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WHERE ARE THE NEXT EMERGING MARKETS? UNDERSTANDING INVESTMENT FRONTIERS AMID GLOBAL UNCERTAINTY

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Panelists:

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P R O C E E D I N G S

MR. PRASAD: Good morning and thank you very much for joining us. My name is Eswar Prasad. I'm a senior fellow in the Global Economy Program here at Brookings and also a professor at Cornell. I'm really thrilled this morning to be hosting the book launch of my Cornell colleague Andrew Karolyi's book, *Cracking the Emerging Markets Enigma*.

Andrew is one of the most revered scholars in international finance. He is the alumni professor of management at Cornell's Johnson School of Business and also professor of finance there. And he's one of the best known professors in international finance. He's been president of the Finance Management Association International; is now the executive editor of one of the top finance journals, the *Review of Financial Studies*; and now the author of what I suspect is going to be a very well-known and reputable book.

Copies of the book, by the way, are available for sale outside and Andrew will be on hand to sign copies of the book, so I'm delighted that we can do this and to talk through the book and the issues raised by the book. We have really a very distinguished panel with us today.

On my right is Ayhan Kose, who's the director of the Global Economic Prospects Group at the World Bank. And in addition to producing that report, Ayhan himself has a book on emerging markets that'll be coming out fairly soon. It's called *Collapse and* -- luckily -- *Revival*. It's a book about emerging markets and how they went through the financial crisis period and what characterizes the recessions and recoveries in those economies.

To his right is Rodolfo Martell, who's the managing director and a portfolio manager at Quantitative Management Associates. In fact, I understand he's starting that job literally this week. Before that, Rodolfo had a very distinguished career in various institutions, including BlackRock, where just before this he was a senior portfolio manager.

Gian Maria Milesi-Ferretti, who's on the right, is now a deputy director in the IMF's Research Department and is also the head of the group that puts together the World Economic Outlook, and a very distinguished research in his own right.

So let's get to it. To begin with we're going to have Andrew tell us about the main themes of his book. Then we're going to have a reasonably interactive discussion with the panelists. We're going to talk about many of the issues raised by the book.

So, Andrew?

MR. KAROLYI: Good morning, everybody. Can you hear me okay? I have to calibrate my classroom voice for the right size of the room here, so thank you.

Thank you very much for coming. It's a great honor and pleasure for me to be here for this morning and to see so many of you here, and I thank you.

I also want to thank our hosts here at Brookings. Eswar, of course, my colleague, and Mike Rettig, who's in the back there, who has organized all of these things. I'm really grateful to your support.

And Ayhan, Rodolfo, Gian Maria, to join this panel, it's just terrific. It's terrific and I'll looking forward to the conversation we're about to have.

Cracking the Emerging Markets Enigma. What is this book about? Well, it is a new framework for understanding the fundamental risks of investing in emerging markets. And that is an ambitious statement, I know, but I'd like to think there's some substance there to back it up, and we'll see. We'll test that today.

The book basically has three reasons for being. It is a framework that brings to bear what I call rigor. Rigor in terms of a base of academic research that goes into the development, construction, design, implementation, and potential usefulness of this framework. It's not just the research that I've been involved with myself, but, of course, many, many other scholars in the area of emerging markets.

The second sort of selling point of the book is that it's a comprehensive framework. I say comprehensive in the sense that this framework designs multiple dimensions of these fundamental risks and clearly outlines them, specifies them, and, as I mentioned to you, operationalizes them.

And that leads to the third dimension of this, which is that it is practical. This book is unapologetically written for the asset management community. It's a trade book. And as a result, it has a very practical dimension. That is, in each of these fundamental risks that I design, I operationalize it by using statistical techniques in a sort of meta framework, meta analysis, to compress harvesting lots of data from multiple sources into each of these six risk buckets, I call them. And I create this standardized index score by which you can rank and order these countries and look at the actual differences in the scores as meaningful things.

It starts with defining what an emerging market is. And if Antoine van Agtmael were here, I think he would like the definition that I put forward on the first sentence of the first page of the first chapter of the book: What is an emerging market? An underfunded growth opportunity with problems.

Growth opportunity makes sense. There's tremendous economic potential and we all know that emerging markets, whatever you conceptualize there, have always had that potential. Many scholars that have gone before us have talked about the potential. But a critical attribute of emerging markets, at least in my mind, is that there isn't that domestic natural pool of capital that is there to support those growth opportunities. And as a result, these countries are naturally externally dependent on capital. And the capital will flow freely. It's available globally to flow into the countries, but for these critical things called "with problems."

So the heart of the book, the middle section of the book, delineates in this framework what I call the six problems, the six risk indicators. And, again, out of this comes these risk indices by which you can rank and evaluate the countries.

The first risk bucket is what I call market capacity constraints. This captures what a lot of, for example, the commercial index vendors out there, who are in the business of defining what is a developed versus an emerging versus a frontier market, say, they focus on. So we're talking about things like the capitalization of the markets relative to the size of the economy, but not just the size in terms of market capitalization, but the vibrancy and vitality of the markets in terms of new issue flows into the market: the size of the banking assets, measures of the turnover activity that's in those markets, so measures their vibrancy. So that's the first one.

Number two, is what I call operational inefficiencies. So even if there is a healthy market there, there are these national frictions that exist in these markets that erode the potential capital of an investor or the clients of the investor carrying the client's money into that market through illiquidity constraints, transactions taxes, commission costs. And then even more subtle things, like clearance and settlement systems, imperfect clearance and settlement systems, what I call in the book the plumbing of the system, the poorness of the plumbing.

Third one, another natural for defining emerging market problems and challenges, is foreign accessibility restrictions, so the ability or disproportionate treatment of foreign investor capital into a target market. Here we feature things that I know many in this audience know well, things like differential withholding taxes, the existence of tax treaties between countries, the currency convertibility restrictions, investor position limits, foreign ownership restrictions and constraints.

Bucket number four, the first three I refer to throughout the book as the “harder” constraints. The next three I refer to as the “softer” constraints and they are corporate opacity, which is basically about the transparency and disclosure systems, the accounting rules that are in place for corporates in terms of what they must report to the marketplace. We talk here about all sorts of activities that many of our scholars in accounting, international accounting, have focused on with respect to earnings management, with respect to the ways in which they report losses, timeliness of reporting of losses, all of these dimensions.

But there’s also other things, like the existence of block holders, block holder controls, measures of the ownership base with respect to the relationship of prospectively minority investors from abroad and how they’re treated.

Bucket number five, dispute resolution, what I call “limits to legal protections.” It’s a reflection of this entire literature on law and finance for which we have tons of metrics thanks to our friends at the World Bank, among others, that look at issues to do with the existence of credit registries, the existence of timeliness of actions, legal actions, that might be taken in the event of a dispute, the efficiencies of the court systems and treatment of minorities shareholders, and things along those lines.

