ARC Course on Money Creation Session Two

Lesson 2 Thinking notes

Title: **Money Creation, Then and Now**

Subject: Money creation in the banks
Theme: Money creation in the banks is the same now as it has always been
Contrast: Most people don't understand money creation at all – then or now

RECAP: **From Lesson One, we can take away at least two key points**. First, knowledge of money creation is urgently important in today's monetary chaos, but **few people understand** enough about it to even advocate for reform. Second, **money creation is not hard to fathom** if you get over the erroneous belief that it is just too complicated. Remember this:

[slide]

> "The process by which banks create money is so simple that the mind is repelled. When something so important is involved, a deeper mystery seems only decent."

Today, we will get into the essential details of how our banking system creates money.
The central theme is that money creation in the banks is fundamentally the same as it has always been, even under a gold standard.

Today, I want to make good on my claim that money creation is a simple process. **Modern money creation is not rocket science. There is no profound mystery to it**! The simple principles in today's session will be vital to understanding all money creation.

We'll cover four key topics that will serve you well during the rest of this course.
[slide]

1. **Fiduciary media, then and now**
2. **Standard money, then and now**
3. **Is money creation by the banks fraudulent?**
4. **How do modern central banks create cash reserves?**

FIRST, we'll examine how money is created in commercial banks. We'll find something surprising to most – that the bank's procedure of creating money – what I call the "mechanics" of money creation – has hardly changed for hundreds of years. Banks' fundamental method of money creation **is the same today as when Columbus first sailed to America**.

NEXT we'll examine the critical difference between money creation under a monetary standard chosen by the market (the gold standard) versus a government-imposed standard. In other words, **the difference between money creation under a gold standard versus today's "fiat reserve" monetary standard**.

THEN we'll ask an important question that always comes up when discussing money creation by the banks: **Is money creation in the banks fraudulent?**

FINALLY, we will introduce **the role of central banks in the modern economy** and illustrate how they create the reserve cash that replaced the gold that once backed our banking system.

SIMPLIFYING ASSUMPTION: During today's discussion, we will make a simplifying assumption to make it easier to understand the material. **We are going to assume there is only one big bank.** That is, we'll assume we are working under a gold standard developed in the market, and everyone using a bank uses the same one. This will avoid the complications that arise when bank deposits and cash reserves move from bank to bank. This assumption allows us to consider one issue of money creation at a time, but it does not affect the validity of our conclusions. Later on, in Lesson Three, we'll introduce the issue of many competing banks. This is my own teaching device, so let's see how well it works.

OK let's dive in. To understand how banks create money, we need a basic understanding of how modern banking was born and developed historically.

PART ONE: FIDUCIARY MEDIA OR "BANK MONEY" THEN AND NOW: MONEY CREATION IN THE BANKS HAS NOT CHANGED FOR CENTURIES

As I mentioned in the introduction, the basic mechanics of bank money creation have stayed the same for hundreds of years. Modern banking and money creation can be traced to the European goldsmiths of the mid-15th Century, who used their public trust to create an early prototype of contemporary banking.

For thousands of years, before the invention of modern banking, precious metals (mainly gold and silver) were recognized as money worldwide. As culture and commerce advanced, gold became the premier form of cash, increasingly replacing other exchange media as the most desirable form of payment.

(A guild was an association of craftsmen or merchants formed for mutual aid and protection and the furtherance of their professional interests. Guilds flourished in Europe between the 11th and 16th centuries and formed an important part of that era's economic and social fabric.)

Leading up to the late Middle Ages (the fifteenth century) in Europe, as the gold trade developed, goldsmiths (artisans who fashioned gold into jewelry, tokens, or coins) became trusted custodians, acting as the safe-keepers of their customers' gold for a fee. This was a valuable service that helped prevent theft and improved public safety. **The goldsmiths organized themselves into professional associations, known as guilds**, maintaining self-imposed high standards of service and craftsmanship to avoid fraud and to protect their reputation, thus protecting the value of their businesses. The goldsmith guilds earned the

public's trust, and as a result, the goldsmiths gained significant economic influence over time. They held a position of trust in society earned by their conduct and reputation.

https://www.michaeljournal.org/articles/social-credit/item/the-goldsmith-who-became-a-banker-a-true-story

ORIGIN OF THE PROCESS

Modern money creation was conceived when goldsmiths began to issue paper receipts to their customers as evidence of their customers' ownership of gold. When brought back to the goldsmith, these paper receipts or gold certificates could be exchanged for physical gold. Eventually, people began trading these certificates for goods in ordinary commerce as if they were physical gold. Gold certificates became popular because they were a more convenient form of money than physical gold: they were lighter, easier to transport, and easier to conceal, and the gold itself was not subject to wear or erosion due to constant handling. **The practice depended on the widespread trust of the goldsmith guilds.**

As a simple custodian and safekeeper, the goldsmith was not yet a modern banker. However, the goldsmiths gradually realized that most of their depositors rarely redeemed their paper receipts for physical gold. In a typical year, perhaps only one person in ten redeemed his gold certificates for physical gold. **Eventually, it dawned on the goldsmiths that they could print certificates representing more gold than they held in safekeeping. They could then lend out these additional certificates and charge interest.**

(As a historical note, **goldsmiths acting as bankers became widespread in England in the 17th and 18th Centuries. Before that, the practice existed all over Europe, but England is where the practice became routine. The oldest surviving goldsmith's receipt dates from 1633. Here is a photograph of one dated 1761**.

