

How secure is the global financial system a decade after the crisis?

September 2018

Great strides have been made since 2008 to prevent a recurrence of the financial crisis and recession that followed. Yet there is more debt than ever in the global financial system.

In this episode of the *McKinsey Podcast*, recorded in August 2018, Simon London speaks with McKinsey Global Institute partner Susan Lund about the global financial system ten years after the crisis that left the world reeling—detailing the state of the world economy and analyzing the potential for such a crisis to repeat itself.

Podcast transcript

Simon London: Hello, and welcome to this edition of the *McKinsey Podcast*, with me, Simon London. Today we're going to be taking stock of the global financial system ten years on from the tumultuous events of September 2008 and the financial crisis that followed. As we'll hear, a lot has changed in the decade since the crisis. But is the global financial system actually more secure? Could history repeat itself? And where might we look for the seeds of the next crisis? To answer these questions, today's guest is Susan Lund. Susan is a McKinsey partner and also an economist with the McKinsey Global Institute. She's based in Washington, DC. Susan is a coauthor of a new discussion paper on the topics we'll be discussing today. If you want more detail, facts, figures, and so on, go to McKinsey.com and download it there. So, Susan, thanks so much for joining today.

Susan Lund: Thank you.

Simon London: I think we should start with a little bit of history, if you don't mind, Susan. What were the origins of the financial crisis? Where was the epicenter, and how did it happen?

Susan Lund: The epicenter of the global financial crisis was really the housing market. It started in the United States, but it turned out that similar housing bubbles were building in other countries, like the UK, Spain, and Ireland. Households were borrowing more than they could afford. Banks were giving out loans at very low interest rates and increasingly having enticing features like interest rates that were very low but then ballooned after a year or two.

This meant that households could borrow more than they could really afford to borrow and buy a bigger house. At the same time, all of this was fueling housing-price increases. Banks looked at the credit risk and thought, well it's fine. These houses are worth a lot, so they have an asset.

But the problem started when housing prices stopped growing and instead started declining. And suddenly a lot of households found that they had a lot of debt. Sometimes more than the value of the house. Then the economy fell into a recession and people lost their jobs, so they couldn't afford these very large mortgages. Now, that in and of itself would've been painful. But what made the 2008 financial crisis so globally devastating was that it turns out there were a lot of complex, opaque derivative securities that had been built on top of these underlying mortgage assets.

So the subprime mortgage market in the US was pretty small. It was not more than maybe 10 percent of all US mortgages. Yet banks had taken these mortgages, pulled them together, and created something called asset-backed securities. Then they took those and pooled them together again. And so they built trillions and trillions of dollars of financial instruments whose value was riding on those mortgages being repaid.

When a few households started defaulting on mortgages, the pain went far beyond those households and the banks that originated them to all these investors around the world. And those global, systemic links weren't apparent until the crisis hit and we saw banks and investors around the world start getting hit with losses.

Simon London: So the obvious question for a microeconomist would be, where were the regulators in all of this?

Susan Lund: Well regulators were there, but banks were creating new types of financial instruments. They were gaining popularity; these so-called collateralized debt obligations hadn't really been seen before. And credit default swaps.

These derivatives are great in theory, and they're often great in practice. But what was happening was, they were creating these systemic risks that the world hadn't seen before. As it started to unravel, we found out that those risks, rather than being diversified and spread around the world, were concentrated in some very large banks like Bear Stearns and Lehman Brothers.

At the same time, I have to say, banks had very little capital. They were in a position—and they were following global regulations at the time—but they didn't have a lot of equity capital to withstand large amounts of losses on their balance sheets. When large numbers of mortgages started to go into default, they were facing losses that pushed them into a solvency crisis. That, too, is something that's changed over the past ten years.

Simon London: With the benefit of hindsight, you could say we started with a housing-market bubble, and that's bad. That's happened before. But what made this different is that there was a lot of financial innovation that had run ahead of regulation, and to some extent had run ahead

of the banks' ability to manage the risks, plus there just wasn't enough capital. The shock absorbers weren't there in the global financial system.

Susan Lund: Absolutely. That is a great summary.