And finally, the last bucket is what I call “political instability.” A better name might have been to call it “political constraints,” but it’s basically more of the political economy of the environment as it affects how minority investors, prospective global investors, are treated when they are coming into this marketplace. So we have a lot of influence from political scientists, polymeric, polimetricians that have developed different measures of the existence of political constraints and how they bind in the appropriate decision-making bodies in these countries. And I this we get measures of corruption, we get measures of effectiveness of the government, the bureaucracy, and so on. All of those are featured.

I guess the last thing before I pass to the panel is, Dear Author, you build these six risk indicators and you've developed these wonderful indices that are so practice, are they any good? So the back third of the book is the validation exercise, the cross-validation exercise. And there's actually two experiments: one which was planned and one which happened.

The first experiment is I used data on ownership of institutions all over the world. It's data from FactSet, the ownership data, where we look at institutions from all around the world and it's about 24 trillion as of the end of 2012. And the focus here is on the 9.3 trillion of the 24 trillion that each of these institutions, regardless of their domicile around the world, where they deploy it by country, in terms of their country allocations. I right-size those allocations across these institutions from around the world by their relative market cap weights and identify what we call the foreign biases, the overweights and the underweights that are revealed by their very actions. And I ask myself are these risk indicators any good? Let's see if they can explain the relative over- and underweights. I don't oversell, but the answer is not bad. And we can get into some of those details.

The second experiment, and it arose to me while I was being hosted at the IMF during the very challenging period of end of 2013 in the emerging market space, I saw a tremendous exit, racing to the exit, in terms of investor flows out of many emerging markets, but very unevenly across different target countries. So the second experiment in which I take my data is to try to rationalize why there were much more intensive outflows as a result of the taper or taper tantrum, if you remember the May/June period of 2013. And the answer is that these risk indicators, again, not bad in explaining why there were much more intense outflows out of some countries, like Korea, China, and less dramatic outflows out of other countries, like, for example, Mexico.

That's the book. I look forward to the conversation that follows.

MR. PRASAD: Thank you, Andrew, that was a very nice overview. And before I get to the panel, let me probe you on a couple of these issues.

So, Dear Author, when one thinks about the predictive power of these variables you have, many of us macroeconomists think about the basic macro variables -- you know, current account balances, fiscal balances, monetary policy indicators -- as being the key drivers of growth or, indeed, stock market returns. So how much additional predictive power in some rough quantitative sense are you getting with these indicators compared to using just macro variables?

And the second issue is are these indicators really good for forecasting just stock market performance of capital flows, but also broader macro things we care about, like growth and inflation?

MR. KAROLYI: Yes. Well, can I answer the second one first?

MR. PRASAD: Sure.

MR. KAROLYI: So I would say to you and to those who consume this, and you will see it in the backdrop to each of the build up of each of these risk indicators, that the idea of returns, prices, and growth are really already established in a lot of the research that is the precedent for all of this. The importance of these what we'll call in general institutional fragilities, which is what I'm capturing with these risk indices, have already been shown by yourself and many other scholars that have gone before me as being associated with sovereign yields, returns, return premia, and in terms of long-term economic growth. So, in some sense, these institutional risk indicators, I'm reflecting back to you what those scholars have already shown to us.

Remind me of the first one now.

MR. PRASAD: The first one is how much additional predictive power do you really get?

MR. KAROLYI: So it depends on the experiments that we're talking about, the two experiments. I can tell you, as somebody who's been studying this whole business of the home bias and the foreign bias for at least 20 years, and some in this room and others who have been studying this, the macroeconomic performance metrics, like real GDP growth and unemployment and even stock return performance, from the perspective of the mindset of the investors it is important. But in terms of the fraction of the explanatory power, the research has clearly shown that this is relatively small for the systematic over- and underweightings.

There's also been some research, I'm sure that some of my colleagues will comment on the 2013 taper tantrum, but they've been relatively ineffective in explaining why we saw the exits, my second experiment, in 2013; the differential or heterogeneous experiences there.

I like to think of -- and this is marketing, I'm selling myself here, but I like to think that these institutional metrics of fundamental risks are baser from the mindset of the investor and that these macro global external imbalances and fiscal challenges, they're almost manifestations of these deeper-seated problems that are being modeled. I may be overstating that case, but I'll let people react to that.

MR. PRASAD: Andrew is, in fact, very modest in the book. He has all these caveats and has a very clear explanation at the end about why you should not take him too literally, although you should take him reasonably literally.

MR. KAROLYI: I'm an editor.

MR. PRASAD: Okay.

MR. KAROLYI: I'm a journal editor, so.

MR. PRASAD: So Ayhan and Gian Maria, both of you in your research, your academic research, as well as the reports that both of you shepherd talk about microeconomic risks in specific countries, regions, and so on. So let me start with you, Ayhan. Does the framework make sense to you in terms of how much value added there is in understanding countries' economic performance or even predicting their performance?

MR. KOSE: Thank you, Eswar. And let me congratulate Andrew for this wonderful book and, at the same time, so very timely book. And it's timely, it is somewhat related to the question you were asking.

It's really difficult to think about emerging market economies without paying attention to these institutional fragilities Andrew very nicely articulated in his book. And ultimately, some of the macro imbalances and vulnerabilities we see in these economies relate to, of course, these institutional fragilities.

Andrew has some very nice exercises. One of them he mentioned, this taper tantrum, how important these institutional factors explaining how much these emerging markets lost capital flows during that unfortunate episode. And what you learn is that these deep institutional fragilities explain a respectable fraction of the variation we observe across countries.

Now, one important thing is that some of them are more important than others. And the important ones, actually, are, to me at least, intuitively very appealing. Which ones are those? Political instability, legal restrictions, and corporate governance. So, in a sense, what Andrew is saying, yes, you can undertake this broad capital accountabilization. Open your country. But if you don't take care of certain domestic issues, you will still have formidable challenges in terms of attracting capital and, at the end of the day, channeling that capital into growth.

Let me use this opportunity to talk a little bit about the book and tell you my take. As I said, it's a timely book. If Andrew wrote this book around 2005, there was hype with respect to emerging market economies. We had high growth 2003 to 2007 period. Maybe, you know, we weren't paying attention to these institutional futures that much. There are always emerging markets, economies growing at the same time. But we are in a period, this differentiation issue is very critical. A number of them have been slowing down, having all types of actual institutional challenges.

One thing about the book Andrew mentioned here, as well, he said this is a book for financial market professionals. My sense is that this is a great book for policymakers, as well, because at least it is the first book I have seen myself that puts together a number of actual institutional features very important for policymakers to think about their structural policies and how to position their countries relative to others. This book provides a comprehensive treatment of that and it does a very good job telling the story and telling it in a way that actually providing the caveats.

It's not a book about hype. It's not a book that's going to tell you emerging market economies rule the world economy. Emerging market, there are a lot of books written. I think it's a very crowded space, but this is definitely a welcome addition.

But let me stop there.

MR. PRASAD: Thanks, Ayhan. Gian Maria, do you share the view that this framework is the right one that we should be using to evaluate emerging markets?

