

The Global Financial Crisis

[Easy Trip Trap by The Brothers Record from YouTube's free Audio Library]

Warren Buffet: 1:09-1:17, "In 2008 you had something close to a bubble in home real estate." ([Buffet1](#))

HBO: 3:55-4:10, "Big trouble for millions of American homeowners as a slowing housing market has turned some mortgages into time bombs. One failed mortgage might not threaten the whole financial system, millions of them could." ([HBO1](#))

Warren Buffet: 2:04-2:10, "You had Wall Street firms participating, you had mortgage originators participating, but you had the public participating." ([Buffet1](#))

Big Short: 0:05-0:12, "Mortgage backed securities, subprime loans, tranches, it's pretty confusing right?" ([BigShort1](#))

Warren Buffet: 1:33-1:40, "Fear spread in the month of September 2008 at a rate that was like a tsunami." ([Buffet1](#))

WSJ: 0:00-0:20, "The worst day on Wall Street since the crash of 1987. The Dow traders are standing there watching in amazement and I don't blame them. We're now down 43%. Almost everything there, completely wiped out. In the NASDAQ everything and more has been completely wiped out. Let's talk about the speed with which we are watching this market deteriorate." ([Buffet1](#))

Barack Obama: 0:22-0:42 "Just this morning we learned that we lost another 651,000 jobs throughout the country in the month of February alone. Which brings the total number of jobs lost in this recession to an astounding 4.4 million. 4.4 million jobs." ([Obama2](#))

[Land of the RetroOnes by RAGE from YouTube's free Audio Library]

Kaleb: Unfortunately, in early 2009 when Obama quoted that number, job losses were only halfway to the total 8.7 million that would be lost before the employment situation hit bottom and began the slow turnaround in 2010.

Kaleb: I'm Alexander Bagehot and this is The Bankster Podcast season 3: Last Resort, presented by Centralverse.org. This is episode 6, The Global Financial Crisis. ([CBPP1](#))

Kaleb: Tons of good material has been produced explaining the origin and aftermath of the Global Financial Crisis, which by the way is another name for the Great Recession that simply puts more emphasis on the financial sector, where the crisis exploded and where most of the policymakers' responses were focused. I could do an entire series on the Global Financial

Crisis, but this season I've dedicated to just the lender of last resort, so we'll stick to the Fed's lending of last resort activities that took place throughout the crisis, but mostly in the Fall of 2008.

Kaleb: If you remember back to episode 3, we walked through the purpose and functioning of the Discount Window. But as a quick refresher, the Discount Window is simply the name of the program under which banks can borrow from the Fed in times of stress. In an ideal world, the Fed could honestly do all of its lender of last resort emergency support via the Discount Window. However, in the real world (both in 2008 and today) the Fed had to be creative and lend under different, new programs and facilities. But why is that? Well, there are a few legal and political reasons, but a very important reason the Discount Window didn't work slash wasn't enough was because of something called stigma.

Kaleb: What is stigma? Well, besides being a very sad song from the absolutely global-dominant band BTS.

BTS: 0:50-1:00, "Stigma" ([BTS1](#))

Kaleb: The dictionary defines stigma as, quote, a mark of disgrace associated with a particular circumstance or the disapproval of, or discrimination against, close quote. In our case the circumstance is a bank that is struggling.

Kaleb: Remember that on their most basic level banks have assets that are very long-term and illiquid (loans to people and businesses that they can't just decide to sell at 3pm and have sold at a good price by 4pm). On the other side, banks have liabilities that are very short-term and liquid (deposits and other short term borrowings that if asked at 3pm, have to pay out by 4pm). They use their assets to pay off their liabilities as needed. Most of the time, this works just fine because a very low and steady portion of those liabilities are demanded on any given day or hour. However, in crises, the portion of a bank's liabilities that demand to be repaid right away goes way up. This is doubly hard because during a panic, those long-term assets get even harder to sell.

Kaleb: There's an imperfect metaphor, that I think nonetheless is pretty helpful. Imagine you own a house that is worth a good amount. Normally, you have monthly expenses that you can cover with your job's salary. But what happens if you lose your job. You still have a positive net worth because your house is worth way more than your monthly expenses. It's just really hard to sell your house. Even in normal times, and doubly hard during a recession when people stop looking to buy houses.

