Lessons Learned Oral History Project Interview

Interviewee Name and Crisis Position	Kevin Warsh[1] Former Member of the Board of Governors, US Federal Reserve System
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Introduction:

The Yale Program on Financial Stability (YPFS) contacted Kevin Warsh by email to request an interview regarding Warsh's time as a Member of the Board of Governors of the Federal Reserve System.[2] As Governor from 2006 until 2011, Warsh was a core member of Chairman Ben Bernanke's group of advisors during the Global Financial Crisis. He served as the Federal Reserve's representative to the Group of Twenty (G-20) and as Administrative Governor managing the Board's operations and personnel.

Since 2011, Warsh has undertaken numerous studies as a Distinguished Visiting Fellow at Stanford University's Hoover Institution. He has advised the Bank of England. He is an advisor to the Duquesne Family Office and a member of the G-30, the board of directors of UPS and Coupang, and the economic advisory panel of the Congressional Budget Office (CBO).

Prior to his appointment to the Fed, Warsh served as a Special Assistant to the President for Economic Policy and Executive Secretary of the National Economic Council. Previously, Warsh served as Vice President and Executive Director of M&A at Morgan Stanley. Warsh earned his
A.B. from Stanford University, his J.D. from Harvard Law School, and graduate training in finance and economics at the Massachusetts Institute of Technology.

This transcript of a telephone interview has been edited for accuracy and clarity.

Transcript:

YPFS: **Kevin Warsh, we're delighted to have you with us. When you were at the Board of Governors serving in that term, how and when did you and your colleagues on the board realize that there was a financial crisis?**

[1] The opinions expressed during this interview are those of Mr. Warsh, and not those any of the institutions for which the interview subject is affiliated.
[2] A stylized summary of the key observations and insights gleamed from this interview with Mr. Warsh is available in the Yale Program on Financial Stability's *Journal of Financial Crises*.

Warsh: By the time of 'Bear Stearns weekend', there was little doubt that there was a large and growing risk of crisis. No one in the room fully appreciated the full magnitude of the crisis, as best as I recall, until the summer of 2008. But if you want to ask when was there a crisis? There were crises perhaps with smaller capital letters that were beginning in the summer of 2007. But if you want to be as accurate as you could to when did the Fed board appreciate the magnitude of the crisis? Summer 2008. If you want to say when should we have known and did some people appreciate the potential of the magnitude of the crisis? March of 2008.

YPFS: You'd been serving for two years on the board of governors. How did this crisis emergence change your goals and your service on the Board of Governors as it related to that important institution?

Warsh: When Bernanke and his team- of which I considered myself a member- arrived in the spring of '06, each of us had areas of policy reform that were important to us. We agreed then as part of a kitchen cabinet what we would be doing collectively and what would be the initiatives that each of us would lead. That included Don Kohn, Tim Geithner, and myself and a few of our colleagues.

Most of those initiatives were interrupted by the events of summer of 2007, and assuredly by early winter 2008. So that's a bit of the sequencing. In substance, Ben's original goal was to establish some sort of fixed inflation targeting regime, something about which he had thought, written, and studied. His other objective was to depersonalize the Fed, giving ground to the governors, and to broaden the discussions both inside the Fed and with external constituencies.

Pre-crisis, I sought to ensure there was a broadening of data sources to inform the Fed's decision-making; for example, using market prices to give us more informed judgments about what might be around the corner. We needed then – and the Fed needs now -- more contemporaneous data sources that could be timelier and more accurate than traditional data sets coming from the Bureau of Labor Statistics or Commerce's Bureau of Economic Analysis. Which isn't to disparage the traditional data sets. But some of these data are stale, lagging and subject to massive revision. So, it doesn't tell us as much as necessary to inform real-time policymaking.

Integrating market information and more contemporaneous, real economic data-- those were to be priorities of mine. We made only modest progress pre-crisis.

YPFS: Did your market data initiative go under market surveillance or just

the whole economics analysis that the Fed has in house?

Warsh: In 2006, the institution did not—and, as far as I can tell, in 2020 does not—spend sufficient time trying to understand the informational content found in foreign exchange flows, capital market flows, asset prices. Progress has been made. But almost all that progress is about broad aggregates, as opposed to more micro- foundational insights. The micro-foundations of macro matter most.

Now, there's been some work on financial information. Market prices—if not already polluted by Fed signal—are a really important source of information. It's harder to divine the signal, however, when the government is setting the price. There were about a half dozen early initiatives upon which we were focused, but I wouldn't want to overstate the progress before the crisis emerged.

YPFS: Then along came the crisis bubbling up in 2007, the defaults or collapse of the retail non-bank institutions, then Bear Stearns to September of '08. In this landscape, could you describe how your work changed, and specifically the coordination that was required between the Fed and other key players like the White House and congressional leaders to respond to the crisis?

Warsh: First, I'll say a word about 'coordination', and then we can discuss changes in the direction and the cadence of our work.