[slide]

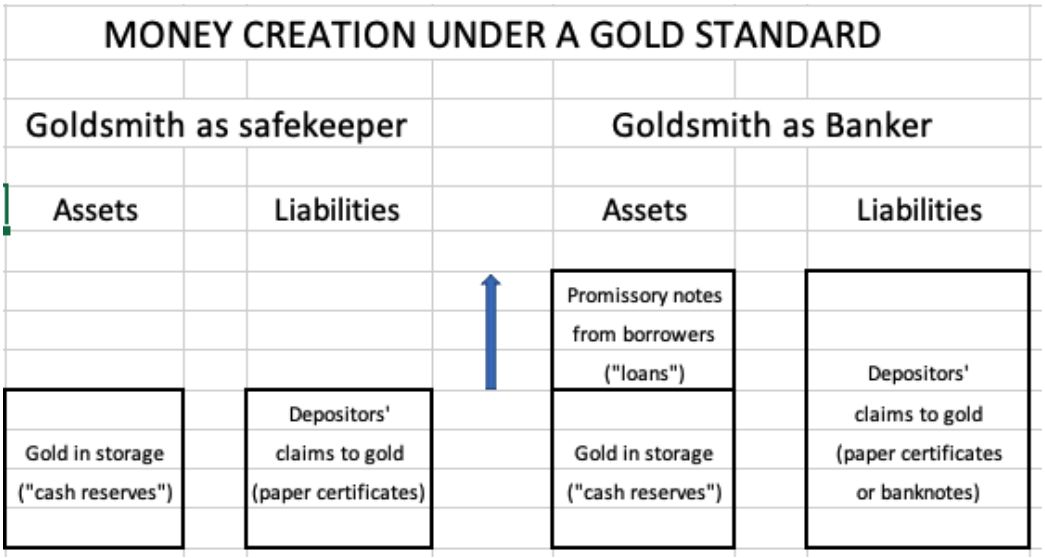
This is a receipt for a deposit with Francis Child Esqr & Co of 20 pounds to the account of William Thompson dated 15 Dec 1761. Earlier, it had been customary for such deposits to be made in the King's Mint for safekeeping; however, Charles I, being in financial difficulties, began

drawing on these funds in the mint for his personal use. When the public became aware of what was happening, the Mint deposits ceased. Now, merchants and others with surplus funds turned to the Goldsmiths and Pawnbrokers to deposit their funds for safekeeping.

https://www.numismaticnews.net/paper-money/goldsmith-receipts-tell-interesting-tale.)

The public, trusting the goldsmiths, accepted these additional paper receipts as money in commerce, just as they had when the certificates matched one-for-one with the amount of gold available for redemption. By the mid-1600s, it was common practice for banks to expand the money supply in this way. This simple but ingenious innovation marked the birth of modern banking and modern money creation.

[slide]



HOW THE GOLDSMITH-TURNED-BANKER CREATES MONEY

This slide illustrates the evolution of the goldsmith from safe keeper to banker. The illustration captures, in accounting terms, the essential feature of modern banking and money creation – namely, the practice of issuing more claims for money than the money physically on deposit in the bank.

On the left is the goldsmith's balance sheet before he becomes a money-creator. The goldsmith's assets (called here "cash reserves") consist of his customers' gold held for safekeeping, for which he charges a fee. The goldsmith's liabilities are the depositors' claims to the gold, evidenced by the paper certificates the goldsmith issued upon deposit. These liabilities are convertible to gold whenever a customer presents a paper receipt at the bank for redemption.

On the right is the "Goldsmith Bank" balance sheet after the goldsmith becomes a banker after he starts making loans and becomes a money-creator.

Something new and important happened when Goldsmith Bank made its first loans. Goldsmith Bank acquired valuable assets by making these loans, which I have labeled "promissory notes from the borrower." The banker purchased a promissory note, an IOU from the borrower, which the banker paid for by issuing additional gold certificates. **In other words, the banker printed up additional promises to pay gold on demand and gave them to the borrower in exchange for the borrower's pledge to pay back these certificates, with interest, over time. The banker "loaned out" new paper claims on gold, even though no additional physical gold had been deposited to back up these additional certificates.** These new certificates were then exchanged equally with the original certificates in the economy. All the old and new gold certificates were then spent and re-spent as they changed hands in the economy, indistinguishable from each other.

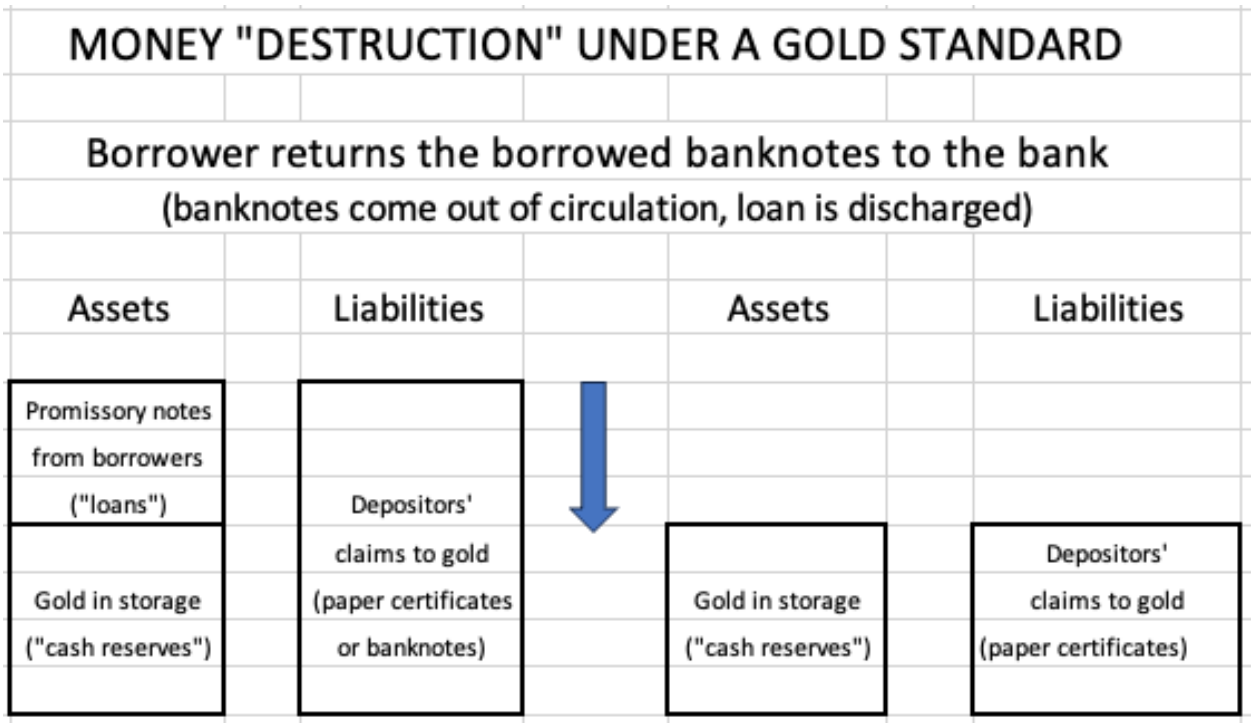
Over time, these gold certificates became known as "banknotes," which is the term I'll be using from here on. **A banknote is a certificate issued by the bank that authorizes the bearer of the note to exchange it at the bank for gold on demand**.