Kaleb: In this situation what you could really use is an emergency loan that could tide you over until the market calms down and you can sell your home. Many people have family members for these types of emergency loans. Banks have the Fed.

Kaleb: But to continue the metaphor a bit, it's not easy to ask your family or friends for money. It can be embarrassing. You may not want the family member you ask for money to tell other members of the family you needed the money.

Kaleb: Sometimes it's not only embarrassing for banks to have to go to the Fed for an emergency loan, it can actually be counterproductive. To survive, banks have to maintain relationships with their clients, including people that owe the bank money, as well as people that the bank wants to lend money to. If word gets out that the bank had to borrow money from the Fed, those clients may decide to take their money or their borrowings to a different bank. That's what stigma is.

Kaleb: The fear that if the bank takes the emergency loan from the Fed at the Discount Window, it might do more harm than good by signaling to the world that the bank is in trouble. An academic study found empirical evidence that stigma was a real issue during the Global Financial Crisis and that banks were actually willing to pay a higher interest rate in order to borrow from someone other than the Discount Window. ([FRBNY1](#))

Kaleb: All of that said, and highlighting the severity of the crisis, many many banks did come to the Fed's Discount Window for support. Record levels actually.

Kaleb: By the end of October 2008, outstanding Discount Window loans reached a peak of \$111 billion ([NYT1](#)). Remember that Discount Window loans are short term, so banks would borrow, then repay, then borrow again, then repay again, for many banks in the worst of the crisis this was a daily practice. That means that although peak outstanding at one time topped out at \$111 billion, the total amount lent by the Fed through the Discount Window was many many trillions.

Kaleb: But despite this surge in use, it wasn't enough. Banks needed way more assistance for starters. The Fed created a number of sister programs to the Discount Window that allowed banks and (importantly others that previously didn't have access to the Discount Window) to borrow without the stigma.

Kaleb: For example, for Primary Dealers, which are big financial institutions that work in government debt and market clearing, the Fed created three major programs that, at their peak, had a combined outstanding value of over \$450 billion. ([GFCvCorona1](#))

Kaleb: The clearest example of a program specifically designed to get over the issue of Discount Window stigma was the Term Auction Facility.

Steve Liesman: 0:13-0:26, "TAF was a program rolled out in 2007 by the Federal Reserve in the subprime crisis. It existed through 2010 and it's really a discount window under another name is the best way to put it." ([CNBC1](#))

Kaleb: This statement from CNBC journalist Steve Liesman is true to the extent that the purpose of the TAF was identical to that of the Discount Window - namely to provide last resort loans to banks that needed it. However, TAF had a few different, and very important, features that made it much more useful to banks than the Discount Window. Two such features are right in the name: Term and Auction. ([Fed1](#))

Kaleb: Difference number one, Term (which just means loan maturity or when it has to be paid back). Where the Discount Window offered overnight loans, the TAF's loans were for a term of 28 days (and later extended to even farther to 84 days). As we described it earlier, banks come to the central bank for last resort loans when they are healthy in the long term but need cash in the short term. However, TAF worked better because giving banks a few months to pay it back is much more attractive than having to pay it back the next day, or within a few days.

Kaleb: Important TAF feature number two, the Auction: at the Discount Window, all of the loans are one-offs made by the Fed with a specific bank. In other words, the Fed is a passive receiver of loan requests from the banks who have to make the first move by coming and asking for a Discount Window last-resort loan. With TAF, the Federal Reserve took the first move. They set up a series of auctions where they said at each one, something like, "we have \$20 billion that we are going to lend out today. All of you banks, send in your bids now."

Kaleb: Then all of the banks would send in bids with dollar amounts and interest rates they'd be willing to pay. The Fed would then line up all of the bids from highest interest rate to lowest and just accept the offers from top down until the money was gone.

Kaleb: This was huge in taking away the stigma because banks could effectively say, "we bid what was economical. We're not in trouble, it was just smart business to participate in this Fed program."