Coordination was easy, in a sense, because of the emergency nature of the crisis: reasonable, customary hesitations that institutions might have about sharing certain information, assessing lines of authority-- recognizing that fiscal and monetary tools overlap in crises, however uncomfortably-- were taken into account in the exigencies of the time. The emergency made coordination necessary. At the same time, I scarcely perceived other government officials outside the four walls of the Fed trying to affect our autonomy to make our ultimate decisions. That's what real independence is about.

Discussions with the White House, the Treasury, and leaders on Capitol Hill were often tense, but they were straightforward, fact-based. There were differences of opinion throughout, of course. There were fights, but they were good fights. They were fights where each person was trying to figure out the answer to the riddle, the policy response that would be most efficacious. (I sometimes wonder whether those sorts of 'good fights' happened inside the Fed in the more recent crisis.)

These were frequent meetings, often frustrating, often ad hoc.

We had one ad hoc group called the DK committee. Don Kohn led that, and we brought in White House, Treasury officials and others from other government agencies. There were often big disagreements, often because of imperfect information. But, it was a useful discussion forum.

The other interesting piece was substantive. If we at the Fed judged that such-and- such was a problem needing to be solved, the next question was what institution was going to be using its authority and money and rhetoric, to lead the response. Is that particular course of action the job of the Treasury, the job of the fiscal authorities in Congress, or the Fed's job?

After coming to whatever judgments—and there were huge disagreements even within the building—the question was: "OK, who's going to pay?" Who's going to use its authority? Who is going to take the lead, be responsible?

YPFS: Take the risk, right?

Warsh: Yes, there is risk. But far more important, what institution has the authority? Is that the job of the Fed, or is that the Treasury's job? Is that Congress's job? These discussions were hard fought, but they were also the right fights. None of us have been through crisis conditions like these, previously. These were the fights needed to be had. There were often significant substantive disagreements both across institutions and inside institutions as to the best choice of policy. We then spent at least as much time on the question of role and responsibility, "OK, whose job is it to fix that?"

In cadence, the first part of your question, we were often in firefighting mode. But there were also long periods between the fires, windows of opportunity to stop and ask, "Okay, where are we?." We cannot afford to only focus on the proper pronouns (i.e., the names of the particular firms in trouble) and ask ourselves, where are we? why are we here? what's around the corner?

There was understandably a difficulty in stepping back and saying, 'Do we have a Bear Stearns problem – or do we have a banking problem? Do we have an AIG problem – or a liquidity problem? Do we have a Fannie problem or a housing problem? Do we have problems of those particular institutions, or rather are those symptomatic of a massive liquidity shock?'

We missed critical windows. The window that comes to mind among others was between Bear Stearns weekend and late summer.

You know, there was a window to ask ourselves and answer really hard questions. I remember saying: "We're going to run out of buyers before we run out of sellers." Meaning we can continue to find buyers of these stranded assets. But is there something bigger going on here? If one goes to the Bear

Stearns transcripts of our FOMC meeting, there's a pretty -- how do we say this -- candid discussion. I think that's a diplomatic way to say it, a candid discussion.

YPFS: **A frank exchange of ideas?**

Warsh: That's right, a frank and candid discussion. We did have a candid discussion over Bear Stearns and what should be the terms of any backstops that would be provided to JP Morgan and others. That was a heck of a family fight. The broader discussion, which you can find some of in the transcripts, is do we have a Bear Stearns problem—or is Bear Stearns indicative of something bigger and more systemic?

Some of us asked ourselves the hard question whether or not there is a run on the entire financial system and whether all of the investment banks will find themselves in a similar situation.

There's no one who had perfect clarity on that. But there was a window after Bear Stearns, between March and late summer, where there was an opportunity to have been more refined in our thinking. We could have examined Bear Stearns and asked whether it [was] more indicative than an outlier. Policymaker cadence was racing from fire to fire; instead, the cadence could have started earlier and should have been broader. We understood the difficulty of the challenge. But in seeking lessons learned from the fog of war, I think there's plenty of useful rethinking there.

The other example that comes to mind involves Fannie Mae and Freddie Mac, Going back to the Clinton administration, when Larry Summers was Treasury secretary, he gave a single speech about Fannie calling for transparency and market discipline of the GSE’s to reduce systemic risk and was attacked immediately.

Then, early in the Bush administration, I worked with Greg Mankiw, then-chairman of the CEA. At the time, I was a on the White House staff. Greg and I —and then Ben and I—did considerable internal research, documenting the significant risks posed by these firms. We did not know when, but we concluded that Fannie and Freddie would have a high probability of failing, which could well be a significant and systemic risk. The firms didn’t have much capital to speak of, they didn't have any real regulation, and there was almost no market discipline. And so, at a terrible moment, they would fail. So that's why there should have been real reform of these institutions long before the crisis.

In the Bush administration, there were some efforts in this direction, not perfect by any means. For example, President Bush decided to no longer name any government directors, to the boards of Fannie and Freddie, even though those were thought to be plum assignments. The administration stopped doing that. That's obviously not a reform agenda in and of itself, but it is a small step.

Ben and I worked on these government-sponsored entities after he became chairman the CEA. We believed that Fannie and Freddie were too likely to fail, and what's more, that they weren't serving their intended beneficiaries very well, namely low- and moderate-income households.

