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The Store of Value, Under Siege

When I get my paycheck, I put it right in the bank
I'm puttin' all my money straight right in the bank
Well I'm halfway to gettin' my big black Cadillac tank
— *Brian Setzer (Stray Cats), "Look at that Cadillac"*

What is Money?

What is money? You might as well as, "What is time?" It's one of those concepts we all think we understand until we really examine them. After all, we use money in its various form to buy things every day. But where does it come from? What does it represent? And most important of all, what stands behind our confidence that if we use our money to pay for something, the seller will accept it?

To appreciate how our monetary system works, we need to go back to the time of Alexander Hamilton and examine how our banking system came into being. Then, we we'll fast forward to the current time, to understand how much more sophisticated, complex and virtual the system has become since then. Lastly, we need to address the role of public debt, a key element in the whole monetary system. The soundness of the public debt is a major topic of current discussion. But when elected leaders raise the spectre of a default of US Treasuries, one could form the impression that they have no idea what fundamentally underlies the value of their own money, or how it all works. Public grandstanding or not, when a Treasury default is discussed as an *option*, it becomes urgent to explain how money works because a default could undermine a vital component of the system that allows our money to remain the primary store of value in our society.

The Origins of Our Banking System

In 1790, the fledgling United States, recently organized under its new 1789 Constitution, faced a series of threats difficult to imagine today. Money was scarce, and holders of debt from the Revolutionary War pressed for repayment. In Massachusetts, Shay's Rebellion — violent popular resistance to the Commonwealth's austerity measures in the previous decade — opposed high land taxes that fell heavily on western farmers. Ongoing disruption to trade from attacks by the Barbary Pirates, the pressing of American merchant sailors into the British navy, and the

constant threat from British troops still garrisoned on US soil and in Quebec showed the need for a central government strong enough "to provide for the common defense." The new government also needed to overhaul the fragmented monetary system, under the control of the states, where local currencies fluctuated so much in value that many people continued to trade in pounds and shillings. With the country so weak both militarily and finacially, the American economy was dangerously vulnerable to control by European interests.

The 1789 Constitution sought to address the nation's weakness by increasing the central government's ability to defend the nation and to raise revenue. It also vested Congress with the authority to coin and regulate money. Nevertheless, the problem of the Revolutionary War debt remained, and hard currency remained in desperately short supply. To address these two pressing problems, Alexander Hamilton, the first Secretary of the Treasury, proposed a plan in 1790 that involved, in effect, rolling the existing debt over into new bonds with maturities of 15 to 20 years, with Congress appropriating funds to make scheduled payments of principal and interest. This plan created what Hamilton termed a "funded debt." The banks would hold much of this debt, against which they could issue bank notes. Those bank notes would circulate as currency, providing relief to a cash-starved economy. By creating a stable, permanent public debt, Hamilton reasoned, the Treasury could repay the Revolutionary War debt on extended terms and stimulate the expansion of the currency circulating in the economy at the same time.

Hamilton's plan addressed two of the major issues of his day, and today the issuance of Federal Reserve Notes against bank reserves and other holdings at the Fed resembles Hamilton's design.[1] In today's banking system, our funded US Treasury debt is central to the asset side of the banking system's balance sheet. This is the asset base against which the banking system — now through the Federal Reserve, rather than individual banks — issues the claims (Federal Reserve Notes and other obligations) that circulate as our money. Like it or not, Hamilton's plan is a permanent feature of our monetary system, and steps that threaten to undermine the soundness of Treasury debt threaten to undermine the banking system, and hence our currency.

[1] Hamilton had contemporary opponents, of course. Southern interests in general, and especially Jefferson, felt that the new Constitution was already radical enough in taking monetary authority from the States and vesting it in Congress. Hamilton's plan would essentially take that power from Congress and give it to the banks. (Jefferson also didn't think much of Hamilton's goal of fostering a manufacturing economy, preferring a vision of an agrarian America.) Hamilton's plan also depended crucially on federal assumption of the Revolutionary War debt of the States, which raised issues of fairness (some, like Massachusetts, had been more energetic in their efforts to repay their debts) and seemed to opponents like a further centralization of what had been State authority. So great was Southern objection that a crucial element of the compromise necessary to win Congressional approval was the agreement to move the national capital from New York to a new site on the Potomac River, below the Mason-Dixon Line.