MR. MILESI-FERRETTI: Well, I completely agree with Ayhan, this is a super timely book, very interesting. It's actually a fun read, which is not always the case for books about economics. It's really written in a very breezy style, but keeping the very strong scientific foundations.

I think that timeliness, I would relate it to an even more recent period than the one Ayhan was talking about. EMs in general had a good global financial crisis. I mean, they suffered during the crisis, but considering the magnitude of the global disruptions, they came out of it quite well. And the years immediately after the crisis were years of unbridled optimism about emerging market prospects with extremely high growth 2010/2011. But the past four years have been years of high growth in emerging markets compared to (inaudible) economies, but disappointments comparing to our forecasts.

If you look at our IMF forecast in the World Economic Outlook, (inaudible) the forecasts of consensus basically of almost every large institution or financial institution or financial organization providing (inaudible). We all overestimated the persistence of growth in emerging markets.

And the disappointments in these past years have been associated with a very large increase in heterogeneity. Basically huge differences in performance across countries within the emerging markets world, which makes it also a bit more difficult to talk of emerging markets as a whole. And in this, it's the beauty of the book. The book is not about investing in EMs versus investing in advanced economies. It talks a bit about it, but I wouldn't say that's the strength. The strength is mostly in exploiting the differences within the emerging markets world, showing that they are very different for a variety of reasons and exploiting those differences -- I mean, constructing measures that allow you to really disentangle what those key differences are from the point of view of an investor.

Coming back to what I was telling you about heterogeneity in performance of emerging markets, just think of the Goldman Sachs acronym of the BRIC. If you look at the BRIC, these are four -- the four largest emerging markets. You have, on the one hand, India forecast to grow this year as 7-1/2 percent. You have, on the other hand, forecast to contract by almost 4 percent. You have China growing at close to 7, you have Brazil in a recession. So just the four big players show the extent of variety of performance. So when you're asked how are emerging markets doing, it's a very difficult question to answer in the aggregate.

Now, this is a book about indices that help explain portfolio allocation to emerging markets. So it's not a book about economic performance in emerging markets. Now, of course, economic performance is related to -- you take economic performance into account in allocating your portfolios, but it is not a book about growth or about current accounts. It's a book about explaining investors' decisions to go in on emerging market versus another.

And it has a beautiful focus on a set of variables, which is very vast in the literature. A lot of people have come up with a variety of indices in different guises, in different parts of the institutional spectrum to try to explain the cross-section of investment in emerging markets.

And I think the really value added of the book is in trying to extract a common component through all these myriad of indicators and see how much that common component is actually able to tell you about the way investors go about allocating their capital to emerging markets. And we can then probably come to some discussion of what other things you may want to talk into account or what you may lose by trying to distill the common component, but maybe I'll leave that for a next round.

MR. PRASAD: So, Rodolfo, both Ayhan and Gian Maria have argued for a broader audience for the book, but Andrew has told us that the book is written specifically for you and your ilk. So from your perspective as somebody who actually puts money on the table since you're an investor in the emerging markets, how do you see the relevance of this framework to the actual day-to-day work that you do in terms of picking emerging markets? And in terms of the different categories of indicators that Andrew's talked about, what is your sense of which ones are really the key ones that you at least focus on?

MR. MARTELL: Can I call a friend? (Laughter) So it's fascinating. I'm listening, taking notes, hoping that I don't forget some points that I want to make.

The first one that I'm going to throw out before I even answer that is if any of us had the wisdom in 1992 to choose the MSCI China Index as a good place to park money, about a year and a half ago you would have lost 20 percent, even though China would have grown 15 times in that same period. And by now you'd be more or less made whole given the recent run-up in the Chinese stock market. So what I'm trying to highlight is that we sometimes forget that in emerging markets it's even more relevant a distinction between economic performance and financial performance. You might choose the best and fastest-growing countries. That happened for a myriad of reasons, some of them as explained in the book, have institutional constraints that create very inefficient reflections of that economy in their stock market. So it's something that sometimes is forgotten in between the lines here, right? I mean, Brazilian performance, yes, the economy is stuck at zero, and for the past 2 years they have delivered an average of annualized net -12 percent for the past 2 years. So just something to keep in mind.

So how does the book come and help? I think it helps massively in raising the bar of the debate. There's going to be, particularly recently, an inordinate amount of noise with respect to emerging markets, most of which comes from uninformed or QuickBook, quick (inaudible) type of opinions. Can you pull out of emerging markets? No. You know, any reasonable asset manager or anybody that has fiduciary responsibility to managing money, pension plans, whoever has a target, actuarial target rate of 7 or 8 percent or above knows that it's going to be incredibly hard to reach those targets without having an allocation to emerging markets.

If you're thinking about sending kids to college, if you have a four-year-old now, probably the best way to put money away for that college to be paid in 10 or 15 years could be some degree of an allocation investment into emerging markets. So having said that, I think the question -- there's two levels of questions here.

As an asset manager, a fiduciary asset manager, I deal less with the how much to invest in EM because that decision is made at a higher level by the investors that decide to put money into emerging market-oriented strategies. So questions then become how do you allocate that allocation that clients made, how do you deploy that into emerging markets? And that's where the book, I think, becomes really important because for the past two or three years I've been beating the drum that emerging markets is an outdated label. It has been around for 35 years now, 34 years now. Actually last night we had a debate. I thought it was 24 and Andrew corrected me, it's 34. It's actually mentioned in the book.

So the point being eight years ago, when I built my first emerging markets portfolio, the only use that I had for the EM label is that it allowed me to sidestep the question of which countries do you include in the portfolio. It was so much easier to say, you know what? We just add the countries that are in the MSCI EM Index.

And emerging markets, frontier and the other extreme, and developed under this extreme, it's just a continuum, right? I mean, there's nothing that actually makes Korea all of a sudden wake up and develop market two or three years from now and, all of a sudden, all of their citizens are 10 degrees happier than the day before. Right? It just doesn't happen like that.

So my whole point here is that the drum that we've been beating is about differentiation, differentiation within emerging markets. And that's really the tune of the day. Even four or five years ago, a lot of EM maps will have emerging markets as this blob of green scattered all over the place. And that's really the wrong way to look at the asset class. Look at it now. The problems or the challenges faced by Asia, India, and Latin America are incredibly different. So what the book raises here is a framework to ask the relevant questions.

The book will not tell you where to invest, but the book will tell you what questions you should ask of people managing your money so that they can justify why they have more money allocated into Brazil, into China, into Poland, and how do those risks actually get rewarded based on managers' expectations of outperformance. So if you think about the asset management industry you have alpha generation ideas, or your ideas where you think your outperformance is going to come from, and then you should have a risk framework. That is, I think, where the book is literally filling a void that was gaping in there on how to come up with that relevant framework.

