



Myrmikan Research

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Currency Versus Banking

F. Scott Fitzgerald famously wrote: “The test of a first-rate intelligence is the ability to hold two opposing ideas in mind at the same time and still retain the ability to function. One should, for example, be able to see that things are hopeless yet be determined to make them otherwise.”

Fitzgerald’s point is not constrained to emotion and philosophy—Einstein taught that light is simultaneously a wave and a particle: “It seems as though we must use sometimes the one theory and sometimes the other, while at times we may use either. We are faced with a new kind of difficulty. We have two contradictory pictures of reality; separately neither of them fully explains the phenomena of light, but together they do.”

Myrmikan would extend the wave-particle duality to finance: money may be expressed as a particle, that is, using the quantity theory, or as a wave, a pure expression of the interest rate. Which of these attributes is primary was the central monetary debate between the Currency School and the Banking School in the mid-nineteenth century.

The battle began during the inflation that struck England during the Napoleonic Wars: The government had forced the Bank of England to purchase government war bonds, expanding the money supply, and also to suspend the right to redeem bank notes into gold to protect the bank’s reserves, which allowed for artificially low interest rates.

The Currency School blamed the rise in prices on the increase in currency, adhering to the quantity theory of money. Its main proponent, Thomas Thornton, argued he “had never yet found any man, who, when the simple question was put to him, whether an augmentation of paper had a tendency to reduce its value, or raise that of commodities, had been so singular as to refuse his assent to the proposition.”

Thornton’s position, aided by its simplicity, became the bedrock of modern economic theory. Keynes adopted it thus: “an arbitrary doubling of n [the quantity of currency notes] ... must have the effect of raising p [prices] to double what it would have been otherwise.... This theory is fundamental. Its correspondence with fact is not open to question.”¹

Banking School theorists, by contrast, argued that the quantity of money is largely irrelevant to its value and that it was the suspension of redeemability and low interest rates that had caused the inflation. The reasoning went thus: Money starts with gold (as a measure of pure liquidity, a concept explored in many of Myrmikan’s previous letters). If and only if the banking system offered an interest rate higher than the natural discount

¹ Quantity theorists also theorize that changes in velocity, or cash-balance preferences, can change prices, but posit that changes in these variables can be only temporary

rate,¹ then and only then would holders of bullion deposit it into banks, granting the banks reserves against which they could lend. Banks could issue credit only against projects that could afford to pay an interest rate that exceeded the natural discount rate plus the banks' expenses. In this way, when the natural discount rate fell, primarily because of increased savings, banks could pay less to their depositors, lend at a lower rate, and the supply of money and credit would increase to fund businesses that supplied additional goods to the market without inflation.

In normal times, the Banking School argued, banks were powerless to issue an excessive quantity of credit: if banks overissued their bank notes, then the supply of their notes would exceed commercial demand for them, causing their notes to fall in value, and that would create an arbitrage—traders would acquire the notes at a discount and demand redemption into bullion at full value, removing the banks' reserves and ability to lend. Therefore, it was impossible for banks to create inflation.

Practical experience supported the Banking School. John Stuart Mill noted in 1844: "The country bankers unanimously disclaim any arbitrary power over their issues, and declare that in certain states of the market they *cannot* extend their circulation; if they attempt it, the increase comes back to them ... by being presented for payment [into gold]."

When the government suspended redeemability of bank notes into gold, however, the Bank of England was indeed able to extend its circulation, to lower rates below the natural rate without bullion leaving the bank. With its reserves intact, there was no mechanism to alert the bank that it was overextending its loans to its customers at rates that were too low, creating artificial purchasing power that pushed prices higher.

Between the Currency and Banking Schools, the British could not determine the better, so they incorporated both into Peel's Bank Charter Act of 1844. Under the Act, the Bank of England was split into two departments: The Issue Department issued bank notes fully backed by gold and up to £14 million in government debt to constrain the quantity of money. The Banking Department issued deposits backed in part by gold but mainly against commercial credit to allow interest rates to determine the issuance of credit. A series of inflationary booms and deflationary busts followed, seeming to discredit both views.