Simon London: From a macro point of view, something that was discussed a lot of the time was the whole question of global financial imbalances. Again, with the benefit of hindsight, what's going on?

Susan Lund: Global financial imbalances refer to the fact that some countries save a lot and invest less, and other countries invest a lot and save very little. The US is an example of a country that was investing a lot in real estate, but its own savings rate was actually going down, down, down. To finance a lot of the investment that was occurring, foreigners were putting money into the US market. Ben Bernanke coined a term, the "global savings glut." He was referring to the fact that China and some other Asian countries had very, very high savings rates.

One of the things they did with all this surplus savings was channel it into the US treasury market. That's because the US treasury market is the largest, most liquid, safe asset in the world. That had the effect of pushing down US interest rates.

While the housing crisis was building up, you saw very large inflows of foreign money into the US. Often it started in the treasury market, but then that pushed down interest rates. Liquidity worked its way through the system and financed, to some extent, this housing bubble. In that sense, I think that surplus global liquidity, combined with an interconnected global financial system, did play a role in setting the conditions for this massive housing bubble.

Simon London: The big question then is, from a layperson's perspective, could it happen again? Could we get a repeat of the same pattern of a real-estate bubble fueling a banking crisis and that spreading across the world?

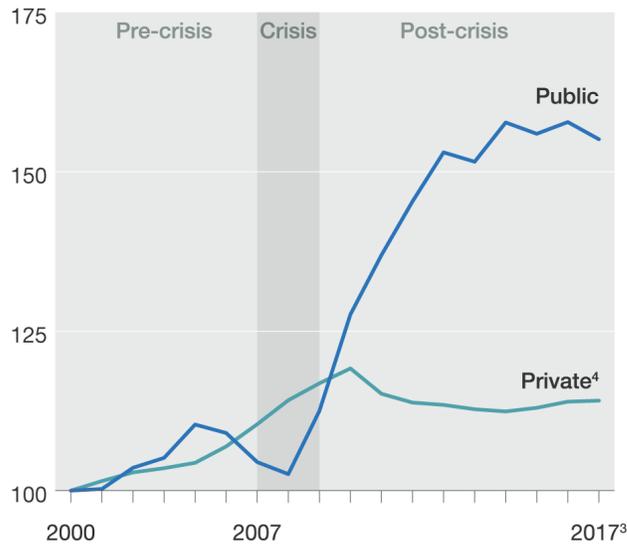
Susan Lund: History shows us that real-estate bubbles and banking crises go hand in hand and have plagued countries throughout history. So I would never say that it couldn't happen again. But a lot has changed over the past ten years. First, you see that the households that had borrowed too much prior to the crisis, like households in the US, Ireland, Spain, and the UK, have really cut down on debt a lot.

That said, one of the most surprising things over the last ten years is that the total amount of debt in the world has continued to grow. Global debt over the last ten years went from roughly twice the size of global GDP to—today, it's about 2.4 times global GDP. In absolute terms, the world has \$72 trillion more debt than there was back in 2007, on the eve of the crisis. Government debt has grown very rapidly in advanced economies [Exhibit 1]. Globally, government debt has more than doubled. There's now \$60 trillion owed by governments around the world. A lot of this came from advanced economies. The combination of a recession that reduced tax revenues and increased social-welfare payments for unemployment really put a big dent in government fiscal balances.

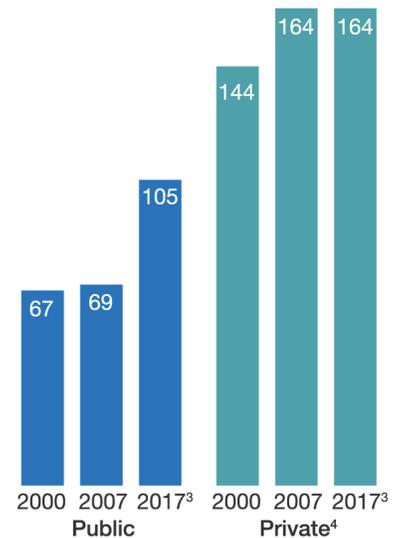
Exhibit 1

Public debt increased rapidly after the crisis in advanced economies.