MR. PRASAD: So, Andrew, let me turn back to you. Rodolfo has told us of the whole notion of at least a label of emerging markets as sort of passé right now. Now, your indices and principle had much more broader applicability, perhaps not to the advanced economies because they have reached a level of institutional development, although that's a question for you, sort of whether it's applicable even to those economies in terms of differentiating amongst them. What about frontier economies? Perhaps another passé label given the continuum that Rodolfo spoke about. But could we use these indices also to look at a much broader set of economies where money hasn't gone in so far and perhaps don't meet your criterion of being open yet?

MR. KAROLYI: Thank you. That's a great question. And I'm delighted because I can tell that these people have read the book. It's fantastic.

MR. MILESI-FERRETTI: We got paid to do that.

MR. KAROLYI: Oh, yes. (Laughter)

SPEAKER: I didn't know about that.

SPEAKER: Maybe you did. (Laughter)

MR. KAROLYI: One of the things that was very important to me in the formulation of this exercise, this empirical exercise that is the backbone of the book, is that all preconceived notions about lines and where they would be drawn, above which you are developed, below which you are emerging, further below which you might be frontier, is something I wanted to vanquish. I wanted to eliminate that.

So in the empirical analysis of the book I actually construct all of these risk indices for a continuum of 57 countries traditionally classified as emerging and traditionally classified as developed, so that the reader could observe the intersection of these risk metrics across the spectrum and then choose to draw the lines where they see it fit. So that tells you about the differentiation between developed and emerging. That was something that I wanted always from the very beginning.

But, of course, data limitations are what challenge those of us who are empiricists. So while there are what some index vendors as classify as frontier in the actual 57 countries, the dimension to which I can expand that is tempered by data.

But good news is on the forefront here because I have an army of research assistants and we are building this out. We are actually, if you can imagine, reverse engineering this framework to the extent possible to a much broader set of countries that go naturally and even further into the traditional frontier set. And you can imagine reverse engineering these countries into these risk buckets and their relative ranks and scores as a result.

So bold ambitions, shall we say, but stay tuned.

MR. MARTELL: I've got to say something about frontier markets or I'm going to blow up here because a lot of people keep asking, particularly in the past year or so, gee, given that emerging markets are down and out and, you know, they're out of fashion, should we go into frontier markets? And hopefully, you'll like my metaphor. I think of frontier markets like truffle antipasto. You'll never make a meal out of truffles. It's great sprinkled on top and frontier markets are a great complement to any allocation strategy or to any exposure strategy into international markets, but it'll never be able to sustain the international component for a portfolio because by definition, because of the label is constructed, every time a frontier market does well it graduates to emerging markets and then frontier were perennially be made up of these up and coming or the fallen angels from emerging markets. Right?

MR. KAROLYI: Let's get rid of the labels.

MR. MARTELL: Your Argentines and your whatnot.

MR. KAROLYI: Let's get rid of the labels altogether and let these dimensions talk to us. That's what I'm saying.

MR. MARTELL: I've been beating that drum.

MR. PRASAD: That sounds very good. Let's try to relate, Andrew, some of the work you're doing to topical issues of the day and think about how practically they might use some of these indices. So what much of the world seems to fear, although some part of the world seems to want it, is the Fed potentially entering its tightening cycle sometime later this year. And there's been a lot of concern that like the taper tantrum episode there could be some emerging markets very exposed.

So let me turn to you on this, Gian Maria, given that you have this broad global overview, and this was something that you brought up in the context of the World

Economic Outlook. What is your sense of how vulnerable emerging markets are as a group? And if you think about this sort of framework to differentiate among emerging markets in terms of how vulnerable they might be, does it resonate?

MR. MILESI-FERRETTI: Let me try to make a few general points on this one. First on the risk of sudden withdrawal of capital from emerging markets, I think, again, I tried to stress in my first intervention the extent of heterogeneity across countries that is very important. So, again, very difficult to put the entire class in the same bucket.

You also have, by the way, enormous differences in size. China is as big as Brazil plus Russia plus India plus Mexico plus Indonesia plus Turkey plus almost all of Saudi Arabia combined. So you're not talking about players with the same weight. For the emerging market class for an investor, China does not loom as large because it is more closed. But from an overall impact on what is happening in the world there is just no proportion between China and the rest for the reasons I just mentioned.

One more point I would like to make is that in terms of risks, what you have is a loosening of monetary policy in the euro area and Japan, with the start of QE in earnest in the euro area, and the continuation of the expansion of the balance sheet of the Bank of Japan in Japan. So the tightening of the U.S. is going to be, as people call it in jargon, an asynchronous exit. So while the U.S. has already exited sort of QE, has stopped purchasing new assets, and is going to raise interest rates most likely within the next few months, other advanced economies are actually still pushing on the monetary policy accelerator pedal. Hence, for this reason, I think the risks of a sudden withdrawal of funds from emerging markets has fallen.

You may have other risks related to the fact that some EMs may be particular exposed to a dollar appreciation for balance sheet reasons, but, in general, the fact that not all advanced economies are tightening at the same time is clearly helpful from the point of view of portfolio allocations to EMs.

The other point I would like to stress is that I think people overdo the taper tantrum a bit. The taper tantrum was not associated with, on net, a portfolio withdrawal from emerging markets. It was associated with a big withdrawal from retail investors. And because people look at data for mutual funds that are typically heavily skewed towards retail investors, they see big withdrawals and extrapolate that in saying there was a huge exit from EMs. It is not true if you look at balance of payments data that include all flows, including those coming from institutional investors.

Individual countries did suffer, some did suffer, outflows. But if you aggregate the emerging markets that Andrew has, in their books not even in the second quarter of 2013 did capital leave, on average. Now, again, a lot of heterogeneity, which I think is the great theme of the book.

But from my perspective, again, I think one has to distinguish a bit between the behavior of institutional investors and the behavior of retail investors. I think we have our own studies at the IMF. I think they're backed by a lot of evidence that institutional investors are less skittish for precisely the reasons that were highlighted a moment ago.

But having said this, we've had serial growth disappointments on average for emerging markets and developing economies. Clearly, the declining commodity prices is something that is hurting a number of emerging market economies that rely on commodities as an important source of both fiscal and external revenues. So I don't want to downplay the set of risks, but, again, I think we ought to be very careful before putting everybody in the same basket.

MR. PRASAD: That's an interesting perspective, Gian Maria, that all the talk about the taper tantrum was just, well, a tantrum.

MR. MILESI-FERRETTI: It was there, but just I think the discussion that it was somehow this tsunami, in my view, is overdone.

MR. MARTELL: And he's absolutely right. Think about the EPFR flows or any type of mutual fund data flows. They're reported much more frequently than large asset managers will report their moves. Right? So back then, in 2013, you saw all these completely, couldn't agree more, retail-oriented flows. And it was not until Q1 of 2014 that you could actually start listening into the earnings calls from large asset managers to figure out what kind of institutional moves had there been in their emerging market allocations.

