THE BROOKINGS INSTITUTION

SAUL/ZILKHA ROOM

THE GREAT REVERSAL:
HOW AMERICA GAVE UP ON FREE MARKETS

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P R O C E E D I N G S

MR. KHARAS: Good afternoon everyone and welcome to this discussion on the great reversal. My name is Homi Kharas. I'm the interim vice president and the director of the Global Economy and Development program here at Brookings. And we are really delighted to have a panel this afternoon to talk really about well, first, to talk about a really wonderful book. And we have the author who is here who will give you a foretaste of what's in the book. Hopefully not so much that you won't then go out and buy the book but enough to persuade you that you want to buy the book. Thomas Philippon will present his book.

But then we've also got a wonderful panel that will be moderated by colleague, Zia Qureshi to discuss the findings of the book and other books of some of the panelists that touch on the same issue. Because this is really one of the big issues and it's a real privilege for us at Brookings to be trying to think a little bit about these things.

And the big issue is what do we think is really going on in the world of economics? I think all of us sense that the outcomes that we're getting are not that great. We're not getting the kind of productivity growth that we used to get and that we want to get. We're not getting the kind of distributional outcomes that we used to get and that we want to get.

And so, the big question is this a fundamental flaw of capitalism today or is it a fundamental flaw in the way that capitalism is being implemented and executed today. In other words, is this an ideological problem or is this a policy execution problem. And I really look forward to a spirited debate on that issue.

So, we've been trying to do some work on what we call productive equity. What is going on with productivity growth and with distributional growth at Brookings. And all of these forces of technology, of productivity, of distribution are all kind of working their way through. Through product markets, competition policy, financial markets which are really important in dictating how some of these outcomes emerge. And this is a very complex set of interactions. So, it's a pleasure to have people who have thought about this deeply to come and talk to us about it.

Today's event revolves around the great reversal: How America gave up on free markets. A book by Professor Thomas Philippon. Thomas is the Max Heine Professor of Finance at

NYU at the Stern School of Business. He's been named one of the top 25 economists under 45. He's won prizes in Europe for the best young economist and other things. He's been a visiting professor at Columbia, Chicago, Yale, Princeton, did I leave out any other places, Thomas, I mean nowhere in Europe?

DR. PHILLPON: Paris.

MR. KHARAS: Paris. Paris School of Economics. So, you know, well-traveled, well-versed and he's obviously will talk a lot about this relationship between how the U.S. has moved from being the champion of capitalism to perhaps being captured by capitalism. He's also an academic advisor to the financial stability board, the Hong Kong Institute for Monetary and Financial Research, an advisor to the New York Fed, board member of the French Prudential Regulatory Authority and senior economic advisor to the French Finance Minister.

So, if you've been advising all these people, Thomas, how come we're in the state which we're in? I mean, do we really want to stay and listen to this? We are delighted to have you here. The running order this afternoon, Thomas will give a 15 minute or so presentation of the book and its overview. Then we'll move to a panel discussion. Zia will introduce the panelists as they come up on stage and then open it up to Q&A from the floor. I think we have an hour and a half for this session. We'll try to close promptly at 4 o'clock. Thomas, the floor is yours, thank you very much.

DR. PHILPPON: Wonderful. Thank you all for coming. It's wonderful to be here in Washington at Brookings where I came many times as an academic. So, it's always good to be back. I want to give you a quick overview of the book so 15 minutes, so I won't go into the details, of course. But at least you're going to get a flavor of what I think is happening in the U.S.

So, I titled the book, the great reversal, because 20 years ago which is exactly, as it turns out, when I arrived in the U.S. I came to the U.S. to be a student at MIT. So, I landed in Boston at the airport, at Logan Airport in 1999 to start my PhD. And quickly I realized that the U.S. had, you know, in many markets, better deals than in France.

So, as a student, I could fly to conferences because plane tickets were much cheaper in the U.S. than in Europe. I could easily afford to use internet for work because it was actually much cheaper to connect from home to the internet in the U.S. than it was in Paris. Having a cell phone was also cheaper

in the U.S. and many other things like that. That was 20 years ago.

And today, it's when I fly back to Europe that all of these statements are true. Just to mention one number and I'm assuming everybody in this room uses internet at home so you all have some kind of broadband connection. Either you get it through just pure broadband or more likely you have a cable company like Comcast or something like that and you pay a monthly bill.

Now, the median household in the U.S. pays $68 per month just to get broadband connection with no TV, just a broadband connection. Okay the median household in France pays $31 a month. So, 68 versus 31. For something that used to much cheaper in the U.S., now it's less than half the price in France compared to here. Why, because on average, you guys have one and a half providers to choose from. Which means half of the rooms lives in monopoly the other half of the room has two. On average in France, it's five.

So, if you don't like one you just switch to the other. Then, of course, they compete, the prices go down and that's how you end up with much cheaper broadband access in France than in the U.S. The same is true in Germany, the same is true is in the UK, the same is in Spain and Korea and Japan. Pretty much every advanced economy has much cheaper access to internet than the U.S. even though it was the opposite 20 years ago. So, the book is about that. It's about how come the U.S. had very competitive markets, meaning good deals for consumers and today it's not true anymore.

So, there are many ways you can look at it. So, the first thing we do in economics is we try to figure out, you know, how many firms compete in each industry. It's very hard to actually do it for the entire economy. Because many markets are local, because it's very hard to compare grocery stores with, you know, big supermarkets. So, we have proxy's that are not perfect but all the proxy's point toward higher concentration in the U.S. economy over time.

So, this is the market share of the top eight firms and how it has changed over time. So, we call them concentration ratios. So, if you open a book in, you know, IO or economics you will see something called CR, that means concentration ratio. So, CR8 means the market share of the top eight firms in an industry. So, if it's like 30 percent that means the top eight firm have like 30 percent of the market. And it used to be around 30 and now it's around 40. So, it went up by about eight percentage points over the past 20 years. That's true both in the service sector and in manufacturing sector.

These are very broadly aggregated sectors. So, in many actual markets, the concentration is much higher. The prime example, of course, is airlines. So, it used to be the case that you had eight major airlines flying in the U.S. and now you have four. Plus a few fringe ones that their market share is so small that they don't really matter that much. So, you went from eight major airlines to four major airlines.

The four major airlines in the U.S. today have about 80 percent of the market. So, we would say that the market share of the top eight, four is 80 percent. In Europe, it's about 40 percent. So, much lower concentration in the airline market.

Now when you look at concentration, I give you a few examples where it sounds bad but the truth is that historically, it's not always bad. You have many examples throughout history where the reason a firm becomes dominant in the market, either one firm or few firms, the reason they become dominant is because they are just really good and just got better. And then that concentration should not be prevented because it is not an issue, it is merely the consequence of, you know, firms doing a better job. And so, this the good type of concentration.

Typically, when you observe that, you see that that concentration comes together with fast productivity growth and low prices. And good examples in the U.S. today in recent years would be the retail and wholesale trade market. In this sector, actually prices have been going down. Concentration has been rising but it's been driven by efficiency gains. It also comes usually with lots of investment either a physical investment or intangible investments. So, when you see this pattern in the data, productivity growth, low prices, intangible investment together with concentration, you don't need to be worried too much.

And then you have the bad type of concentration. That happens when the large firms in various ways manage to prevent firms, other firms from competing with them. But broadly speaking, we call that barriers to entry. These barriers to entry could be regulatory so I'll show you some date. Firms lobby, lots of them lobby for that either themselves or through business associations to make sure that they get protected. It could also just be that they behave in a way which is threatening to the new entrance. Either they're going to buy them out very quickly or threaten to kill any that enter and this kind of predatory behavior can also prevent entering. Then you would see concentration but that would be the

bad type. So, it would come with high prices, not much productivity.