Notice that by making this loan, Goldsmith Bank's balance sheet has expanded; that is, it has gotten bigger. **The banker has acquired a valuable asset, a promissory note from the borrower. Goldsmith Bank's assets now include the original gold in the vault and the borrower's promissory note (the loan). The bank has also taken on a new liability equal to the loan amount – the obligation to pay out gold to the bearer of the new banknotes on demand. The bank's liabilities now include the old claims for gold and the new ones loaned out to the borrower. Since all these gold claims have equal status, the old claims to gold cannot be distinguished from the new ones. Thus, the money supply has increased!**

HOW MONEY IS DESTROYED

That's how money is created. The bank printed up new claims to gold and loaned them out. Just as simple as that. (Is your "mind repelled? by the simplicity?)

Can this type of money, once created, also be eradicated? Let's look at what happens when the borrower pays off the loan.



When he returns the borrowed gold certificates to the bank, the borrower has fulfilled his agreement. The promissory note is torn up. **The bank loan is no longer an asset.** Sitting unused in the banker's vault, the banknotes can no longer be spent in the economy because, sitting in the vault, they are not a promise to pay out money on demand. **The banknotes, unused in the vault, are no longer money. The bank's assets decline. When the banknotes are returned to the bank, the bank is no longer obligated to redeem the banknotes for gold. Therefore, the bank's liabilities also decline. The money created by the loan has gone out of existence**.

The money supply has decreased.

That is money creation and money destruction in a nutshell. To this day, banks still create money in the same way, except they have replaced banknotes with bank deposits. In Lesson Three, we'll cover various bank transactions to decide whether they create or destroy money.

Over time, banks stopped issuing banknotes as evidence of their promise to pay out gold on demand. Instead of banknotes, banks created so-called "deposits," which are not really "deposits" but ledger entries in the bank's records that serve the same purpose as paper banknotes –evidence of the bank's obligation to pay out standard money on demand. This was a technological improvement made possible by an extensive banking network and improving communication. Replacing banknotes with bank deposits was a gradual process over several hundred years.

These deposits were traded in the economy just like paper banknotes, and they still are today because they are the same thing as a banknote – a promise to pay out standard money on demand. Today's transactions are exchanges of bank deposits for goods and services, such as when you write a check or use your bank card to direct your bank to pay for something.

[pause for questions]

THE REAL BUSINESS OF BANKING, THEN AND NOW

Let's go back and be sure we understand the real business of banking. In the first session, I mentioned that what we call "lending" by commercial banks is not lending in the usual sense. Let's pause to consider what the bank is really doing.

In the literal sense, banks do not really "lend" money! From their historical beginnings right up to the present, banks, in their role as money-creators, are not in the business of "lending" under the strict meaning of that term. A "loan" is the temporary surrender of something valuable on the condition it is returned or repaid in the future. It is an extension of credit. For example, you might lend me your car for the weekend, and I agree to bring it back Sunday evening, clean and full of gas. You have extended credit to me by trusting me with the use of your property today in return for some compensation tomorrow.

But when banks lend, they are not lending out the bank's money or anyone else's money.

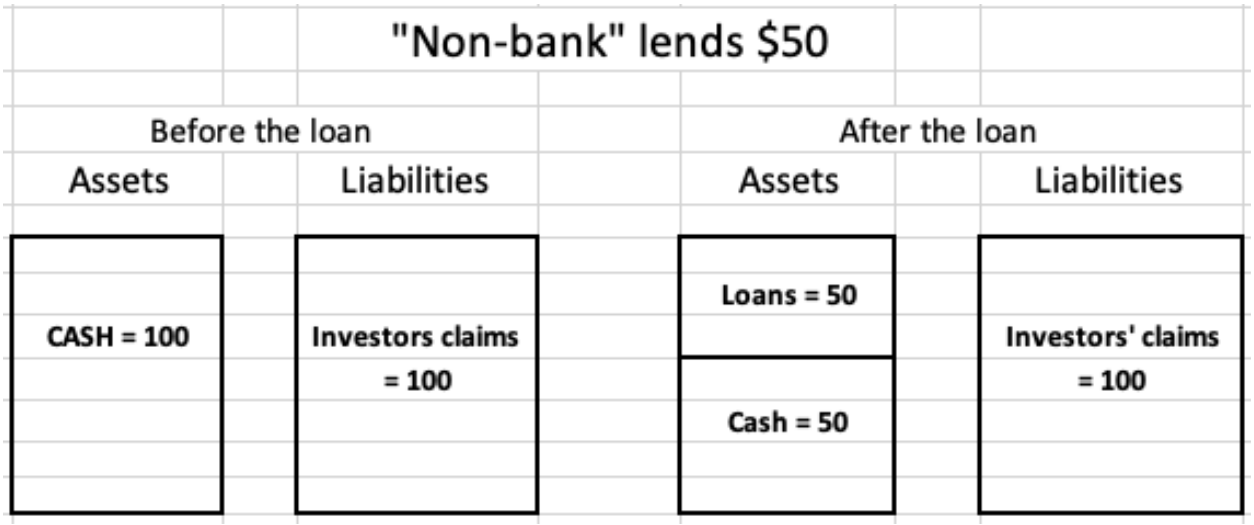
Notice that Goldsmith Bank did *not* lend out its physical gold cash reserves. The banker did not lend out money that came from a customer deposit. Doing so would have reduced the bank's cash reserves, replacing them with a loan of equal value. Lending out cash reserves would have left total assets and total liabilities unchanged.