So it actually highlights one of the biggest dilemmas, I would say. As an asset manager, everybody tells you that you should invest with a long horizon, medium to long horizon. Right? I mean, there is a tendency to revile and despise the short, fast money. And yet, a lot of people pay undo attention to all these flows that come from mutual funds that happen to have daily liquidity, and it's very difficult to have a nice match when you're managing money between providing daily liquidity and providing investment insights that will pay off over the next 6 to 24 months. So it highlights as a manager you don't make money by choosing the next rock stars in your portfolio. You make money 99 percent of the times by managing drawdowns, by losing less money than the guy next to you when things get tough.

And that's one of the main reasons why the book is good in coming up with a risk framework to analyze what you're exposed to.

MR. KAROLYI: Can I (inaudible) for a second?

MR. PRASAD: Okay.

MR. PLATT: One more comment. In the study of mutual fund flows during 2013, I would add furthermore that retail experience is quite heterogeneous among global emerging market mutual funds, where some were clearly more skittish and yet others really held their ground. And there's quite interesting evidence of this heterogeneity of experience on the retail side that were reflecting manager styles and manager strategies and allocations, as well, in that period.

MR. PRASAD: So, Ayhan, let me turn to you and, first of all, ask whether you agree with this seemingly revisionist history about what seemed like a very difficult period for many emerging markets, and are there lessons in it for what might happen if the Fed were to tighten? Because this suggests that it was retail investors and that institutional investors tend to be more sticky.

And I'd also like to relate it to other risks that you see emerging markets facing. And the last global economic prospects that you were the head of there was a very nice discussion about oil prices and how that's also affecting many emerging markets symmetrically. So if you add up all these risks it seems like emerging markets look vulnerable, but this discussion suggests maybe not. What is your sense?

MR. KOSE: I think I agree with all the things Gian Maria has said. When we think about the baseline, the risk, of course, is not there. There are different reasons why this is a different episode than it is a taper tantrum. I will talk about taper tantrum, as well, a little bit.

First, obviously the U.S. economy is gaining ground. This is a (inaudible) development that we will see an increase in the interest rate, not because of market perceptions of monetary policy are changing, but because of the U.S. economy's getting stronger. So there are good reasons to increase interest rates in the United States. And a stronger U.S. economy is good news for the rest of the world, including emerging markets, frontier economies, whatever you want to call them, Andrew.

So the second important point, though, taper tantrum, mostly driven by retail investors. Gian Maria made that nice observation. Now, the institutional investors have longer-term horizons. Of course, they will look into the types of things, hopefully, Andrew talked about. And their behavior will be, you know, less volatile. That's good news, as well.

But during the taper tantrum a number of emerging market economies suffered. We saw very large exchange rate moments, even if you don't think that capital flew out. That's a fact. And when we think about broader emerging markets and think about the basic pull-and-push factors, there are reasons to worry about the possibility of a sudden stop in one or more emerging market economies.

Since Eswar asked me about the risk scenario, I will talk about the risk scenario (inaudible). Just think about push factors. Of course, the growth is picking up. That's one reason you need to think about the growth differential between emerging market economies and advanced economies are going to go down. At the same time, growth is picking up means that there are positive spillovers. That's good news.

Another important issue to think about, whether that growth is fragile or not, at least for the moment U.S. growth looks durable. The euro area is picking up. These are all good news for the emerging market economies.

But let's look at the pull factors. The important push factor is there, of course, the interest rate increase. When we think about pull factors, Gian Maria nicely mentioned this observation: we have been making predictions with respect to growth in emerging markets and every year we have been over-predicting the growth. So there is an assessment for potential growth we have been making a mistake about. I think the latest World Economic Outlook nicely covered that issue. So there is decline in potential growth and there is decline in a broader growth trend we see in emerging market economies since 2010.

Another important reason, now you look at emerging market economies, some of them have serious vulnerabilities. Those are the ones actually that are going through contraction periods.

In addition to that, some of these emerging market economies are having difficult episodes when we think about the types of risk factors Andrew nicely articulated in his book. Policy uncertainty, governance issues in some of these emerging market economies are at the forefront driving the news, creating all types of challenges for investors, like Rodolfo.

Now, when you add up all of these, what do you see? First, we know that it's going to be a gradual increase in interest rates. That's good news. At the same time, down the road, we see that market participants' views with respect to how interest rates will evolve and the policymakers' view how interests rates evolve, there's still quite a bit of gap between the two. How that gap is going to close down the road, it has to be seen. And how that will play out, of course, have implications for emerging market economies.

An increase in the interest rates in the United States will have implications for how emerging market economies conduct their monetary policies. It will be difficult for them to implement expansion of policy. Most of the time they will follow the Fed.

In the Global Economic Prospects Report we discuss another important issue: this fiscal policy, whether they have available fiscal policy to stimulate their economies if growth slows down and they have, you know, higher borrowing costs. That can be quite difficult for some of the emerging market economies because they don't have the type of fiscal space they used to have prior to the crisis. They used that fiscal space, they stimulated their economies, and they were able to weather the storm of a global financial crisis well. But that space, I think, quite a bit gone.

These are not emerging market economies of the '80s or '90s. They're in much better positions, but they should be mindful of the risks. And I think, in that context, it's very important for a number of emerging market economies to try to find ways to differentiate themselves and implement structural reforms to push potential growth. Because when interest rates start increasing we will really learn, in a sense, you know, who are the ones swimming naked. And at that point, it might be too late. So it's a good idea to read this book for policymakers in emerging markets.

MR. PRASAD: So, Rodolfo, what is your sense about how much we should be concerned when this (inaudible) moved by the Fed actually happens? So there is a sense that some of it is already priced into the market. There is a sense that some of these economies are preparing themselves for it. But how much room do they really have to respond if things do turn ugly? And what is the likelihood that things will turn ugly for any of these countries?

MR. MARTELL: Wow, that's a big question. So let me tell you how I think about those things, which is slightly different from the question that you asked.

I'm a stock picker, not even a country picker, right, which means within my mandate I've got to make sure that I keep more or less equal exposure within countries, right, manage my exposures within countries, and then try to find the opportunities within each country. So what does it mean? I totally agree on everything that has been said about probably a lot of the hype of what the Armageddon coming from the next iteration of taper tantrum is going to be, it might be exaggerated. We all hope it is exaggerated.

The biggest fear comes from the potential overhype of the mechanisms of adjustment that had been hailed over the past two years. So a lot has been said about how these countries are not the ones. You know, these are not your grandfather's emerging markets, right? They have developed local debt markets, they have turned out their debt in local currency, they have flexible exchange rate regimes, all of which is good.

The big test is going to be when people come to get their money, if those markets don't freeze or dry up because we know that local fixed-income markets tend to be very finicky. And if that happens, then what will happen is a lot of people (inaudible) will reduce their exposures by going short the currency or by selling currency. At which point, the shock will move on to equity markets and then it'll become real. That'll be the scenario that we all want to guard for.

Now, from an asset manager's perspective, then you have to differentiate not only within countries, but within country sectors and figure out which country sectors are going to be affected differently by these potential currency moves. So those will be my concerns from where I sit doing my job on a day-to-day basis.