And so, the big question then is when we the concentration going up in the U.S., how much is the good type, how much is the bad type. And what the book is about, first of all, if figuring out, you know, teasing out which one is going on. Then a rated question when you start to understand the dynamics is, is it technology that's changing in the background or are we seeing the consequence of policy choices. So, I'm going to try to answer both questions.

So, to give you a sense of what good concentration looks like from the perspective of an economist like me, that's Walmart in the 1980s up to the mid-2000s. So, the market share of Walmart used to be close to zero, it's actually almost zero in the 70s when the firm was born. And then starting in 1980s you see a very, very fast growth up to almost 60 percent of market share in the 2000s. So, amazing growth.

But what was driving this growth? Well for sure, they were competing extremely aggressively but they were cutting prices and they were investing a lot in just in time, supply management chains, all kinds of investment that drive up productivity. So, it's still disruptive, it's still the case that they can put small business out of business, that is possible, but at the very least, the consumers get a good deal. So, in my playbook, that looks like efficient concentration.

And the green line here is their profit margin. So, as they were expanding, their profit margin was roughly stable, definitely not increasing, maybe slightly slower. The question is, is this the kind of concentration that we've seen. So, that one month, that was the 1990s. The question is since 2000, are we seeing more of the Walmart bad concentration or the bad type concentration. And I'm arguing that we're seeing more of the bad type concentration.

One hint is that good concentration usually comes together with investment in tangible asset in innovation and we haven't seen that. So, this picture here shows you what I call the capital investment gap. So, this is the extent to which firms are not investing as much as you would think. That is, they are making lots of money, they could invest, they only choose not to. And I'm just separating the industries by the ones that are concentrated in green and the ones that I've not concentrated in red.

So, what you can see is that in industries that have remained where concentration has remained stable, then there is no investment gap. They're investing about what you think they should be

investing given the fundamentals of the economy.

But in industries where concentration has gone up, it has come together with weaker investment. That is not consistent with the view that this is efficient concentration. So, that's just one hint. Then you can look at other indicators like prices or productivity growth and again, you get the same kind of flavor which is some of the concentration we see today is of the bad type.

If that's true then the next question would be okay is it technology or is it policy. And that's where I think Europe becomes important. Europe gives a nice, Europe is holding a nice mural where you can look at what the U.S. could have done. And the very simple reason is that what Europe is doing today in terms of market regulation is precisely what the U.S. was doing in the 1990s. And this is not by chance.

This happened because when the Europeans created the single market for goods and services in the 1990s, we had to write the rules of the game for the single market. And if you were interested in free market in the 1990s, where did you look for inspiration. The answer was pretty obvious, you would look at the U.S. And so, not surprisingly, we took the U.S. playbook, we wrote it down in European language, English, and then -- English with a French accent and then we created regulators to enforce it.

So, what's going on in Europe today is not alien to what the U.S. has been through in history. It's very much what the U.S. used to do. And one way or another, that led to lower prices and not as much concentration. So, this is, for instance, a compilation of changes in concentration in the U.S. versus, actually this is not just America, that includes Canada because that's how the data is constructed. In green, very similar to what we saw earlier. So, you know, from .32 to .4 something, that's about like 7, 8 points of increase in concentration.

In Europe, a deepening on the data, so this is the data that shows a small upward trend. Some of the data shows flat, some of it shows decreasing. I think the best thing to keep in mind is flat in Europe, it's not increasing.

So, something different happened, okay and what's interesting is that in many of these industries, although not all of them, the technology is very similar. Like the cell phone, the cell phone technology, the airplanes, all of that is exactly the same in Europe. I mean these are exactly the same machines operated in the same way. So, technology is the same and yet the outcomes are very different. And

when you look at why they are different you see that almost all the time you can trace it back to policy changes.

So, this is one of my favorite examples. This is the price of telecommunication services in France relative to the U.S. So, this is data from the World Bank where they go around and they collect prices for values baskets of good and services. This one is the telecom basket so they look at how much on average does it cost to have communication services in a country and I have the number for France and the U.S., I think the ratio.

And then you see that France used to be something like 10 to 20 percent more expensive than the U.S. And suddenly in 2011, something happened and France became 25 percent cheaper than the U.S. Now technology didn't change. It's not like a small market where it moves a lot over time. This is a gigantic market. So, when a gigantic market moves by, you know, 40 percent in two years, something is happening in the background.

And what's interesting is that what happened was in France, it's just one thing. We gave a license to a new telecom operator in the cell phone market. We used to have three, it was a monopoly of three legacy carriers and they were all exactly offering the same services for a high price. So, you had a choice between, you know, paying $59.99 with one or $59.99 with the other. So, it's a choice but it's not really a choice. And then they also, they were lobbying very hard to make sure that the regulators would not give a fourth license to a new operator.

And they succeeded for like ten years. And then in 2011, they lost and Free Mobile got a license and the operators forced some of the incumbents to share some of their network so the new one could start operating. And Free Mobile came in the market for the same contract half the price, literally half the price.

So, six months later, they were getting market shares and the incumbents of course had to get their acts together so they reacted by cutting their own prices. So, that even if you didn't switch, even if you just stayed at home with the same exact phone, the same exact plan, suddenly you paid 40 percent less.

This is exactly what happened. That's how France went from being more expensive that the U.S. to being much less expensive than the U.S. And this is even more true today. The median

household spend about $100 per month on cell phones in the U.S. The same household will spend half of that in the UK or Germany or France. So, that's policy driven. And it is policy driven by regulators that are enforcing ideas that were very prevalent in the U.S. 20 years ago. So, somehow, the U.S. lost it way in that sense.

So, the telecom is one of the very large example where the price difference becomes very, very big. If you take a broader perspective and you put all the goods and services together, then you get something like that. So, this shows the evolution of essentially the relative change of prices relative to wages. Now wages are adjusted for productivity because obviously if somebody is super productive you can pay them a lot, they produce a lot. So, it's the wage (inaudible) of efficiency compared to the price.

And so, if the line is flat like you see for Europe, it's flat, what that means is that prices and wages are just more or less increasing at the same pace. In the U.S., the line is going up which means prices are outpacing wages by unit of efficiency. So, that's the markup that firms are charging. This markup is increasing over time. And that's come from the example I gave you in telecom, airlines and industries like that.

So, that today, you know, the price markup has gone up by about maybe 7 to 10 percent in the U.S. broadly speaking. Much more in some industries, not so much in some others. But if you take the average, it's about 7 percent, 7 to 8 percent. How do they get away with it, well they will be allowed to keep their privilege. That's not the only thing they do but that's definitely something they do. And what's interesting to see is that there will be a lot more in the U.S. than in Europe so these (inaudible) by the total. The green line on the top, that's the total, then the one with red dot it's being done by businesses. So, the difference in the green and the red will be done by non-business groups which is relatively small in the U.S.

In Europe, you see two things. You see that the level of lobbying is much lower adjusted for the size of the economy of course. So, the level of lobbying is much lower and so a smaller fraction of the lobbying is actually done by business group as opposed to customer advocacy and NGOs. So, there's a lot more lobbying in the U.S. and it seems to be working better for the businesses because they get the regulations they want that make sure that they can protect their profits.

Now why is it that Europe didn't have the same issue. It's again, something like an accident of history. Which is when we created a single market, I told you already, we looked across the Atlantic for inspiration about the play book. But then we had to adapt it to Europe and in Europe we don't really trust each other. So, then if we had to have a single market, you know, what happened was that the very same politicians who at home really don't like independent regulators very much because they like to keep their hands on the regulators. That's definitely true in France, for instance. At the EU level, somehow, they realized that the tension was not so much that it would be between France (inaudible) the tension was that some of the other 19 countries would be able to influence the regulators.