Debt in advanced economies¹ by sector,
% of GDP,² Index: 100 = 2000



Actual debt-to-GDP ratio in
advanced economies, %



¹Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom, and United States.

²Debt as percent of GDP is indexed to 100 in 2000; numbers are not actual figures.

³First half of 2017.

⁴Includes household and nonfinancial corporate-sector debt.

Source: Bank for International Settlements; McKinsey Global Institute analysis

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And around the world, governments, to one extent or another, provided financial support to the banking system and other critical industries. All of that has made governments more indebted than ever before.

But at the same time, companies have borrowed almost as much in addition as governments have. Globally, nonfinancial corporate debt has grown to be even larger than sovereign debt, to \$66 trillion. About two-thirds of the growth from that comes from developing countries. And here China stands out in particular. Chinese companies alone have added \$15 trillion of debt over the last ten years. This means that the country now has one of the highest corporate debt ratios in the world. But China's not alone. There are other pockets of corporate borrowing, ranging from Turkey to Chile to Vietnam.

It's a particular problem in these developing countries. I want to know when the debt is in US dollars, or euros, or other foreign currencies, because it means that these companies face a risk. If their own domestic currency, such as the Turkish lira today, depreciates, it means that repaying that foreign currency debt is much more expensive. And the likelihood of default goes way up.

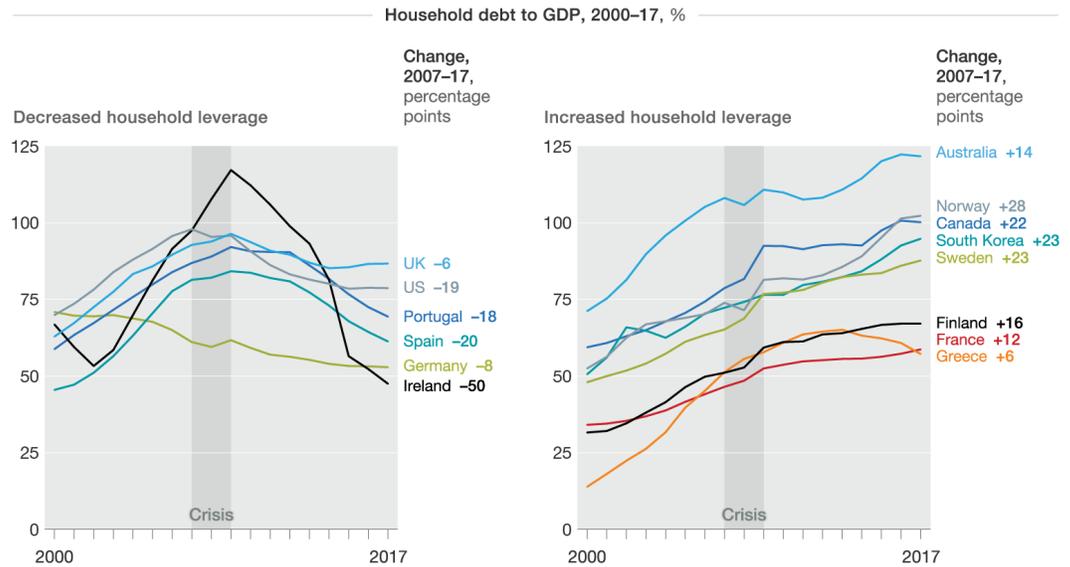
Simon London: Tell us a little more about household borrowing. US households have taken on this mortgage debt. We've seen similar patterns in the other countries that were at the epicenter

of the 2008 crisis. What is the pattern of household borrowing globally? Is there less household debt than there used to be? Or is there also more?

Susan Lund: Globally, household debt has also continued to grow since 2007 [Exhibit 2]. But the picture really varies by country, and it's grown a lot less than corporate debt or government debt. Households in what I think of as the core crisis countries of the US, UK, Spain, and Ireland have all reduced household debt quite significantly.

Exhibit 2

While households in hard-hit countries have deleveraged, household debt has continued to grow in other advanced economies.



McKinsey&Company | Source: Bank for International Settlements; McKinsey Global Institute analysis

But the same pattern hasn't held in other countries that weren't as heavily affected. So, for instance, households in Canada have seen household debt continue to grow, and real-estate prices have continued to rise quite rapidly. Today, household Canadian debt is much higher than it was in the US at the peak.

