

## ECONOMICS U\$A LESSON #8

(MUSIC PLAYS)

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Stasio: Economics U\$A. One of a series of programs designed to explore Twentieth Century micro and macroeconomic principles. The subject of this edition is Money and the Banking System. Our guest is Philip Kagan, Professor of Economics at Columbia University and visiting scholar at the American Enterprise Institute. I'm Frank Stasio.

Stasio: Money. People sing about it, kill for it, talk about it, and die for it. All for something that would be worth no more than the paper it was printed on if we didn't believe in its value. What is money? How does it circulate? And how do we know what it's worth? When we talk about money, we usually think about the coin and currency that we use in our daily financial transactions. We seldom consider that the ten-dollar bill that we pull from our pocket is just a piece of paper printed by the government to represent ten dollars. We simply hand over the bill, confident that the merchant will accept it on its face value. Of course, merchants know they too will be able to pass it on to others who will also acknowledge its face value. It is public faith in currency that keeps the system working. That faith is strengthened by the fact that no matter where we travel in the United States we all use the same currency. That wasn't always the case.

Stasio: Before the Civil War, Americans did business using a variety of coins, local currency, and state bank notes. It was an unstable system that often faltered under the weight of mistrust and abuse. Philip Kagan teaches economics at Columbia University and is a visiting scholar at the American Enterprise Institute.

Kagan: The main disadvantage is that if you take a currency from a particular bank a long distance away people may not be familiar with it and they may not know how good it is. So the two problems that you have is that, uh, you have counterfeiting is easier. There was a great complaint about counterfeiting before the National Bank notes came along. And banks at that time were not always as sound as they are today. So some of them, uh, were on the edge of bankruptcy so many of these notes would trade at a discount. And you had to have what was called a bank note detector, which they had at that time, in order to look up and find out what discount different bank notes were being issued at.

Stasio: Then in Eighteen Sixty-four Congress passed the National Banking Act.

Kagan: During the Civil War the government needed a form of financing other than the bonds they were issuing. And they found it desirable to issue money. Uh, prior to that there'd long been a view that we needed a uniform national currency since the state banks were all issuing their own currency. So these two ideas combined during the Civil War to generate the idea of a national banking system, which was simply a system in which the federal government would charter banks, unlike just the states chartering the banks. And as an incentive for banks to become under federal charter and also as a way for the government to be able to, uh, finance the war easier, a provision of the National Bank Act

was that these nationally chartered banks could issue a national bank currency which would be printed by the Treasury and would be uniform among all the banks. And in order to do so, they would deposit government bonds with the Treasury. So this was a scheme, so to speak, whereby the banks would buy the government bonds then deposit them with the Treasury and issue currency on them. So in effect the government was through the National Banks issuing currency because the bonds I sense were never circulated among the public, they were simply left in the Treasury in order to be the back up for this currency.

Stasio: We often think of money and currency as one in the same but there is a difference. Currency is just one form of money.

Kagan: Money is something that you can use to make payments to directly to another party. So that I can take a dollar out of my pocket and give it to you and then you then have it. Or I can write a check on my banking account and give it to you, and you can deposit it in your bank.

Stasio: We may hold wealth in a number of ways: currency, jewels, real estate, collectibles, and the like. But money is the easiest form of wealth to exchange for other goods and services. Even so, some forms of money are more readily used than others. Economists try to divide the money supply into categories based on the liquidity of assets.

Kagan: Liquidity, we use a term to refer to a form of holding wealth, generally a financial asset which can be easily sold at what one considers to be its full value. So you take a easiest comparison: a Treasury bill or a savings deposit, uh, can be easily sold at

its current price and converted into money and then you can use the money as you wish. Another form of holding wealth would be a private house. And you know that if you want to convert that into money, it's gonna take some time to find a buyer. You could always sell a house at a tremendous discount right away. But the question is how long would it take you to sell it at what you think you can eventually get for it? And it would take a little time. So it's an ill-liquid asset.

Stasio: And economists are...are interested in measuring money and also separating money in...in categories of liquidity, aren't they?

