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Shadow Banking: What It Is, How it Broke, and How to Fix It

By Mike Konczal

We hear a lot of chatter about the shadow banking system and its crucial role in the financial crisis. But rarely do we find time to step back and ask the basic questions: What is shadow banking, where did it come from, how did it operate, what role did it play in this crisis and how do we deal with it going forward?

I hope this Q&A with a very smart professor and economist at Barnard College Professor Perry Mehrling provides answers to each of those questions.

Mike Rorty: Let's start by talking about what a traditional bank does, how it takes money and the special kinds of risks it faces.

Perry Mehrling: You are talking about the Jimmy Stewart bank. There are two sides to it, the liability side which looks to the depositor. The other side is lending, for consumer loans and other loans. The regulatory support and backstop for that system was devised over many years to deal with two fundamental problems facing that kind of structure.

One risk is liquidity risk, which is the risk that people on the deposit side might want to take their money out and, since the money is locked up in houses and long term loans, it can't happen. So there has to be a lender of last resort. There's a second problem, a solvency problem, which is maybe all those loans go bad, and we want to make sure that the depositors aren't all wiped out. That's where the Federal Desposit Insurance Corporation (FDIC) comes into the picture, making sure that if the bank is insolvent that the depositors are covered to a certain limit.

I referred to the lender of last resort, and that's the role of the Federal Reserve in this story. If a bank does not have liquid funds to pay depositors who want to withdraw their money, the Fed can lend a bank the funds it needs in order to make the payment system work. It isn't then a problem for the depositor, but instead a problem between the bank and the Fed.

That's traditional banking. One thing to understand is that the regulatory support structure of the government is designed for that kind of banking.

Before we start talking about shadow banks I want to go to this quote I found from your presentation. It's Fischer Black in 1970:

"Thus a long term corporate bond could actually be sold to three separate persons. One would supply the money for the bond; one would bear the interest rate risk, and one would bear the risk of default. The last two would not have to put up any capital for the bond, though they might have to post some sort of collateral."
- Fischer Black, "Fundamentals of Liquidity" (1970)

It's amazing in how accurate that quote is, as a motivating factor for what the capital market would become, 20 plus years before credit default swap contracts.

He's thinking about corporate bonds, and splitting off interest rate risk and selling it separately and splitting off the credit risk and selling it separately. The instruments he is imagining back then are what we know today as interest rate swaps and credit default swaps.

Why do this? The idea is to make the corporate bond market a more complete market. So by being able to trade interest rate risk and credit risk those risks will move to the people most able to bear them, thus lowering the price of that risk and lowering the price of corporate credit.

So let's talk about shadow banks. What are they, where did they come from, and how did they operate?

We have to appreciate that we are writing history as it is being made so these are provisional theories. I'm really hoping that there will be a big congressional inquiry and we'll find out the facts of the matter, if only for future historians.

The shadow banking system was built up alongside the traditional banking system, using some of these tools of modern finance we were just talking about like interest rate swaps and credit default swaps. The idea was to make credit cheaper for the ultimate borrower and more available, but also to separate the credit system from the payment system. A lot of the regulation we have on the traditional banking system is there to protect the payment system, to make sure that when you write a check on your deposit account, that money actually gets transferred.

The idea of the shadow banking system was in some way, not only tolerated by regulators, but encouraged by regulators. They thought, "Let's get some of these risks off the balance sheet of the traditional banking system. Let's get interest rate risk off the balance sheet of the traditional banking system. Let's get credit risk off the balance sheet of the traditional banking system." They thought that would be a good thing. The traditional banks became an originator of loans which they packaged, securitized, and then sold to the shadow banking system, which then raised funds in the money market from mutual funds and asset-backed commercial paper that they issued to whomever. It was avoiding the traditional banking system entirely in this regard, and also avoiding all the regulation of the traditional banking system as well as all the regulatory support of the traditional banking system.

But of course it had the same risks. You aren't actually getting rid of liquidity risk or getting rid of solvency risk; you are just moving them into a different place.

Let's look at a specific example of how a shadow bank would use a prime AAA collateralized debt obligation (CDO) tranche -- that is, the highest rated portion of the security.

Because these things were rated AAA, or if they weren't they got AIG to insure them and make them AAA, they were able to borrow almost 100% of the value of the CDO tranche in the overnight repo market at low overnight rates and were able to make money on the difference. They were trying to do the funding piece of Fischer's idea, and get rid of all the other risks by selling them off. They were taking advantage of what they understood to be their access to low-cost funds and leveraging them up.

So that explains how the shadow banks evolved. Now where did the weaknesses start to show up?

There's some controversy about this. It is certainly true that problems in subprime started to create some anxiety as to whether or not these assets were really AAA or not. But I don't think that this can be sustained, the notion that this was just a housing bubble that collapsed. Because if it was, we'd be done already. As many people said at the beginning of the crash, "oh [the problem is] just subprime, there's only, say, $400 billion of that stuff out there, it is not big enough to undermine the entire financial system." The fact that crisis continues shows that it isn't just a crisis of subprime, but a crisis of the whole securitization structure, that everything came into question.