And so, they were willing to essentially give up the opportunity to lobby to influence the regulators. Not so much for themselves but as a way of making sure that the other countries would not use the regulators against them. That was part of the agreement. That's how the German's agreed with the French and the French with the Italians and all the small countries also very importantly. All the small countries agreed to be part of a single market without fearing that it would be (inaudible) by say France and Germany making the decision by themselves.

So, the real outcome is the lack of trust among EU nations at the time when the single market was created forced them to adopt very independent regulators and determined that these regulators just don't listen to lobbyists as much. That's why they essentially said it's not fool proof but essentially, they say no when they think the right thing to say is no. And they don’t worry about, you know, getting beaten in the price or influenced by lobbyists or by politicians.

So, I think that's what happened, in a nutshell. Now to conclude, I just want to put the numbers into perspective. That’s my last slide, just so you have a sense of what we're talking about. It shows that the numbers are surprisingly large and I'm going to use three ways to think about it.

The first is that my 7 percent extra cost, the prices are higher by 7 percent compared to where they should be if competition had remained strong in the U.S. market. That costs the median household about $300 per month directly because prices are too high. That's a lot of money for most people. If you aggregate it up across all household in a given year, that's about $600 billion of consumer spending which, in fact, is spent on the rents owned by monopolies.

But it's not the end of the story. This is the consumer side of the household. This is just

saying, if you go to when you go shopping, grocery shopping is not that bad, actually. It's more like when you buy services, you pay too much. That's to the tune of $600 billion per year for all the households in the U.S. So, if you were to go back to a competitive market, prices would go down and on average, households would save $600 billion.

But that would not be the end of the story because households are also workers. And when firms compete, then typically they invest more and they have to build up the wage because they have to attract the labor force. So, competition has a positive impact because it lowers prices. It also has a positive impact on investment productivity and wages. So, as workers, they would also gain to the tune of, you know, about the same amount.

So, if you look at what would happen to the economy as a whole if we turn the clock and went back to high competition, then the total improvement would be something like that. Private GDP, I don't count the government there just the private industries. Private GDP would go up by about a trillion dollars. But that would not be uniformly distributed because labor income would go up more than capital income.

In fact, capital income, in my summation, would shrink. So, labor income would go up by about a trillion a quarter. That's about $5000 per year for the median household. That's about 10 percent of their income. So, that's a lot of money. And, of course, capital income would go down by, you know, $250 billion. So, that means dividends payments, in the form of dividend or shares buy back, it's the same, would go down by about $250 billion.

So, a competitive economy would have higher disposable income for the middle class especially for people who work full time and also some more distribution of wealth from capital owners towards workers. So, that's, I think, the main reason why we want a competitive economy. Thank you.

MR. QUERSHI: Thank you, Homi, for getting us started very nicely and thank you, Thomas, for the presentation. I think it provides a great lead in to our panel discussion. Following the panel discussion, as Homi said, we'll open the discussion to the floor for questions.

I'm Zia Qureshi, I'm a visiting fellow at Brookings and we have a great panel today. We have Thomas, of course, Heather Boushey and Romain Duval. You have their full bios in the handout so I will not go for long introductions. Heather is president and CEO and co-founder of the Washington Center for

Equitable Growth. And her latest book is, which I think came out at more of less at the same time as Thomas's book. It's entitled, *Unbound: How Inequality Constrains our Economy and What We Can Do About It*. And it so happens that both books are on FD's list of best books in economics of 2019 and also on Amazon's best sellers list in economics for 2019. So, congratulations to both of you.

And Romain is adviser to IMF's chief economist and he heads the structural reforms unit in IMF's research department. And he in the spring edition of IMF's World Economic Outlook publication, there was a chapter on this very topic. The rise of market bar and its macroeconomic implications and Romain was the lead author of that chapter.

So, we have a strong panel with work in this subject area which is recent and important. So, I will start first with, well for the panel discussion, what we will do in the time that we have we will -- I'll first turn to Heather and Romain for their initial remarks, reactions on the book presentation and then to Thomas for his response. And then we will have some interactive discussion in the panel and then hopefully if panelists keep to time which I hope they will, we will have about 20 minutes, 25 minutes for floor discussion so that will be great.

So, I'll first turn to Heather for her thoughts and reactions on the book and the presentation and the topic we're discussing today. And it would be good, Heather, if you could also link this to your book because that goes into some of these issues. The rise of market bar monopoly, its rents and you link it to the rise in inequality so it would be good to bring out some of those links.

MS. BOUSHEY: Happy to. I'm really happy to be on this panel. I was happy to get my copy here of the great reversal and I use Thomas's work a lot in my book as well. So, I was very excited when I heard that this was coming out. I will start with my second little plug for it. If you read the book from cover to cover, it really, it made me want to go out and try to get somebody to let me teach a class on this. I mean, it just seems like if you were teaching a class on competition, this is like the perfect sort of road map for the issues that I think you would want to cover so I recommend it as well.

So, now into a few of the things, some of my reactions. And I think I'm going to bucket them into three groups here but I have a lot of different thoughts. But I just in the opening remark wanted to focus on, I think, three things. So first, as Thomas lays out the story in the beginning of the book and focuses on the rise in concentration, one thing that sort of as you read through it that I don't think you do

actually address is whether or not this rise in concentration is natural for the economy.

In some sense as a reader, you're left sort of with the reaction that unless there is active policy then markets will have a tendency to concentrate. And that's sort of one thing that I kind of wish there had been a little bit more about whether or not that was sort of a natural tendency of the economy. It's implicit, I think.

But I think that the reason I think it's so important is because the whole middle section of the book is what you already talked about. About the role of politics, the role of lobbying, the role of institutions in constraining what appears to be this tendency towards those who are able to. To hold onto the rents and to use that to then lobby members of parliament or members of Congress to be able to keep their hold on that economic power in the next instance.

And so, that in and of itself is such a really interesting different starting place for economics, right? We go back, we read our Adam Smith and we're sort of told that so long as there is competition, markets will deliver these optimal outcomes. And your book gives us all this data and evidence that competition leads to the kinds of beneficial optimal outcomes that we expect our economies, our market economies to produce. In terms of, you know, consumer welfare, in terms of investment, in terms of productivity, in terms of wages and employment.

And yet, that requires this intervention on the part of the state or part of institutions to make sure that some actors aren't able to take more of their fair share of the gains. So, that they can't hold onto those economic rents. And that seems like a really important piece.

I actually just wanted to quote, I'm just going to quote one very short sentence from the book here. It's in the fifth paragraph of the conclusions. There's this lovely section at the very end which seemed very uneconomistesque. There's a whole section on what surprised him about the research so it has this lovely sort of what you learned. And the sentence is, "I was surprised by how fragile free markets really are". And that's the first lesson that you take from it.

And as we at Equitable Growth have been studying the rise of economic inequality across all these axes, income, wealth, the rise of market concentration across firms. I think that has also been my reaction that markets are very fragile. And one of the most important implications of inequality is that if you allow some actors to amass the control of economic resources, that very quickly can translate

into political and social power which then gives them the capacity to subvert the market in the next instance.

And so, it actually creates a really important role for institutions that I think economists have not put at the forefront of our thinking. And it seems to me over the past four or five years, people have. So, that was sort of my first reaction was that I thought that was a very interesting insight and I wanted to elevate it for the audience.

The second that really struck me and was so consistent with a lot of the other research that I focused on, that we focus on at Equitable Growth and I focused on my book was this question about the investment gap. So, what is it that drives the kind of investment we want to see?