MR. PRASAD: Gian Maria, I want to turn to this longer-term issue that Ayhan briefly alluded to. In the latest World Economic Outlook he had this very nice chapter about the decline in potential output, basically around the world, especially in emerging markets. So can you tell us a little bit about why you believe that potential output growth is declining even in the emerging markets? And in that set of reasons, how important are the sort of risk metrics that Andrew has identified? Have they contributed in any significant sense to this decline in potential output growth?

MR. MILESI-FERRETTI: Very hard to answer the second part of the question because we simply haven't run the experiment of correlating these indices.

I think I would not -- I think these indices are great in focus, but the entire focus of the book is really on the cross-section of emerging markets. The issue of declining potential growth is an issue of the time series. So an issue of the time series is why is the same country with these characteristics now growing more slowly?

So a question for me is, will these indicators work not just to tell you whether to pick Brazil or China, but will they work over time in telling you should you increase Brazil, if Brazil -- exposure to Brazil. If Brazil moves, the values of corporate capacity, of political instability, or whatever for Brazil move in a direction that would raise the index or put the index starts more favorable values.

Now, why do we come with the notion that potential growth has declined in emerging markets? Think of three pieces of potential growth. I think of growth in the labor input, growth in capital and total factory productivity.

On labor is where we stand on slightly firmer ground. There we have demographics. And, again, you remember what I told you before about the relative size of countries. Think of the demographics in China with a huge decline in (inaudible) with the one-child policy. Any reasonable extrapolation of the labor force in China will tell you that the growth of labor input in the future, just an amount of new workers, is going to be much lower than in the past.

Truth be told, this was not the motor of China's growth in a statistical sense. But still, it is something that matters. On that, we are on safer grounds.

What is the second factor? Capital accumulation. Well, again, if you look at China in particular, I think almost everybody agrees that the push to raise investment in the aftermath of the crisis ex post turned out to be unsustainable in the sense that the allocation of capital was what it was and everybody, including the Chinese authorities, firmly believes that a rebalancing of the economy is extremely important with a decline in the overall rate of investment. It's sort of increasing consumption, declining investment, and, of course, more attention about the cross-section of allocation of capital, so matching better expected returns rather than other factors.

Now, still, a decline in investment rates is going to be other things, being equal, associated with lower levels of potential growth. It may be healthier growth. It may be less likely to lead to a crisis, but it will be lower growth.

The third factor and the most difficult one is total factor productivity. Now, what can we do, what can we say about the evolution of total factor productivity? Here we are on very thin ground, to be very honest with you, for two reasons.

First because it is very difficult to predict total factor productivity, even if we were able to measure it correctly. So the exact way in which technological improvements, organizational improvements enhance the production possibilities for a given amount of labor and capital. But even if we were able to do it correctly, you know, predicting the next technological revolution, extremely hard.

For EMs the difficulty's compounded by the fact that measurement issues are hug. Measures of capacity utilization, for example, lack typically; same for measures of the length of the workweek because of the particular importance of a formal labor market. It is very, very difficult to extrapolate.

What we can see is what has happened in the data. And what has happened in the data has been a systematic slowing of productivity growth over the past few years, (inaudible) the serial disappointments that I mentioned. And we can think where could these come from?

I think one factor, again, acting over a longer horizon, could be a bit of convergence. China is still far away from the U.S., but has moved quite some ways along the technological frontier. It's much less poor than it used to be. Mechanically, you would expect at some point returns begin to fade.

The second is that some factors that helped very high growth in EMs around 2010/2011, and possibly pre-crisis, as well, may turn out to have been more level effects than growth effects. To give you an example, when you have a boom in commodity prices and you sell commodities, that clearly makes you richer. You get more money for exactly the same amount of output and you can spend that money on nontradable goods and increased production of nontradable goods. But this does not necessarily lead to a sustained increase in growth. You get a boost over a few years, but it's basically a level (inaudible) that eventually ends.

And one can make the same reasoning for sort of an increasing demand of foreign investors for EM paper associated with lower interest rates in advanced economies. I think you can think of level effects coming from there. But eventually, even those gains tend to be exhausted.

And we can think of the role of China again. China being so large, pushing so hard for a number of years with growth, we want a rationalized ex post above trend, has helped its trading partners, has pushed up commodity prices, all factors that have helped emerging markets for a while, but factors that eventually will fade.

So for all these reasons combined we have an outlook where growth in emerging markets is going to be a bit slower than it used to be.

Now, just one piece of good news to finish is that emerging markets are still growing at a faster rate of advanced economies and they are a much bigger share of the world economy. So China growing at 6 today, contributes to world growth the same or more of what China growing at 10 did 10 years ago, simply because the weight of China is twice as big as it was before.

So if you look at out forecast for world growth, you actually don't see much of a slowdown. But if you look within countries, you do see it. So basically, the faster-growing countries will continue to grow faster, but not as fast as they used to. But the fact that they're becoming a more important part of the world economy helps global growth.

MR. PRASAD: We have a number of different elements now in this discussion. Rodolfo has made the point that the connection between macroeconomic performance, especially growth in stock markets, is not entirely obvious. In fact, there seems to be a disconnection in China, in particular, right now.

Gian Maria and Ayhan have made the point that there are there deeper forces at work. Ayhan has called for structural reforms in these economies, and Gian Maria has talked about how many of these economies face (inaudible) potential outward growth. So if one takes a step back from your paper what can the broader policy community learn from this rather than just the investors?

Gian Maria also made this point that what your books is about is the cross-section really, then the time series. But, ultimately, we care a great deal about growth and that's what matters.

So what lessons can a policymaker take from these indices for what one cares about other than stock returns?

MR. KAROLYI: This is for me, I presume, Eswar.

MR. PRASAD: Yes.

MR. KAROLYI: And I appreciate very much the question and the comments of Ayhan earlier that -- and I've been told this on a number of occasions, that my purpose is too narrow in communicating directly to the institutional asset management community or the asset owners that are served by them, and that there may be greater implications for policymakers. And I definitely recognize that possibility.

I guess I'll say it very simply: this is an important constituency that has a lot of potential consequences in terms of the distortions they may create and the dislocations they may create. The more a policymaker can inside the head of these investors, the more effective they can deploy whatever macroprudential tools they have at their disposal to manage what might be coming at the end of the 2015. And the book is a service for them. It's again, holding a mirror up not only to the institutional investors, but also one that might be very interesting for the policymakers, although the book was never written for them.

And I guess if I added one more thing, another reaction that I've received to date from my colleagues is that many corporate that are considering deploying resources into these countries, for example, through a Greenfield operation or joint venturing or acquiring their way into one of these markets could benefit from the rubric and the framework that's contained here. And, again, it was never intended for them.

That also, undoubtedly, has -- we were making the differentiation between portfolio and direct flows. Right? That also has some important consequences for the policymakers.