The Currency School came to realize the quantity of money included not just bank notes (physical currency) but also deposits, and thus began the monetarist trick of distinguishing between the monetary base, M1, M2, etc, determining their relative moneyness, and demanding that a central bank have the powers necessary to manipulate monetary aggregates.

The Banking School's error was more subtle: the theory rested on the propensity for the public to redeem depreciating notes into gold to constrain credit creation. Once legal tender laws became established, there was no reason to transform bank notes and deposits into bullion *even when redemption was legal*—much easier to use the depreciating currency to pay taxes and cheat creditors (a modern form of Gresham's law). The discipline of the market thus removed, banks could overissue their liabilities by lending against assets, which pushed asset prices higher, which increased the value of collateral, and allowed more lending, to create the bubbles so familiar to recent times.

This little history is important because the same divergent views on the essence of money underlie our current banking system. During the Civil War, the Federal Government

¹ The natural discount rate represents society's time preference and exists as a real phenomenon: a man will agree to delay present consumption only if additional consumption is offered in return for the delay. The quantity of additional consumption required to have him agree to the delay measures the natural discount rate, also known as time preference.

banned private bank notes, which had been subject to market forces, and mandated that banks could issue currency only the extent that they held federal government bonds, the quantity of which was relatively fixed. Under Currency School theory, the price level should have changed little. Experience told a different story with a series of booms and busts (though short-lived and mild by modern standards).

Paul Warburg, who designed the Federal Reserve, pointed out: “If we compare the net results of the discount system with those of the bond-secured system, we find that in Europe rates of interest fluctuate within comparatively small limits, while the outstanding circulation constantly contracts and expands within wide ranges. With us it is the reverse: The outstanding circulation, once it is issued, remains fairly stationary, while the rates of interest fluctuate violently from 1 to 200 per cent.”

Warburg’s solution was to join the two functions of central banking from a Banking School stance: the Fed would alter the quantity of money as needed to stabilize interest rates around the nature rate. Warburg rejected any thought that the central bank could or should attempt to control the general price level, which he believed should be left to market forces, the “gold compass” as he called it. His design suffered from the same Banking School error: he did not understand that the pernicious effect of legal tender laws meant that the Fed was easily able to push market interest rates below the natural rate without having bullion leave the system, allowing the Fed to cause inflation.

The U.S. began suffering deflationary conditions in the early 1920s as market forces attempted to liquidate the overcapacity constructed during the war. Federal Reserve officials discovered that when the Fed bought bonds, increasing the quantity of money, the money disbursed through the financial system, which allowed banks to lend more freely, and thereby lowered market interest rates, which then increased the prices of commodities. In other words, they were surprised to discover that the changes in the Fed’s balance sheet controlled not just the interest rate but also the price level. Bullion could have but did not leave the banks because of legal tender laws, allowing the artificially low rates to persist, maintaining prices at artificially high levels.

Fed officials determined to use this new tool to manage the economy directly, announcing in 1923 “that the time, manner, character, and volume of open-market investments purchased by the Federal Reserve be governed with primary regard to the accommodation of commerce and business and to the effect of such purchases or sales on the general credit situation.” A contemporary translated that sentence into straight English: “I concede that the Federal Reserve Board showed wisdom, in the present stage of public thinking, when it substituted the phrase ‘general credit situation’ for the phrase ‘a stable price level.’”¹

The Fed system worked for a surprisingly long period of time: the Fed would buy bonds, increasing the money supply, which lowered rates, prices would rise, and vice-versa. Because of these mechanics, the tension between the Banking School and the Currency School as an intellectual matter vanished: price increases correlated both with lower rates and an increased quantity of money, so either theory could be used to explain the phenomenon.

