

CARNEGIE COUNCIL *for Ethics in International Affairs*

The Shifts and the Shocks: What We've Learned--and Have Still to Learn--From the Financial Crisis

Public Affairs, Global Ethics Forum TV Series

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Transcript

Introduction

JOANNE MYERS: Good morning. I'm Joanne Myers, director of Public Affairs Programs, and on behalf of the Carnegie Council I would like to thank you all for joining us.

It is a pleasure to welcome Martin Wolf back to this podium. He will be discussing his book, *The Shifts and the Shocks: What We Have Learned—and Have Still to Learn—from the Financial Crisis*. His rigorous thinking, deep insights, and incisive comments will stimulate you today just as they did when he first spoke here a few years ago, as a visit to our website will confirm: www.carnegiecouncil.org.

Before I began preparing my remarks for Mr. Wolf's visit, it occurred to me that, although I may know a little about a lot that is taking place in the world, what I know about the global financial markets is even less. But knowing that one of our esteemed trustees clearly understands more about the financial world than many of us, I decided to ask Anthony if he would be interested in introducing Martin, at which he hesitated, but only for a moment, before overwhelmingly answering yes.

Anthony Faillace founded Drake Capital Management and serves as its managing director, chief investment officer, and portfolio manager. He also served as managing director and senior portfolio manager at BlackRock, and before joining BlackRock, he spent five years at PIMCO and a few other places. With these golden credentials, I think you will understand why I chose Anthony to introduce the premier financial journalist of our era, our guest today, Martin Wolf.

ANTHONY FAILLACE: Thank you, Joanne. There wasn't much hesitation, I assure you, at the chance to introduce Martin Wolf.

Just by way of background, I am an investment manager in New York City. During the financial crisis, I was the chief investment officer of a firm that managed fixed-income portfolios, as well as leveraged hedge fund portfolios. So I really had a front-row seat. I constantly would have people ask me, "Well, what was it like during that time?" I said, "I slept like a baby—for about a year, I woke up in the middle of the night crying."

I think if you weren't a financial market participant in the crisis, you don't have an idea about how scary things really were. We all saw share prices fall all around the globe, but what probably isn't better understood is that literally any asset that was not a government bond fell for a certain period of

time, which was absolutely incredible. We had a complete drying-up of liquidity in financial markets. It was very hard to buy or sell securities in any quantity. We also saw the financing markets collapse, which was absolutely integral to what Martin refers to as a shadow banking system that was set up.

I lived through this for a good year and a half. It really reached its most dramatic point in September of 2008. When you think about what happened in 2008, we saw seven major financial institutions within two weeks either taken over by the government, forcibly merged into other entities, or bankrupted in the case of [Lehman Brothers](#).

I had occasion to talk with one of the senior negotiators on the part of a large bank who was there that weekend prior to Lehmann's bankruptcy, the weekend of September 13th, and he said the weekend was unbelievable; they were trying to get to the bottom of this ungodly mess. He came home, when he knew that Lehmann was going to go bankrupt, and he told his wife, "There's going to be another [Great Depression](#)."

When we get to a point where a senior official from a major bank—a serious, smart individual—is talking about a Great Depression, we have some serious questions to ask:

One being, how on earth did we get ourselves in such an absolute mess?

Number two, why weren't people sounding the alarm? Where were government officials, regulators, private sector participants, academics, journalists? No one was really talking about a disaster of this scale.

What can we learn from this?

Finally, how do we make some changes so that we are not in a situation where something like this happens again?

Martin addresses all of these questions in his fantastic book, *The Shifts and the Shocks: What We've Learned—and Have Still to Learn—from the Financial Crisis*. It takes a special person to write this book, because you need a journalist's ability to tell the events, talk to all of the participants, and report on that, but you also need to be a trained economist in order to put the events in the proper context from a theoretical perspective. Martin does both of those things beautifully. You would expect that. He is associate editor of the *Financial Times* and chief economics commentator. He has written two [other books](#) on a similar topic. You can read his full bio. I won't go into that.

But I would just say this. If we took a poll of people who consume financial journalism, whether they be academic, market, government, whatever, and asked them who the most influential financial journalist working today is, there is no doubt that Martin Wolf's name would be at the top of the list.

Please welcome him to the Carnegie Council.

Remarks

MARTIN WOLF: First of all, thank you for that very kind and flattering introduction. How does one follow that?

Secondly, it is an immense pleasure to be back here and to talk to the Council on my book, which appeared in September and, to my great pleasure, is doing quite well.

The turmoil in the markets at the moment and the questions about the future of the world economy

are, I have to say, very good news for me. I was rather concerned, when I finished this book, since it is now roughly seven years since the financial crisis ended, that when it appeared people would say, "Crisis? What crisis? It's all over. That's just history."

But there doesn't seem to be any great danger that it will just be history. In fact, it is pretty obvious—and indeed it is a big theme of the book—that it is going to go on shaping our lives; not just the crisis, but the events that led up to it and the subsequent, only partial success in dealing with it, particularly the ongoing crisis in the eurozone. This is going to continue to shape our lives for a very long time.

I can't possibly discuss everything in the book in half an hour. This is quite a large book. Anyway, I want you all to buy and read it. So what I will do is give you an overview of what this is about and where I end up. It won't be completely balanced in terms of the different components, but we will see how this goes.

What I want to do is divide my remarks into two parts. The first part, which essentially covers the sections which I call the shifts and the shocks, which is what happened, my analysis of the event and what drove it, how we got into this situation, which, as Anthony discussed, was quite extraordinarily frightening—thank god I didn't have anybody else's money, apart from my own, to worry about. But, still, it was the most frightening event in economics policy certainly of my lifetime. It forced one to rethink in a very big way. So that's the first part of what I want to talk about.

In the second part I am going to talk about what in the book are called solutions. What do we do about the situation we have ended up with, both in terms of monitoring fiscal policy at the global level and also in terms of the financial system? So that's what I want to do.