Kaleb: It became a kind of last-resort loan program with plausible deniability that it was a last-resort situation for the banks that used it. And therefore, it worked. Loans under the TAF peaked at \$493 billion - nearly five times the peak outstanding amount at the Discount Window. ([Fed2](#))

Kaleb: When reviewing some of the actions taken by the Fed during the crisis, Ben Bernanke, chairman of the Fed, later described the TAF as a "pretty clever solution." ([Bernanke1](#), p175)

Kaleb: Ok, up to now, we've talked about the Discount Window and TAF, plus briefly mentioned a few other programs for other large financial institutions. We're now going to turn to the bane of central banks and regulatory authorities.

CNBC: "What we call the shadow banking system. The nonbank but very large in the United States system of money market funds, of securitization activity, of nonbank financial firms."
2:46-3:03 ([CNBC2](#))

FT: “Shadow banks are largely unregulated.” 2:17-2:22 ([FT1](#))

FT: “A shadow bank covers a huge range of definitions really. It’s everything from an insurance company and an insurance company, an asset manager, a hedge fund, a private equity firm, a private debt firm, any type of business that engages in Bank like activity.” 0:10-0:28 ([FT1](#))

FT: “Shadow banks do a vast range of things from very simple lending to small and medium-sized business for example right through to very complex asset structuring in the financial crisis they became infamous because of some of that structuring because they hid and magnified a lot of the risk that was actually in the banking system.” 1:42-2:04 ([FT1](#))

Kaleb: and my favorite lede to explaining shadow banks.

Paddy Hirsch: “Hi my name is Paddy Hirsch. I’m a senior editor at Market Place. Today I want to talk about shadow banking. Is it something that involves ninjas? No?” 0:07-0:11 ([MP1](#))

Kaleb: Like Paddy’s explainer, unfortunately this episode will not feature any ninjas. Instead, we’ll hit “the” big five investment banks, money market mutual funds, big businesses, and finally, we’ll end the episode with the shadow-bank elephant of the Global Financial Crisis - the insurance company AIG.

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Kaleb: Here are the big five investment banks all but the first in the voice of their decades old tv advertisements.

Bear Stearns Ad: “Bear Stearns, Bear Stearns...” 0:12-0:17 ([CNBC3](#))

Lehman Brothers Ad: “You can get there from here with Shearson Lehman Brothers.” 0:16-0:31 ([Lehman1](#))

Merrill Lynch Ad: “There are lots of investment firms, but there is only one Merrill Lynch.” 0:10-0:29 ([Merrill1](#))

Goldman Sachs: “Goldman Sachs is firmly established as a leader...” 1:56-2:08 ([Goldman1](#))

Morgan Stanley: “Morgan Stanley. World Wise.” 0:15-0:30 ([Morgan1](#))

Kaleb: These investment banks no longer exist as we knew them before the Global Financial Crisis. In less than a year, all five fell. One literally failed, the others were either bought up by a regular bank or were forced to convert into a regular bank themselves. How did this happen?

We'll go through them one by one. There are entire books about their collapse, but I'll focus on the Fed's role in each of their last days. First up? Bear Stearns.

Kaleb: Two things to note about the lead-up to the failure of Bear Stearns. First, they were highly leveraged, which means they had borrowed a lot of money to fund their investments. Second, they used a good portion of this money to invest in financial products that were effectively bets on the housing market. When the housing market began to collapse, two of Bear's subprime hedge funds failed. The losses on the investment bank's books began to build.

Kaleb: In December 2007, Bear announced its first quarterly loss in 80 years. As the new year began, Bear replaced its CEO but losses continued and confidence was drying up. As the lender of last resort, the Fed watched closely as all of this unfolded. The markets for these advanced and complicated financial products were made of very few players, so one of them completely failing would cause real harm to the market itself. Remember back to episode four and Too Big to Fail.

