banks to fail, the world would have ended. So I want to ask what does it mean when they say the world have ended?

And then the other piece of that is if that were to happen, the financial laws and structure would be completely revolutionized to accommodate such a disaster.

So if AIG were allowed to fail, what would the world look like and do you think it should have?

MR. COLLYNS: Well, I think we kind of ran that experiment. We let Lehman Brothers fail. And when you look at the accounts of the crisis, that's widely blamed, rightly or wrong, for causing the death of the crisis.

So the notion that letting AIG fail would have somehow made things better seems to me to a bit hard to argue. I think that the broader question is did we create with the saving of Bear Sterns a situation where too many people on Wall Street expected the government to bail out anybody who got in trouble. They surprised them with Lehman Brothers, and as a result they had to, they felt, the authorities felt that if they let AIG go, we would have had an even worse situation.

I think that the, you know, we had a pretty bad recession, the worst we've seen since the Great Depression itself, and it was, as the book points out, a global phenomenon. So I think it's a reasonable argument that had we had less bailouts, we would have an even worse situation and we would had something that came a lot closer to the Great Depression than what we got. But counterfactuals are easy to talk about and very hard to prove.

MR. WESSEL: The gentleman there in the white sweater. Or beige sweater.

QUESTIONER: Hi. Ralph (inaudible). Also teach at American University. I teach microeconomic and economic history.

My question, you've kind of already answered it, Kemal, but I want to go back to it. I'm curious again about the paradox that you talk about. So in the Depression, there was a period of stagnation and also not, innovation was certainly muted. Now, we've had a period of significant innovation, at least apparent innovation. Everything from (inaudible) and things that are coming.

And yet, it doesn't seem to be going -- well, if it's going to productivity, it's not going to wages. So if it's not going to wages, then it must be going to the share of capital so profits must be going up, but we don't see that necessarily occurring either.

So I want to go back to that paradox and ask maybe if you can shed anymore light or, or not? Is there something in the theory or we just give it more time?

MR. KOSE: First of all, we do not see it in productivity numbers either, broadly speaking. Both labor productivity and total factory productivity are not reflecting of anything (inaudible). On the contrary, we're seeing the opposite. Now, that's over a fairly short period, of course.

Very quickly, my own -- I mean, first of all this is a big research topic. I don't think I have the answer. I don't think anybody really has a full answer of this. But I would tend to think the following. And since we've talked of Schumpeter, that the destructive part of the creative destruction is taking away more at this point still in history than the creation part is contributing. Okay. So we're facing a period of transition where the adjustment may be costly. Nobody knows how long it will last, how fast it will go, but I would say that.

The second part of it is that it has major, and I keep repeating that, major income distribution effects and employment effects, skill effects, and so on. Again, nobody has all the details, but I do believe we face a huge challenge on the income distribution front.

I don't think it, I'm not saying it cannot be managed, but I think the nature of the technological change is such, together with globalization that that widely shared benefits will need very strong public policy behind them to be feasible at least in the medium term.

MR. KUMAR: (inaudible) Kumar (inaudible). First of all, congratulations to the authors for an absolutely wonderful, very topical, very insightful book. Enjoyed the panel's remarks very much.

I have two questions. One relates to China and the emerging markets. With regard to China, specifically, we've been talking about change in the growth rate, decline in the growth from 10 percent to 8, 7, 6. But, of course, equally relevant is the point which has been mentioned of re-balancing of growth. Changes in the composition of growth from emphasis on manufacturing and investment, to services, to consumption.

Now, the implications of that re-balancing for the global economy I think it will be interesting for the panel to say a few words. It's not only that the growth is lower, but that benefits or the effects for the rest of the world are likely to be very different.

And related to that, Kemal made a point that, you know, emerging markets prospects are, perhaps, not as bearish as the consensus, LEMA concessions (inaudible) is made out to be, and I can assure you that in the markets there is a huge amount of bearishness. I mean, it's like the next recession is just around the corner and it's originating in Shanghai and Beijing and, perhaps, in Sao Paolo. So a few words on that I think would be very helpful.

The second point very quickly is on coordination of policy. When you have the central banks of the world with their national mandates, they are only concerned about employment and growth and inflation, or inflation in their countries as parameters.

Is it really possible to think about coordination in the meaningful sense? I mean, you know, one thinks of the Plaza Accord and the Louvre Accord. They happened because you had in a sense one country pushing this thing through. When you don't have that sort of situation, is coordination in a real sense of the word. Except in a real crisis as we had in 2009, is it possible? Thank you.

MR. WESSEL: So the China question?

QUESTIONER: In the short term it's a problem because the world has come to rely on rapid China growth. On the other hand, for the medium term, it's much better if China pushes through an effective ambitious program and structural transformation that means that we're not going to have a China crash three years from now, but rather sustained Chinese growth of a pretty solid pace. That is how China can contribute to healthy global economy, not by focusing excessively on maintaining short-term growth at a rate that cannot be sustained in a safe way.

MR. WESSEL: And Ayhan, everybody else has talked about coordination so it's your turn. Can you have meaningful policy coordination of every central bank as a national mandate?

MR. KOSE: So there are two points on this issue. One, the benefits from coordination might be overstated. I think the IMF has done studies on this issue Kemal also mentioned.

So the challenge is that we should all take care of our houses all the time. That would be wonderful for the city. Clean, you know, in front of the house, mow the lawn.

But the big issue is that then there is a true crisis. There's a big fire. Whether we can get together around the table and discuss. In the meantime, we should continue talking to each other. G-20 has done that, I think (inaudible). In the context of central bank, (inaudible).

In an integrated economy, global economy, even if you don't have a single engine pushing for coordination, countries need to coordinate when they have challenging periods. One of them was 2009. I think the global community passed that test with, I think, very well. And, hopefully, it will happen again. Now we have the framework, the issue is whether the framework is working efficiently. I think people have good intentions with respect to pushing that framework forward and, hopefully, we will see benefits of that, not just during the periods of financial stress and the crisis, during periods of calm as well.

MR. WESSEL: Kemal.

MR. KOSE: Adding to the macroeconomic issues of coordination central bank, I think there is another area. They link to some degree, but the other area may be except during times of fire actually more important, and that is the regulatory and financial regulation. But not just financial. We just are in the middle of the debate about Cloud computing and data flows and all that.

Given the interaction in the world and the nature of production now, there is an even stronger challenge I think for regulatory cooperation than there is for macroeconomic cooperation.

The question is will it be for all citizens of the world? Is that the objective? Or is one seeking lobbyists and interest group type of coordination. Coordination is needed but in favor of whom?

MR. WESSEL: Okay, with that, I hope you will join me in thanking our authors and our panelist and you for the good questions.

(Applause.)

MR. WESSEL: And thank you all for coming. I believe there are books for sale in the back. My colleagues here on the Brookings maintenance staff would be enormously grateful if you'd look at your feet and pick up the paper plates and cups and papers and put them in the recycling in the back.

But thank you very much for coming.

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CERTIFICATE OF NOTARY PUBLIC

I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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