We had plenty of opportunities, even once the crisis had begun and in early '08 to force—to use a loaded word—Fannie and Freddie to recapitalize in the public markets. The same way, when I recount the Bear Stearns history—to encourage, persuade, cajole—the banks to recapitalize themselves in the public markets. There were huge opportunities missed.

YPFS: **What to do? Capitalized, right - it was going to take that?**

Warsh: Right. I remember the banks and Fannie and Freddie's management teams during that period saying to the regulators that raising new capital would be too dilutive, with share prices half what they were 100 days prior. That argument was more persuasive to some people in positions of authority than to others.

There were some of us who thought that while we didn't know the outcomes, new private capital would serve as good insurance. The sooner the better to recapitalize. Fannie and Freddie reforms in the 1990s and 2000s would have been better than in 2008. But recapitalizing in the eighth inning is better than bailing them out in extra innings, namely August or September of 2008. The cadence necessarily quickened, as policymakers raced from proper noun to proper noun (i.e., firm to firm). There were windows that the markets gave us that we could have seized.

YPFS: **And when was that discussion, heated or not, polite exchange? Just so I can look at that FOMC meeting?**

Warsh: The March FOMC meeting of 2008, but you should just know one thing for your writing, thinking and just knowledge: FOMC meetings are taped. In part, because there is a recording but for other important reasons as well—there tends to be informal meetings before the formal meeting.

Bear Stearns happened to correspond to a regularly scheduled FOMC meeting. And the events were happening pretty quickly. That transcript was a somewhat more candid and real-time than a normal transcript just because of the timing of events, but no FOMC transcript fully captures the real debate that might be had in Chairman Bernanke's office.

Incidentally, regarding central bank meeting records and discussion, I wrote a report for the Bank of England about how the BoE runs its monetary policy committee meetings, both in times of peace and crisis. They also had been taping their MPC meetings for 100 years. Among the things I recommended in that report was, that they not tape Day One sessions of the two-day gathering. Their meetings are similar to ours. So, on day one, you can actually have a full family fight. You don't have to have a meeting before the meeting, you can really play devil's advocate and try to make each other better. Be unafraid to say things. And on day two, where you then say, "Okay, I heard what I heard on day one, this is my judgment." Tape that because that matters. That's your rationale. That's your thinking, you prepared for it.

Unlike many of these sorts of white papers in the US, Parliament passed the recommendations of the report. They actually changed the law in Parliament, which has now changed how the MPC does it. And my friends that are [Bank of England] Governors and members of the monetary policy committee tell me it's largely been a success, meaning they're actually more candid with each other, they have a better discussion. And they come to better judgments. Those judgments, of course, can still be wrong, but the process improvement matters.

YPFS: I'd love to hear what they said about Brexit.

Warsh: Yes, exactly. Some historians, people like you—when I wrote that the report, were concerned about the lack of historical record. And I get it, but the truth is that the full taping is actually not the historical record.

YPFS: It's the propaganda.

Warsh: And if we humans were perfectly virtuous, that would be a perfect historical record. But dealing with human nature as it is, this is the best one could do. With the benefit of reforms, the resulting transcript ends up being better for purposes of getting the policy right, which is the first objective.

YPFS: The international dimension is another part where you had this remarkable experience. By the way, our last interviewee, Kieran Fallon, greets you and lauded your work, Kevin, with the interagency response during the crises. He spoke highly of that.

Warsh: Kieran is a very talented guy and incredibly valuable member of the Bernanke team.

YPFS: Yes, he was an amazing interview.

Warsh: He was Deputy General Counsel; he's a brilliant guy. And you know, the incredible thing about the Fed truly is, in that crisis and I'm sure today, there are dozens and dozens of great thinkers and doers. They have brains, knowledge, integrity and no less important, deep institutional memory. Kieran is a fine exemplar.

YPFS: **It was fascinating to have the chance to exchange with him and hear his insights. He hailed the coordination in a different vein. But you also worked with the international side, sent to represent the US Fed with the G20. Could you speak to that experience in light of what has been touted by political scientist Dan Drezner as a very effective and under recognized instance of international monetary coordination? Were there any sticking points or was it just a kind of surprisingly virtuous coordination?**

Warsh: Well, that's nice what you said, but it was arduous and difficult. So, was the communication strong and candid and frank? Yes, it was all those things. So, in that sense, I think it was a huge success. But it was hard. We should not allow in history re-telling to suggest a myth of perfect coordination, ease of discussion; it was brutal. But I would say two things made the international dimension largely a success.

YPFS: **Who you were interfacing with and on what scope in this international outreach to the G20?**

Warsh: It changed over time, I'd say as Kieran talked about, there's a lot of domestic coordination with the other bank regulators, with the Treasury, with the White House, etc.

On the international front, there were a series of concentric circles. A useful way to think about it: in Chairman Bernanke's kitchen cabinet, it didn't really matter who had what title. It was about who had what insight. Perhaps that's just the nature of crises.