Banking and Money

Now that we've seen the role that public debt and banks play in our monetary system, let's taks a look at money itself. Functionally, money acts as a medium of exchange and as a store of value. As a medium of exchange, money elevates us from a barter economy. We don't trade our labor, or the products we make or the services we provide, directly for all of the many goods and services we need to run our daily lives. Instead, we work or sell products for money. We then use that money to buy the things we need from others, who will in turn use the money we pay them in the same way. In this way money circulates, creating the economic lifeblood of the community.

Of course, money doesn't just give me flexibility in what I buy, and from whom. It also gives me flexibility in the *timing* of my purchases. That is, I use money as a store of value. I can save some of what I earn, and spend it later — maybe many years later — or even pass it on to my heirs as a bequest. When I save I am, in effect, storing part of the value of my past labor to use in the future. We tend to want to put our savings in safe places so that we can rely on having it later when we need it. While we might put part of our savings into tangible wealth, for the most part we hold our savings as money, either as currency or on deposit with a financial institution like a bank. So why do we place value on the numbers on our bank statement or on those pieces of paper that say "Federal Reserve Note?"

The Difference Between Wealth and Property

To understand how money acts as a store of value, we need to go beyond a functional definition. We turn for insight to the work of the twentieth-century economist that probably thought most deeply about money's nature and behavior: Irving Fisher, a Yale economist most active just about a century ago. His clearest analysis of money is in his 1911 book, *The Purchasing Power of Money*[2].

Fisher began his book by seeking to define wealth, which he saw as taking three forms: real estate, commodities, and people. These are tangible things that people can own (we own ourselves), but Fisher went on to distinguish between wealth (the things people own) and property (the rights to the use of those things.) Landlords, for instance, enjoy the rights of possession of buildings, but they also may wish to enter into leases seconding those rights to tenants in exchange for payment. Owners of airlines (or railways, as Fisher had it a hundred years ago) can sell trips to passengers or cargo capacity to shippers. Fisher emphasized the economic

[2] Irving Fisher and Harry G. Brown, *The Purchasing Power of Money: Its Determination and Relation to Credit, Interest, and Crises,* (New York: Macmillan) 1911, now available at http://www.econlib.org/library/YPDBooks/Fisher/fshPPMCover.html

importance of these distinctions, and particularly the importance of the right of owners to sell property rights while retaining final ownership of the wealth itself.

The Representation of Property Rights

After distinguishing money from wealth and wealth from property, Fisher adds one more distinction — that between property rights and the written evidence that certifies those rights. Owners of shares in companies hold share certificates; owners of loans hold promissory notes; and owners of railway trips hold tickets. One special type of certificate is is a bank note, which provides evidence of a financial claim against a bank. Bank notes, along with a number of other types of claims (or indicia of claims) have long traded freely as payment for goods and services, and therefore function as currency.

Fisher wrote in the era immediately prior to the establishment of the Federal Reserve, and his work reflects an implicit belief in some form of money based on commodities like gold coins. In Fisher's time, commodity-based money formed the monetary base, while bank notes and other similar instruments allowed the effective money supply to expand through the banking system. In such a system, savers might deposit gold with banks, which would then use it to make loans. Banks can further expand their balance sheets by issuing bank notes, direct obligations convertible on demand into precious metal coins they hold in reserve. These notes can circulate freely as currency, with their convertibility serving as the basis of their value. The bank notes, along with checks and other types of "fiduciary money," created by the banking system, permit expansion of the money supply if the supply of precious metals does not keep up with general economic growth. However, Fisher complained in 1910 or so that existing US law restricted monetary growth severely enough to impede economic growth and contribute to economic volatility.

Today's Fiduciary Money

The passage of the Federal Reserve Act in 1913, which authorized the creation of Federal Reserve Notes, eased the constraints on the expansion of the money supply, entrusting its management to the Federal Reserve. Nevertheless, until 1971 the US attempted to maintain a steady value for the US dollar in terms of gold. Today, we have dispensed with commodity money almost entirely, and operate in a system based entirely on fiduciary money. All our money, even the folding money in your pocket, represents claims against the banking system — property rights — rather than any physical commodity. Our everyday currency, those Federal Reserve Notes representing liabilities of the Federal Reserve, bear a crucial legend: "This note is legal tender for all debts, public and private." This statement assures our currency's value. It guarantees that if you present US currency to satisfy your monetary obligations under a contract, the Federal Reserve will recognize the transfer of its obligation from you to your payee, and the

US courts will stand behind you. For that reason, you can expect most merchants (with conspicuous exceptions, like airline food carts) to accept it for ordinary transactions. The value of today's currency stems not from any convertibility to "hard" currency, but from the legally enforceable guarantee that the currency is good for payments against contracts.