MR. PRASAD: I would, in fact, suggest an even stronger defense that, ultimately, many of these institutional issues you talk about in the book are the constraints that prevent these economies from generating better allocation mechanisms in terms of generating better productivity growth. So, ultimately, all of these matter for what macroeconomists care about. So even though you're looking at it in terms of -- from the perspective of stock market returns and so on, I think, ultimately, there's a very important determinance of this, things that feed into growth in an important way.

Do you sense that there are other angles in terms of what policymakers and others could take out of this? Because you were the one, I think, who made the good point that perhaps there is a lot more to this book than Andrew as himself been suggesting.

MR. KOSE: Yes, I think there actually many things policymakers can learn from the book by simply looking at this figure, locating their countries, where your country is. Because there's a figure almost in every chapter of the book telling something about these countries' relative positions with respect to, you know, the different types of institutional indices.

Now, when we think about institutional fragilities, these institutional fragilities, especially when it comes to public institutions, have implications, how countries design their policies. Take very simple example, think about monetary policy and Central Bank independence. In a number of countries, Central Bank independence is in question.

We know that more independent Central Banks tend to implement policies thinking about just, you know, the economics of the monetary policy rather than other considerations. And I think that the types of indices Andrew provides actually have all types of hints with respect to institutional underpinnings and how countries should think about these institutions and provide the necessary reforms, undertaking necessary reforms, to push the institutional quality forward.

This is especially important in this environment, in an environment of slowing growth despite higher growth in advanced economies. Because only if countries undertake these structural reforms, what I call, and most of them are related to institutions. There could be institutions with respect to property rights. It could be institutions with respect with how the financial sector functions. It could be institutions with respect to fiscal authority; institutions with respect to monetary authority. They all involve some type of structural reform. They all involve actually considerations with respect to productivity growth and ultimately growth and, ultimately, I think bringing foreign capital to these economies. And that's the basic premise of the book, this underfunded growth opportunity, combined with institutional problems, fragilities, but, at the same time, a huge opportunity.

MR. PRASAD: So, Rodolfo, you again are the practical user of this book, so you're typically in the mode of advising investors, but let's say you had a policymaker from an emerging market who seeks your advice and says, Professor Karolyi has given these give things to focus on. I have a limited amount of political and economic space. What should I really focus on?

So if one thinks about the prioritization of this list, what do you think is really important from all of these indicators and was pointed out? And as a subquestion do you think again that the micro part is more or less important than the sort of indicators that Andrew has talked about in his book?

MR. MARTELL: Well, I think micro rules, period. Now, having said that, in terms of the indicators in the book, the one that I would personally put at the top of the list, if you had limited powder and ammunition to go after, would be number six, I think, the one that talks about the political instability, which is a nice way or a euphemism to talk about all the corruption problems and all the fragile institutional framework and all that. So if you take a quick list about what's ailing Latin America, just to take an example now, even Chile, that it's a rock star, there are corruption scandals. Right? So the whole cabinet sacked and everybody (inaudible).

You move on to Brazil, take your pick, right? I mean, first one off the list would be the Petrobas scandal that has tarnished a lot of the image and efforts of the government.

Move on even to Mexico that has been the darling of everybody because of the reforms that have been so accurately put in place. And a lot of the luster of that has been taken away from these, you know, questionable scandals on whether or not certain property loans or mortgages were appropriate or not. So that will be the one that I think I would address first and foremost.

And the list just keeps going and going, right? I mean, it's not to say that China, Korea, or Russia, you know, that are free of all these problems. I mean, these, I think, is the malaise that actually allows or doesn't allow a lot of the good efforts to actually take hold and develop their potential.

MR. PRASAD: Okay, we'll get to audience questions in a second, but before I do that I'd like to pin you down, Andrew. These are your babies, all these indicators. If you had to prioritize, how would you think about them? And at one level I know this is all endogenous, but if you were to tell, again -- if you were in the seat of having to advise a policymaker what would you have the policymaker focus on?

MR. KAROLYI: Yes. No, thank you for the question. As I was writing this, over the course of time that I was writing it I kept imagining myself in the setting of an investment policy committee for an institution deciding whether and how to deploy overseas. And that was sort of my guiding light is thinking about how useful these risk indices. As I always say throughout the book, it's a starting point for a conversation. It's a starting point for a conversation.

If you ask me in that conversation were I to imagine that conversation to be had now or then or in the future what would I emphasize among the six indicators that are featured, I would definitely -- and I come to it regularly through the book -- talk about what I classify as the softer constraints. Those are the latter three.

You talked about political instability and I agree, but I would also put into that, lump into that, the issues of the legal backbone as far as one of the key institutions and corporate governance, the corporate opacity metric. I would put those in sort of a higher category.

Part of it may be the fact that in my experience these things have not received as much attention in those types of conversations and discussions as the harder constraints, but that would be where I would put my relative emphasis. And you can see exactly my logic and thinking as I was writing the book as to how I would sharing and utilizing this with them.

MR. PRASAD: Very good. So we have a few minutes for questions. When you ask questions, please identify yourself and ask questions. You can save comments and extended comments about the book for later with Andrew.

Please, there's a mic that will be coming around.

MR. TAZUKI: Thank you. Thank you so much. My name is Takomo Tazuki of CSIS. I was originally working for a commercial and investment bank for 20 years and I am supporting the Japanese companies operating in China and Southeast Asia. And I supported not only investment, but (inaudible) operation, general operation in so many countries. And from my experience, what should I say, where we see the infrastructure and the (inaudible) factories and other general consumer equipment, probably the transparency or legal capability or governance is quite different in each country.

So I think you should include what kind of industry you should focus on. Probably you have to choose other criteria for governance and legal transparency and something like that.

And I think one more important thing is combining with long-term economic forecasts is quite important because this analysis is (inaudible), so we have to see a long-term economic forecast and long-term prosperity and interest. So how to discover it.

MR. KAROLYI: Thank you for that. Should I react or --

MR. PRASAD: A quick response.

MR. KAROLYI: I'll give a quick reaction because I would love other questions, too.

Thank you for the feedback, especially with respect to the industry. I should mention that to add color to each of these six very sterile risk buckets I utilized case studies, teaching case studies that I've written with my students at Cornell, to sort of showcase and bring to life each of those different risk dimensions, and I encourage you to look at some of them. They are typically corporate types of deals and they are in specific industries. Perhaps afterwards you can share some more thoughts about why you think some industries may be more acutely sensitive to, for example, issues of transparency than others. But I welcome that. Thank you.

MR. PRASAD: From the back.

MS. AGARRY: Ingnar Agarry from GW. So there's a lot of talk about heterogeneity in the book, right, about (inaudible). So the one question that I had was are some of these institutional fragilities or these dimensions of risk more pressing for certain countries depending on the development path that they're on? So it's conceivable that, you know, the farther off you are in the development path, maybe it's more about market capacity, but (inaudible) you are, then maybe it's really about the softer constraints that matter. Right?

Which also brings this question of how much of this book of these indicators is really about a static view of the world rather than a more dynamic thing? Some of these things don't seem to change much over time, like the legal system and political constraints and so on.