Other financial institutions that are not banks – we'll call them "non-banks" – lend out money already in their possession, money that already existed. **For example, I once took out a mortgage loan from an insurance company.** I got a competitive interest rate, just like I would have from a bank. However, the insurance company did not create new money when it made the loan.

(Incidentally, of all the lending done today in the USA, including loans by banks and non-banks, the banks, the money creators, make about 30% of all loans. The rest is money that changes hands, not new money creation.)

Here is what a **loan from a person or a company that is not a bank** looks like from an accounting perspective.

[slide]



This exhibit shows what happens when a non-bank lender makes a loan**. It is a "true loan" in that the money already existed, i.e., someone already owned it.** When this loan was made, no new money was created. The lender purchased my promissory note with its own money, not made-up money. You can see this because **the balance sheet did not grow** when the loan was made. Instead, **one cash asset was replaced by another asset, the loan**. Total assets and total liabilities did not change.

A mistaken description of banking: https://www.bloomberg.com/opinion/articles/2023-07-17/branches-make-bank-runs-harder?sref=dJHrNkep

What we call a "bank loan" is the bank's purchase of a valuable asset called a promissory note paid for with a made-up promise to pay out cash on demand. **The loan from the non-bank is also the purchase of a promissory note, but it is paid for with existing money, not with new money.**

Notice also that when the loan from a non-bank is repaid, money is not destroyed; it simply changes hands. Like the borrowed car, it is returned to the lender.

So, I think it is slightly misleading to say banks are in the business of "lending." Even better, more accurate expressions, such as "banks lend money into existence," are also slightly off the mark.

It's misleading because banks do more than create money to purchase promissory notes. They also create money to buy many other kinds of financial assets. In actual practice, **banks' asset purchases consist of business loans, mortgage loans, consumer loans, and bonds issued by sovereign governments, state and local governments, and private corporations**. Conceivably, banks could create money to purchase any asset, although regulators frown on banks purchasing assets like stocks, direct ownership in real estate, or precious metals.

It's more accurate to say that banks are in the business of acquiring assets that will earn a profit, and they acquire these assets with money they create internally by granting credit.

THE ECONOMIC BENEFITS OF BANKS AS MONEY CREATORS

Why did this system of bank credit creation evolve under the gold standard? Social systems become popular and enduring only if they have near-universal support from the public users of that system. This money creation system has always been popular. Clearly, bankers and the banking public derive economic benefits from this money and banking system. Let's review these benefits from the point of view of the relevant parties: the depositors, the borrowers, and the bankers.

[slide]

From the depositor's point of view, the bank provides:

- Secure storage of his standard money (gold)
- Ready access to their gold
- The convenience of using paper banknotes (or, later, bank deposits) versus the inconvenience of holding physical gold.
- A trusted provider of payment services over time and distance.
- Potential to earn a profit (interest) on gold deposits.

[slide]

From the borrower's or businessman's point of view, the bank provides:

- A source of new capital (purchasing power) for investment.
- A trusted agent to provide payment services over time and distance.
- A trusted third party to guarantee credit between transacting parties.
- Common methods and standards of payment that worked efficiently for everyone.

[slide]

From the banker's (lender's) point of view:

- Money creation (lending) is a very profitable business when adequately run.

From all points of view, **the banking industry provided a technological advantage over the Medieval practice of physical payments involving couriers, armed guards, and hiding treasure from thieves.**

[pause for questions]

That covers basic money creation, which is the same today as when members of the Goldsmith Guild first conceived it. Now let's let's ask the same question about standard money,

PART TWO: STANDARD MONEY, THEN AND NOW

namely, what are the differences between money creation under a gold standard versus today under what I call a "fiat reserve? Standard? As background for that, we need to review what we mean by "money."

VON MISES IDENTIFIED TWO KINDS OF MONEY

I've been referring to banks creating "money," so now would be a good time to **review and clarify the terms "money" and "credit."**

Some economists, even friends of mine who are friendly to free markets, object to referring to paper certificates or even gold banknotes as "money." **In their view, only physical gold is money,** and any paper promise to pay out gold (or any other standard money) should be called "credit," but not money**. I think excluding anything that is not full and final payment from the definition of money is unrealistic because the credit instruments issued by banks (bank deposits) are, *in fact,* most of the money we use today**. (this was true 120 years ago – mention 5% gold in transactions)

[slide]

What do we mean by "credit"? Credit" is the transfer of money, goods, or services (something of value) with the expectation of future repayment.

"Extending credit" means accepting a promise to pay in the future for the value conveyed today. Suppose I want to buy your car, but I currently have no cash. You could extend credit to me by accepting my personal IOU, a promise to pay you money in the future, in exchange for taking possession of your car today.

This credit agreement might be acceptable to us privately, but my promise to pay money would not be commonly accepted as a medium of exchange; that is, it would likely not be transferable from one person to another. For example, it's unlikely you could find someone to give you money in exchange for my promise to pay unless they knew me personally. Or if you did, they might not pay the full price for the promise. "Credit" is a fairly broad term, and credit agreements can vary.

But the bank's promise to pay out standard money is a form of credit with a special status and credibility that makes it commonly acceptable in exchange. When a bank makes a loan, the borrower sells his promissory note to the bank. He receives from the bank a promise to pay out cash on demand. This credit agreement is recognized as the equivalent of standard money, a transferable claim to standard money on demand.

Now, what is "money"? According to Von Mises, money is a commonly accepted medium of exchange. **Von Mises identified two types of money – "standard money" and "fiduciary media."**

[Slide]

<u>Standard money</u> is money that is not itself a claim to anything further. <u>Standard money</u>, when paid, is complete and final compensation for value received, extinguishing all previous financial claims. Under a gold standard, gold is the standard money. In today's system, standard money is the paper dollar bill, or its electronic equivalent, held on deposit at the US Federal Reserve.