Switzerland has very high household debt, as does South Korea. Australia has an extraordinarily high household-debt level. There are also some developing countries where households have borrowed quite a lot over the past ten years. This would include Thailand and Malaysia. In China today, the household debt, when measured against household income—not GDP but household income—is actually similar to the US level today.

It's possible for there to be future crises or banking problems involving mortgage debt and household debt. Even though the US mortgage picture looks good, it's very clear that ten years on, US households and individuals are still struggling. And many are not financially well.

So in the US you see that student debt to fund postsecondary education has exploded. And it's now at about \$1.5 trillion outstanding. That's even more than credit-card debt in the US. That's quite worrisome for the future, because student loans cannot be defaulted on. You're seeing young people with large student-loan burdens not purchasing houses and not purchasing cars—delaying big expenditures. That has a significant impact on overall economic growth.

At the same time, there are other metrics. Like a significant share of US households don't have enough savings to pay for even an unexpected expense of \$400 in any given month. They would need to borrow money to do so.

Simon London: I think that the point that you make about the US underlines for me that a lot of pain was taken by households—not only in the US but also in a lot of countries—in the aftermath of the financial crisis. In a lot of countries, it's still being worked through, right?

Susan Lund: Absolutely right, Simon. When you look at Greece, for example, today, as we record this, is the day that Greece is formally out of its bailout package financially. But Greek households have been left a lot poorer. Average wages in Greece are down by about 20 percent. Unemployment remains high. Taxes have gone way up.

There's still the sense that even while the economy recovers, households are much poorer. The same would be true in Spain, where the economy has grown quite strongly, but real wages have gone down quite substantially. And youth unemployment in particular remains high. In some sense, with this global financial crisis, even as we're on the tenth anniversary and we look at all the ways that the financial system is more stable, it's important to remember that the individual losses and consequences of this crisis have still not been worked through.

Simon London: We've talked a lot so far about the borrowers. But who's doing the lending? And is the global banking system more secure, more stable than it was going into the crisis?

Susan Lund: There are two parts to the answer to that. Banks are definitely more stable and secure. For one thing, they now hold a lot more capital. For US and European banks, the average Tier 1 capital ratio has risen from about 4 percent of their assets before the crisis to 15 percent today. And the biggest systemically important financial institutions actually hold even more capital than that.

In addition, banks have been subject to a whole host of different new regulations, and they have reduced the risk on their balance sheets, and off their balance sheets, in terms of the assets that they hold and the activities, like proprietary trading, that they engage in. At the same time, though, you see that banks are doing a lot less cross-border lending.

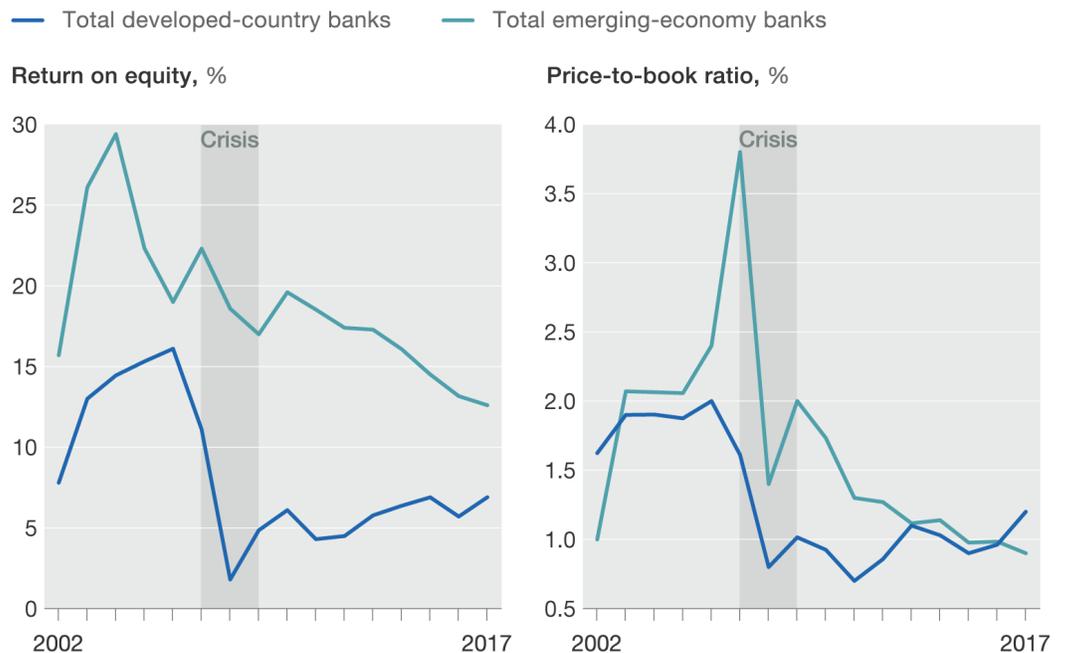
Overall, one of the things that's been most notable in the past ten years is that the global financial system is somewhat less interconnected than it was. When you look at the average just in the amounts of money crossing borders, it has shrunk by about half since 2007. Banks are the biggest part of this shrinking. They have sold foreign assets; they've exited doing business in some other foreign markets.