Kaleb: By March, Bear's steady stream of losses came crashing down like a waterfall. The billions of dollars of cash that Bear had on hand dried up in a matter of days. On Thursday, March 13, Bear acknowledged that it did not have enough money to open its doors the following day. So in a move that foreshadowed what was to come, the New York Fed worked through the night drafting the paper work of a special emergency 13(3) last resort loan from the Fed to JP Morgan Chase for nearly \$13 billion. JP Morgan Chase then lent the money to Bear Stearns. This allowed Bear Stearns to make it to the weekend, and two glorious days of no trading. ([Fed3](#))

Kaleb: After making the final go ahead decision for the loan and knowing he was heading for a very long weekend, Bernanke, Fed Chair at the time sent an email to his administrative assistant, "Pls order a couple of muffins and oj for me. I'll be in in 10 mins." (Courage1, ch10). And a busy weekend it was. Although the last resort \$13 billion loan helped Bear make it to the weekend, it quickly became clear that they would need much more cash before the markets opened Monday if they were going to be able to survive. Instead of the Fed providing more funds, it decided to facilitate a sale of Bear Stearns. JP Morgan came through.

AP: "The banner headline is that JP Morgan Chase is buying Bear Stearns." 0:00-0:05 ([AP1](#))

AP: "It's yet another sign of the credit crisis in the US, which also led..." 0:31-0:34 ([AP1](#))

CNBC: "The housing crisis in America took today one of Wall Street's most venerable institutions. An institution that survived multiple wars and the Great Depression expired today at the hands of the housing crisis." 0:00-0:17 ([CNBC3](#))

Kaleb: Now, JP Morgan Chase not only bought Bear Stearns at a tiny fraction of what it had been worth just twelve months before, but it also had one other huge condition: it would not take

the worst of Bear's balance sheet. Here the Fed stepped in with a new kind of last resort facility. The New York Fed created a completely new limited liability company called Maiden Lane (named after the street where the Fed is located).

Kaleb: This new holding company would take about \$30 billion in those bad (although bad probably isn't the right word, the assets were mostly bad because no one had any clue what they were really worth and they had the potential, though not the certainty, of defaulting). So Maiden Lane took \$30 billion in Bear Stearns' assets that JP Morgan wouldn't take. The Fed put up \$29 of the \$30 billion and JP Morgan put up the other \$1 billion.

Kaleb: The company was set up such that if the assets lost money, JP Morgan would lose its billion first, then any money lost on top of that would come from the Fed's investment. In the end Maiden Lane repaid the Fed in full and actually earned a net \$2.5 billion. ([FRBNY2](#))

Kaleb: This was the first, but not last, as you'll hear in a few minutes, use of this type of Fed LLC company used to facilitate a last resort loan.

Kaleb: The problem here was that Bear was just the weakest among a group of weak investment banks. All five had been lined up like dominos, but what no one really knew was how close together they were. After Bear went down, the next domino was Lehman Brothers. In the end, it would survive the summer of 2008, but not the Fall.

Lehman Brothers Ad: "You can get there from here with Shearson Lehman Brothers."
0:16-0:31 ([Lehman1](#))

Kaleb: Remember that one of the key attributes of a shadow-bank is that it operates outside of the regular regulatory umbrella. As things began to go crazy at Bear Stearns in the spring of 2008 the Fed began to gather data and start conversations with Lehman Brothers, whose official regulator was the Securities and Exchange Commission (the SEC) who has less of a day-to-day relationship with those it regulates and more like a cop that swoops in to investigate only when a crime has been reported. ([Bernanke3](#))

Kaleb: The Fed conducted some stress tests, which means they took financial information from Lehman and ran it through a model that predicts how well or poorly the investment bank would do if markets went bad again like they had before Bear collapsed. The results of the stress test were not good. The Fed encouraged (though by no means could force) Lehman to raise more capital, which means get more investors to buy equity in the company. Lehman was able to raise \$6 billion in June, but needed more and was working to raise it all the way to the moment it failed.

Kaleb: Similar to the Bear Stearns experience, the Fed found itself going into a weekend (now September 13) with a distressed investment bank, unable to open without major assistance by

the upcoming Monday morning. This time the stakes were even higher. Lehman was 150% the size of Bear and even more interconnected with other important financial institutions.

Kaleb: Here's Bernanke, somberly testifying before Congress.