MR. KAROLYI: Thank you. Can I react to that real quick?

Beautiful question and, again, I thank you very much. I didn't showcase it in the book and I haven't shared it with you, but these risk indicators have been built every year back to 2000. And you're absolutely right, they are slow-moving. They are reflecting the underlying institutions and they are organically changing, but naturally quite slowly.

And the idea of threshold effects, which was the first part of the question, is a beautiful one. I would say that to now I have under-explored the threshold effects. And the nature of the pairings to the extent that this is transactional, involving an acquirer from one country and a target in another country, the differences in terms of -- the institutional differences and the size of those institutional differences I heretofore have really under-explored, but it's a great point and important.

MR. PRASAD: I see there are lots of questions and a lot of interest. I'm going to change the rules of the game. What we're going to do is we'll take a bunch of questions.

MR. KAROLYI: Take a bunch, okay, that's fine.

MR. PRASAD: And then I'll give each of the panelists a minute for any concluding thoughts and Andrew will have the last words. So don't feel obliged to answer all the questions, but if you'd like to comment on any of the questions or the discussion, you'll have a chance.

MR. KAROLYI: Thank you.

MR. PRASAD: Let's take two from here and then we'll go to that side. So please keep your questions short.

SPEAKER: To any of the panelists, do you have any advice for the retail investor interest in emerging markets?

MR. JANE: E.K. Jane. My quick question is about what are the learnings from the emerging sectors that you've kind of used in the framework that you have developed, emerging sectors and industries within the developed markets? How do they translate to the risks and returns (inaudible) economies?

MR. PRASAD: Amadou?

SPEAKER: One thing is what policymakers in emerging markets can do, but the other thing is what market investors themselves can do. So you have, for example, American depository receipt and all these innovations that the markets themselves have created to manage these risks. So I know you worked on it, if you could just elaborate. Thanks.

MR. KAROLYI: Happy to, thank you.

MR. PRASAD: Let’s do two questions from this side, please.

SPEAKER: (inaudible) from Chinese embassy. Nice to get this book. I have to read it. Just a quick comment.

Personally, I think it should be also good for the policymakers. And my question is because China now is not just a (inaudible) for FDI, but at the same time, last year, we got the same (inaudible) outside similar to that, what we had attracted for the FDI. So a question is that have you any experience or other -- you can let us know that, how can you compare what is the emerging markets and developed markets? And among developed markets, what might be factors you can consider?

MR. ZAHN: Mike Zahn, an amateur quant investor. You’ve started the conversation about how to do -- set up an index and then compute an optimum portfolio allocation. The real world that I found demands a black swan time series analysis, where you hedge against the bad black swans and try and ride the good black swans. Have you started that conversation among your students as to how to do that? And can you offer any, as a retail investor or as a hedge fund investor, how to do that with your book?

MR. PRASAD: All right, so we have a good set of questions. So I’m going to let the panelists have a minute each and then we'll conclude with you, Andrew.

MR. KAROLYI: Just watching the time and I obviously can't -- I would love to answer all of them and I --

MR. PRASAD: Yes, you'll have to be selective.

MR. KAROLYI: I will be very selective.

MR. PRASAD: A series of questions on how to -- the retail investor, the weekend quant investor can use your thing, how we can use it in terms of developed markets' industry indices.

MR. KAROLYI: I'll take that one. I'll take that one.

MR. PRASAD: Andrew.

MR. KAROLYI: Yes.

MR. PRASAD: So we're going to give the panelists a minute to talk and we'll give you three minutes at the end to wrap up.

MR. KAROLYI: Very good.

MR. PRASAD: So if the panelists have any thoughts, Rodolfo, would you like to start? Any concluding thoughts of if you'd like to answer any of the questions selectively? Please a minute each.

MR. MARTELL: So I'm timing myself. Retail advice, by and hold, literally. (Laughter) I mean, make your mind and ride it, right? I mean, if you think about the average buy-and-hold return to the MSCI Index over the past 10 years it's probably 12 percent or 13 percent, even with the recent disappointing period. If you look at the annualized return dollar weighted -- it's available on Morningstar, you can choose it for any category -- it's going to be in the emerging markets at least 4 percent lower, which means retail investors are exceedingly good at buying high and selling low, and that's literally poor timing. Right? So that's all the difference -- that's actually what all their sites in the market trade capitalize on.

So that'll be the short advice. Make up your mind on something and then, you know, have longer investment horizons.

MR. PRASAD: Ayhan?

MR. KOSE: I think this idea there is emerging markets developing economies, developed economies, this book makes a very good case at the end of the day these countries have certain futures. These underlying futures with respect to institutions are critical and those institutional futures shape long-term potentials of these countries. It's not just important for asset managers. It's important for policymakers to pay attention to them and think about ways, policies to improve them. And I think that Andrew's book provides a wealth of information to make that case.

MR. PRASAD: Gian Maria?

MR. MILESI-FERRETTI: Maybe again one word on the time series. You have these indices. You have people that have invested on the basis of them. And as Rodolfo has emphasized, stuff is priced in. Countries that are growing fast may have asset prices that have risen already, and so it's not clear that the best opportunities necessarily are there. So within the big picture of buy and hold and being diversified, I think thinking forward, if you have trust in these indices of whether -- where they're going to move in which direction because just putting the money where the index has the highest value is not an obvious investment strategy to me. It's more a rationalization of where people have invested so far.

MR. PRASAD: Andrew, you have the last word.

MR. KAROLYI: Well, I'll just say two things. On the retail investor, how can they use this stuff? Take the risk indicator scores, hold them up side by square with the country allocations in your global emerging market fund, and look at the relative weights of those countries and hold them up against the risk indicator scores and do the very simple smell test. Does it look like there's inordinate bets that are being taken by the mutual fund that you're considering relative to what seems rational and sensible based on these risk indicator scores? That's what I would do if I imagine myself sitting down with my father-in-law deciding which of these global emerging market funds.

They are by design trying to focus in on that black swan event. What these indicators are trying to do ultimately is preserve your capital. Imagine you're taking your client -- or you as a client are taking your money into these markets. Whatever the returns are, whatever the gross prospects are, whatever the result is, are you able to repatriate and return that capital? That's what these institutional measures are.

And I guess my second and last comment would be to just simply say thank you. Thank you for coming. You honor me and I appreciate your attendance here and your questions and your attention. And to my fellow panelists, I'm really grateful for the time you've taken. Thank you.

MR. PRASAD: So *Cracking the Emerging Markets Enigma* available on sale outside with Andrew's signature or if you find at a local bookstore. I am delighted that we had such a wonderful panel with us and thank you very much to all of them, Gian Maria Milesi-Ferretti, Rodolfo Martell, Ayhan Kose. Congratulations especially to you, Andrew Karolyi --

MR. KAROLYI: Thank you very much.

MR. PRASAD: -- on a fantastic book. And thank you very much for coming. (Applause)

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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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