This has been seen very clearly in Europe but is also true, to some extent, of the largest US banks. For instance, before the crisis, two-thirds of the assets of German banks would've been outside of Germany. And today, now, that's been cut by half. So about a third of German banking assets are outside of Germany. That gives you some sense of this massive restructuring of how banks are doing business. But at the same time that they've become more capitalized with less trading risk, one of the things we've seen is that they're not terribly profitable. The banking industry had very high returns up until the global financial crisis. And metrics like return on equity have been cut by more than half.

Many banks are not even earning their cost of capital. When you look at their growth prospects, investors are taking a pretty dim view on how fast these institutions will be able to grow. A common metric is the price-to-book ratio [Exhibit 3]. And for a large number of banks in Europe and Japan, this ratio is less than one. Meaning investors are valuing the bank at less than the book value if they just sold off all their assets today.

Exhibit 3

Banks have posted weaker financial performance since the crisis.



Note: Analysis includes ~1,000 banks in 70 countries, each with total assets exceeding \$2 billion. They account for ~75 percent of global bank assets.

McKinsey&Company | Source: SNL Banker; Panorama by McKinsey

Banks are continuing to try to find a way to be profitable in this new environment with more capital and more liquid assets. That's obviously a problem for banks and their shareholders, but it's also a systemic problem for all of us because one of the temptations might be to start to engage in riskier-but-higher-return type of activities that led to the crisis ten years ago.

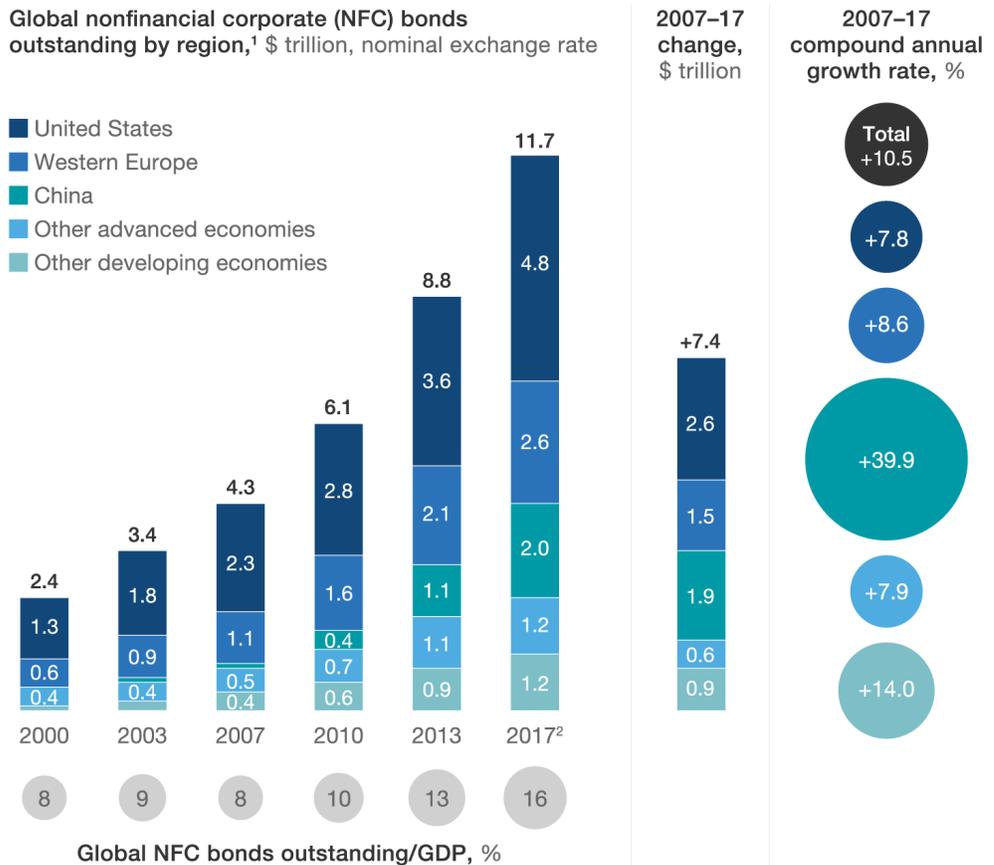
Simon London: Another development since the financial crisis—and this one is very close to my heart, because what you don't know is that my very first job was writing about the Eurobond market—is that the corporate bond market has tripled in size since the global financial crisis.