<u>Fiduciary media</u> are transferable claims to standard money, payable by the issuer on demand and accepted in commerce as the equivalent of standard money, but for which no standard money exists. Fiduciary media (bank deposits) is an extension of credit that also functions as money.

("Fiduciary" comes from the Latin "fiducia," meaning trust.) Because both standard money and fiduciary media are widely accepted in commercial exchange, both fall under the definition of money as a medium of exchange. Standard money stands alone and does not exist due to an extension of credit.

The key point is that since both standard money and fiduciary media are commonly accepted as a medium of exchange, both qualify as "money" under Mises's definition. Fiduciary media is both a money and a credit instrument, while standard money is solely money, not a credit instrument.

[slide]

Here is a historical example of fiduciary media. This banknote is from a bank in San Francisco in the 1870s. It is the type of fiduciary media issued by banks under the early gold standard before bank deposits had completely replaced banknotes. Notice this document says at the top, "redeemable in gold coin." Just like the gold certificate we described earlier issued by the Goldsmith Bank, this was a paper receipt that said "IOU physical gold" in some specific amount. **This banknote is a form of fiduciary media, and because it was commonly accepted as a medium of exchange, it was "money."**

(Historical note: In England, banknotes issued by individual banks were common until 1844, when Parliament granted a monopoly on their issue to the Bank of England. Some banks from Scotland and Northern Ireland were exempt from this act, so some banks, like the Royal Bank of Scotland, still issue their paper currency today, although these are no longer redeemable in gold. True banknotes, redeemable in gold, from individual banks were still used in the USA right up until the USA went off gold in 1933.)

In today's monetary system, bank deposits have replaced banknotes as fiduciary media. Gold, of course, is no longer standard money, so you no longer see banknotes in circulation.

[slide]

Standard money today – money that represents full and final payment – is the paper money (or its electronic equivalent) issued by central banks. In the USA this is the Federal Reserve note, i.e., the dollar bill. A modern five-dollar bill is printed with the words "federal reserve note."

This dollar bill is not a banknote. Compare the banknote to today's paper money. They look similar, but they represent very different claims. They are both "notes," that is, both are instruments of credit, or an IOU, a promise to pay. The banknote was a promise by its issuing bank to pay out gold. The banknote says, "IOU gold."

The federal reserve "note" is written as an IOU but doesn't promise to pay anything further because there is nothing further behind it except more federal reserve notes. It looks somewhat like the old fiduciary media, but it is not. It says, in effect, "IOU nothing more." This official paper is standard money in today's monetary system**, representing full and final payment.**

I suspect the similar appearance of the gold-backed banknote and the fiat dollar was instrumental in people's acceptance of the fiat currency when it replaced the gold-backed dollar in the 1930s. People trusted this paper document just as they had trusted the banknote that was redeemable in gold.

This raises the question of trust, which is fundamental to a well-functioning money and banking system.

PART THREE: IS MONEY CREATION BY BANKS FRAUDULENT?

The way money is created is hard to believe, partly because **money conjured out of thin air sounds like counterfeiting.**

So we should address the question, is money creation in the banks some fraudulent scam? There are some economists, mainly of the Libertarian persuasion, who do see money creation in the banks as fraud. The late Murray Rothbard, an Austrian economist and a hero of many Libertarians, thought the creation of fiduciary media was fraudulent. He referred to the process of issuing more receipts for gold than the gold itself as

[slide]

> "…a Ponzi scheme, a fraud in which fake warehouse receipts are issued and circulate as equivalent to the cash supposedly represented by the receipts."
>
> - Rothbard, Murray, *The Mystery Of Banking*, Ludwig Von Mises Institute, 2008 (Orig. 1983)

Other economists believe that if the issuance of fiduciary media – today, that means creating new bank deposits – is conducted openly, without deception—that is, **if it is disclosed to the owners of bank deposits that the bank does not have sufficient standard money to back all the fiduciary media** – then there is no fraud. Therefore, the government has no legitimate right to prohibit the practice.

What do you think? (discussion)

In some ways, **issuing more fiduciary media than the standard money behind it is reminiscent of what insurance companies do**. A life insurance company sells its customers a promise to pay out a death benefit when the insured person dies. The contract is priced based on a

probabilistic calculation of how many will die over time. **If everyone died at once, the insurance company could not pay out the full promised benefit to everyone – it would be bankrupt. Everyone understands this, but no one believes the insurance company is fraudulent.** We all recognize that the probability of massive simultaneous deaths is remote, so we are willing to pay a market price called an insurance premium in exchange for the insurance company's promise to pay.

Similarly, owners of bank deposits should realize that they are entitled to have all their money in cash any time they want it – unless everyone wants it at the same time, in which case everyone will get only part of their money. That is simply the nature of the banking beast.

Among economists who are friendly towards bank money creation, there are also those (myself included) who think that if banks were utterly free to issue fiduciary media without limit, **the practice would be very self-limiting**, perhaps nearly to the point of non-existence. Under this view, everyone would see the possibility of losing everything to the banks that issued fiduciary media, so most people would avoid putting their money in a bank that did so.

For a good discussion of this issue, see Reisman, George. *Capitalism: A Treatise on Economics* (pp. 514-515). TJS Books. Kindle Edition. Reisman does not take a side in this particular discussion. In other places, he has expressed misgivings about banks issuing fiduciary media. He disapproves of the practice but doesn't think issuing fiduciary media should be outlawed. He does believe that a world of free market banking, unconstrained by government regulation, would result in honest, self-regulating banks that do not over-issue fiduciary media.