Let me start off with a point which the introduction allows me to make fairly potently: This was a colossal failure. It was a colossal failure of policy and it was a colossal failure of the financial system. We can discuss why it happened—and I do—but we have to start with a recognition of how colossal the failure was.

There are three dimensions to this, at least. First, with a very few exceptions—and there are a few—nobody foresaw a crisis on this scale and magnitude. There were lots of people who expected very serious trouble, lots of people who thought that the pre-crisis trends could not continue. I was one of them. My previous book had been about that.

But I did not envisage the complete meltdown of the financial sector, that we would come to the point at which, essentially, the core financial system of the Western world, which you described, would cease to function as a system, which is where we were, which is very clearly much worse than what happened in the 1930s to the financial sector.

The core financial system, the money-center system, in the 1930s continued to function. Most of the banks that failed—and there were a huge number of failures—were relatively small banks. The big banks that did fail—and there were one or two—were essentially in continental Europe, particularly the famous [Creditanstalt](#) story. That was a much bigger economic disaster.

But the financial disaster this time, the implosion of the system, was extraordinary. So the first thing is, that wasn't expected.

The second point is just the scale of this disaster.

The third point is that the economic long-run consequences of this have been absolutely enormous. I will give you one indication of this, which is in my book, that is in terms of the U.S. economy, which is that if you take the trend growth of the U.S. economy from 1950 to 2007, it actually fits quite well. There are some periods in the 1960s when you are a bit above that trend, and, of course, in the 1970s and early 1980s, below it. But it is a reasonable fit.

You just extrapolate that forward to 2014 and you ask yourself: Where does the U.S. economy in the second quarter of 2014 compare to that long-term trend? The answer to that is that the U.S. economy is now 18 percent smaller than what that trend would imply and than pretty well every forecaster expected.

By the way, for the UK it is the same. For the eurozone it is also much the same.

These are losses in present value terms of many, many times GDP, unless we get an extraordinary resurrection in growth. And, by the way, there is literally no crisis-hit country in this case that has got back to the pre-crisis trend rate of growth, let alone the level implied. I am not even talking here about the effects on labor markets, on incomes, which you are familiar with. So it is a devastating crisis.

As I point out very clearly, the core policymakers, as I have already indicated, did not expect or understand this. On the contrary, the very possibility of a Great Depression-type scenario in the financial sector did not appear in any of the conventional economic policymakers' frame of reference or in the economists' who were advising them, even the most skeptical. Probably the people who came closest among the academics were [Carmen Reinhart](#) and [Ken Rogoff](#) in their book *This Time Is Different*. [See their Council talk on this book.] I wonder whether, though—obviously they don't foresee this—they expected such a total meltdown. That forces us to confront the question: Why were we so wrong? Analytically, why did we rule out this very possibility, and what drove this?

In addressing that question—this is the second thing—I tried to look at this perhaps largely in the way of the one economist who I think basically got this sort of story right, who had been largely ignored. That economist was [Hyman Minsky](#), who had been largely ignored by conventional economics because he did not believe that the market economy was fundamentally stable. On the contrary, he believed that it tended to generate its own instability. The most penetrating notion he has, which really informs much of this book, is a wonderful, very simple sentence: Stability destabilizes.

Far from a great moderation indicating that everything is going to go on forever in a very moderate way, when everybody thinks there is a great moderation you should really be terrified because we as human beings, and particularly we as human beings operating through financial markets, will create risk in this situation. There is a very simple way, which is, again, central to his analysis, of how we create risk in this situation.

If you are in a world which is seen as moderate, stable, and so forth, then you will want to take on risks. There are two different ways of taking on risk in the economy: really productive ways, like starting new businesses, being a true entrepreneur—and you will get some of that; that's why a lot of booms go with innovation.

And the other way, the good, old-fashioned way, which he discusses, is leverage, you just leverage yourself up in that sort of world. We leveraged ourselves up in the years up to the crisis, in terms of ourselves as households. That was quite a new thing. It wasn't mostly non-financial corporates, though they played some role; it was, overwhelmingly, households.

In terms of the financial sector itself, the balance sheets of the financial sector in scale—which, of course, was largely a counterpart of what was going on in the rest of the economy—and the complexity of the financial sector, but also the leverage within it—to give you a very simple idea, the major banks of the world roughly doubled their leverage in the four or five years running up to the crisis. They varied in the individuals, but it became quite normal for the major banks of the Western world to be operating with leverage in the 40- to 50-to-1 range, which, for all intents and purposes, meant that they did not have any capital at all. Their capacity to bear losses was almost zero, as you can see. So we leveraged ourselves massively.

As I said, stability destabilizes. Again following Minsky, Minsky talked about the trigger, the displacement event, the trigger that started off this process. In my book I argue that a crucial trigger—not the only one, but a crucial trigger—was something that happened in the late 1990s and early 2000s, which was a collapse in global real interest rates on safe assets. Basically, the global real interest rate on safe assets, which can be measured—the IMF (International Monetary Fund) has talked about it and I discuss it—halved in the late 1990s, roughly speaking, from around 3.5-to-4 percent to 2. That is a very, very big shift. And it coincided with—and, in my view, it was not at all just a coincidence—the [Asian financial crisis](#), which I regard in my previous book as an incredibly important event which most people do not understand the implications of.

Essentially, this did two things. First of all, the Asian financial crisis persuaded the most dynamic economies in the world, with the best investment opportunities in the world, that they were not going to borrow capital net from the rest of the world again. They were not going to run current account deficits, and if you were China you were definitely going to run very large surpluses. You were going to insure yourselves against financial risk by running your policy in such a way that you could accumulate enormous claims on the rest of the world—above all, the United States—in the form of foreign currency reserves, which simply exploded upwards from the Asian financial crisis. At the time of the Asian financial crisis, gross foreign currency reserves—all this increase was in the emerging countries—were about \$1 trillion. Today they are \$12 trillion. When they hit the crisis, they were close to \$8 trillion.