This unified theory of central bank management was on full display in Bernanke’s defense of his Quantitative Easing policy. From a Banking School perspective, he argued

¹ Federal Reserve Bank of New York governor Benjamin Strong admitted that was what the Fed was doing when asked in a 1926 congressional hearing: “Do you think that the Federal Reserve Board could, as a matter of fact, stabilize price level to a greater extent than they have in the past by giving greater expansion to market operations and restriction or extension of credit facilities?” He responded: “I personally think that the administration of the Federal reserve system since the reaction of 1921 has been just as nearly directed as reasonably human wisdom could direct it toward that very object.”

that “by acquiring securities in the market and bringing them onto the Fed’s balance sheet, we essentially induce investors to move into substitute securities. So, for example, an investor who sells a Treasury security to the Fed may end up buying a corporate bond instead, and so the effect will be to lower corporate bond rates and corporate spreads.” In other words, increasing the quantity of money lowers interest rates to support demand and collapsing commodity prices.

From a Currency School perspective, Bernanke also accepted that increasing the quantity of dollars would cause inflation, which is why he always presented the QE program as temporary: “To avoid inflation in the long run and to allow short-term interest rates ultimately to return to normal levels, the Fed’s balance sheet will eventually have to be brought back to a more sustainable level. The FOMC will ensure that that is done in a timely way.”

The Fed’s balance sheet only grew larger in QEs 2 and 3, and yet consumer inflation did not appear. The Fed’s largess flowed into asset markets, which funded overinvestment and overcapacity, which produced falling consumer prices. This outcome prompted the theorists at the Fed to sever the Keynesian/monetarist/Currency School connection between quantity and inflation and prompted it to adopt unknowingly a kind of pure neo-Banking School view.

As chairman of the Fed in 2015, for example, Janet Yellen lectured her fellow governors: “if you were to hold the nominal rate at zero, in spite of the fact that the equilibrium nominal rate would be higher [i.e., maintain negative real rates], you would end up generating not lower but higher inflation. And, the higher inflation went, if you kept the nominal interest rate at zero, the lower the actual real rate would move over time, the gap would increase, and you would get accelerating inflation.” Note that her explanation of inflation contains no mention of monetary aggregates. In other words, Yellen was arguing that inflation is determined solely by real interest rates, not the quantity of money.

This neo-Banking School view was firmly entrenched by the time Powell spiked the money supply in response to the COVID hysteria. Powell noted in April, 2021: “Back 12 years ago, when the financial crisis was getting going and the Fed was doing quantitative easing, many people [such as Bernanke] feared that the increases in the money supply, as a result of quantitative easing asset purchases, would result in high inflation. Not only did it not happen, the challenge has become that inflation has been below our target. So that is—globally the challenge has been inflation below target. Honestly, it is not a first order concern for us today that too high inflation might be coming our way in the near-term. Far from it.”

The government’s response to COVID was very different from the banking crisis of 2008. Whereas previously Fed largess was confined to financial actors, the government in the latest panic sent checks generally to individuals and business, large and small. The result was, of course, a surge in retail prices. The Fed is determined—*determined*—not to repeat the 1970s, to pull a Volcker, to kill inflation and inflation expectations no matter the consequences.

Volcker remains a legend for slaying inflation with high interest rates. This view is overly simplistic. Volcker actually began his tenure from a Banking School stance, declaring in March 1979: “The exact level of the [monetary] aggregates isn’t quite as important to me as the movement on the funds rate.” With inflation out of control, he revised his thinking only two months later: “Maybe for lack of anything better we should go back and look at the aggregates a bit.” On October 6, Volcker announced: “Actions

taken [include a] change in the method used to conduct monetary policy to support the objective of containing growth in the monetary aggregates.”

In other words, the Fed fully embraced Currency School thinking: instead of targeting interest rates, they would target low growth in monetary aggregates and let rates go where they would. Under this framework, the fed funds rate surged over 20% in three different waves through 1981, and then inflation retreated. Restated, it wasn't that the Fed targeted 20% rates, it was that they targeted a certain level of monetary growth, and 20% was an output of that decision to starve the banks of capital.