Kagan: Well I think most, uh, what we would call money itself is...is the highest form of...of liquid asset. And then the others liquid assets, what we would call near money like savings deposits and other short-term assets—uh, uh, assets like commercial paper, Treasury bills and so on, would be different forms of liquid assets. But money itself we would say is...is highly liquid and that would be currency and checking deposits now. So the narrow definition of money, the one that's called M-1 and the one that's closely watched, is the one that I referred to before. That's the medium of exchange. It's currency and checking deposits which can be directly transferred. But many people feel that that's too narrow a definition of a proxy—of...of a device—of...too narrow a definition of a money that's useful for monetary economics. And they want to include other very liquid assets that they feel are so highly substitutable for checking deposits that the public makes no important distinction between them and monetary economics should not also. So they define and M-Two which includes everything that's in M-1 and in addition savings and time deposits and other, uh, the kinds of deposits in the banking system that are a close substitute.

Stasio: Much of our money is kept in banks, which serve a number of important functions.

Kagan: They are the vehicle for either issuing bank notes – as used to be the case; now that’s been taken over by the federal reserve system – and providing checking deposits for both individuals and businesses to make payments. And they combine this with the loan activity, commercial loan activity of banks in which they make loans primarily to small businesses which would not themselves be able to go out in the market and issue bonds and stock the way the large corporations do. So they—I’ve long from the very earliest days of, uh, of financial development of the economy been an important source of the flow of credit in the economy providing a...a mechanism whereby people who save can deposit their money in the banks as a form of holding their wealth and the banks in turn can lend this out to others who want to borrow it. And in this way, uh, we, uh, sort of lubricate the wheels of commerce.

Stasio: Banks use the money placed on deposit by their customers to lend out to other customers. Today we consider banks relatively safe places to keep our money. But for much of our history, bank failures were common. The National Banking Act may have bolstered public confidence in currency but it did nothing to settle the general uneasiness about banks. Tempted by the promise of big profits, banks were easily lured into risky investments, holding small amounts of depositors’ money in reserve and lending out the rest. By itself this practice is known as fractional reserve banking. It’s not bad. In fact, it’s the only way banks can make a profit.

Kagan: Banks make money as...as...as middlemen do. They...they provide a service. They provide checking services to their depositors and they charge interest on their loans. So if they charge a little bit more to their borrowers than they pay out to the...the lenders, that is those people who deposit with them, then there's a interest rate margin there which covers both their expenses and provides a little bit for their capital. So, banks can make money like any other business. The fractional reserves reflects the fact that they've—banks, commercial banks, combine these two activities of taking deposits and lending. If they held a hundred percent reserves behind the deposits that they receive from the public, there would be nothing to lend out. And you could have such an institution. It would have to make its money by charging depositors a fee for, uh, check clearing. But long ago they combined the...this with commercial lending. So they keep a fraction of...of reserves behind the deposits on the grounds that not everybody wants their money at the same time. So banks' reserves, uh, might be eight, ten percent of the total. And then the rest is lent out on commercial loans in order to earn interest. And it only causes difficulty, as we've talked about, in a banking panic when for some reason the depositors all want their money at the same time and the reserves are only eight or ten percent of the total and there isn't enough to go around.

Stasio: But if depositors became nervous about a bank's stability, they might all rush to the bank and withdraw their deposits at once. This is known as a run on the bank. As news of a bank failure spread, depositors in other parts of the country began to lose confidence in their banks sending panic throughout the economy. The general instability of banks contributed to the jarring economic cycles of fast growth followed by steep depressions that marked America's industrial revolution.

Kagan: During this period about every ten years, uh, not exactly, there tended to be these banking panics which were the scourge over the period and the thing that people at that time complained most about. The banks by their charters were obligated to convert the currency at that time into gold specie; we were under the gold standard at that time. And if they were not able to do so, you could take them to court. And of course the banks that, uh, were not able to do so for one reason or another well then had to be closed, essentially went bankrupt. And their assets were then turned over to the, uh, people who held their notes. And if there wasn't enough to go along, then people took losses.

Stasio: Clearly, banks have an interest in making reasonably safe and responsible loans to keep from losing their customers' money. But according to Forbes magazine senior editor Alan Sloan, a bank would often take huge risks if it looked like it might reap big profits.