So, for example, Kieran played an important role. Scott Alvarez, his boss, the GC, Nellie Liang, who at the time was not running a full division but is incredibly talented. Regardless of what we might call senior Fed staff, or Governors or lawyers or communicators or regulators, I would say Bernanke put together a kitchen cabinet of people who he'd speak to at 5:30 in the morning and 9:30 at night. And we'd coordinate regardless of titles and responsibilities, on a broad set of things. That's a more useful sort of mental model, I think, of the crisis response. And by the way, Paulson did something similar at Treasury, as I recall.

On the international front, which is part of that, on the 5:30 AM call, it would be something like Scott or Kieran, Don Kohn, myself, Ben and Michelle Smith. I don't know if you've interviewed Michelle yet. She's very talented. So, at some level one might look in an org chart and underestimate her role and influence, and that of several others. She was in the room where it happened, helping us think about everything.

With the concentric circle of 5:30 or 6:00 in the morning, Michelle would say or I would say or Don would say, "You need to call Jean Claude-Trichet or you need to have a discussion and reinforce the following two points with the governor Bank of Japan." Or "Mervyn called me last night and asked about this. And I told him this, but I told him I wanted to make sure you are comfortable. I'm going to call him back, Ben, but are you okay with X, Y, and Z?"

The G20 is a useful forum. But the way I would describe it is the G20 relationships are forged in the forum. Building those relationships out in peacetime led us to better solutions in war-time. You could just pick up the phone and have whatever ad hoc discussions would be necessary. If we wanted to put the swap lines in place, you knew the people, you knew their concerns, you talked to them five times and you talked to their guys 20 times. And you'd then coordinate with Michelle talking to their press people about "Okay, at Tuesday at 6:00 AM, East Coast time, we're all going to put up the following statements."

So, the G20 was both a jumping off point to the relationships and was a periodic way get together. The G20 was useful but less in a formal, "four walls" sense as much as the relationship and knowledge that would come from it.

YPFS: **Okay. I see. So that gives great context. On your earlier comment you were going to make, Kevin, that in response to the idea of an under-recognized and effective international coordination, it was tough and ugly. So, could you discuss what you mean by that?**

Warsh: So, I don't mean to say ugly, as in wrong. That is, we're all manifesting different timing and sequencing of symptoms in a crisis. We had institutions that cross borders that are as much British as they are American, as much Japanese as they are US. So, there's always in that concentric circle differences in interests. But I think they're the right discussions, they were necessary arguments, and there were disagreements. If the agreement was to backstop bank X, whose backstop? America's or someone else's? Who is responsible for assets that are stuck in someone's country? Who has different legal authorities? Who needs to consult with their prime minister or President or parliament?

To your broader theme, I would make two points.

The international coordination was, on balance, excellent. And that was, I think, a function of two things, which you can judge, or you can ask yourself whether they are as relevant today as they were then. It was a function of, one, the exigencies of the situation. There's nothing like panic to get people to coordinate. There was deep concern based on what each person was seeing at different points in 2008 and '09. Fear was useful to bring some degree of comity and coordination. And so that's one.

The second explanation, I think may be more parochial, but is at least as important. Policymakers around the G20 thought: 'America knows what it's doing; American policymakers are leading.' You'll recall in the first 12 months of this, there was a sentiment in Europe and other parts of the world. "Oh, I hope these Americans don't export their crisis to the rest of the world." Which again among all the things I've read, and in the last dozen years, it strikes me this was never a uniquely American crisis. This was always a global crisis. Almost every bank in the world was insolvent. There were different times at which that was recognized and appreciated.

Even though it was perceived early to have something to do with subprime US mortgages, a hypothesis that I did not believe then was adequate and do not believe now. There was a mispricing of every asset in the world, a lack of capital and liquidity around almost every major financial market. It manifested itself in subprime mortgages first, for plenty of good and obvious reasons. But that was merely illustrative of a broader, deeper problem.

So, the answer your question was first panic, and the second answer is those Americans, even if they let this thing happen, even if it was perceived to be a US crisis, those Americans and their economy, they know what the heck they're doing. And so, we need to broadly, follow is not the right word, defer is not the right word, but we understand who is well-situated to help lead the US and global response.

The mix of those things, the height of economic powers in the post war era, even in the darkest days of that '08 crisis. And fear such that people were looking for who had knowledge and expertise.

And because this thing had manifested itself in the US first and I think we had a reasonably competent group of policymakers, there was some degree of deference. I think those are the two big explanations that come to mind as to why the international stuff worked.

A different mental model would be there'd be 20 countries. Everyone thought that they knew better than the other 19. And everyone had their own sorts of views of who's on top and who's on bottom. That'd be a harder crisis to coordinate than what we were confronted with in 2008 and 2009.

YPFS: **Right. And both of those presumptions could be in question**

today. We'll get to that later. I want to stay in 2008 and 2009, 2010: Was there anything else you would say about decisions taken or not taken by the Federal Reserve that you wish had been handled differently? You gave a big answer to that point, but it's an open-ended question.

Warsh: In retrospect, we would have been more aggressive a bit earlier with interest rates. Economic historians might give us perhaps a B or B plus. We did okay. If you knew at the beginning that which knew at the end, you would have been quicker on monetary policy and more aggressive in the earlier dark days of the crisis. But I don't think that's a great insight. It's a blindingly obvious insight. And I'd say on the on the broad financial stability, proper nouns, I think we really talked about it... I think judgments that were made for all the best of intentions and good faith, but there were some errors in judgment.