The way this played out is the following. Once there is any concern about the value of the collateral you are putting up in an overnight borrowing situation, the first thing the lender does is to alter the deal, to say "Ok, we'll continue to lend. But just to be on the safe side, instead of giving you 99 cents on the dollar we'll give you 95 cents on the dollar." That immediately creates a problem for the shadow bank that is borrowing. Where are they going to get that other 4%? The way that plays out is that there is a downward spiral of the collateral because no one knew what these assets were really worth, so they looked to where these assets were traded. Where can we find a market price? And there was no market price.

So what they used as a proxy for a market price was the Asset Backed Securities (ABX) index, which was an index of 20 CDO tranches. This was a traded index. They looked at the price on this index as an indication of the value of the underlying. As that index fell the collateral value was marked down. You couldn't borrow as much as you used to in order to carry the underlying security. This became a self-fulfilling prophesy on the way down, something I refer to as a "liquidity-solvency downward spiral."

I've told my students for a decade that this new system would inevitably get tested by a crisis. And when it got tested it was inevitable that it was going to break. We didn't know where it was going to break, and the important thing now is to identify where it broke and to fix it so it doesn't break there again.

Who was selling all this credit default swap protection?

Many people were selling protection on tranches along the way. Lehman Brothers was selling protection, but it was also buying protection. They were net buyers of protection in fact. The net sellers of protection were insurance companies like AIG. They were thinking of this as an extension of their regular line of business into a new profitable area.

The math geeks on Wall Street supposedly had built ironclad formulas that could model incredibly complex risk to help bankers make complicated investments that would boost their profits. But it seems to me that these models didn't take into consideration the issue of this liquidity risk -- that is, the chance that you will be not be able to trade an asset before taking a loss.

This mindset assumes that these markets are continuous. That liquidity is a free good. And you assume that in building the theory. But when we start to think of the actual mechanics of trading, liquidity does matter, and needs to be paid attention to.

The assumption that liquidity will always be there is just an assumption. And this is my argument, that this is really what happened, and why things became so brutal: That there was no organized lender of last resort for the shadow banking system. The shadow banking system really depended on the traditional banking system as its lender of last resort, and the traditional banking system depended on the Fed, but the Fed had no direct link.

Where do we go from here? Should we just outlaw credit default swap contracts, and try to work back to the traditional banking system?

I think that if you are really honestly trying to do that, that is a recipe for a massive credit contraction that would be terrible in the short run. I suppose it is true that we could get back to the banking system of the 1950s. But let's remember where that banking system came from. It came from a Great Depression and a World War. Hopefully we won't need to go down that road. Hopefully we can find a way to fix the system we have now. And I think it can be fixed.

Where I put my finger on this is that what AIG was doing when they were writing insurance on AAA CDO tranches was writing systematic risk insurance. This is insurance that they could never pay.

Again to come back to the modeling questions, it's not like adjusting the correlations in an equation one way or the other would have made much of a difference with insuring that amount of systematic risk.

Not only did they not reserve against it, which they didn't, they couldn't have reserved against it. They realized this, but too late. They didn't reverse their position, and maybe they couldn't, because of the size of their positions, the problem would have been worse or shown up faster.

Once AIG stopped writing insurance, the game was really over, but it continued to run for quite a while. One thing that happened, and we know this from the UBS shareholder report, is that UBS started to say if AIG isn't going to sell us insurance at this cheap rate, we are going to make a plan to buy just 2% insurance and then make a plan to do "dynamic hedging" ourselves, which is a problem. That means when the price goes down, we sell, assuming that there would be a buyer on the other side.

So what can the Federal Reserve do going forward to try and regulate this shadow banking system?

I use the term "Credit Insurer of Last Resort." And here's the idea: The Bagehot Rule - lend freely, at a high rate, in a crisis - dates from 1873. That was a good enough rule for the 19th century British economy, an economy that ran on short term commercial bills of exchange, 90-day paper. You can see for the new capital markets banking system we have a problem. We have 30-year mortgages that are the underlying asset that are being turned into 90-day paper through asset-backed commercial paper, or a repurchasing agreement, or repo, but the underlying asset is still a 30-year mortgage. That is where the system broke, because those mortgages serve as collateral for the short term borrowing.

Floating the system with money market liquidity, which is what the Fed did, didn't solve the problem, because it wasn't getting to the capital markets. That's why we need a credit insurer of last resort, to put a floor on the value of the best collateral in the system. I say the new Bagehot Rule should be: *Insure freely but at a high premium.*

Why a high premium? If you insure an earthquake, you are not making earthquakes more likely. The insurance contract is a purely derivative contract, it isn't influencing earthquakes. That is not true of insurance of financial risk. When AIG is selling you systemic risk insurance for 15 basis points, that price is too low. People said: "If I can get rid of the whole tail risk that cheaply, I should load up. I should take more systemic risk." So the prices were wrong. So the important thing for government intervention here is to get that price closer to a reasonable rate to prevent people from creating earthquakes.

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