So the emerging world became a capital exporter in this and other ways. The biggest chunk of this was China. But it was not just China. Everybody got into this game. The people with the best opportunities became capital exporters. This created the global savings glut, which was associated with the global imbalances.

There were two other things creating a global savings glut, in my view. I have analyzed these in less detail because they were changing, but they were very important.

One, changes in income distribution in our societies in the direction of great inequality.

Second, a fascinating puzzle, which people have not written about enough, which started in the early 2000s, which was a situation in which the non-financial corporate sector of the Western world started: its profits rose dramatically and its investment did not. So the non-financial corporate sector of the Western world—and I include Japan—became a net supplier of funds to the rest of the economy. It was investing less than its retained earnings. That is another important component of the global savings glut.

If you think about it, the emerging world is a net supplier of funds to the rest of the world economy. The non-financial corporate sector was the same. Rich people, who were doing very well, were certainly not wanting to borrow. What did this leave us with? Well, it left us with essentially only two

classes of potential borrowers: households and governments. And we have been oscillating between the two ever since. We either have huge government deficits or we have huge household deficits.

Since we want to get rid of our government deficits, we are for sure going to try and re-create another household leverage cycle. That is certainly what we are going to want to do if we are going to develop demand.

This is the macro story, and into that is imposed—the macro story is very important, but I don't think this can be just understood as a purely financial sector story—we have this very fragile financial sector of ours, which had more capacity to create leverage quickly, swiftly, and powerfully than ever before.

A lot of the innovations in our financial sector—the creation of derivatives, which construct leverage within them in many, many different ways—the shadow banking sector, as has already been mentioned, was an essentially unregulated banking-type structure, so able to generate leverage within it to an extraordinary degree. The leverage in the money market fund is literally infinite.

There is no equity at all, which is fine if the assets are absolutely safe, as they are supposed to be. But it turned out they were not, for the reasons that have already been mentioned. What people thought was safe turned out not to be safe. The back was broken, and then suddenly the money market fund business does not look as—so that was another part of the run that you've got here. So leverage was created in innumerable ways.

Financial innovation, the originate-and-distribute model, which generated, in addition to all the leverage, fantastic non-transparency: people didn't know what they were owning. One of the most remarkable achievements—I have made this point many times—of America was that it was able to take a large amount of very, very bad housing loans and distribute half of them across the world. I thought it was really rather clever. It is one of the things that may not be known, but it is a funny puzzle that the British banking sector, which is very, very large, lost substantially more on American mortgages than it did on British mortgages in this crisis.

So bad, non-transparent lending, leverage, and, finally, a global financial system, so that when things really went wrong, they went wrong globally because everybody was so interconnected.

There were so many dimensions of this, but one of the dimensions, of course, it turned out—the Fed realized this very quickly—was that so many of the financial institutions that were playing such a big role in the American markets were foreign. That forced the Fed to provide dollar funding to these institutions by generating a whole slew of swap lines with other central banks. The Fed very rapidly found itself the lender of last resort, not just to the American banking system narrowly defined, but to the entire global financial system, because it affected dollar markets. It is just one aspect.

Finally, let me say—because of lack of time, I can't go into detail—I regard the eurozone crisis, which is a big part of my book, as reflecting all that stuff, with Germany emerging as the surplus country in that context—well, Northern Europe emerging as the surplus.

There was a savings glut within the eurozone. There was the global one. This was offset by another mad housing bubble, the biggest and most important of which was in [Spain](#), which was running current account deficits at 10 percent of GDP, the housing boom much bigger relative to its economy than in America.

In this world in which everybody was convinced of gain but there was no risk, all spreads on all

government bonds in Europe disappeared. All these spreads collapsed. Lending was seen to be absolutely safe—until it wasn't, and then we had waves of panic, starting, first of all, obviously, in 2008, then in late 2009 with [Greece](#), then building up because of the impossibility within the framework they had created for the eurozone, which lacked nearly all the institutions to cope with a first-class financial crisis. So they had to invent it.

None of the institutions for coping with making the adjustments work to the changes in competitiveness that occurred within the eurozone—a whole wave of crises, which culminated in the summer of 2012 with the decision of the European Central Bank to offer its so-called [outright monetary transactions program](#)—never yet used; might still be used. In fact, I think it is rather likely, and I do not think it will work.

That worked as an incredibly successful confidence trick, in both senses of that term, and eliminated this panic from the markets about Europe for the last two years. I think what we are seeing at the moment, in a very crucial way, is that that program's success is now coming fundamentally into question. So the eurozone crisis is, in the deepest sense, not resolved. It is a much more difficult part of this, and it is one of the reasons—and probably the biggest—why we are not through this. Finally, let me talk briefly about the lessons of all this and how we should be thinking about this. I will divide this into, I think, three parts.

The first point is what we might call the global economic balance side of this story. We have a fundamental problem, which is that the countries with all the opportunities in the world do not want to borrow capital from our financial markets because they think that if they do they are going to blow up. And they are probably right. They want us, basically, to absorb the products of the financial sector internally.

That creates a very fundamental macroeconomic problem for the world as a whole. This is the bit of my book which I think is the most original. Everybody thinks the financial sector failed. That is obvious. I have lots of ideas about what should be done about it. But I am arguing that I cannot see any stable and sustainable way for the developed countries, as they are now run, to absorb the savings of the world without periodic crises.

The least bad approach, in my view, is to absorb them in public sector investment in our countries. It is the least likely, however. The political resistance to this is sensational, even though interest rates, both nominal and real, are extraordinarily low. We have been talking about that.

What we in practice tried to do, apart from the point in the immediate post-crisis period when we did accept the fiscal deficits—what we are trying to do is to get these surplus savings absorbed in our private sector. The non-financial corporate sector is consistently surplus. It is not going to borrow this money in aggregate.

Just look at the most interesting indication of this. Your most competitive, most profitable companies—Apple, Google—do they need money from the markets? No. They are huge investment funds. Apple is an immensely gigantic investment fund, a colossal one, growing all the time, which has as a sideline a very profitable tech company.