Susan Lund: That's right. Over the last ten years, as banks have sought to repair their balance sheets after sustaining huge losses, they've really retrenched from lending, especially to corporations. And companies, at least the largest companies, have instead turned to corporate bond markets. Prior to the crisis, the US had a very large and liquid corporate bond market. The same could be said of maybe the UK and South Korea. But in Europe, in Japan, and really the rest of the world, companies turned to the largest banks for commercial loans.

Over the past ten years, as global banks have retrenched, companies have in fact turned to bond markets outside the United States. You've seen a tripling in the size of corporate bonds outstanding [Exhibit 4]. And this is a good thing in terms of systemic risk, because it means that

Exhibit 4

Nonfinancial corporate bonds outstanding have increased 2.7 times over the past decade to \$11.7 trillion.



Note: Figures may not sum to 100% or totals listed, because of rounding.
¹Bond nationality is based on the location of the headquarters of the parent company of the company issuing bonds.
²Data as of December 4, 2017.

companies are diversifying their sources of financing, and we think that there's lots more room for sustainable growth.

Simon London: What about the financial imbalances? The global savings glut and all that? We talked about it ten years ago. Have those things resolved themselves? Or are there still stresses and strains?

Susan Lund: Yes. A lot of the global financial imbalances have in fact subsided. So that's been another very positive development over the past ten years. On the eve of the crisis, China had the world's largest current account surplus, meaning it was giving its savings to the world. And it was worth nearly 10 percent of GDP in 2007. That's down to just roughly 1.5 percent of GDP most recently. Then on the borrower side, the US was the world's largest borrower, receiving capital flows. And its current-account deficit was nearly 6 percent of GDP. That's now down to about 2.5 percent of GDP. These imbalances have subsided to a large extent.

Now, that's not to say that some countries aren't running large current-account deficits or surpluses. Germany has been called out by the IMF [International Monetary Fund] and others for now maintaining a very large current-account surplus throughout the crisis. Then there are some emerging markets that remain on the deficit side, for instance, like Turkey and Argentina, that could make them vulnerable. As we said earlier, I would never say never. But a lot of the potential risk in global imbalances does seem to have subsided.

Simon London: This all sounds very positive. The big, global financial imbalances have largely resolved themselves. Banks are better capitalized. Corporate bond markets have grown up. All sounds very good. Is there anything that we should worry about?

Susan Lund: One thing that we know is that the next crisis probably won't be the same as the last crisis. We've done very well in responding to the last crisis, and battening down the hatch, and creating a stronger financial system to guard against *those* risks.

It's hard to foresee what the next crisis might be. But there are a couple things I think are worth looking at. First would be corporate debt, especially in emerging markets. This would be both loans and bonds. This is particularly true for foreign-currency-denominated loans, which are now in the trillions of dollars of worth. As the US dollar strengthens, as interest rates rise, and if countries come under fire like Turkey is as we record this, a lot of those debts could be unsustainable.