YPFS: Which were the errors in judgment inretrospect?

Warsh: The recapitalizing of the banking sector, and the recapitalizing of the GSEs.

YPFS: Right. Right, as discussed.

Warsh: By private markets when you still could!!!

YPFS: As we look to lessons learned, is there anything you could take from this retrospective analysis that would be forward-looking or that could be even applied today?

Warsh: Yes, lots of things. One of them: I do think that the narrative that became common was not the right narrative. The common narrative for years was subprime US mortgages. So, if you ask yourself, "Okay, what if there were no subprime US mortgages? Does that mean there would have been no global financial crisis?" I don't believe that. It would have hit the next weakest asset, the next most mispriced asset, the next asset with the least amount of market discipline.

And you just find the next most fire enhancing tinder that was around. From a global perspective, had this been properly framed as a global financial crisis of which certain US assets, US institutions were being implicated, but was global in nature and the problems were global in fact, then the global economic response could have been way more aggressive and more coordinated earlier. In the first 18 months of this, this was perceived a US problem. And there's a quote, which I won't get exactly right. But it's in someone's history, written by a very, very senior UK official says, "I think with respect to Lehman Brothers and the potential sale to a UK institution, we are not going to import America's cancer into the United Kingdom."

So that's indicative of, "Oh, you have a problem. We don't have a problem." Which was also Europe's judgment until, I don't know 18 months, two years into this, when the word GFC became part of it. Global financial crisis is what we all call it now. It is not what it was called until, 2011, 2012. Policymakers in positions of authority around the world, that fixated on the US mortgage piece, got that wrong.

That's not to say that the US mortgages were in great shape. No, they were in terrible shape. And they were the trigger, the catalyst, akin to assassination of the Archduke. But that framing slowed the global response, slowed the global understanding, and made the global recession materially worse, meaning the earlier you can get on top of these things with a narrative, a framework and a policy response, the better and faster can the economy perform. As global in response as it is an origin, the more power your tools can be used, and the less injurious the turn in the financial business cycle.

YPFS: **The US subprime narrative is so powerful that somebody like me who follows this stuff-- not an expert but follows it pretty closely-- gets that. I get that there are other pieces. But the narrative of the subprime mortgage has stuck, the one we go back to. So alternatively, what would your narrative be? I'm curious how you find something with as good a hook.**

Warsh: Virtually every asset everywhere in the world was mispriced. Subprime US mortgages were crazily mispriced, right. Whenever there would be a shock of any type of any magnitude, the shock would be amplified in financial markets and importantly in the real economy, when you have such a mispricing of risk, a mispricing of liquidity, misunderstanding of what real term premium and risk premium are. That the whole world will be suffering the consequences of such misallocations of risk and misallocations of capital.

Many of the topics we've discussed -- my views are different to a degree and in some cases in magnitude from the Washington consensus.

YPFS: **That's a really interesting point. So, I just wanted to ask you about the framing.**

Warsh: In the world of economics and the world of monetary policy, there tends to be a dominant, prevailing consensus view. And it's good to know that and that consensus view can be right about a lot of things, but also can be wrong about a lot of things. And so, when the overwhelming consensus view is wrong, it's really, really wrong. Because the world isn't ready for the shock, by definition.

YPFS: **What I'm wondering about the story, and I want to read your**

papers more closely-- is the cause of the market failure. Because the smart market makers should find out the mispricing, the speculators should pay the price if they're wrong, and the massive mispricing should be corrected. So, what was it?

Roger Altman wrote that it was easy money. He has a macro-aggregate story that too much easy money for too long fuels overshooting. Similar to your account: speculative excess is going to happen somewhere and spread badly.

But your story, as I follow it, is more about some underlying dysfunction of markets. I don't know if you have a name for that, if that's right?

Warsh: The story of the great moderation is the narrative that is shared by the overwhelming economic, financial, and monetary policy community. It began in the early 1980s and ostensibly ran through the financial crisis, and then re- asserted itself in 2011 until early 2020.

The learned behavior of investors was that the official sector’s objective was to mitigate deviations in output and employment and mitigate deviations in financial markets. Market participants and real economic actors said. "Well, policymakers going to make sure really bad stuff doesn't happen. You know, we might have a recession, but a moderate business cycle will exist. The real tail had been bitten off and these guys are going to protect me."

The great moderation thesis had taken hold, which is quite troubling. Any tail-risk is therefore going to have adverse consequences because the world isn't prepared for it and didn't buy insurance against it. That's a broader way to frame why shocks inevitably happen when everyone's betting on a reasonably set of benign outcomes.

YPFS: How did the crisis response and then the avoidance of total meltdown-- the crisis experience-- feed into financial market reform. The crisis happens, it's a new landscape. So how did it affect the politics of financial market reform after 2008?