And, you know, Thomas you and your colleagues have done all of these papers over the years that point to the role that market concentration plays. Which gets at this longstanding debate in economics about whether or not it is competition that drives productivity or whether or not sort of in a more (inaudible) way sometimes concentration can give firms the resources to invest.

And it seems that your argument is in this particular configuration today. What we're seeing is that, and I think that would be one caveat that I would add. I've seen some of the debate online and other places that does seem important to say, given the economies that we have now and the institutional structures. And all the like that the evidence you have found is that at least to this decline in investment we're also seeing that in other parts of economics. That the rise in economic concentration, the rise in the supply of savings isn't leading to an increase in investment but is actually been leading to an increase in the supply of household credit.

This is work from Atif Mian and Amir Sufi. I've been at a couple of events this fall where Atif has made that argument very compellingly. And it's interesting to see the echoes between your work and that work. Because again, if you start your economics training, part of what you learn is that so long is there's a lot of capital, investors will invest and everything will be really great. But yet it seems like what we're learning is that it requires more than that. And again, institutions matter but what happens down the income distribution may matter for investment and productivity as well.

And then the third point I wanted to make is so one of my reactions, one of my big reactions to the book above and beyond. So, just actually to sum up those first two to kind of get to your

point about connecting it to our work. You know, really this idea that markets can only work if you have institutions that constrain inequality at the top and provide some sort of counterweight to concentrated economic power. Is the way that I've been thinking about the intersection between inequality and growth from what we're learning from the research and evidence.

But I think in order to really understand that, we actually do need to push ourselves as economists to go beyond economics. And I feel like whenever I say this there's some political scientist in the back of the room who will like start cheering. What I'm about to say is that we need to do more work with our peers in political science and sociology who've spent their careers thinking about the role of institutions and politics and this interplay.

And I think that part of what we might be missing, you know, in sort of the latter half of the 20th century is that disciplines became much more siloed. And we became much more scientific and we're able to really dig down. I think we lost some of that intersection and your book works so hard to connect the dots between political outcomes and lobbying and economic power.

And I kept sort of writing notes about, well I wonder what, you know, these different political scientists would think about this body of research. Because it was relying a lot on the economics research which I think is important. But I would be very curious to have this conversation in a more interdisciplinary way. I think we could all learn a lot but I think it would also help us understand that intersection between economics and economic outcomes and the role of institutions and social processes in there.

MR. QURESHI: Thanks, Heather. Romain, your thoughts and reactions and again, it would be good if you could link this to IMF's work on the rise of market bar.

MR. DUVAL: Yeah. Thanks a lot. Thanks so much for inviting me. I also love the book, I must say. And I would say, you know, whatever your priors about competition in the U.S., your posterior is going to be different. In the sense that it's not possible after having read this book that you would not be a bit more concerned at least about competition even if you are not concerned at all. So, I would definitely advise you to read the book and as you saw, some very super compelling examples.

That said, you know, it's our job to challenge him so that's what I'm going to try and do. Just to recap, you know, he makes basically three points. One is competition has declined in the U.S.,

second that's partly due to logics then due to weakening of pro-competition policies, anti-trust, maybe regulation. And third because of point one and point two, it's a large adverse macroeconomic consequence for growth, also for income distribution at least for the labor share.

So, I want to take each of these three in turn and give you, you know, a few counter arguments. At least, I don't think qualitatively because I think these three claims are probably qualitatively, I think, valid. Just quantitatively, you know, I think I sort of have doubts about the magnitude of these effects and I will give you a bit of a perspective we have at the IMF based on work we did on the topic.

So, on the fact that competition has declined in the U.S., you know, Thomas really dismisses the really super star story on, I think, two key grounds. One is if there were a super star story that is, you know, it was sort of dominant firms, super productive firms that were gaining market share. And that's what was driving, you know, higher market power in the economy, you should see productivity acceleration. You do not see this. And actually, you don't see it in industries that have concentrated. So, that's kind of something that makes you think, okay the super star story maybe doesn't hold that much.

And the other thing, he mentioned it, is the missing investment. If they were super stars they should be investing more and yet we're seeing missing investment, not over investment. So, on these two claims they're clearly, you know, I mean very good claims but two remarks.

One is on the productivity slump. Obviously, there's many other candidates for the productivity slump that has been discussed at Brookings and other fora. Maybe ideas are getting harder to find. There's increasing in lags between maybe, you know, discoveries and their implementation. We saw that back, you know, in the electricity days. There was a famous paper by Paul David that documented this 20 years ago.

We've seen slow in human capital (inaudible) in the U.S., there's aging, so lots of confounding factors as we say in economics. And also, you know, in industries that are concentrated, it's not that we see, you know, even in his own book, a productivity slow down but we don't see any significant association between this rising concentration and productivity. So not, you know, I don't think extremely compelling evidence.

And on the investment side, the fact that there's missing investments. You know, one

can also think of this story, a sort of super star leading firm story that would not necessarily imply higher investment. Think you're in a world with, you know, two types of firms. Some are low productivity, they are small and they have low market power, okay. And the others are more productive firms, they are large they have higher market power.

You could think of a case where there's actually maybe an increase in competition and that leads you to -- that's the good concentration case that he mentioned. And I would reallocate resources in the economy toward the high market up firms. And through a composition effect, you're going to see mark ups. So, the price, the gap between prices and marginal costs show you're going to see this gap rising and that would be, in fact, a good thing in my example. I'm not saying my example is correct but that would be a good thing.

That said, there's no evidence that my example is not entirely incorrect. Because if you take, so what we did at the IMF, we looked at the rise in mark ups across advanced economies and we did compose it into this within firm rise in mark ups, the kind of bagpipe, I think, that he mentions and the between components. That is the fact that there was reallocation of market shares away from again, low productivity, law mark up firms to high productivity, high mark up firms.

And what we find is that for the U.S. actually is the second component that really dominates. Since 2000, it accounts in our data for about 80 percent of the rise in aggregate mark ups. And there's, you know, another paper that's focused on the U.S. and uses even better data, uses U.S. census data. That's the (inaudible) paper that finds that it's about two-thirds this component.

So, you know, roughly similar numbers that suggest that well, this rise in market power is not entirely of the bad type, there may be a good type. Why is there a good type, because actually what we see is that these firms that are high mark up firms, they are also firms that are more productive and they are firms that use intangible assets more and that we find in our chapter.

So that, I think, is really an important point. And so, the bottom line would be it's not that there's no weakening competition. We find there's been a rise in market power within firms so there's a weakening, okay. But maybe quantitatively it's not so large and there's a bit of a good type and bad type playing out at the same time.

Okay there's methodological issues that are associated with all of this and maybe that's

not the right place to discuss them. He focuses a lot on concentration that as it flows, we focus a lot on mark ups using a method that also has its flows. I think we would all like the chart that he showed, you know. It was just the gap between average price and average labor costs is not exactly what a mark up is in a text book which is the gap between the price and the total marginal cost. No one has good data so, you know, I'm not going to blame him and I hope he won't blame us. Ideally, we want much more, much better data on prices to be able to sort that out properly.

Now on point two, the fact that weaker competition is rooted in the weakening of policies. I'm going to make a couple of points. One is the rise in entry costs, I think it's hard to measure because from the reg data that he uses in the book. What you see is that if you take the code of federal regulations you see indeed a rise in, let's call them regulatory burdens on firms. But that may be due to a rise, you know, in say safety, health, environmental regulations that effect all firms and not just new firms.

So, in this case, you know, one it would not be very (inaudible) and second, it would raise an issue of whether these kinds of regulations are efficient or inefficient, right. To some extent, you want maybe a tightening of some safety and environmental regulations in the U.S. And so, I think we need to do a bit more work to sort that out.