Powell may channel Volcker in his speeches, but the Fed is still operating under neo-Banking School as opposed to Currency School thinking. Federal Reserve Governor Christopher Waller recently warned that policy will involve: “interest rates higher for longer than some are currently expecting.” Powell's recent Congressional testimony had the same message: “As I mentioned, the latest economic data have come in stronger than expected, which suggests that the ultimate level of interest rates is likely to be higher than previously anticipated.” These speeches reflect the same theory, that real interest rates determine inflation. Last month, CPI was running at 6% while the fed funds rate was set at 4.8%: *real rates were still negative!* So the Fed raised rates again to 5% because in neo-Banking School theory the real rate has to be positive to constrain inflation. Now both inflation and nominal rates are at 5%, making the real rate near zero. Policy is still very loose from a Banking School perspective, which should lead to higher prices.

In the background, however, the Fed has also been shrinking the quantity of money. The Fed's balance sheet is now \$435 billion (4.9%) less than it was a year ago, and M2 is down \$880 billion (4.1%). From a Currency School perspective, prices should be falling. All of a sudden, the unity of Currency and Banking Schools in central bank management is shattered: will prices increase in response to a real interest rate of just 0.1%? Or will it decrease (with a lag) because of the falling quantity of money?

Much debate on the future direction of prices—and future Fed policy—unknowingly relies on these two theoretical frameworks. If the Banking School is primary, then the Fed has considerable tightening left to do. *Higher for longer!* If the Currency School is correct, then the Fed has already greatly overreacted.

In Myrmikan's view, the Banking School theory is clearly superior—but only in the context of a free banking system. The Currency School is dominant in the context of legal tender laws. In such an environment, and only in such, private banks become engines of inflation. The fractional reserve mechanism is well known: A deposits \$100 into a bank, which is required to hold 10% as reserves. The bank lends \$90 of A's deposit to B, who deposits it back into a bank. That bank, whether the same or different, then lends out \$81 of that deposit to C, and so on, until to A's \$100 cash the banks have added an additional \$900 in credit money.

What happens when A withdraws \$10? Now the banks can only maintain \$810 in credit money—the banks must somehow destroy \$90 of loans.¹ And that is what the Fed is doing, withdrawing cash through QT. The big banks have so much excess reserves they don't care. The little banks don't and are failing.

With the enormous influx of deposits from the Fed's money printing during COVID, banks had no time to lend the money out, so they purchased securities instead. Then the Fed temporarily removed Treasuries from leverage ratio calculations entirely, allowing infinite leverage—no wonder that banks loaded up on Treasury bonds. Myrmikan's previous letter discussed the demise of SVB Financial Group, which imploded because

¹ Reality is more complicated, the Fed having switching to leverage ratios instead of reserve requirements as credit regulators, but the essence of the system is the same.

of mark-to-market losses on its Treasury bond portfolio (the bank held \$86 billion of Treasuries with maturities beyond ten years and with a fixed interest rate of just 1.63%).

SVB was not alone: three of the four largest bank failures in U.S. history have occurred just since March. And there will be more: the KRE regional bank ETF is down over 40% since February as the market searches for the next victims. These first failures were caused by sudden repricing of securities. Private loans do not suddenly reprice but default one by one. Regional banks are being squeezed on both sides of their balance sheets: deposits are fleeing to higher yielding (and safer) alternatives, and commercial real estate and other loans are souring.

Powell repeatedly claims the banking system is “strong and resilient.” How could it not be with real rates at only 0.1%? He has no idea we’re in a Currency School regime in which falling money supply is lethal.