Second, I would continue to monitor the global landscape for real-estate bubbles and mortgage risk. Canada, Australia, South Korea, Thailand—there are a whole host of countries, and I would put China in this bucket, that have had continued growth in housing prices, continued growth in household borrowing through mortgages. So that's a potential risk. In the US, now roughly half of all new mortgages are coming from nonbank lenders. It's not the same shadow-banking entities that we saw before the crisis, but it still bears watching.

Then the third big potential area of risk, I would have to say, would be China's rapid growth and debt. Over the past ten years, China's debt, in absolute terms, has more than quadrupled in size. They've added more than \$21 trillion of debt.

They went from basically being on par with other developing countries for their level of debt to now being at, or higher than, the level of economies like the US, Canada, and Germany. One thing we know from financial crises around the world is that whenever you see rapid growth in credit, there's a high likelihood that lending standards have fallen and that credit underwriting is not as strict as it should've been.

And so there is a potential risk in China's debt. A lot of it is related to real estate. If the real-estate market were to go into reverse, that could produce defaults. There have also been a lot of local-government entities that have borrowed to fund low-return-infrastructure and social-housing projects. That's another potential risk.

I would not say that any of these risks are as globally, systemically important as what we saw with the situation before the 2008 financial crisis. Even in China, where they've added a lot of debt, most of it has been lent by Chinese lenders, so you don't see the international linkages in any crisis there. And the Chinese government has plenty of capacity to bail out the financial system, because its central government debt is quite low.

Simon London: What about financial innovation? We hear a lot about fintech. And then, of course, there are cryptocurrencies: Bitcoin, and all the rest of it. So financial innovation clearly played something of a role in the emergence of the 2008 crisis. Are there things out there that we should worry about?

Susan Lund: It's a very interesting point that, yes, financial innovation, in some sense, was at the heart of the last crisis and created the globally systemic risks that we saw. And it's unknowable today how some of the new innovations in financial technology would play out.

For instance, cryptocurrencies. We could clearly see that in some cryptocurrencies, like Bitcoin, there may be a bit of an asset bubble that could create volatility. But there are real questions about how central-bank monetary policy plays out in a world with digital currencies. And is it less effective than it used to be?

There are also market risks coming from high-speed algorithmic trading. We've seen some stock-market flash crashes and bond-market and currency flash crashes as computer-generated trading very quickly makes a turn and creates incredible market volatility. We also are starting to see the rise of new technologies, like blockchain, that would enable potentially huge efficiencies in financial transactions but that also are decentralized.

One area to watch as we go forward is how the move toward a world of digital finance, digital payments, and robotic artificial-intelligence-driven trading and financial markets—how those impact market dynamics. And the ability of policy makers and central banks to be effective as they set monetary policy.

Simon London: Yes. I guess all of that falls into the bucket of known unknowns, doesn't it? We know that it's out there, but it's pretty hard to judge at this point what the impacts are going to be. Another one that falls into that bucket is also good old geopolitics. Whether it's armed conflict or trade wars.

Susan Lund: That's right. In recent *McKinsey Quarterly* surveys of executives around the world, one of the notable things over the last few years has been the consistency at which business leaders put geopolitical risk as higher than it's ever been. There's just a lot of uncertainty in different regions of the world about political and military conflicts, potentially.

Now there's also uncertainty about the global trading system and whether the 30 years of an increasingly liberalized "free global trading system" is going to be significantly changed and curtailed going forward. All of that could affect financial markets as it affects real economy flows, and production, and investment in ways that are very hard for us to foresee right now.

Simon London: We're out of time for today, but, Susan Lund, thanks so much for joining.

Susan Lund: Thank you. My pleasure.

Simon London: And thanks as always to you, our listeners, for tuning in. To learn more about this topic, and to learn more about the work of the McKinsey Global Institute, go to McKinsey.com/MGI. 

Susan Lund, based in McKinsey's Washington, DC, office, is a partner at the McKinsey Global Institute. **Simon London**, a member of McKinsey Publishing, is based in the Silicon Valley office.