Von Mises, who was Reisman's teacher and Ph.D. advisor, also apparently held this view, which he expressed in *Human Action*:

[slide]

> "It is a mistake to associate with the notion of free banking the image of a state of affairs under which everybody is free to issue banknotes and to cheat the public *ad libitum*.….However, freedom in the issuance of banknotes would have narrowed down the use of banknotes considerably if it had not entirely suppressed it. It was this idea which [Enrico] Cernuschi advanced in the hearings of the French Banking Inquiry on October 24, 1865: "I believe that what is called freedom of banking would result in a total suppression of banknotes in France. I want to give everybody the right to issue banknotes so that nobody should take any banknotes any longer."
>
> - Von Mises, Ludwig. *Human Action* . Lulu.com. Kindle Edition.

So, how much fiduciary media – money in excess of cash reserves – would banks really issue if regulation of cash reserves was left purely to the free market? In other words, if there were no government safeguards, no FDIC insurance, no ability of the government to print up new cash reserves to bail out failing banks, if gold were still the standard money, and if the public could

choose to store their gold in banks that did not issue fiduciary media; if all these things were true, how much fiduciary media would the banks issue?

We don't know the answer because an entirely free banking system has never existed in the modern world. [Hartley Withers estimate of 5%] Some, like Reisman, opine that under fully free banking, the creation of fiduciary media would be practically non-existent. Others, for example, Richard Salsman, have speculated that the market would settle on a ratio of cash reserves to loans of about 40%. (TOS cite)

My view is that a free, market-regulated banking system would allow some fiduciary media to be issued; that different institutions would establish good reputations and would cater to depositors with varying appetites of risk, some willing to pay for simple safe-keeping and others willing to take the risk to earn interest on their deposits; and that very few institutions would take an extreme risk with fiduciary media because these institutions would not stay in business past a typical recession. In a free market, we'd have a variety of banks, some that were fully reserved and practically risk-free, and others that were more aggressive, paying interest on deposits but also subject to bank runs in which depositors might not get all their money back. In other words, market discipline would weed out bad actors and limit the issuance of fiduciary media.

But this would be a very different world from today. This would be **a world where people took responsibility for choosing a sound bank, did not assume the government would protect their savings by plundering other peoples' wealth to provide deposit insurance, and considered it more essential to acquire the skill to read a bank balance sheet than to become expert on the latest video game**.

That is my view, but the only way to know would be to implement a free, banking system and see the outcome. That is such a remote possibility that I do not expect to get the answer in my lifetime.

BANK REGULATION UNDER A GOLD STANDARD

In the discussion of the alleged fraud of issuing fiduciary media, the question arises: **what prevents the bank from issuing money at will, simply printing and lending more and more banknotes or deposits out of wanton greed? Is there any regulation or limitation on issuing banknotes or bank deposits?**

Let's look at the market-based incentives that regulate the behavior of bankers under free-market banking, i.e., the gold standard. These market-based regulators derive from the economic advantages the various participants get from the banking system.

1. **Gold depositors are the primary regulators of the banking system. Bankers can only operate with an adequate level of gold in reserve. If depositors don't like what the bankers are doing, they withdraw gold.**

2. **Bankers are incentivized to make good loans that will be repaid on time.** If their loans get too risky, depositors will start to withdraw their gold.
3. If the bank starts to make too many loans relative to cash (gold) reserves, the bank is at risk of a bank run, so depositors will begin withdrawing gold.
4. If the bank does not pay sufficient interest to gold depositors, they will withdraw gold. Bankers will then have to raise interest on deposits, which will require increasing interest on loans, limiting the demand for loans.
5. In addition, there is an absolute limit on how much fiduciary media the bank can create. This limit is set by the amount of gold in existence. Even if all gold owners deposit all their gold in the bank, the quantity of gold available at any one time can be at most the total amount of gold in existence. Historically, the additional quantity of gold added to the world's supply has been 1-2% percent per year. So once our bank is loaned up and invested to its prudent maximum, the increase in the money supply cannot exceed the increase in the stock of gold.

I introduce these market regulatory forces because some still operate under our fiat reserve system. We'll discuss them in more detail next class.

I want to introduce how standard money is created in the modern banking system. Why do I call our system a "fiat reserve" monetary system?

[Questions and comments?]

PART FOUR: HOW CENTRAL BANKS CREATE CASH RESERVES

Today, gold is no longer the standard money, the full and final form of payment. Gold cash reserves have been replaced with "fiat" cash reserves – cash preserves created by government authority. **Miners and gold owners, who produced and provided cash reserves to the banks, have been replace by central bankers**. This is the core difference between banking then and now.

How does the central bank create fiat cash reserves? You'll be happy to hear that you already know the answer. You just didn't know you knew! If you understand how commercial banks create the money we use in the economy, you can easily imagine how the central bank does the same thing in creating standard money or cash reserves.

So, how do central banks create this standard money? It is an important question because **the source of cash reserves is the part of the money production industry that has fundamentally changed since the demise of the gold standard**.

Many say "central banks print money" or "the Fed prints money." This is merely an expression. Contrary to some people, the central bank does not simply print paper dollars and distribute them to banks. Instead, **central banks mimic the money creation process used by commercial**

banks when they create bank deposits. We'll use the US Federal Reserve as an example, but all central banks use substantially the same procedure.