If you compare this with 40, 50, 100 years ago, U.S. Steel, the GMs of those times, they don't need the money and they are not going to borrow it. Neither is GM nor any of these other companies going to go out and build really large-scale plants. They are very profitable. They are going to continue to put money in the market, not take it out. I think that is an ongoing structural condition. It has been true in Japan for 25 years.

So we are going to have to create household borrowing. Somewhere we are going to have to create household borrowing, or we are in permanent quasi-depression. This is the secular stagnation argument.

Europe is worse, because the demography is much worse. Once you took the housing bubbles out of the European equation, demand just stopped. I mean this quite literally. This is very important to understand. Most people do not focus on this. In the second quarter of 2014, real domestic demand in the eurozone as a whole, an economy roughly the size of the United States, was 5 percent less than the first quarter of 2008. Yours is roughly 6 or 7 percent more. So you have had some growth in demand.

They have had collapse. In the last three years, it has shown essentially no growth at all. That is depression. That is just bang, slump.

By the way, in Greece real domestic demand fell 40 percent. In Spain it fell 20 percent. Very limited recovery in Spain.

So we have a tremendous aggregate demand problem. Unfortunately, this is very problematic in Europe, because Germany believes that it is conceptually impossible to have an aggregate demand problem, and therefore they cannot do anything to address it because it cannot exist. If something cannot exist it cannot be addressed.

We have this fundamental demand problem. It is shown in the fact that we have had five years of zero interest rates, massive expansions in the balance sheet.

Japan, if you want to cheer up, has had 20 years of zero interest rates, or near zero, and it is generating almost no demand. It is generating none of the growth in demand/borrowing that you would expect.

So we have this huge demand problem. That is the first huge one.

In the long run, the way to fix this, without a doubt, is to get back to lending from us, who are naturally saving-surplus countries. Our major institutions are saving surplus. Most of the people who earn income are saving surplus. If we do not want to run huge fiscal deficits, we have to lend money, provide capital to the emerging world, net, and to do that, we have to provide them with insurance that will encourage them to take the capital. That means a complete reconsideration of what the IMF is for and to go back to what [Keynes](#) thought before.

Of course, I know this is not going to happen. I am just following it logically.

Keynes, of course, on this fundamental matter, was right. The American position at [Bretton Woods](#) was wrong. Fortunately, you got your way—inevitably you got your way—because you were the most powerful country. And I think by now you should have regretted it.

There are some pyrrhic victories. [Harry White's](#) was a pyrrhic victory. Of course, the assumption was that the United States would be the creditor nation forever and it would never have the problems it now has. So that is the first big thing.

The second big thing is the financial sector, the financial sector broadly speaking, in de-leveraging our economies. I think it is difficult to do much of this in the macro context that I have described. That is why I think the macro context is so important. It is the most important contribution of my book, I

think, that I spelled this out.

It is not just about finance. But I think we can make finance more robust, in the sense of more capable of coping with the sorts of shocks we have experienced and we are going to experience again.

I would stress two elements of this just for now. The first element is that it would be a very good idea—and [Atif Mian](#) and [Amir Sufi](#) discuss this very well in their excellent book *House of Debt*, and Ken Rogoff and others have talked about that—if we encouraged a move away in our financial contracts, which means also in our tax system, from our extraordinary reliance, extreme reliance, on the inherently inflexible and crisis-prone structure of debt contracts, and move more to what we might call risk-sharing or equity-sharing types of contracts.

This is particularly important if we are going to rely so heavily on household borrowing, particularly house price back-borrowing collateralized by housing, because it is very difficult for a household to grow out of its debt in the way a corporation could do. It is far better to have structures which basically say that if there is a generalized shock of some kind, the lenders share the risks with the borrowers.

There are very easy ways to do that. You can imagine, for example, that instead of having a straight mortgage-type loan, the principal of a mortgage will be indexed to the general index of house prices. You would not benefit from not investing in your own house, but if the house prices in your country—or in America, perhaps, in a state or a city—were to fall by 20 percent, mortgage loans would go down. There is risk sharing in the system. Of course, that will require tax changes, but that would get us away from the mass bankruptcy problem that we otherwise face as soon as we get a crisis of this kind. So deleveraging the economy is one thing.

The other thing, of course, is that we need a less leveraged banking and financial sector. I think we have made small moves in this direction. I strongly sympathize with those people who think we should have much more capital in banking and financial institutions, particularly any banking institutions that we regard as systemic. So I sort of believe—and I discuss this in the book—that we should think that leverage in such core financial institutions shouldn't exceed 10-to-1.

I also discuss the Chicago plan, [100 percent reserve banking](#). But I do not think I am going to have time to discuss this. I am very tempted by this, though I have to admit that there are all sorts of problems. I am trying to persuade Iceland at the moment to adopt it, to see what would happen if we went in this direction.

But I am basically assuming, in other words, that we are going to continue to have problems in need to lend to households if the governments are not prepared to borrow in a large way, or even to adopt [helicopter money](#), which I discuss, [Milton Friedman's](#) proposal. If the government is not going to go that way, then we are going to have to have a financial sector which is much more capable of bearing stress than it was before the crisis and households whose borrowing characteristics in terms of the contracts are much more flexible and allow much more automatic restructuring of the debt than we have been able to do this time, and we have had this tremendous debt overhang problem, which remains with us to this day.

Let me conclude, then, by saying: One, a huge disaster; two, rooted in a serious intellectual misunderstanding of the way the economy interacts with finance; three, it had macroeconomic triggers which are really, really important to understanding, interacting with a deregulated, innovative, technology-driven finance sector, which proved incredibly fragile. The eurozone was all that, plus the

incredible rigidity of its institutional structure.