In this rise of regulation, what's the good and bad type and what has to do with rising barriers to entry as opposed to others, you know. Basically, regulatory burdens on firms in general that need to be addressed. So, that's one thing that we need to figure out.

The other thing is if you think of other signs of rising, you know, entry regulation in the U.S. such as occupational licensing. You see a lot in the health sector, for example but it's not so relevant in some big industries where we've seen rising market power like tech or finance. So, it would still be an open question to me as to whether we've seen a rise in entry cost in the U.S.

On dividends, that's sort of the rising money in politics and lobbying, you know, accounts for some of the weakening of pro-competition policies. I think the evidence is very, you know, new, interesting, troubling. At the same time, I'm just wondering quantitatively how much that really matters for aggregate outcomes.

Because for example, if I think of a recent study that's mentioned in the book, a paper by Ashenfelter and Huskin, that took, you know, a sample of let's call them controversial mergers. Looked at

mergers that went through but were very controversial appearing. Well even looking at this very bias sample of mergers that were cleared but would seem to be controversial. What they finally exposed were price increases in the order of 3 to 7 percent. So, certainly not so small but as you can see, not so large on a sample that's very bias. Which again, makes me wonder quantitatively how big the problem really is.

Now on the comparison between the U.S. and EU. It's absolutely correct that one anti-trust frameworks differ between the EU and the U.S. The EU is a much more interventionist culture. That showed up in (inaudible) recently until, I think, DOJ and FTC started launching, you know, the FTC launched hearings about the efficacy of anti-trust enforcement in the U.S. The DOJ launched its review of anti-trust for tech. But until recently, the EU was more active.

It's also true that the institutional setup makes like more complicated, I think, for regulators in the U.S. than the E.U. One is indeed the EU regulator is to a large extent, independent from, you know, immune to national pressure. Thomas explained very well why. And second, in the U.S. if regulators want to block a merger, they need to go to court to sue to block the merger. While in the EU, the European Commission can make a first instance decision.

So, that gives them an ability to drive the process that is more difficult to get in the U.S. So, this is absolutely correct. It's also correct that market power trends have been different in the U.S. and EU. You see a larger rise in market power in the U.S. as measured by mark ups and that we documented in our work.

At the same time, and I'm coming back to this reallocation component versus the, you know, rise of market power within firms. What we find is that if you look only at the rise in mark ups within firms, okay, and you ignore this reallocation component, you don't find it to be so much smaller in the EU than in the U.S.

You know, in the EU, we find that since 2000, average mark ups have increased by about 5 percent. We find it's a bit more in the U.S. but it's not such a big difference. The very big difference is this reallocation, again, of market shares from low productivity low market firms to high productivity high mark up firms. Whether it's a good thing or not I don't fully know. You could tell a story as I told you earlier that, you know, could reflect an increase in competition. You could tell a story that reflects just a rise in barriers to entry by high productivity high mark up firms that would enable them to grab market

share and that would be bad thing for the economy.

So, I think we need to understand these two components a bit better. And also, I think very important is there's some forces related to the super star story that are, you know, I think overlooked in the book. In particular, there's two interesting recent pieces of work by, you know, Phillip Bagon and co-authors on the one hand and (inaudible) from University of Chicago on the other. That, you know, tried to explain the rise and fall in U.S. growth over the last 25 years.

And what they document is that, you know, ICT enabled large firms to gain market share in the '90s and that eventually led them to become dominant and stifled competition down the road. And also, another story is that you see a decline in technological decision from, you know, ICT intensive, high productivity firms to low ICT intensive, less lower productivity firms.

And in both cases, what's interesting is you see a rise in growth, a fall growth which described very much what happened in the U.S., right, '90s rise and the decline, gradual decline in 2000. But as you can see in both cases, competition eventually declines. It's a worrisome feature of the economy but it is not driven by a rise in, you know, a weakening of pro-competition policies like regulation enforcement.

And to finish, I want to touch on the adverse implications. So, given the interpretation I've given I think what we find in our own research is that the adverse macro implications are less than, you know, what Thomas described. Because some of the rise in market power is actually of this good type. So, we find this macro implications of the rise in market power to be negative. But for example, on the total missing capital we find numbers that are about half of what Thomas showed. And so, eventually we get smaller numbers than what he gets. So, qualitatively again sort of (inaudible) quantitatively maybe a bit less.

And very final point on the policy implications though I think there's a lot of convergence. Because whatever you think the drivers were, it is clearly a fact that, you know, there's a growing gap between leading, lagging firms. There's the ability of dominant firms to set up barriers to entry and (inaudible) software and more broadly intangibles.

o, you need to do something about it and it goes into this into the book and maybe will come in the discussion. But I think there's indeed scope for, you know, stronger anti-trust enforcement on certain

aspects, especially mergers by dominant firms. And I also think for me, the anti-trust resources need much more resources. Thank you.

MR. QURESHI: Thanks, Romain. Thomas, before you respond, maybe I can add a question building on some of what has been just said. The outcome we're discussing is clear. I think there is consensus that the numbers show that. There has been a rise in market concentration, rise in market power.

Where there is controversy is how we got there. So, there are two narratives as you said. One is the decline in competition story, the rise in monopolies, competition policy failures, rent seeking, lobbying et cetera. So, that is one narrative.

The other narrative is a more benign one. That the companies have gotten into dominant positions because of their superior performance. They have (inaudible) advantages, they have used the new technologies that offer the scale economies, network effects. The attributes of intangible capital, scalability, et cetera. So, there are these two narratives and they have different policy implications.

And there is also this sort of related story based on some recent works that you're well aware of. About rise in concentration at the national level and decline in concentration at the local level. When Walmart goes into a local community, it ends up reducing concentration there. Even the concentration at the national level rises.

So, there are these sorts of narratives out there but there is clear recognition of the problem. But since there is this doubt or some conflict in terms of the diagnosis people are advising caution on the policy side. That before we decide to do something big, we need to have more clarity as to what's going on. So, that has been sort of one line in some of the reviews promote by your excellent work.

And for instance, in the review of your book by in *The Post*, I think it was a few days ago by Robert Samuelson noting precisely these different narratives. So, he concludes by saying in terms of what needs to be with policy, things are not clear. So, he concludes by saying situation normal, it's the fog of economics.

So, my question is that given the work that is out there, including your work which occupies an important place in recent research on the topic. What are the most convincing arguments which would lift

this fog that some people still see? So, that there is a greater consensus moving toward policy response.

DR. PHILPPON: And I have five minutes to do all of that. Thank you.

MR. QURESHI: You can do that.

MR. PHILPPON: So, very briefly then I'm going to talk a little bit about the two comments and your questions. So, Heather, I think you had three main points. The first one was is it like inevitable that capital then gets more concentrated. Or in other words, if you didn't do anything would we go towards full concentration or not.

I think the truth is I don’t know the answer. I mean I give you, for instance, I showed you the graph of Walmart. So, if you look around 2000, you can safely think Walmart is too big and then you worry that maybe we should be doing something about Walmart. Thankfully that's exactly when Amazon started to grow. And so today, nobody thinks that Walmart has too much power because Amazon has just as much or even more.

So, that's exactly the extent at which you can't predict. So, in that case, you didn't actually need to do anything because the market sorted by itself by having new competition. And to be honest, I think often times this is what happened. Many of the firms of yesterday are today, you know, either middle firms or they've disappeared entirely because of new competition.

So, the market solves most of the problems. And the problem is more like if it doesn't when is it that you start to worry and you want to do something. Because you can always say well, I can wait and if you wait long enough, surely there will be a competitor for Google at some point. Maybe we'll all be dead by then and so the question is when do you want to start doing something. That's a tough question, I don't think I have the answer, to be honest. But I agree with you, that's the perfect question.