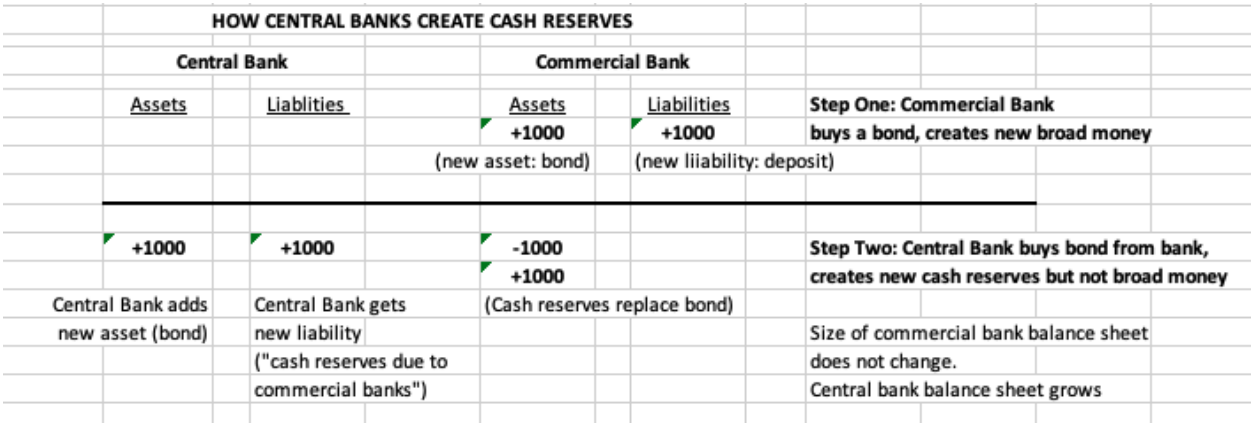
Understanding this procedure is important because it is the heart of what central banks do. For example, you will need to understand this process when we discuss quantitative easing, which is the most significant monetary expansion of all time.

Here is how they do it. **Central banks create standard money (cash reserves or bank reserves) when they purchase assets from any bank that has an account with the central bank.** In the USA, these are the federally chartered commercial banks and state-chartered banks included by legislation.

[Slide]

Let's take it in two steps. Start with a commercial bank that buys a treasury bond from a private investor. Recall that when the bank acquired that bond, it created new money. The slide shows a change in the bank's balance sheet: an addition to assets (the bond) and an addition to liabilities (deposits owned by the bond seller).

[slide]



Now, step two. **When the Central bank wants to create new cash reserves, it buys the bond from the commercial bank.**

The central bank now owns the bond, which it paid for by creating, ex nihilo, new cash reserves, which it gave to the commercial bank. The commercial bank holds this new cash asset with the central bank.

No new money (of the spendable kind) is created by the central bank's creation of cash reserves because the money is not in circulation being "exchanged" for goods and services. (Recall that money is a "commonly accepted medium of exchange. Cash reserves on the bank's balance sheet do not qualify.)

Notice that the central bank pays for the bond just like the bank paid for it: it makes a ledger entry in its account called "reserves due to commercial banks." The commercial bank makes an entry called "cash reserves held at the Fed." Presto, new cash reserves are swapped for the bond. The bank replaces one asset (the bond) with a new asset (cash reserves). The Fed has a new asset (the bond) and a new liability (cash reserves owed to the commercial bank on demand). **The Fed's balance sheet has grown, but no new money has been created because the bank's new cash reserves cannot be spent in the economy until they leave the bank**.

[slide]

The principle: Central banks create cash reserves (standard money) by purchasing assets. (Just as commercial banks create money by purchasing assets.)

So cash reserves come into existence through a process similar to the process banks use to create bank deposits. A commercial bank creates fiduciary media in the form of a bank deposit, when it purchases an asset from a customer. In the same way, a central bank creates standard money, or cash reserves, when it purchases an asset from one of its customers, a commercial bank.

Here, we see that when the central bank purchases a bond from the commercial bank, it gets new, made-up cash reserves in exchange for its bond. The size of the commercial bank's balance sheet does not change. The Fed, however, creates a new promise to pay out cash reserves to the bank on demand. So the Fed acquires a new asset – the bond – and an equal new liability – a ledger entry that by law is a promise for full and final payment, that is, "standard money."

[slide]

"Fiat Reserve" Monetary System

The primary difference between the central and commercial banks is that the central bank has the sole legal authority to create the standard money that is the full and final payment. In contrast, the commercial bank can create only "promises" to pay standard money.

This difference is why I call this arrangement a **fiat reserve banking system**. It is not a full-blown fiat money system but a partial one in that the privately owned banks still have a big say over the creation of most of the money used in the economy (the fiduciary media). Still, the central

bank has sole control over the amount and timing of issuing the standard money in the economy.

This creation of fiat bank reserves is the origin of vault cash, which is cash reserves in the form of paper cash, sitting in the bank's safe, ready to be used if withdrawn. How did the paper cash get into the bank? The bank requested the Fed to send it, and the Fed then directed the Mint (an arm of the Treasury) to send some of the bank's cash reserve account to the bank in the form of paper bills. But it doesn't become money**, in the Mises definition of a commonly accepted medium of exchange, until you go to the bank teller or the ATM and trade a bank deposit for paper cash. We'll have more to say about this process in Lesson Three. Paper** cash is still counted as "bank reserves" as long as it sits in the bank's vault. It is not counted as part of the broad money supply until it is withdrawn from the bank and is spendable.

Let's pause here and consider the modern money-creation system. The key point is that **the mechanics of creating the money we use in everyday commerce, the creation of fiduciary media, did not change as the banking system developed during 400 years of the gold standard. It did not even change when the US abandoned the gold standard. Money creation in the banks is essentially the same now as it was 75, 150, or 400 years ago.**

There is a long social memory and tradition of trust involved here. I believe this is the main explanation for why almost everyone trusts the banking system with their money.

I suspect many people never understood the difference between their old and new money after we went off the gold standard. It's as if you swapped out cubic zirconium for your spouse's diamond ring, but they didn't seem to notice and moved on, thinking they still had something valuable on their finger. They're happy as long as they don't know the difference, even though you told them what you would do.

BRIEF COMMENT ON THE LEGAL BASIS OF MODERN CREDIT CREATION

[slide]
Legal Basis of Banking in the USA

- Fundamental authority comes from the Constitution: Art. 1, Sec. 8, Cl. 5 (empowering Congress to regulate the value of money)

- Congress authorizes national banks to create money: See 12 U.S.C. § 24 (seventh) (empowering national banks to receive deposits)

- State banks are also included: 12 U.S.C. § 378 (a)(2)

The legal basis of money creation in the modern economy is a big topic beyond the scope of this course. It differs from country to country, but all countries today have banking systems that create money, as described in this lesson. In every country, the money creation system is

based on a combination of trust in markets and trust in the legal authority that regulates banking activity and attempts to protect the public's money.