We need to think very, very seriously about the nature of the demand that will be generated in the economy to use our potential productive capacity. What we are doing is moving from one bubble to the next. I discuss in my book—I will not go into this now—China's bubble, which was a reaction to the failure of our bubble to generate demand in China once they lost the export markets. We are going to live with the consequences of that. This is a real problem. And we have to think very, very carefully about how we can create a financial sector and debt structures—or, if you like, intermediation structures—in our economy that are less disaster-prone than the one we have created.

Today, unfortunately, we still have an incredibly highly leveraged economy in the Western world. There has been a modest deleveraging. But to give you one indication, gross debt, private debt, in the United States relative to GDP is only back to 2003 levels. You have four years before it blows up again, as it were, if we repeat the last experience. I am not saying you will, but it is remarkable how little deleveraging there has been.

In Europe there has been no deleveraging at all, in aggregate, in the private sector, never mind the public sector, which has been leveraging like mad.

The financial sector we have is more concentrated, certainly more regulated, with incredibly inclusive capital. But it remains incredibly highly leveraged and fragile.

In conclusion, it is a disaster. But we still have, as I argue in my book at length, a great deal more to learn.

Thank you very much.

Questions

ANTHONY FAILLACE: As I said, the book is fantastic. The speech was every bit as good.

You talk about deleveraging the banks. But how do you do that in the short term? There is a tension between not blowing up the next time and trying to get the world economy on keel in the short term. The proposition of reducing leverage to 10-to-1, throwing out the risk weightings, is going to have the effect of increasing risk premium virtually everywhere. When you have risk spreading wider, perhaps even government debt higher in yield, equity risk premium higher, and stocks lower, what does that mean for the monetary policy transmission mechanism and getting the global economy to function in the short term?

MARTIN WOLF: This is not a question that can be answered quickly, unfortunately. It has several elements to it.

As you pointed out, I am very, very suspicious of risk-weighted capital. I think it is a system that failed dramatically and sensationally. I discuss that in my book, with some really interesting data, mainly from the UK case.

Risk-weighted capital means basically—it is a logical idea—you do not need so much capital to back safe assets but you need more capital to back less safe assets. This would be very good if we knew *ex ante* (before the event) which were safe and which were unsafe.

But the example I give in the book from the British bank shows that in just the four years before the crisis—remember, this is four years leading up to the biggest financial crisis we have perhaps ever had, and certainly for the last 70 or 80 years, the major British banks—which are enormous, by the way; the balance sheets of the major British banks in aggregate were almost as big as the balance sheets of the American banks; just colossal banking balance sheets, including what was then the biggest balance sheet in the world in RBS (Royal Bank of Scotland), but also HSBC and Barclays—the risk weights essentially halved in those four years.

What they were saying is they were looking back at the data on their balance sheets and the data was showing the great moderation. Every year, things were looking safer. That is how it works. You looked at the data and what was happening to the risk characteristics of your assets. Every year, in 2005, 2006, 2007, 2008, there was no risk. They reduced the risk weights.

So the risk weights collapsed over those years and reached their absolute trough in the summer of 2007. That allowed them to double-leverage.

It did not appear in risk-weighted capital. Risk-weighted capital looked great. All the banking sectors of the Western world looked sensationally well capitalized in the summer of 2007. Just look at them. They all were, because there was not any risk in them, or risk was deemed to be at its lowest-ever level, because that is what the models told them.

Then, of course, it all blew up. Then they suddenly said, "Oops, we do not actually have any equity—not real equity, just risk-weighted stuff."

So I am unbelievably suspicious of that, and I think we need real equity against real balance sheets, because we really do not know what's safe.

I would make one exception. I think the sovereign debt of a country that issues its own currency really is pretty safe against default. That does not, however, apply to any eurozone member-country, because it does not issue its own currency, it is actually operating in a foreign currency. So it does not apply to them.

All other assets are potentially very, very dangerous. The fact that they have been shown to be very safe for the last 20 years does not tell you about the future.

What do you do, then, if you need more equity? If you go to the banks and tell them, "You have to raise your equity ratios," the simplest way for any bank is to reduce their balance sheets, which is what you are talking about. So we get lending stopped. That is a very big mess.

There are two very, very, very unpopular ways of doing this—which are not going to happen, but they would work; I promise you they would work.

The first is simply to say: "This is your target equity, in gross terms, to support your existing balance sheet. We do not want you to contract your balance sheet in the next five, ten years. In the long run, we want you to contract your balance sheet, but we have got a big enough mess that we do not want you to do that. So what we say to you is, until you get this target equity, you cannot pay any dividends. End of story." That would get them their equity, I promise you, because they earn a lot of profits in the normal course of events.

The second possibility is to say: "This is your target equity. You have two years to get it. If you do not, we, the governments, are going to supply the equity." The governments are all, as you might

have noticed, rather solvent right now, except if you are Italian or in Spain. But the major governments of the Western world have never been able to borrow money so easily. So if they wanted to nationalize all their banking sector, they could do so very, very easily. It is a credible threat, if they were allowed to do it politically. Again, I think if the banks were told that if they did not raise the equity they were all going to be nationalized, they surely would raise the equity.

Now, I do understand—I'm not incredibly stupid—that neither of these things is politically going to happen. I understand very well they are not going to happen. The result is that we actually are going to have banks which tend to contract capital. But in those ways, we could have forced them to increase their balance sheets.

It is true, however, that the fundamental problem is—and here I agree with this; it is incredibly important—the balance sheets of the banking sector are too big, and particularly outside the United States, and the likelihood is that in the long run they ought to shrink. In the short run we do not want them to shrink a lot, but in the long run we have probably created much bigger balance sheets than we really need. That is dramatically true in Europe. So the short run does get in the way of the long run.

Those are the answers that I would give to these proposals. They are in the book.

QUESTION: You talked about colossal failure and meltdown, but not too much about forecasting. I know Minsky forecast for a long time. He did not say when, fortunately for him. The *Financial Times*—you read that too—I read it pretty carefully, and I do not think they forecast, at least not particularly well, although maybe. If you cannot forecast, what can you do to stop another colossal failure?