Ben Bernanke: "In an attempt to devise a private-sector solution for Lehman's plight, the Federal Reserve, Treasury, and SEC brought together leaders of the major financial firms in a series of meetings at the Federal Reserve Bank of New York during the weekend of September 13-15. Despite the best efforts of all involved, a solution could not be crafted, nor could an acquisition by another company be arranged. With no other option available, Lehman declared bankruptcy." ([Bernanke3](#)) 50:32-50:58 ([Bernanke4](#))

Kaleb: Among the potential suitors were Bank of America, which had purchased the distressed mortgage company Countrywide Financial back in January and set its sights on a different acquisition; a Korean Development Bank, who's own domestic regulator stamped out the potential for a deal; and finally, the prospect that came the closest to succeeding was the British bank Barclays, but just like in Korea, the regulator stepped in in the last minute and forbade Barclays from going through with the deal.

Kaleb: At the ten year anniversary of the bankruptcy, the WSJ gathered a few former Lehman employees who were there on the day of the bankruptcy. Here are some of their comments.

WSJ: "So what is the feeling, that bankruptcy is inevitable? Sure I think so. And then in the middle of the night we got an email, a text, that the firm had filed for bankruptcy, bankruptcy. So I was there when that email was being drafted, our counsel they had to put together probably the quickest bankruptcy papers ever done ironically for the largest bankruptcy in the history of the world." 5:56-6:26 ([WSJ1](#))

WSJ: "like a big machine had just shut off and it was it just felt very quiet where none of us really knew what what direction anything would take." 8:00-8:12 ([WSJ1](#))

WSJ: ""at the end of that day, I was walking down the street to meet some friends for a drink and a homeless guy came over to me and asked me for money and he saw my Lehman Brothers bag and he said oh no, that's okay, never mind." 8:48-9:07 ([WSJ1](#))

Kaleb: Despite headlines in the major papers lauding the Fed's quote "restraint" in not rescuing Lehman, that's not how the Fed tells the story. They tried to save Lehman by finding a suitable buyer for them just like they had with Bear.

Kaleb: When the Fed justifies their decision to not rescue Lehman Brothers, they cite the central banker's bible. They cite Bagehot's rule. Lehman was not ok in the long run and just short on cash. It was insolvent. The assets it had were worth so much less than its liabilities that

the Fed decided it just couldn't. This decision is backed up by just about every single person in a powerful position at the time. They haven't swayed since.

Kaleb: There are others that argue that Lehman just needed more time. That it had enough collateral to back at a minimum an emergency last-resort loan from the Fed that would have given more time to Barclays or another suitor to buy them. Lawyers will argue for years to come about whether or not the Fed could have saved Lehman. ([Ball1](#))

Kaleb: This podcast isn't the time to dive into the legal arguments. But I do want to pause for just a second and emphasize how important the Lender of Last Resort is. Not just to lawyers and bankers, but to you and me. People may disagree about whether the Fed could or could not have rescued Lehman. But what no one argues is that Lehman's failure was the straw that broke the camel's back. It pushed the financial system into a full-blown panic. It pushed the economy into a recession. It was the last straw. Millions lost their jobs. Some never got them back. The Great Recession changed our politics, it changed an entire generation.

Kaleb: At its core, the argument about Lehman isn't really about Lehman, it's about the Lender of Last Resort. We all agree there should be one, but what should the rules be and who should decide and enforce those rules. We're relying on a bible written nearly 150 years ago that doesn't actually say what many cite it as saying.

Kaleb: Before we can get into the granular policy level of designing a lender of last resort system, we have to know its history and where it came from and how it's been used. That's what I've tried to do with this season of the Bankster Podcast.

Kaleb: Two investment banks gone, three still standing, barely. Next in the domino line?

Merrill Lynch Ad: "You know who - there are lots of investment firms, but there is only one Merrill Lynch." 0:22-0:29 ([Merrill1](#))

Kaleb: Merrill Lynch saw the writing on the wall. The weekend of September 13-15 was a fateful for one for Merrill just as much as Lehman. Part of the reason Bank of America dropped out of the running to acquire Lehman was that it had turned its sights on Merrill. And sure enough on Monday morning, September 15, Bank of America announced that it would buy Merrill Lynch ([BoA1](#))

AP: "The Charlotte, North Carolina based bank will acquire Merrill Lynch in an all stock transaction worth about \$50 billion. The transaction is expected to close in the first quarter of next year. Judy Boysha, Associated Press." 0:40-0:54 ([AP2](#))

Kaleb: So in one weekend we went from three to two.