Warsh: It did two things. It made the prospects of quote-unquote reform easier, both legislatively through Dodd-Frank kinds of things, and through the interagency process at the Fed. Meaning ‘reform’ became then the calling card of the day. In that sense, all these events were impetus to reform. But the real big reforms, the necessary reforms, the reforms that would make a huge difference I don't think those were incorporated.

I'm impressed with the reformed impetus. I'm unimpressed with the strength of the reforms themselves, which could have been implemented fully in the long period between that crisis and the Covid crisis. This is a disagreement with the prevailing consensus. There are a dozen examples, I'll just give you one: the stress tests for the banks. So, the bank stress test we put in place in 2008 and 2009, those were quite useful. They really were helpful, helpful for us to understand what these banks could survive and the period ahead, and helpful for markets so they'd have a better understanding of what's in the four walls of the institutions.

Mine is not a criticism of the stress tests in the immediate aftermath of the crisis. It is a criticism of the stress tests from 2011 until today. The stress tests became part of the typical regulatory scrutiny. And they lost their salience. The stress tests lost their unpredictability, and they lost their effectiveness. As almost all reforms can do over time. The stress tests became part of the compliance effort, a repeated take-home test. It's especially problematic when the institutions are-- in the eyes of markets-- back-stopped by the US government.

Before the crisis, we worried that there was a too big to fail problem. After the crisis, markets weren't worried. They knew there was a too-big-to-fail policy effectively in place. Markets were pleased.

The US government was going to stand behind the biggest five banks in any and all circumstances. So, two points of emphasis for you. One, that's a bad public policy. Now, the darkest days of the crisis, when you have no alternative, you have to stand behind those institutions. That was necessary but real reforms should have been put in place ex ante. The crisis is the wrong time then to be a radical reformer.

When I raise critical questions of too-big-to-fail, the response of some authorities: "Kevin's naive here. The Canadian stand behind their banks. The Japanese stand behind theirs, the Chinese, the French, the Germans, the Australians." "These aren't soda pop companies," as one former colleague said to me, "these are banks, they don't just make widgets. They're part and parcel what we are."

I disagree with that. That's the wrong public policy for the U.S. And in peacetime, it should be addressed.

YPFS: **But explain how your alternative framework works. You don't want a market meltdown either. But if these banks are systemically important, how does the market sort that out without bringing down the whole economy?**

Warsh: In a crisis they don't. You're right. In 2008, in 2009, that's the wrong time for perfected virtue.

But before that crisis, and before this crisis—again, I've written a few papers on this-- you adopt a three pillar approach. You would establish real market discipline, real capital standards, and real regulatory standards. Because any of those three pillars can break down, they have to work in concert with each other. Sometimes markets get overly ebullient, and they don't care what someone says about institutions' profitability and their financial wherewithal. They just treat them like the good times will never end. So that's a scenario you need capital standards to step up. That's when you need your regulators to step up as well.

Sometimes there's regulatory capture. That's why you need market discipline and capital standards to stand up.

This was true in 2006 as it was in 2012. It's true in 2020. Let's say you're an expert on all things banking, and you wanted to know what was happening inside the business of a too-big-to-fail institution. And all you had to go by was the bank's 10Q and 10K and annual report. You will find it nearly impossible to actually understand the risks in that business. Really understand their true capital and liquidity.

Then what you might do? "Okay, I'm going to pull those documents of their four or five biggest competitors. And I'm going to compare them." You'd find that also incredibly difficult to compare. The definitions are hard to compare, the standards are hard to compare.

By contrast, I know very little about consumer products. But if I took out the financial statements of Walmart, I'd understand in an hour, where do they make their money? How much cash do they have? What are the big risks to their business? What could happen?

And again, the people on the other side of this in Washington policy circles say, "Banking is special. Kevin's naïve to think the business of banking is like any other business." I'm not willing to willing to stipulate that banking is altogether that special or deserving of special treatment.

YPFS: Well, that keeps it interesting. And that's crucial, we want to document that too.

Warsh: We should try to engage in these discussions constructively because other shocks will happen. And absent real reform, we can end up in similar situations. The "too-big-to-fail" thing is one of a dozen examples. But the stress tests are another. The stress tests became part of the normal regulatory compliance exercise.

Let's just use the 2020 shock as an example. The 2020 shock ends up being about as bad as the stress test scenarios that were dropped on the banks in the last couple of years. And you'll recall the results, the then-contemporaneous results of the stress tests were all, "the banks are fine, they all pass. They're all in fine form." OK, then we actually had the stress. Let's ask ourselves the question: Absent extraordinary government support, would the ex-ante statement of the regulators turn out to be true? The US government in March, by necessity, had to bail everybody out, including the biggest banks, bail out the money market mutual funds, and provide full backstop of liquidity to everybody.

You can go through the laundry list of what was done in March of 2020. The first things done were a bit of "cut and paste" of our measures from 2008 and 2009. I don't mean that critically; I mean that's on the shelf and events are moving quickly. And according to the stress tests, none of those moves were to be necessary. Could those banks have readily withstood the shock, just fine? Not in my view, absent extraordinary government support.

Well, obviously our government policymakers thought extraordinary government support was needed, and with good reason. It's one example of a dozen examples where the so-called reforms—which were useful and productive in the last crisis, and maybe immediately after that crisis—lost their salience and effectiveness in the period between these shocks.