MARTIN WOLF: This is the way I put it. You might not like it. Take the question of when the next big earthquake in California will happen. The probability of another large earthquake on the San Andreas Fault, as I understand it, is 100 percent—maybe it is 99, but it is very, very high.

It is probably true, as I understand it, given the nature of the forces involved—I am obviously not a seismologist, so this is my secondhand reading of the physics—that the chances of the earthquake occurring on any particular day are an increasing function of how long it has been since the last one. It is more likely now, today, than it was yesterday, since it did not happen yesterday. But nobody can forecast when it will happen.

So what conclusion? Here is an event that is certain, very, very damaging, and you cannot forecast.

By the way, I do not think you can forecast such events, because if you could forecast such an event it would not happen. We would all act in such a way so as to prevent it. These are not forecastable events. They are loosely probabilistic events. I would say major financial crises are not certain in the way that the earthquake on the San Andreas Fault is certain, but they are highly probable events if we have certain sorts of characteristics in the financial and economic system—again, not certain. And we certainly cannot forecast when they will happen.

But what we do, at least as I understand what we do in California and other earthquake-prone regions of the world, if they have the money, the resources, is you have building codes and protocols governing rescues and so forth, such that when the shock occurs you can survive it. It will still be very unpleasant, but you can survive it.

My answer to you would be we cannot forecast these events, and we will never be able to forecast

these events. That may be very bothersome for people in the financial sector. But I do not care about that because they are just doing whatever they are doing. For the rest of us, what we want is the economy to be able to survive them and the financial sector to be able to survive them. So we need codes that govern economic policy both before and during the crisis—but above all, before—that reduce the probability of such events and increase the robustness of the financial sector in the face of such events.

That is what I see my book as being about. You might say it is the earthquake building code for a world prone to financial crisis so banks survive even if there are very large financial crises and the really very large banking sectors survive even though there are very large financial crises—the core financial sector survives—and the policymakers understand when they are getting closer to the possibility of a financial crisis and lean against it more aggressively than they would have in the past. They get away from the idea, which is very common in the system, that if such a thing ever happens, it is going to be quite easy to clean it up, and therefore we do not need to lean against it. That is, I think, how we should approach these things rationally.

The problem we had was not that we could not forecast it, in my view. The problem we had was we thought what happened was basically inconceivable—that is to say, such a thing could not happen. I am not saying that you did as an individual, but collectively the basic view was that such an event could not happen.

Then, of course, we cannot cope with it. We were completely surprised—one surprise after another. I think that if we recognize it can happen, we change our policies in such a way as to somewhat reduce the probabilities. That is why I talk about the flows of capital in the world, where savings go, and so forth, and having institutions that can cope with the shocks. Then I think we have done the best we can do.

I would just like to point out—and this is why I was so surprised by this crisis and I did not expect it—that the UK banking sector, to take an obvious example, got through the Great Depression without any difficulties. It was a huge shock, a colossal shock, but the UK banking sector got through it perfectly well, because the UK banking sector at that stage was a relatively sound banking system. Unfortunately, in the four or five years running up to this crisis, we allowed the UK banking sector to go completely and utterly crazy and so, for the first time in 140 years, the UK had a first-class banking crisis.

Historically, as [Charles Calomiris](#) has pointed out in his wonderful book *Fragile by Design*, the U.S. has designed a financial system designed to fail. That was his argument, not mine. I am going to hope that I can persuade the Americans, since they have the most important financial sector in the world, to change this orientation.

QUESTION: David Musher.

You made a big point that many companies are giant investment firms. You did not talk at all about the corporate income tax rate, certainly the corporate tax rate in America. Wouldn't a marked decrease in that tax rate have the effect of those corporations releasing those funds to their shareholders, disbursing them, so that the individual shareholders could then utilize that money to buy their homes or to do whatever they wanted to do?

MARTIN WOLF: I am certainly not trying to defend the U.S. corporate code, though, as I understand it—and you would know much more about this—people have discovered now very clever ways, by borrowing money, to release the funds or a significant part of the funds back home to shareholders.

I have been very tempted by the idea of what I think of as the most radical tax reform that I like in response to this, which is a use-it-or-lose-it policy. I will explain what I mean by that.

I would raise the corporation tax rate to the highest individual tax rate and I would fully—there is a real distortion. There are obviously tax-exempt entities that own corporates, and there are also lots of wealthy individuals. So there are problems. But you have a distortion if the corporate tax rate—arguably a distortion—is lower than the highest individual tax rate, because in that situation, particularly if you've got capital gains tax lower, it is in the interest of the shareholders if money is accumulated in the corporation because it is taxed less heavily. So that's for the first part. I would align the capital gains tax with the individual income tax. I am not going to go into all that.

Then I would expense investment completely, so all investment spending is expensed in the year it is taken. And I would have a rather generous treatment of expensing, including R&D (research and development) things.

Basically the corporations in this situation would do one of two things with nearly all their money: they would either distribute it back to their shareholders or they would invest it. Since, in my view, the corporation is designed not as a tax shelter—that is not why we created the corporations, in my view; we created them as entities to invest on our behalf to create wealth and/or to pass the money back to their owners—this seems to me the rational structure for corporation tax. I am not going to go into the question of territoriality, which is another huge issue.

Would that solve my macro problem? I think it would improve the efficiency of the corporate tax system massively. But would it improve? That depends ultimately on who the owners of the corporations are and what they would do with the money. If they use that money to invest themselves or consume themselves, then the macro problem would be largely solved. If they use the money simply to put back into the market so that it is household savings instead of corporate savings, it does not solve the macro problem at all. Here my guess is—but I do not think there is any clear evidence that I have seen on this—that the fact that the dominant owners of corporations are a very small part of the households who are already, on the whole, very wealthy would mean that it is more likely that this would be saved, and therefore the savings problem would remain.