Goldman Sachs Ad: “Goldman Sachs is firmly established as a leader in...” 1:56-1:59 ([Goldman1](#))

Morgan Stanley Ad: “Morgan Stanley. World Wise.” 0:26-0:30 ([Morgan1](#))

Kaleb: Goldman Sachs and Morgan Stanley - the last two investment banks standing. It would take less than a week for their dominos to fall as well. To be clear all five of these investment banks were suffering in this crisis. However, Goldman and Morgan were the largest and strongest, thus (a) their falls came after the others and (b) were not nearly as dramatic. And this is one of the most interesting lender-of-last-resort-like activities by the Fed during the Global Financial Crisis.

Kaleb: At the heart of any financial crisis is a panic. A contagion. Fear of failure of an otherwise healthy institution can quickly become a self fulfilling prophecy. And this is what brought Goldman and Morgan to the last-resort window. But these investment banks' ask to the Fed was not a loan backed by collateral that would allow them to cover their short-term liabilities. Instead, the ask was that the Fed would allow them to convert from investment banks into bank holding companies.

Kaleb: About a year after all of this happened, John Mack, the head of Morgan Stanley described what happened that fateful week. The full video is pretty incredible. It's almost 30 minutes long, but here are a few highlights. He'll mention Lloyd and Hank, which is Lloyd Blankfein, head of Goldman Sachs and Hank Paulson, Secretary of the US Treasury.

John Mack: “I knew that Morgan Stanley would be next in line we went into that week with a hundred and eighty 1 billion in cash not in securities not in Treasuries not in IBM stock, cash. Because we knew there would be a run on the bank on Monday.” 3:23-3:44 ([Morgan2](#))

John Mack: “So that was the spin we were in. Money running out the door. It was a classic run on the bank.” 5:28-5:36 ([Morgan2](#))

John Mack: “What are you going to do? And you know we were talking to the Chinese. We had put out a feeler to the Japanese. We talked to Buffett. We talked to everyone and trying to figure out how can you put some calmness into this market and get people to stop the run on the bank.” 8:56-9:15 ([Morgan2](#))

John Mack: “But by Friday, we were getting nowhere. We'd been turned down at every place we'd gone. And Lloyd called me and said do you think if we were a bank holding company that would help us through this crisis and I said, clearly in the long run it would, I'm not sure in the short run if it would, but started to do some work on looking at being a bank holding company.” 12:19-12:41 ([Morgan2](#))

Kaleb: In the end, converting into a bank holding company is exactly what both Goldman and Morgan did. You can imagine the Fed holding a giant umbrella. When a storm rolls in, entities regulated by the Fed can move under the giant umbrella until the storm passes. Investment banks, institutions of the shadow-banking world, do not have access to the umbrella. They don't have to follow all of the rules the Fed enforces, but they also don't get to shelter under the umbrella during storms.

Kaleb: Goldman and Morgans' request to convert into bank holding companies, was basically them asking to be taken out of the shadow-banking world and be given access to the Fed's giant umbrella. They weren't moving under the umbrella right away, they just wanted to be allowed in later if they needed it.

Kaleb: So to be clear. No money exchanged hands. No loans were made. But on Sunday, September 21 the Federal Reserve approved the applications for Goldman Sachs and Morgan Stanley to become bank holding companies. ([Board1](#)) ([Board2](#))

Kaleb: And with that, all five of the big investment banks were either bought, bankrupt, or converted to regular banks. Now these institutions were important for the roles they played in international financial markets. But they weren't the only players in these critical markets. So too were money market mutual funds and large businesses.

[[Sun Awakening by Futuremono from YouTube's free Audio Library](#)]

Kaleb: Traditionally, money market mutual funds (MMFs) are available to normal people like you and me, as well as being popular places for insurance companies, pension funds, and big businesses to park their money. They are kind of in between investing your money and just depositing it in a checking account.

Kaleb: Like a checking account, money in an MMF can be deposited and withdrawn pretty easily. Also, like checking accounts, you weren't supposed to have to worry about your money losing value in an MMF. However, unlike money in a checking account, money in an MMF was not guaranteed by the FDIC or NCUA and it was only "supposed" to never lose value, technically it could.