YPFS: **What about the argument of Bill Gross, the asset manager, that given the massive debt in society at all levels, extended liquidity was needed to allow space to deleverage. The Fed didn't want to shut off the recovery, as bad as it was.**

Warsh: I'll say this about the debt trajectory. The debt trajectory in the prior decade, we said was clearly unsustainable. The current trajectory is now clearly unsustainable, and, yet somehow people are less troubled by it instead of more troubled by it.

We did not use the period between the two crises to normalize the broad conduct of policy. When as inevitably happens, there is a shock, we tend to arrive at it ill prepared—intellectually, resource-wise, credibility-wise—we tend to double down with the same remedies. And the longer this goes on, the fewer options there are. We continue as if there is a Great Moderation that lasted from 1982 until 2020.

There was one major aberration of 2008 and 2009 of the Great Moderation… until there were two. We conduct policy as if shocks won't inevitably happen. As a result, we then can appear stuck with no good alternatives. Policymakers cross more red lines. They encourage more leverage, and the country has fewer degrees of freedom.

This is not, in my view, the right way to be conducting policy. It is not a criticism of the firefighters in the darkest days of the crises. It's a criticism of policy in the periods between the shocks.

YPFS: **Looking to the COVID-19 and the US economic response, how would you assess that? And specifically, how would you evaluate the coordination by the different agencies?**

Warsh: Let's just stipulate for the purposes of the discussion that there's nothing that could have been done the day before the pandemic to prepare. You're stuck with the war you've got. Now I don't believe that, but just for purposes of answering your question, you arrive at the Fed and the Treasury and the White House on March 15. You had no prior warnings or inclinations to normalize policy in the last decade. So, you've got to do what you've got to do. By that standard, they did fine, at least in the darkest days of this shock. Now, I think they were a little late in their signaling on policy changes. I wrote in the third week of February, in a Wall Street Journal op-ed that policymakers need to be cutting rates right now.

And they did it three or four weeks later. Not the end of the world, but there was some bit damage that may have been mitigated, to be fair, this group of policymakers were less late than we were in the 2008 crisis. And so, in terms of the darkest days in March and early April, it was a pretty good initial response, borrowing from the 2008 playbook and then deciding what to do next. But again, cutting and pasting from a decent roadmap's not bad. But the nature of that crisis, the nature of this crisis is quite a bit different.

So, while I'm broadly supportive and praiseworthy of that initial response, 2007- 08 was a crisis that manifested itself first in financial markets and found its way into the real economy. This is a crisis that finds its way in the real economy and manifests itself in financial markets. Now, those can both be overstated, but as a simple framing device, I think that's a true statement.

As a result, from the darkest days of this crisis until today, I view the emphasis on fixing financial markets relative to the emphasis on helping Main Street as being misplaced. So, the 2008 crisis was criticized for "Oh, you guys did lots for Wall Street you didn't do much for Main Street." And that's a fair criticism, but at least the initial shock was at least first and foremost, a Wall Street shock.

This shock was not first and foremost a Wall Street shock. It was first and foremost a Main Street shock.

Why has there been so little emphasis on the real side of the economy, which continues to be suffering relative to financial markets? Financial markets that continue to be subsidized.

As an example of that. I wrote again, in maybe the second week of March in the Journal an op-ed that said, "This is a Main Street problem and the Fed needs to fiscal support from Congress through the Treasury's Exchange Stabilization Fund to provide immediate access to liquidity to every Main Street business in the country."

And about a month or six weeks later, they announced a proposal with a good name, but one that was not well-designed. Their proposal they call the Main Street Lending Program. I called mine the Government Backed Credit Program, a terrible name …

YPFS: Same idea, though, right?

Warsh: Not quite. Here's what I thought-- then and now-- should have been done. If a business goes to their lending institution, and if that lending institution would have provided them a loan on February 1 or January 1, then they should provide that loan to that recipient today, immediately, at the onset of the pandemic. And they would use their same underwriting standards they would have done then.

YPFS: Freeze the economy.

Warsh: And if they lose money... What's that?

YPFS: Freeze the economy, right? Lock it in where it was before.

Warsh: Yeah, all borrowers that would have gotten liquidity pre-pandemic would get liquidity. And if the banks lose money on the new loans, the government would be on the hook, owing to the exigencies of the pandemic. And the binding standard is that the banks will be regulated as they would a normal loan book. If the new loan would not have passed normal underwriting standards, then the bank would take the loss. The government would not. So, the bank should follow its own pre-covid underwriting standards. That way the government doesn't need to micromanage the loan book. And I think that would have been a huge benefit.
Instead, we've now gone through five versions of their Main Street Lending Program, it basically doesn't work. There has been almost no take up.

YPFS : Can you explain the failure of that the Main Street Lending program?

Warsh: Here are a few possible explanations. Others can judge which is correct.

One, the focus and attention wasn't on Main Street. Policymakers were panicked by what was happening to financial markets, and they rolled out our 2008 toolkit.