So, your second point was about, and also something that Romain was mentioning, about the (inaudible) investment. And yeah, I think it is true today that not just in the U.S. actually but we have, you know, we have lots of evidence that at the margin today, if you increase competition you tend to see more innovation. And it doesn't have to be that way because we have, so think of patent. Patents are clearly (inaudible) competitive (inaudible) because you protect something you own and nobody else can take it away. So, that market becomes non-competitive for a while.

And nobody thinks the optimal length of a patent is zero and the question is what's the

right amount of protection. You invent something, right, you can get the monopoly on it for like a few years. At some point you lose it. It's really a question of when is it the right time to lose it. And then I think that the bulk of the evidence today is that we went too far in almost all of these dimensions. Which is every time we have a natural experiment where for some unknown reason the patents get shorter, we see more innovations in that industry and more importantly in the upstream and downstream industries.

So, I think today we're on the side of the curve where if we increase competition, we wouldn't lose any innovation. Another way of thinking about it is there is not a single large firm in the U.S. today which is constrained in its investment decisions by how much profit it's making. That simply does not exist. Okay they all have more than enough money to finance any investment they could dream of and if they don’t, the market is willing to land at very low rates. So, that's not the issue.

But it doesn't have to be like that all the time. So, I agree with you, it's like an empirical question. I think today we are in this situation where I don't think we would lose anything in terms of innovation or investment by having a more competitive market.

Then the third point was the silo effect of, you know, economics versus all the other sciences. Yeah, I agree, and I plead guilty, it's true. Like academically I tend to be very siloed. I don't think it got better over time and on top of it, economists tend to be very, as a scientist, very (inaudible). That we take over other fields and we're not asking questions. And sometimes we just rediscover stuff that these people will have known for a while and they are right to complain when we do that.

So, Romain's question, I think why it's so hard to you, name the numbers in economics because, you know, everything is the outcome of a process that has many, many different causes all interacting at the same time. So, even agreeing on what's the number for the mark up is very tricky. So, I tried to put the numbers I believe are correct but I totally agree that there are different interpretations.

Some of the more important ones, I think start to fade away if you zoom in at the industry level. Which is why I don't think you need to be too pessimistic about that part of the equation. About the fact that maybe we don't fully agree, that gets to your point too. That the fact that if we don't fully agree 100 percent on diagnostic than we cannot do anything. I don't think that's going to be necessarily the binding constraint as opposed to getting (inaudible) agreement to do something.

And the reason is that the more you zoom in on say a particular industry, the less

disagreement there is. So, you know, like if you think that some of the competition we see is because of, you know, the super star effect which is the leading firm taking over. Yeah, that's true in the retail and wholesale trade, I agree with that, I'm not worried about this.

But if you look at the airlines, I'm still waiting for somebody to make the case that we have super star airlines. I don't think anybody, okay everybody is laughing. So, I don't think there's going to be a controversy there. And for anybody who has a cell phone in the U.S., I don't think you think of your cell phone provider as a super star firm who is there, you know, giving amazing services for very low prices. So, nobody thinks that.

And if you think about hospitals and the healthcare system, I think you'll have the same story. Nobody is going to think that it's just the reason we have monopolies in many hospital markets is because of super star effect.

So, what I'm saying is that -- and it's important because all of the policy actions, of course, they are very granular, they are at the industry level. Or something at the regional level which gets to your other point that you were mentioning that national concentration is not always the right number to look at. In the retail market, clearly, it's not.

But if you start zooming in, I think the disagreement then to fade away a little bit. So, that's the good news for the diagnostic. But it's the bad news for the policy. Because the more you zoom in, the more you really hit like the constraint of, you're going to, you know, do something that is not going to be popular with some people and they're going to complain and lobby.

So, that’s where the action is going to be. Which is at the industry level, exactly how do you make sure that people can access internet for cheap. Or how do you, you know, make sure that cell phone don't cost an arm and a leg. And that is not going to be easy because you're going to have to pick a fight with some of, you know, the (inaudible).

MR. QURESHI: Thanks, Thomas. I think maybe we can have one more round of interventions, about two minutes each on the policy side. I can start with you, Thomas. There are with respect to policy response, there are new issues that we face because of new technologies and you deal with that. You set out some principles for reform toward the end of the book.

Some of the new issues relate to data regulation, proprietary agglomeration of data as in

platforms which is a big source of comparative advantage now in market concentration. The two sided markets, how to regulate tech giants which are like natural or quasi natural monopolies because of economies of scale.

So, these are new issues and some of them do not have clear answers. So, some thoughts on that on how you're thinking about those. Because even if there is the political will to take some policy action, what those actions might be are not entirely clear with some of these new dimensions relating to the new technologies.

DR. PHILIPPON: Yeah, so actually can we get the slides back, I just want to show one thing on the big tech. Because, I mean, I think there is a lot of complicated things there but there is also some stuff which is not. I mean one of the narratives that I disagree with is the idea that the big tech firms are exceptional. I think that's just bogus.

So, if you look at the U.S. history, in every single decade of history in the U.S., you had some firms that were the stars of the time. You had General Motors in the 1950s, you had General Electric after that. You had Proctor and Gamble, AT&T, IBM, Exxon Mobile. All of these were star companies either for (inaudible) or sometime they fall out.

So, the idea that you have top firms today, a few of them happen to be Google, Amazon, Facebook and Microsoft. That's true, and Apple. And so, these are the stars of today. But they are not that different from the stars of the past. If you look at the numbers, their profit margins, their growth rates, their investments, all of these, even their market values for that matter are nothing special. They are exactly in line with what we saw historically.

So, the first thing you have to get rid of is this idea that these firms are so special that you cannot touch them because they will break or because they are like so different from everything else. I think that's just not true.

The other thing that's not true is that their growth is spectacular. Their growth is great but it's nothing spectacular about historical standards. This graph here shows you the extent to which the leading firms, the stars. So, these are the top 20, the triangle, so the top four by industry in the blue line. The extent to which just the top super star from the U.S. economy are putting the economy ahead.

And, of course, the numbers are significant so just these top firms are pulling the

economy a lot. But as you can see in recent years, if anything, it's lower than before. So, in other words, the cumulative impact of Google, Amazon, Facebook and Apple on the growth of the U.S. economy is less than what that impact was in the 1960s by, at that time, probably was AT&T for sure, IBM, Proctor and Gamble maybe GM and a few others like that.

These guys were also pulling the economy forward. And the stars of today are not doing better, if anything, they're doing slightly worse. So, that's the first thing. Treat them as normal companies, that is point number one.

Then point number two is, is there really completely different types of return to scale and natural monopoly in that market than in other markets. I don't think that's completely true, to be honest. And, in fact, to the best report on that is the one that Jason Furman wrote for the UK government.

And the conclusion is that yeah, they are increasing returns and natural monopolies, the same way you have natural monopolies in network industries and telecom that we had that with the phone lines before. In many of the pharmaceutical markets you have very large increasing returns. So, they don't think that these guys have a lot more natural monopolies than the other, maybe a bit more. So, again that's a reason for just treating them like other firms. They are no better and no worse.

And the last thing is about the data. So, that is specific but I don't know that the (inaudible) spot is a more specific one. The anti-trust solution to Facebook is to force Facebook to interoperate with other social networks if they were to exist, you know. The same way we force telecom companies to interoperate with each other. I don't think that's that different.

The thing that's different is more the non (inaudible) side which is the privacy and the political aspect. But I think being ahead of those is a lot more than we knew about these things.