Sloan: Because they have very little of their own money compared to the amount of deposits they have, it doesn't take very much to put a bank out of business. Left to their own devices, banks will always commit suicide by chasing very bad deals.

Stasio: One of the most widely reported bad deals of its time was the one that led to the collapse of New York City's Knickerbocker Trust in Nineteen Oh-seven. The Knickerbocker's president, Charles Barney, had helped to build the bank's standing as a well respected institution in New York. But he was not above taking some risks if it looked like there was money to be made. His chance came when a speculator named Charles Morris, an associate of Barney, came up with a scheme to manipulate prices in the copper market. No one is sure how involved Barney became in the scheme. The

principal players in this unhappy tale appeared to be Morris and his partner Frederick Hines. Historian Robert Sobel picks up the story from here.

Sobel: Hines came to New York where he met Morris who was the—a...a small-time speculative. He was behind the American Ice Company and a few other companies like that. And their plan was to get four or five banks behind them. And once they had the banks' assets to use it to create a new cap copper company, United Copper, push the stock up, squeeze the shorts – that is to say squeeze the people who sold the stock thinking it would go down – and make themselves a bundle. Perfectly legal for that...that period. The stock market at that time was heading downward because of this money crunch I mentioned just briefly before. That is to say, uh, the economy was overheating, many people were frightened that perhaps there'd be a crash; they were taking their gold out of the banks. Most people knew that Knickerbocker was part of this group. And when United Copper started to collapse, they put two and two together. Depositors started to appear at the Knickerbocker with those pieces of paper that I said before gold certificates written by the Knickerbocker and said give us our gold.

Stasio: But, of course, the Knickerbocker Trust, like all banks, had only a fraction of its total deposits on reserve so it couldn't pay off all of its customers at once. Panic followed and spread quickly to other banks across the country. Two hundred forty-six banks in all were forced to close as a result on the run of the Knickerbocker Trust.

Kagan: Well the Nineteen Oh-seven panic was the last grace—great panic that we had, uh, before the establishment of the Federal Reserve System. It was one of these series of panics that we had, uh, during that period roughly about every ten years. And it was just

like the others although a little bit more severe, and it more or less convinced people finally that this is the last straw, we've got to do something about it. And it led to Congressional inquiries, which eventually led to the founding of the Federal Reserve System. The panic itself was characterized by the other panics. The economy at that time was much more agricultural than it is now so there was a tendency for bank loans throughout the agriculture regions to expand during the harvest time of year in the fall. So the banks tended to be very loaned up during that time of year. Most of our panics came in the fall of the year for that reason. Then in addition if you were at the peak of a business cycle where business, uh, borrowing in general was very high, that was an additional pressure on the banks. So if you're in...if the banks are in this rather vulnerable position at this time, if some shock to the system occurs, they're not as able to weather it as they otherwise would.

Stasio: It took six years of study and debate but in Nineteen Thirteen Congress did pass the first Federal Reserve Act which established a central bank made up of twelve regional banks spread out across the country. America decided the time had come to end the chronic convulsions in the banking system.

Kagan: A major provision of the Federal Reserve System when it was set up was to provide extra reserves to the banking system in a time of need in order to prevent these panics from closing down the system. The idea being that if you could give the banks temporarily more reserves in order to meet these panicky demands on them, as soon as the public saw that the banks were able to give them all the currency that they wanted when they went in to withdraw their deposits, they would see that the banks were liquid.

And at that point knowing they can get their money, they wouldn't want it anymore. So the panic, uh, would be over, presumably.

Stasio: So the central bank was set up as a lender of last resort, a Federal Reserve System that could in affect save banks from themselves. But why should government choose to protect this industry and not others? Why not let banks sink or swim on their own like the rest of the business world? Forbes magazine senior editor, Alan Sloan:

Sloan: Society has an enormous stake in banks because everyone has money in the bank. If the bank disappears and takes people's money with it, there's a panic; people feel insecure and crazy. If...if the banks fail, you lose a whole lot of social cohesion.

Kagan: So most of our severe depressions throughout our history have been associated with banking panics.