Kaleb: Well, hopefully after listening to the destruction that was happening in financial markets as the investment banks went down one after the other, it's not hard to imagine that things were not working as they were supposed to.

Kaleb: On September 16, 2008, this was the Tuesday after Lehman's bankruptcy the day before, an old and large MMF called the Reserve Primary Fund was forced to announce that its customers would no longer be able to withdraw their money dollar for dollar, an action called breaking the buck. Reserve Primary had had money invested in Lehman Brothers and they didn't know how much they'd get back after bankruptcy.

Kaleb: Given the certain loss in value and the uncertainty about how big that loss would be, for every dollar on the book, Reserve Primary announced it could redeem only 99.5 cents. Although only a half a penny per dollar less than the original amount, this was a huge blow to the system. As I mentioned previously, money in MMFs just weren't supposed to lose value. Now maybe they wouldn't offer a super high interest rate, but you were supposed to be able to always count on it retaining your original deposit at least. ([Coursera1](#))

Kaleb: Faith in the system was broken. Withdrawal requests at Reserve Primary piled in. This would have been bad enough if that was the end, but no, the small investors and big investors, the big businesses, insurance companies, and the pension funds alike wanted to take their money out of not only Reserve Primary but also other MMFs that looked like Reserve Primary. The fear spread like wildfire.

Kaleb: Similar to what the head of Morgan Stanley said a few minutes ago, all of this was very similar to a bank run, it was just happening outside of the regulatory sphere. Watching this unfold from their offices in Washington and New York, the Fed knew that it could not let this trillion dollar MMF market go bust. So it stepped in with a new 13(3) emergency loan program whose name is too long even for this podcast, but whose acronym is simply AMLF. ([Board3](#))

Kaleb: The AMLF was run through the Federal Reserve Bank of Boston and worked like a special discount window. It allowed banks to buy assets from MMFs that the market wouldn't take. The banks could then post those assets as collateral for a loan at the Fed's AMLF. At its peak this money market assistance program had over \$150 billion in outstanding loans. ([GFCvCOVID](#))

Kaleb: One type of asset that these money market mutual funds were struggling to sell was something called commercial paper. This commercial paper was effectively really short term loans from businesses. These loans, sometimes as short as over-night, were made by pension funds, MMFs, and insurance companies, among others. However, as panic spread through financial markets, the market for commercial paper dried up. Even long-established companies, and broadly health companies, found themselves unable to issue commercial paper. This was an extraordinary expansion of the Fed's lender of last resort activities. They would now extend loans directly to businesses.

Kaleb: It's another example of how issues in the financial system can quickly seep into the real economy. The Fed responded with an emergency 13(3) facility. The Commercial Paper Funding Facility was set up in a similar format as had been used to facilitate JP Morgan Chase's purchase of Bear Stearns. The New York Fed established a limited liability company that bought and held commercial paper. At its peak, this facility held nearly \$350 billion. ([GFCvCOVID](#))

Kaleb: Now before we end the episode with the story of the elephant of the crisis, AIG, I wanted to quickly turn our attention to a lending of last resort activity beyond the borders of the US. If you remember from the last episode, in response to 9/11, the Federal Reserve established two emergency currency swap lines with the Bank of England and the European Central Bank ([FRBSL1](#)).

Kaleb: During the Global Financial Crisis the Fed increased dramatically the number of countries with whom it operated these swap lines from two to fourteen. In the next episode, we'll talk about how the Fed became the lender of last resort to the world. ([Board4](#))

Kaleb: AIG. An insurance company, with all of the regular insurance products like home, auto, life, and travel. But it also offered insurance to financial institutions. And not life insurance for their employees or renters insurance for their properties. No, they sold insurance on actual financial products. The insurance worked just like a normal insurance product does. The buyer pays a small amount to the insurance company and then if something goes bad, the insurance company will pay out the full amount they lost.

Kaleb: But this time what these financial institutions were insuring was their investments. They could invest money in a mortgage backed security, which remember is just a bundle of mortgages. Maybe they invest in one of the lower tranches. The lower tranches are the first to not get paid back if some of the mortgages default, but it's also the tranche that earns the higher interest. Classic, more risk, more reward kind of thing.