MR. QURESHI: Thanks. Heather, in your work, you also lay out an agenda, how to make growth inclusive. And in that context, you look at sort of pre-distribution, redistribution policies. Now looking at that in the context of the market, how do you see some of the policy issues they have? For instance, in his recent book, Branco Milanovich suggesting that maybe the middle class should have more ownership of financial capital because that is where the returns are high. So, maybe through some tech advantages they could become owners of financial capital or maybe employee stock ownership plans.

And then your work in health issues and health is a big sector in this discussion. The big issues rising from both concentration and consolidation. So, how do you see some of the policy issues from that perspective?

MS. BOUSHEY: Yeah, so let me lay out a few and I'll start with, I think, where you ended. It does seem that if you're going to have this concentration of markets, we do need to think about what those counter veiling forces are. So, one fact about the United States is that as a share of private sector workers, we now have fewer people in unions than we did before we made it legal to bargain collectively in the 1930s.

So, some of the firms that we talked about historically where concentration led to the kinds of investments and the rents were shared, those were unionized industries, right. We talked about the big three, the big autos. My father was a machinist a Boeing, unionized monopoly, right, in the United States. So, that matters how those rents are shared and also how that plays out through the political process. Because if you don’t have a voice in Washington that is thinking about the other side of the equation from a perspective of labor or for consumers then you're also, it's not just the lobbying that you talk about in your book where they're out giving their perspective. That's a paucity of voices that have the expertise and the insight on the other side as well.

So, I think that both thinking about unions, thinking about employee ownership, thinking about workers on boards. Thinking about different ways to counter act that both within the firm but also in the political process seems really important. Connected to that, one of the things that we don't do currently in our anti-trust enforcement is take into account the effects of labor market monopsony that are the outcomes in much of this concentration.

So, one of the things I was struck by in doing the research for my book where I focused on concentration specifically on healthcare, is just how concentrated that is at the local level. So, many communities now in the United States if you're a nurse, maybe there's four or five hospitals you can work at but they're all owned by the same corporation. And that changes your relationship to your employer both in terms of your ability to bargain over wages. If you don't like your boss, go and get another job, maybe your HR file is going to go with you.

But importantly and there's actually really important union campaigns happening on this

right now, that also means that you don't have a lot of leverage in terms of quality. So, if you're a nurse in a hospital and you think that the quality isn't high enough or you're not give the tools that you need to provide the best care, you don't have a lot of leverage to get a different job, there's no competition there. So, that also affects us as healthcare consumers.

So, I think thinking about the effects of monopsony on workers as a part of our anti-trust enforcement seems like a really important step. I would also say that the research on that seems very new. There's like a new paper coming out each, you know, every few days or at least every week looking at this side of the equation. So, I do think we need to learn more before we start regulating there but I think that that really does need to be a focus of energy and attention.

And then the last point I'll make, I was really struck actually. One of the things that I did not know before I picked up your book was the difference in the history between the United States and the EU in terms of the path dependency of the regulatory infrastructure.

And one of the things that we know here it the United States, my colleague Michael Katus has done this fantastic work sort of building out this portfolio. But really showing how underfunded our anti-trust agencies are relative to the challenges in front of us. And so, it's not just that they aren't getting more money but relative to the rise in concentration, not having enough resources. Which is not an easy thing because it's about money but it's a simple fix and definitely seems like a place that we can start. So, it was sort of from hardest to easiest.

MR. QURESHI: Romain, any thoughts on the policy side? But I'll just throw in one question and maybe for your comments or Thomas, and then we can open it to the floor. At the end of your book, you laid out some principles for reform and I think wisely you do not present specific, much less specific radical proposals. I think the principles are good.

But there is actual debate on some of these issues in the U.S. political presidential campaign, including suggestions to break up some of these monopolies. Any thoughts on that specifically? Because on the breakup of monopolies, the counter view is that they perhaps are given the new technologies and how internet makes it easier for successful firms to dominate. That even if you break up monopolies either by product line or by geographic areas as was done in the case of the model. They will grow back given the nature of new technology. So, any thoughts relating to the current

discussion in the U.S. on these issues in the political domain. Romain?

MR. DUVAL: Yeah, so on this actually, you know, we're doing some follow up work for the spring. And in that context, we've been talking to a lot of competition experts across the whole spectrum, you know, I would say. I was struck by the amount of disagreement among them first. But I also was struck by a few things that seem really concerning, disagreements including on the points you raise, right.

Can you really make this parallel between the big tech firms today and say, you know, the big network industries of the past, should you break up the downstream from the upstream part. And, you know, this upstream part today is the network or maybe data is the new network.

So, all these questions are very controversial but, you know, I think at the practical level, this scope for progress on a bunch of issues and I think they're going to recoup quite a lot. In fact, what Thomas advises at the end of the book, one is greater scrutiny as we got mergers by and acquisitions by dominant firms, I think, is warranted in general. And, in particular, this, I think, wide spread concern regarding what regulators call potential loss of competition. Which is what happens when large dominant firms acquire a small but potentially big future competitor.

And the thing is today it goes under the radar screen of the authorities because you don't need to turn other thresholds. So, you know, there's a few things you can do, none of them are perfect but maybe at least some sort of asset value threshold could work. Because that would leave at least the authorities to look into mergers that seem to be basically, you know, in which to target as a very, very high market value. And so, you know, it would be subject to greater scrutiny and that has been the case in the past that's really warranted.

The second thing is greater use of market studies. You know, the UK uses a lot of market studies. The authority and they undertake market studies and if needed they can enforce remedies. It's much less wide spread, for example, in the U.S. I think it's an open question as to whether you should strengthen those.

And third, I think, that relates to the first two points. You know, if you want to do one and two, you need more resources. And indeed, as a share of GDP, I think resources of anti-trust authorities in the U.S. have shrunk. This is a recurring concern and so I definitely agree with Heather that it's

needed.

Now regarding tech specifically is very tricky, of course. These are fast moving markets. It's not clear to me yet whether anti-trust really is the right answer in the sense can it be really so fast and that it can address this problem in real time. So, maybe, you know, the solution has more to do maybe with regulation and regulatory intervention. Think of the telecoms in the past, right, at least in Europe. What led to the regulation actually, you know, Thomas showed one example was not anti-trust it was just the regulator that decided that said you would break up downstream and upstream parts by, you know, privatizing, keeping public only the network, think of right of ways, telecom and that's what did it. And competition was first thought on the downstream part.

So, maybe we need regulator intervention including on the data portability and date interoperability issues. That's again, very similar to what was done in telecom in the past and there was more regulatory action than the anti-trust. So, maybe to do that, the firm report that Thomas mentioned, proposed that there be a new digital agency created in the UK.

And, you know, even short of that, maybe one option is to be already to start having a dedicated unit within existing agencies, dedicated unit to tech issues. That would be a very good start to be able to respond in like more real time to these issues and think about regulatory actions that way.

MR. QURESHI: Thanks, Romain. Thomas, last couple minutes before we go to the Q&A.

DR. PHILPPON: Yeah. So, one thing the book does not conclude is a list of to do's because the to do's are very industry specific. You know, so for the airlines, you just want more competition. Let me give you an example of something that would work and would never happen. We could let foreign airlines fly domestic routes. Right now, it's very simple. If you fly in from outside, you land in a U.S. airport, you have to takeoff and leave the U.S. So, of course, you're never going to compete on domestic routes with domestic airlines. If you just wanted competition, that would cost you nothing, like literally nothing. It's never going to happen, obviously, but that would be one way.

More realistically you can open slots at busy airport for U.S. domestic airlines to compete with the big ones. That's how we got cheap prices in France by using Easy Jet to compete with Air France. So, that's specific to that industry.

In the tech space, I think that the first thing to do would be to -- so first of all, I agree with the statement but let me reemphasize. If you look at the agencies that have lost budgets that makes absolutely no sense is the IRS and the DOJ together with FTC. Because it's like they are obviously more important, there is more tax evasion today and we give less money to the IRS. So, that caution makes no sense.