Stasio: Just...just the availability or lack of availability of money?

Kagan: Yes. The...the...the circulatory system, uh, of...of the economy slows down. It doesn't slow down completely. It isn't as though nothing happens. It's just that you can't get currency out of the banks; you can't make payments out of the local banking district. The banks will...will pay checks on each other as long as there's no gold specie that has to be paid out. So things do move along in a crippling way. But it's...it's, uh, because businesses can't borrow, many of them go under. They don't expand. Uh, the economy goes into a tailspin is what happens. And it generally takes several months before things calm down and, uh, the banks are able to open again.

Stasio: Without banks or some other institutions to create money, the economy would grow very slowly indeed. While fractional reserve banking makes it possible for banks to create money, we've also discussed the trouble banks get into when the promise of quick profits skews their judgment. As the lender of last resort, the central bank is not anxious to be called on too often. So it has developed some preventive measures designed to keep banks from the brink. One way the Federal Reserve does this is by setting the percentage of total deposits a bank must keep in reserve. This is called the reserve ratio. By raising or lowering the reserve ratio, the Federal Reserve controls how much money banks can lend.

Kagan: Let's take a case where the banks, uh, can reduce their reserve ratio. That means that some of their reserves are in excess of the amount that they're required to hold. And if they feel that they don't need these for their own business, they then have extra reserves to lend out. One bank will lend these out. The borrower will take these reserves and, uh, spend them somewhere. He's borrowed this money for his business perhaps in order to buy some capital. When he spends these reserves, they pass on to someone else who deposit them in his bank. So he gets a deposit and the bank receives these reserves through the clearing mechanism of the banking system. And that bank then has these reserves which are excess and it can lend out. So this—through this process of...of depositing and lending and depositing and lending from one bank to the other we get this multiple expansion of the banking system through, uh, excess reserves which leads both to more loans and more deposits throughout the system. So we have a relationship between the total money supply here, the amount of deposits that people hold in banks, and...and the amount of reserves that the banks hold. This can lead to a multiple

expansion of the banking system. If the banks are holding ten percent reserves, it's gonna lead to ten times that much expansion of deposits. So we would have a hundred million dollars extra deposits if the banks felt that ten million dollars of their reserves were excess. So that would be a case of a reduction in the reserve ra—uh, amount of reserves the banks felt they needed to hold. And an expansion produces just the opposite. There would have to be a contraction of the whole system in order to bring the amount of reserves into...to a proper desired relationship with the volume of deposits.

Stasio: For a variety of reasons, banks often hold a bit more money than required by the reserve ratio. These are called excess reserves. Banks generally prefer to keep excess reserves to a minimum since banks make their profit on the money they lend out. But there are times when banks may decide to keep high excess reserves. For example, Dr. Kagan explains that the catastrophic effects of the Great Depression left lenders reluctant to part with their depositors' money.

Kagan: There are two explanations for this. One is that they didn't see the opportunities for making loans that they would otherwise like to make. Interest rates were very low and, uh, they felt that, uh, holding the extra money was...was a safer thing to do than lending at very low interest rates. But they were also afraid. The Federal Reserve had failed them in the Early Nineteen Thirties in a way that they thought they would be saved. And so the banks were very skittish, very nervous, uh, following the banking panic of Nineteen Thirty-three and their reserves rose to very high levels. And many of us who've studied that period have argued that these were not excess reserves in the sense that there was nothing that the banks could do with them but were actually desired reserves that the banks wanted to have, uh, because of the terrible experience in the Early  
Lesson #8

Nineteen Thirties. Many of them went under. They had difficult times. It was a very precarious time for banking. And they were very skittish for many years after that.

Stasio: As Kagan says, the banks and public as well felt that the Federal Reserve had let them down in the Nineteen Thirties. It was supposed to prevent bank failures. And yet during the Depression more than three thousand banks went under. Eugene Nelson White is an assistant professor of economics at Rutgers University:

White: What the Fed was supposed to do was to engage in a counter-cyclical policy to counteract the trends in the economy. But instead it, at the beginning, began to play a very neutral role and just let the banking system slide very slowly into, uh, into chaos.