The problem is we have more savings in the world economy looking for good opportunities than the world economy apparently is able to generate. This is a really interesting phenomenon. It is quite surprising. I do discuss in the book why that might be so. In this situation, merely shuffling savings from the corporate sector to the wealthy households who own corporates does not solve the macro problem. It might solve efficiency problems. It might increase the efficiency of investment. It might not. It depends on how much better individuals do in investing their money than corporations do on their behalf.

So that would be my answer. I would try the use-it-or-lose-it policy, and, if that did not work, then I would have to start thinking about some other way of generating demand for funds in the system.

But I just go back to this fundamental puzzle that we have been operating in this essentially zero-interest-rate, real-interest-rate world—not sure about zero; long-term real-interest-rate world—for five years and we are not seeing any staggering growth in investment demand anywhere in the world economy. That is very, very disturbing. It is why some people have argued that we are in the 1930s-type secular stagnation mode. In that situation, unfortunately, just fiddling with the corporate tax code doesn't do that much for you.

QUESTION: Don Simmons.

A few years ago, the European financial authorities conducted a series of stress tests on European banks. Most banks passed rather comfortably, to the point where some economists suggested that the bar had been set too low, that this was designed to increase everybody's confidence in banks. We are now about to have another set of stress tests. What results do you expect, and what would be the implications?

MARTIN WOLF: I think we have done it now several times. I cannot remember how often the Europeans have done this now. It certainly does appear that they have not made the solvency of the European banking system credible.

I expect them to conclude that most of them are solvent. Will that be convincing? Well, that depends, doesn't it?

The stress-testing process is ultimately a confidence trick again. Whether funders of banks, shareholders and other funders, find this credible depends obviously on the underlying credibility of the test. The important point, which is self-evident, is that there is nothing that tells you how solvent a bank really is, other than on the basis of some assumptions, obviously, about the value of the assets.

To take one very obvious example of that little problem, if you want to judge the solvency of a number of the banks in the eurozone, you have to ask yourself: How likely it is that the governments whose debt they own—particularly the banks in Italy and Spain own a lot of national bonds—what is the likelihood that these governments will default? If the likelihood is zero, then they are going to look very good. If the likelihood is 50 percent—I am not suggesting it is—they are going to look really terrible.

My guess is—I haven't seen it—they are going to assume that the likelihood of a default by any of these governments is zero, because to actually include in their estimation—I am going to have to look at this carefully—the probability greater than zero that a major government will default would create such huge political problems that it will not be included in the calculations. I may be wrong on that. I have not looked at precisely what they are going to do.

But as the outside investor in these banks, whether this is credible or not depends on that assumption, because, of course, if the government were to default, lots of other people would go bankrupt in these countries and you would suddenly have a massive financial crisis in this country, which would not be in the stress test. And it is pretty certainly not going to be in the stress test. So the credibility you assign to stress tests on banks depends on the credibility of the scenarios to the investors.

The first round of U.S. stress tests was astonishingly, and to many people surprisingly, successful. [Tim Geithner](#) has written a whole [book](#) saying this is—they called it "stress test" for this reason—well, there were two reasons, ambiguous. But the main reason was that was his idea. He won the debate in the [administration](#) on what to do. He got the stress test and, lo and behold, it solved the banking problem in the United States. It was fantastic because it convinced people that the scenarios were plausible and well done and the rest of it.

The Europeans have not been able to do that. I am not sure they can, given that the macroeconomic environment of the Eurozone is so uncertain. In the United States there was a certain credibility, even if the federal government and the Congress were in a mess, that the Fed would act in any way to keep the thing going. That does not exist in Europe.

So I am not sure there is any set of stress tests that can be completely convincing to the Europeans,

independent of some belief that they've got the macroeconomic problem of Europe basically sorted. Anybody who looks at Europe today, the eurozone, cannot possibly believe that, and because they can't believe that, they can't really believe that the stress test is the last word and therefore the problem has been resolved.

I hope I am wrong, because I really would like this to turn around. Clearly, it is going to be the most professional such exercise yet done. But it has been done several times, and it is difficult to be really confident that we have finally cracked it.

ANTHONY FAILLACE: I read another book on the financial crisis by Professor [Gary Gorton](#) at Yale, called *Misunderstanding the Financial Crisis*. He has a very different emphasis than in your book. He basically says this financial crisis was not unique; in fact, it bore a lot of similarities to other banking crises. He goes back and looks at different crises in the 19th century and, of course, the Depression.

He basically says that what you have is a problem with bank debt. It is just that we did not understand the bank debt and we did not understand the banks. We built up this incredible shadow banking system through the broker-dealer community, where they were essentially borrowing money in the repo market, there was a commercial paper market, there was commercial paper issued off of these asset-backed pools, and when we had a crisis of confidence in the bank debt, we then saw a classic run on the bank, which led to the ungodly delevering that we saw.

He stresses that this is a banking sector that did not have access to insurance, it didn't have access, until very late in the game, to a lender of last resort, and "too big to fail" was summarily thrown down and danced upon when Lehmann Brothers was allowed to go bankrupt. He argues that what we need to do is figure out a way to regulate the banking system to bring that into the whole.

I am curious. What do you think about his argument?

MARTIN WOLF: I am actually surprised that you think it is different from mine, because I felt that I was more influenced by his book on banking than anybody else's. It is a central part of my discussion of the financial sector.

This is what I understand him to say and what I thought I was trying to say in this part. I think you have macro forces, innovation in the financial sector that goes along at the same time, which generate a pattern of expanding financial leverage and expanding financial balance sheets, which support—obviously, this is part of my view—certain developments in the macro economy which the policymakers wanted.

The problem with this, he's saying, is that the nature of our financial system is that our deposits in banks and our short-term loans to near-banks—that's your repos—are viewed by the people who make these loans as money. By this I mean—and I think I got it from him, but I think it is a very important notion—that the characteristic of money—it might have come from [Perry Mehrling](#). I can never remember quite where I stole ideas from, but it is all in the book.

The basic point about money is this is stuff that you believe will be safe and usable, whatever happens. That is the characteristic of money from this point of view. It is a store of value. That is, however badly wrong the economy goes, you can still pay your bills with money. That is really quite an important asset to own, because terrible things sometimes happen.