Kaleb: But one way to lower the risk of financial loss in any situation is to buy insurance on it. So, AIG offered that insurance. You could make an investment, then buy insurance. Pay AIG a relatively small fee and they will insure the success of the investment. This works great for the investors who have managed to earn the higher return, without having to take the full risk.

Kaleb: And it works great for AIG, because even if a few mortgages go bad, in the history of the housing market, not since the Great Depression had housing prices across the board, across the country gone down at the same time. So AIG could do what it did with home, auto, and travel insurance, collect a lot of small fees, and then pay out an occasional lump sum to a few.

Kaleb: Well, that worked, until it didn't.

Associated Press: "The state of the housing industry is even bleaker than previously estimated." 0:00-0:07 ([AP4](#))

ABC: "But if you're among the millions of Americans trying to sell, this was a very bad day. The National Association of Realtors reported the worst month-to-month drop in existing home sales since they started keeping track in the late 90s. And compared to last year, closings are down more than 25%." 0:07-0:23 ([ABC1](#))

Kaleb: I started the investment bank section with clips from their old advertisements. Well, AIG's crash was so dramatic, and the Fed and Treasury's last resort rescue so intense, that AIG, clear into 2014, was still talking about it in their tv advertisements.

Kaleb: "For companies going from garage to global. On the ground, in the air, even into space. We're AIG. We repaid every dollar America lent us and gave America back a profit. We're here to keep our promises." 0:10-0:24 ([AIG1](#))

Kaleb: AIG's financial product insurance division almost brought down the entire financial system. If there is a single company that embodies, Too Big to Fail, or Too Interconnected to Fail, it's AIG.

Kaleb: It's only fair I guess that the complicated nature of AIG's financial insurance products led to the most complex lending of not only this Global Financial Crisis, but possibly more complex than any other last resort loan ever made by a government to a single company.

Kaleb: The total pledged support was for nearly \$200 billion ([GFCvCOVID](#)). And that \$200 billion was spread out over 5 different last resort facilities.

Kaleb: The first was a special revolving credit line of \$85 billion. This was introduced on September 16, the day after Lehman filed for bankruptcy and the same day the Reserve Primary Fund broke the buck. This revolving credit line meant that AIG could borrow up to \$85 billion from the Federal Reserve Bank of New York.

Kaleb: The massive loan was collateralized, or backed, by a substantial portion of the regular insurance business that was pretty healthy. But the most interesting aspect of this last resort loan was that AIG was also forced to give up to the US Treasury 79.9% ownership of the company. ([Board5](#))

Kaleb: The second and third support facilities were set up similar to that of Bear Stearns, where the Fed created two new limited liability companies, they actually named them Maiden Lane II and III. With \$20 billion and \$24 billion in equity, these two new central bank LLCs bought troubled assets from AIG. Over the next few years, as the markets improved, the LLCs were able to sell all of the assets and return a profit to the New York Fed. ([Board5](#))

Kaleb: There were two other Fed facilities and many other actions by the US Treasury that would be wound up and wound down over the next few years. In the process AIG shrunk its business down by half and ultimately paid back every penny to the Fed, with interest and fees.

Kaleb: And thus it was with all of these new and dramatic last resort loans made by the Federal Reserve during the Global Financial Crisis. In all, taking each program at its peak, the Fed had over \$2.3 trillion in outstanding emergency loans. All of those loans were fully repaid.

[Land of the RetroOnes by RAGE from YouTube's free Audio Library]

Kaleb: The Fed learned a lot of lessons during this experience. Little did they know, that before the cake crumbs had been swept off the floor of the 10 year crisis anniversary events, a pandemic would envelop the world, financial markets would freeze, and the Fed would redeploy many of the lender of last resort tools it developed in the GFC.

Kaleb: Today's episode was written, edited, and produced by me, Alexander Bagehot. A full transcript with links to all of the sources used and quoted in today's episode can be found at www.centralverse.org. While you're there, check out the interactive graphics describing how modern central banks work today. The theme song for this season is Land of the RetroOnes by RAGE. Additional music by The Brothers Record and Futuremono.

Kaleb: I tweet under the name @KalebNygaard. Central banks affect the daily lives of all of us. Rate the podcast wherever you're listening, then share it with your coworkers, classmates, family, and friends. Until next time, thanks for listening.