The central principle of modern money creation is that a commercial bank is legally empowered to create a promise to pay out standard money (cash) on demand. This promise to pay out standard money is accepted in commerce as cash.

The original goldsmiths and their credit creation activities relied primarily on the confidence of their depositors. They relied on the public's trust, not legal authority, to create fiduciary media accepted as money. They did not need a government banking license to issue fiduciary media. **Under a free-market gold standard, the main legal issue around bankers is the enforcement of commercial contracts between bankers and other parties, but the government does not protect bankers or their depositors from financial loss due to bad investment decisions.** It was caveat emptor, buyer beware.

This is not the case today. **The public's confidence in banks today is based partly on confidence in the banks but also on the legal protections and guarantees enacted by the government and enforced through regulation. Deposit insurance is a leading example of government protection.**

Why are non-bank businesses not allowed to create money? The short answer is that only legally chartered banks can create new money because they are the only entities that have been granted the legal authority to do so. You have to get a government banking license, which is still possible in the USA today but harder in other countries. As an industry, banks hold a legal monopoly on money creation.

In the USA, the legal authority to create money resides first in the US Constitution and second in the banking laws enacted by Congress [cite these], including a massive regulatory structure established by legislation**. In the reference material is a long and fascinating article from a legal journal entitled "Where Is A Bank Account?"** A legal scholar, Professor Lev Menand of Columbia University, recommended this to me. You can also read Menand's book, *The Fed Unbound*, which includes a section on the legislative development of the US banking system during the 19th and early 20th Centuries.

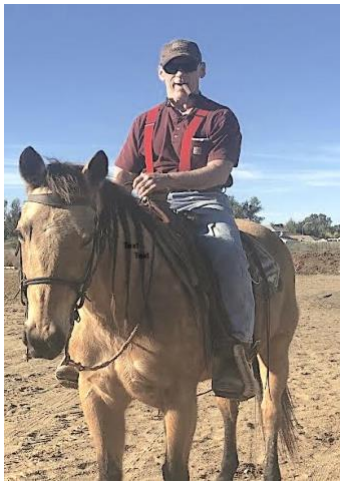
Key points of Lesson Two:

- Money creation through banks extending credit has stayed the same for hundreds of years.
- A "loan" is a purchase of a security called a promissory note, paid for with a promise to pay out cash reserves on demand.
- In addition to "making loans," banks buy other securities, such as bonds and sometimes even stocks, creating new money in the process.
- Banks do not lend out cash reserves or deposits to acquire new assets but instead create new money (new liabilities) to acquire these assets.
- A "deposit" is the bank's promise to pay out cash reserves on demand.

- “Deposits” are created when the bank acquires an asset, usually a loan or purchase of a bond.
- Deposits are not the source of loans but the results of loans (and other asset purchases).
- A bank’s promise to pay standard money (deposits) trades on par with cash but is more convenient than cash, which is why they are more popular.
- Banks need cash reserves not to make new loans but to credibly fulfill their promise to redeem a demand deposit.
- When deposits change hands among individual deposit accounts, an equal amount of reserves changes hands between their banks.
- Central banks create new cash reserves “ex nihilo” by purchasing assets from commercial banks.

OK let’s draw a line there for questions and discussion. In the next lesson, we’ll cover more practical applications of the money creation and destruction principles we covered today so you can see how bank transactions affect the broad money supply.

[slide]



Search:	Substack: HardmoneyJim
Website:	jim3c5.substack.com
Twitter:	@hardmoneyjim
LinkedIn:	Jim Brown, CFA

Recommended: “Why is the failure of Silicon Valley Bank Important? https://jim3c5.substack.com/p/why-is-the-failure-of-silicon-valley

BONEPILE:

From LM's email July 2020:

National banks are explicitly authorized by Congress to create credit money. See 12 U.S.C. § 24 (seventh) (empowering national banks to receive deposits). Congress also recognized the power of state banks to do the same. 12 U.S.C. § 378 (a)(2) (prohibiting anyone else from receiving deposits who is not regulated by a state banking authority). The Constitution vests in Congress the power to do this. See Art. 1, Sec. 8, Cl. 5 (empowering Congress to regulate the value of money).

Seventh. To exercise by its board of directors or duly authorized officers or agents, subject to law, all such incidental powers as shall be necessary to carry on the business of banking; by discounting and negotiating promissory notes, drafts, bills of exchange, and other evidences of debt; by receiving deposits; by buying and selling exchange, coin, and bullion; by loaning money on personal security; and by obtaining, issuing, and circulating notes according to the provisions of title 62 of the Revised Statutes.

Bank credit money trades as equivalent to Federal Reserve Notes, but it is not legally equivalent. Credit money is redeemable on demand at banks for Federal Reserve notes (banks are legally obligated to make good on their deposit liabilities). Federal Reserve notes are not redeemable for anything except Federal Reserve notes -- they do not represent any actionable legal obligation. See Joseph Sommer, Where is a Bank Account? Maryland L. Rev. (1998). Furthermore, Federal reserve notes are legal tender for all debts public and private -- deposits credits are not. See 31 U.S.C. § 5103.

Given these differences, a lot of work goes into making bank credits operate as equivalent to cash. The FDIC insures deposit credits. The Fed provides cash/reserves to banks through the discount window when they need them to settle inter-bank transfers. When you pay your taxes by writing a check to the U.S. Treasury, your bank has to actually come up with cash/reserves to transfer to the Treasury's General Account at the Federal Reserve. The Treasury is only interested in Federal reserve money, which is a constraint on the ability of banks to create credit money. The Fed's monetary policy and discount window lending is designed to relax this constraint (or tighten it) thereby encouraging/allowing banks to expand their outstanding deposit credit or contract it in ways consistent with stable prices and maximum employment. See 12 U.S.C. § 225a.

The system is designed so that banks are the source of elasticity in the monetary system (not the government), but banks are on a tight leash. They depend on the government to do this; a bank without access to an account at the Fed, the discount window, etc. wouldn't last long.

END OF MANUSCRIPT