The growing banking failures have put the Fed in an awkward place both practically and intellectually. In the two weeks following the failure of SVB, the Fed was forced to undo 63% of the quantitative tightening it had performed over the previous year in order to support banking resolutions. Meanwhile, it continued raising interest rates. That is not supposed to happen: for over a century, more money issuance has resulted in lower rates, not higher, throwing the whole theory of central bank management into crisis. Radical monetarist Professor Steve Hanke when asked to opine on the current quandary demonstrated the lack of an intellectual framework even to address it: “Well, uhh, that, that would, I mean, if they really did quantitative easing and simultaneously were increasing the fed funds rate, that, that would be pretty inconsistent and, and, uh, [laughs], it’s, it’s basically not going to happen, I mean, [pause], that, that scenario, that hypothetical is just not going to happen.”¹

But it is going to happen. Unlike in 2008, the “little people” hold fixed-rate mortgages, and their cash holdings are fully insured by the government. It is institutional money that bears interest rate and bank solvency risk. Bernanke observed after the 2008 panic, “If one bank is having problems, people at the bank next door might begin to worry about problems in their bank. And so, a bank run can lead to widespread bank runs or a banking panic, more broadly.” The three resolutions of three large banks over the past three months illustrates that institutional money cannot be allowed to fail because doing so risks sparking a systemic crisis.

Therefore, at some point, the Fed will have to ensure that the quantity of money increases. The Fed’s balance sheet has declined somewhat since March, but only because the bad bank assets it had had to accept were moved to the FDIC’s balance sheet, where they sit for sale with no buyers. In its Financial Stability Report dated May 8, the Fed declared that it “is prepared to address any liquidity pressures that may arise and is committed to ensuring that the U.S. banking system continues to perform its vital roles of ensuring that depositors’ savings remain safe and providing access to credit to households and businesses.”² The Fed has no choice but to backstop the banking system (even if it were to allow the banks to fail, it still would have to pay out retail depositors full value).

As more banks fail, the Fed’s balance sheet must grow further. The current slowdown in inflation will reverse (just as what occurred in the 1970s, with inflation coming in discrete waves). The resulting inflation (combined with scarcity caused by left-wing green regulatory policies) will prompt it to hold rates “higher for longer.” And yet this policy will create more chaos in the credit markets, and eventually will undermine the Fed’s own balance sheet and that of the U.S. government. At some point the Fed will have to decide whether to defend the dollar or prop up the banking system and support the state.

1 <https://www.youtube.com/watch?v=dol5npFzo4U> @ 16:22

2 <https://www.federalreserve.gov/publications/files/financial-stability-report-20230508.pdf> p. 54.

The Fed's April Senior Loan Officer Opinion Survey on Bank Lending Practices reports a trend that will only grow in intensity:

On balance, tighter standards and weaker demand for commercial and industrial (C&I) loans ... [and] tighter standards and weaker demand for all commercial real estate (CRE) loan categories.... Lending standards tightened across all categories of residential real estate (RRE) loans ... [and] demand weakened for all RRE loan categories. In addition, banks reported tighter standards and weaker demand for home equity lines of credit (HELOCs). Standards tightened for all consumer loan categories; demand weakened for auto and other consumer loans, while it remained basically unchanged for credit cards.¹

The fractional reserve process, which is able to turn \$10 cash into \$100 credit money, is sputtering and will start to work in reverse. The prices of assets will go down with the decrease in credit even while the costs of goods will go up with the increase in currency. This is the same phenomenon that strikes all inflationary economies eventually, and it makes the middle class poor fast.

As this process happens, the Fed will have no intellectual tools to understand it. Banking School and Currency School thinking were unified for so long that modern economists are barely aware of the distinction. As in the early nineteenth century, they will have no consensus on why prices are increasing nor how to address it. It will be crisis management of ever increasing frequency and intensity.

Harkening back to Fitzgerald, we can acknowledge the situation is hopeless and yet be determined to preserve our own capital. Capital will seek safe-havens with ever more urgency, the preeminent being gold. Those who get there first will fare the best.

1 <https://www.federalreserve.gov/data/sloos/sloos-202304.htm>



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