The second explanation is at the beginning the Fed didn't have the backing from the fiscal authorities. Meaning the money for this came from the CARES Act, which hadn't yet become law. The Fed can't do this without fiscal support, because the central bank is not in the business of spending and losing money.

The third possible explanation: The central bank policymakers came up with their own standards, meaning the business needs to have this kind of loan and this kind of cash coverage: The regulators came up with their own underwriting standards.

And then a final possibility: the Treasury didn't agree with the Fed's proposal.

YPFS: So, the Main Street Lending was going through banks—the Fed providing credit to the banking institutions-- but they gave a lot of stipulations to it.

Warsh: Exactly. My view is, is to use big bold, clear standards, make them obvious. Harder to be gamed. Could some people that were less deserving find their way in? Of course. So, you're going to over capture-- that's a policy choice you've decided to make. This should have been a program of general applicability to borrowers of regulated financial institutions.

YPFS: You've argued we should differentiate fiscal stimulus from income support. That fiscal stimulus is the wrong term for what we're doing with the checks, it's really income support as a temporary emergency intervention. Having thought that through from a policy standpoint, what do you think is the appropriate timeframe for income supports in this crisis response?

Warsh: Many of my colleagues think about what Congress can do here in aggregate demand terms. There's a shortfall in aggregate demand. There's not enough consumption, investment, and exports etc.. So, in Keynesian terms, we should be plugging the shortfall of C plus I plus X with lots of G. And that way we can get back to potential. That's good GDP arithmetic but it fails to appreciate fully the nature of the dynamic economy, in my view.

All parts of aggregate demand are not created equal. The returns on real business investment, the multiplier on that are invariably higher on average than the multiplier on much of G. And that preoccupation puts us entirely on the demand side, when much of this shock looks to me like a supply shock. As we're taking the supply out of the market, and obviously there's effects on demand when people are staying home, but the most thing to learn in Econ I is that supply and demand cross.

I don't accept that we need to fill the hole in aggregate demand by replacing it with any old government spending. That's more misleading than it is informative. So, the way I think about the government checks here is different: We are a rich and generous country with citizens who, through no fault of their own, are in terrible shape. And we should find the most efficient way to provide them support, so that they can survive and be well positioned to ultimately thrive on the other side of this. So that's not a plugging G, that's about helping those who have found themselves in a bad place and for whom we can mitigate the harm so that our fellow citizens are better positioned.

YPFS: **Isn't that part of it, that we're asking them to stay home more?**

Warsh: We told them what they can and can't do. We as policymakers across administrations of both parties -- it was our job to try to provide some insurance against these tail risks. We've not done a good enough job of preparing the economy or our citizens for the shock.

YPFS: **Finally, the dollar and US financial markets in the world system: Considering COVID, concerns that Asia's recovering faster, the US exploding its debt, where do you see the outlook for the US dollar and US financial markets moving presently and looking ahead?**

Warsh: First, the most important attribute the US needs around the G20 is soft power. And soft power is a hard thing to define. It's a hard thing to gather. It's an easy thing to lose. I haven't been to a G20 meeting in 10 years. But I asked myself the question: When the Treasury Secretary of the United States, a Fed Chairman of the US – who over the course of the last 40 years have been in those meetings— when US leaders speak, is there less attention paid to what they say and do today than there was 10, 20 and 30 years ago?

And, again, the consensus view among the other folks might be that we are in a postwar order. Other countries are bigger and more consequential, the US is smaller and less consequential.

Well, arithmetically, relative decline might be true, but that doesn't have to be true in terms of holding the forum and being the framer at forums like the G-20. So, I wouldn't be fooled into thinking that US necessarily has lost its ways to influence or steer these international forums. Because if we act as though we have our act together, and we have a plan and a strategy, and we've gotten lessons learned, even if we are no longer as large a share of global GDP, that doesn't mean we should not be capable of leading.

YPFS: **It's about soft power, not just raw material power, OK. But we're**

exploding our debt, and Asia is going to recover faster in the near term. So, in the long term and in the near term, there's a decline in US capabilities, no?

Warsh: The explosion of US debt is still at a level that we can, if we chose to take it seriously and chose to deleverage over time, we are powerful enough, strong enough, productive enough that we could do it. Some of the things we're doing will be or are already being imitated by countries that have less financial wherewithal. So, if and when there's a sovereign crisis, it's not likely to be in the US, it's likely to be among folks that followed our behavior and were unable to sustain it.

The dollar has been on a weakening path for several months. Foreign exchange investors believe that the growth profile, not level, the growth profile of the US will continue to fall in the decades ahead. What distinguished American growth and productivity and other important attributes in the postwar era were relatively high levels of growth and productivity. The dollar markets are telling us that the world perceives that the relative strength of the US on those factors will continue to decline relative to international peers.

The dollar may be weakening if it's perceived that the comparative advantage of the country is falling. The consensus view might believe that these trends are inevitable. But, I don't believe in the inevitably of any trajectory.

YPFS: That's a good place to leave it. Kevin Warsh, thank you on behalf of the Yale Program on Financial Stability for your generous time.

Warsh: Hopefully, I was able to be sufficiently clear and answer your questions.

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