The other one is even if we don't think breaking them up is the solution, there is more of an issue of market power and we give less money to the anti-trust regulators. That makes just no sense. The first thing to do is that, then you get the expertise. And then in public though, you have to realize that when we say for us, there is a big difference between anti-trust and regulation but nobody should care about that. People shouldn't worry about is it really anti-trust or is it regulation. It just means competition. It doesn't mean you're going to get better service for lower price.

And then whether it goes through the anti- trust channel or the regulatory channel, that's something for geeks like us to talk about. But people shouldn't have to worry about that.

So, you need the expertise to do it and then you need to try. I think one of the big lessons that I -- one of the reasons free markets are fragile, to go back to what Heather was saying earlier. Is because right on the people, the watchdogs have become too fearful. Like the regulators are worried that there are cases that they don't want to bring because they are not sure to win. That's a terrible outcome.

If you only prosecute a case that you're sure to win, then that means you're prosecuting too few. It's not the right outcome and for that, you need to embolden the regulators. And sometimes they're going to fail. In the case of big tech, they are likely to fail. It's very unlikely we're going to successfully break up Facebook or Google but that doesn't mean we shouldn't try.

And by the way, we should also be open to the possibility that we try and we conclude that maybe it's not the remedy in any case. But not trying for sure, that's the wrong policy. That's my view on the take home. Well, and then we can talk about the other firm.

MR. QURESHI: Thank you. So, we have some time left for, not as much as I had hoped but some. So, if you can identify yourself and keep your question brief, we can take three questions. There is a hand held microphone that should come to you. Yes please.

MR. CRAMER: My name is Tim Cramer, I am a student at Georgetown University,

actually, recent alum. And I have a question for you, Mr. Philippon. So, regarding your theories about competition and restraining sort of the creation of monopolies. At least in the United States, we have a lot of presidential candidates, particularly on the left who are advocating for nationalization potentially as an alternative to this oligopoly. And I'm curious, considering you seem to believe the more companies the better. Do you feel that that is a positive direction or would that simply perpetuate the problem? Thank you.

MR. QURESHI: Thank you. Gentleman next.

MR. BANNER: Thank you. Greg Banner, (inaudible) U.S. representative of (inaudible) French business. It's about competition in the EU and in the U.S. How much do you think that the sort of philosophical, ideological difference there is between U.S. and anti-trust strong influence of the (inaudible) can be beautiful? That's not the way Europeans look at things. There are real differences there. And other question is the fact that there are agencies in the U.S., FTC for example, that are very easy to capture and that don't exist in Europe. So, it makes like easier for the competition folks in Brussels.

MR. QURESHI: We can take one more question. Yes.

MS. MORGAN: Hi, Nancy Morgan. I'm the coordinator of the Northern Virginia Chapter of American Promise and we're trying to get money out of politics to role returning citizens united and introducing campaign finance. And I'm glad that money and politics came up a couple of times.

The question that I have, could you speak to the issue of rulings the Supreme Court and the court system in terms of influencing competitiveness and monopoly powers. And specifically, I reference a presentation done here a few months ago where it was 80 cases of the Roberts court were all 5-4 decisions that favored corporations but only certain types of corporations. And the activist issues related to say, for example, labor and unions.

So, the question is 85 percent of corporations feel like our campaign finance system is broken. There are small and medium size business that feels like now we're in a situation of legalized extortion. Can you make a comment about how you think that influences the role of certain industries versus others?

MR. QURESHI: Thank you. I think -- Thomas, yeah. Maybe, we have very limited time now so you could start with maybe one minute each. Thank you.

DR. PHILPPON: So, the issue of monopolies and then whether we want to nationalize some of the industries. So, I think you can make the case, in a way. I'm tend to be, I'm still like a very free market guy. I like capitalism, I just think it's not working the way it should work but I don't think we should replace it. So, in that sense, I tend to think that we want more competition. And then nationalizing the (inaudible) of the firm is not the solution. Some people can disagree with that.

I also think sometimes just the (inaudible) is placed. Like there is way too much government in the real estate market in this country. Like you don't need Fannie and Freddie. You should get rid of them entirely. And on the other hand, in the healthcare market, if you don't regulate properly it doesn't work very well. So, it's not so much the overall level of government intervention as to, you know, the allocation that I think the issue is.

Then for what makes life in Brussels then in, yeah. So, you have the revolving door issue. That's specific to the FTC. It's much less for FTC DOJ but it is true for this one. And the biggest difference is, for instance, like take the case of the issue of nascent competitors. That's something that the judges in the U.S. have decided to just not listen to. That issue is in the court system. Which is if you make the argument that well, this firm could become a significant competitor, therefore I think this merger, even though today that firm is small, allowing the merger today would deprive competition in five years. It turns out that the judges in the U.S. decide they only side to that argument. That's an issue because it's true that in Europe it's not the case. So, I think that's the main one.

And for citizens united yeah, I think that's where the crux of the problem is in the long term. In fact, some of the argument by the people who are more extreme in what they want to do, sometimes we call them (inaudible). So, they want to -- they think that big firms are bad in and of themselves. Sometimes the argument in the background is a political power argument.

I just think that again, on that one, I'm a bit more conservative. I think we shouldn't mix anti-trust and politics which would keep them separate. And so, the way to fix the political power of big firms is doing something about campaign finance, not use anti-trust law to go after them. But I think we have to realize that if we don't do it, some people are going to propose that for sure. And I don't think that's the right outcome.

MR. QURESHI: Thank you. Romain, one minute.

MR. DUVAL: Yes, maybe just one remark since, you know, I may be giving a very, you know, rosy view of the EU competition framework. I would just want to say that clearly as I mentioned earlier, there is a more interventionist culture in the EU. Maybe a slightly less obvious influence of the (inaudible) although still influential.

But I want to point out that, you know, Digi-Comp is still a fairly new agency and right now it's already under pressure. In case you didn't notice, there was a very famous case recently. The merger between Alstom and Siemens and where you see the French and German government reacting really adversely to Digi-Comp's decision and calling for an overhaul of the competition policy framework in the EU.

What's really interesting for the future is that you've got this tension in a way between this rise in market power that would seem to warrant, if anything, a tightening of competition framework or certainly no weakening. And the political pressure, in some cases, to in fact overhaul them in a way that would potentially weaken them. In this context, a big topic is also how to make possible industrial policy and competition policy co-exist.

I think that is a very big issue in the case of the EU in the future. It's less of an issue here in the U.S. given what we said the starting point, the different trends in market power, et cetera. But it's really a big live issue for the EU so I would keep a bit of caution regarding what's going on in the EU.

MR. QURESHI: Heather, you have the last word.

MS. BOUSHEY: Yeah. Well, I just want to echo what Thomas said about the importance of campaign finance and the question that I think Nancy asked about. I do think that is key and I think the point is well taken that there's many ways to address the money and politics issue. And some of it comes from breaking up big firms but that seems not the priority. The priority seems to be figuring out how you address the money and politics issue more focus, in a more focused way which is not, of course, what this panel is about.

But I think along with that is, you know, one of the bigger differences which you actually never brought up in the book which I kind of thought was notable given where we are here in 2019. That our election cycles are also so much longer so there's also so much more opportunity for the way that the role that money plays in the political process also takes a lot longer. And I have no doubt that that would

affect the regulatory environment in ways that it doesn't in Europe. I say that without having any evidence but just a guess but as a place to end.

MR. QURESHI: Thank you. I would like to thank the panelists and I hope the discussion has helped lift the fog a little bit. So, let's give a big hand to our panel.

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