Kagan: There was a pervasive notion at that time that the Federal Reserve could not directly influence the economy. That its job was to react to what was going on in the economy. There were many people in the Federal Reserve Systems, they saw the economy contracting who felt that the money—the economy did not need as much money and therefore it was appropriate for the money supply to contract along with the economy. Many of us feel that this is a misinterpretation of what was happening because it did not take into account the fact that as the money supply contracted, this added a contractionary pressure on the economy. And indeed the contractionary in—uh, path could have been reversed if the Federal Reserve had thrown a lot of liquidity, a lot of extra money into the economy and made it much easier for the banks to make loans at that time.

Stasio: The huge number of bank failures in the Thirties made it clear that the Federal Reserve would have to take a more active role in preserving confidence in the banking system.

Roosevelt: There must be a strict supervision of all banking and credits and investments. There must be an end to speculation with other people's money.

Stasio: At first Roosevelt declared a national bank holiday to hold back the tide of bank failures and head off further panic. The next step was to give the Federal Reserve greater powers to regulate and monitor banking activities. Merritt Sherman was a member of the Federal Reserve's Board of Governors at the time:

Sherman: What Roosevelt was trying to do was to create a period in which the whole banking system, individual banks, could be reviewed by bank examiners, by experts who had a great deal of information about banks and enable them through the procedure of licensing banks to reopen to carry out the promise made by the President that any bank that was reopened would be able to stay open.

Stasio: The government also created the Federal Deposit Insurance Corporation, or FDIC, which guaranteed repayment of up to ten thousand dollars to every bank customer in the event that a bank failed and could not pay all of its depositors. The FDIC will also take temporary control of a bank that has failed to assure orderly payment of bank customers without undue strain on the banking system as a whole.

Stasio: Let's review now some of the main points in our discussion about the banking system. Money is used as a medium of exchange to make commercial transactions

convenient. It holds its value over time as long as people continue to have confidence in the money they use. The narrow definition of money includes coin, currency, checks, and other checkable deposits such as negotiable orders of withdraw or savings accounts which allow automatic transfers to checking accounts. A broader definition of money includes assets which cannot be used in commercial transactions but which can be converted to cash quickly without much loss and value. Savings and time deposits as well as money market accounts and government bonds fall into this category. Assets not considered money include items that cannot be converted quickly without a loss in value such as real estate and personal property like jewelry and collectibles. Most of our money is held in banks. Commercial banks hold demand deposits and checking accounts and lend money to firms and individuals. Banks keep in reserve only a fraction of their total deposits. The rest is lent out to firms and individuals. This is called fractional reserve banking. Banks make a profit by charging a higher interest rate on the money they lend than the interest rate they pay to depositors. The Federal Reserve System set up in Nineteen Thirteen as a lender of last resort to help prevent bank failures and restore confidence in the banking system sets the minimum amount of deposits a bank must hold in reserve. This is called the reserve ratio. By raising or lowering the reserve ratio, the Federal Reserve System regulates the amount of money the banking system can lend which has a direct impact on the growth of the money supply. Excess reserves are the amount of money held by banks above the amount required by the reserve ratio. These are used to cover banks' daily transactions. Banks generally try to limit the amount of excess reserves because they cannot make a profit on money that is not lent out. However there may be times when banks choose to keep high excess reserves. This

might happen when bankers lose confidence in the ability of borrowers in all areas of the economy to pay back their loans. The banking system is generally safer today than it was a century ago largely because of the creation of the Federal Reserve System to monitor and regulate the industry and the creation of the Federal Deposit Insurance Corporation which insures customers' deposits and takes temporary control of failed banks. Those reforms, particularly the creation of the Federal Reserve, have had greater influence on the economy than simply protecting the banking system. More on that in future editions of Economics U\$A.

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Stasio: You've been listening to Economics U\$A, one of a series of programs on micro and macroeconomic principles. Our guest has been Philip Kagan, Economics Professor at Columbia University and visiting scholar at the American Enterprise Institute.

Economics U\$A has been produced by the Educational Film Center in Annandale, Virginia. I'm Frank Stasio.

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