But the problem, he argues, is that the other side of the balance sheet of all these entities which promise you money, which you think is money—and I am not just talking about insured deposits; all

the uninsured deposits and all the rest—the other side of these balance sheets of these entities that promise you money is basically junk—good junk, bad junk. It is risky assets. That is what I mean. They are risky assets, which are exposed to credit risk and term transformation risk, so that they can bounce around in value very much.

That is a structure that is going to generate panic, because precisely the moment when you really want money and you want to be sure that you can pay your bills, if you are a company or an individual, is precisely the moment when you will wonder about the balance sheets of these entities whose liabilities are your money. Very few of us hold much of this in cash and actually relatively little even in government bills. Most of it is held in the liabilities of such entities. In the U.S. case, 97 percent of money is the liabilities of banking institutions. That is what they are.

So periodically we are going to have panics. He discusses the way the Americans dealt with panics in the 19th century, which were very complicated and convoluted. It allowed stays in payments. Of course, we had a simple mechanism called the central bank. You finally decided to create a central bank after the [1907 panic](#), and you got the Federal Reserve, which has been doing a magnificent job ever since.

The point is, that is how we have dealt with these panics. Periodically the system will panic. That is what makes these crises so severe. If the banking sector is enormously extended and its assets are particularly difficult to read and there is an enormous quantity of uninsured liabilities which are regarded by their holders as money or near-money, who is investing in the repo market? Obviously, big corporations, people like that. They wanted this cash because they had to pay bills with it.

Not being able to get that money back is a problem for them because they could not pay their bills. And borrowing from a banking sector which is imploding to pay their bills becomes rather difficult. The banks were not even willing to lend to one another. That is what happened in the interbank market. It all froze. If you have a sufficiently overextended system, you have a world-class financial crisis.

I agree with all that. That is my description, too, though I am not saying I do it perfectly.

The point is, if you allow the financial sector to get large enough because you need the leverage to generate the demand—and I discuss why we needed so much leverage to generate demand, because essentially we are leveraging up assets in order to generate income flows—there is a huge relationship between the amount of asset inflation you need to generate income flows through equity withdrawal and all the other things from housing.

In my view, there is an interaction, which he doesn't go into. He does not discuss the macro side.

But, yes, fundamentally, we have a financial sector which is bigger, more complicated, more global, more non-transparent, and more innovative than ever before. It is basically the same thing as the 19th century; there is just more of it. We have data on the balance sheet of the financial sector relative to the economy. It is just much bigger now, so when we get the panics they are much bigger. And the panic was an extraordinarily big one.

Now, we did then get the central banks to act as lenders of last resort, on a very, very large scale, as you know. The operation of the central banks—and this is where I think I part company with him—was spectacular. We still had a huge economic meltdown. We are still living with the consequences.

So just eliminating the panic is not enough; managing the panic is not enough. Why is that? This is where I really part company with him. Because he does not pay any attention to the macro context, he does not pay any attention to the other side of this story.

One is that it takes a very long time to restore confidence in the financial sector in full, and we have not. One symbol of that is that all corporations now hold a hell of a lot of cash. It is not just because they do not want to invest. It is because they do not trust their banks to lend to them when they are in real trouble. So they hold much more cash. A rational consequence of a crisis is that everybody who can holds more cash. So that is a problem.

But the other thing that he ignores in the pure panic view—and this is a point Ken Rogoff has made very powerfully to me—is simply the debt overhang, the whole economy's debt overhang, and the effect that has on economic behavior—the balance sheet recession idea of [Richard Koo](#), which goes back to [Irving Fisher](#)'s debt deflation idea. The accumulation of debt—of course, the financial sector is a key component of all this—itself exercises a long-term depressing effect on the economy, because if people are very, very highly leveraged and businesses do not want to lend, people are very highly leveraged. They cannot borrow more. Nobody wants to lend to them.

They want to pay down their debt if they are solvent, they want to get into better financial shape, because what they have discovered is that the expectations they had of the future, which justified all that debt 10 years ago, were wrong. They made a mistake. They thought house prices would go up forever. They thought the economy would be 20 percent bigger today than it is now. They were wrong. So they have decided they have too much debt and they want to pay it down. That is what has been happening in the household sectors in many countries. So the leveraging machine goes into reverse, and that unbalances the whole economy.

My answer is Gary Gorton's view of the banking sector is absolutely correct. It is a crucial part of the story. I thought I fully internalized it. Obviously I failed. But I admire it enormously. I think it is an immensely good book, very, very important, one of the best books I have read about this. But it does not explain the whole mess, because there are other bits of this puzzle which other people's work, particularly Reinhart and Rogoff, Irving Fisher—I try to put these all together—describe.

You cannot, I think, get a sense of this thing if you just view it as a financial crisis. This is my big departure. Some of my economist friends are very much on the other side. But I will just leave it.

A very last thing—[Alan Blinder](#) wrote a great book. [*Editor's note: Don't miss Blinder's Carnegie talk on this book from January, 2013*] It is a wonderful book. It is much more complete than I am on the U.S. financial sector. But he does not discuss any of the macroeconomic side that I have discussed. In my view, that makes a very incomplete picture.

In addition, he does not discuss the global side. I never like to say this in the United States. This was not just a U.S. crisis. It was a global crisis, in which, of course, the U.S. institutions were the biggest players. But it was part of a whole global systemic breakdown. The Chinese crisis we are going to see, in my view, is a consequence of it. It is a global systemic crisis.

So Gary, great. They are all great. But my book is the only one that has it all together. [Laughter]

JOANNE MYERS: It's not only the shifts and shocks, but it's shock and awe for the splendid discussion. Thank you so much.

Audio

Why did the 2008 financial crisis occur? What should it teach us about modern economies and economics? Martin Wolf does a masterly job of untangling this complex catastrophe and proposes how we can avoid repeating our past mistakes.

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