The Connection Between Money and Credit

As electronic commerce has expanded, the virtualization of our money has extended beyond the elimination of commodity money, to the elimination of much of the physical evidence (Fisher's "certificates") of the ownership of property rights. We hardly use stock certificates any more, and many people rarely use physical currency, preferring the convenience of debit and credit cards and on-line, electronic payments. If I receive my salary as a direct deposit to my checking accounts, I might look at an online banking site to check that the deposit has cleared to my account from my employer's, or I might just wait to receive a bank statement. Either way, as far as I'm concerned, all that has changed is the amount I can spend before the bank stops being obligated to make payments on my behalf.

In our banking system the connection between money and credit is simple: money and credit are the same thing. When I receive that direct deposit into my bank account, I think of it as money. But I'm not asking the bank to stash it in a vault. Instead, I'm lending rights to that money to the bank, entitling it to make further loans against my deposit. I hope the bank lends the money well, because I'm counting on it to remain solvent so that it can redeem my claim when I demand it back.[3] I pay my bills with checks or transfers drawn against my balance (the amount of credit I've extended to the bank), or I can go to the ATM and withdraw currency. My check represents a claim against my bank, and the currency represents a claim agains the Federal Reserve. Either way, I hold fiduciary money, which, unlike a commodity-based currency, is a financial claim that depends for its value on the banking system's ability to meet its obligations to me, and the Federal Reserve's ability to meet its obligations to the banks.

The Store of Value

We depend on the soundness of the banking system not just to facilitate everyday commerce, but to safeguard the money we save and invest for the future. As soon as we save our first dollar, we begin the complex process of choosing among investment opportunities to preserve and enhance the value we have saved today. For many savers, the principal store of value is in bank deposits.[4] When we put money aside this way, we become full participants in the bank credit system. A bank deposit is a loan to the bank.

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[3] That is why the increase in FDIC protection of consumer deposits during the financial crisis was so important.

[4] At least for savings we want to have in liquid form with stable nominal value

The deposits of savers allow banks to extend credit to borrowers. In a paper money system, this may seem like a house of cards, but it isn't. At a fundamental level, the main purpose of our financial system is to manage the transformation of savings, especially household savings, into investment capital to support productive enterprise. When you make a bank deposit, the future value for which you are saving relies in part on the bank's success in putting your money to work in the productive economy. The bank acts as an intermediary, choosing the parties to whom to make loans. When their loans are successful, the ensuing prosperity is every bit as real and tangible as a stack of gold coins, even if the effect appears exclusively in electronic balances representing the bank's improved ability to make payments.

The Role of Government Debt

Politicians sometimes grandstand with dire predictions of the burden Government borrowing is placing on our children, but Treasury debt can also be an important store of value for savers. One of the most notable of the many startling developments in the 2008 financial crisis was the collapse in yields on short-term US Treasury bills. At the beginning of 2008, a four-week T-bill yielded 3.02%. In December of that year, the officially-recorded yield on a one-month bill touched 0.00%, and on at least two days, December 11 and 19, the yield was –0.01%.[5] The negative yield meant that for a short time investors were willing to pay the US Treasury to store their money for them.

The negative yields were a rarity, of course. Short-term T-bills typically offer yields that correspond roughly to the current rate of inflation, so they are less vulnerable than cash to loss of value from that cause. When you buy Treasury bills, you are lending money to the US Treasury, against the full faith and credit of the US Government. The full faith and credit guarantee means that the Treasury can call on both the taxing power of the Congress and the borrowing power of the Treasury to redeem your T-bill in cash. The US could, in principle, default on the loan, and some current political discussion seems to suggest that possibility. But such an event would require a set of policy choices in the Congress that would amount to political extremism.

The soundness of our banking system rests heavily on the soundness of US Treasury debt. The government's issuance of Treasury debt doesn't just offer a reliable store of value for conservative savers. Today, as in Hamilton's design, it is also the basis of our monetary system. The market's acceptance of US Treasury securities provides the backing that keeps our currency from becoming merely worthless paper. It's easy to imagine that the Treasury, or the Federal Reserve, could simply issue an unlimited amount of paper currency, but that isn't true. In fact,

[5] US Treasury, Bureau of the Public Debt, Daily Treasury Bill Rates at http://www.ustreas.gov/offices/domestic-finance/debt-management/interest-rate/daily_treas_bill_rates_historical_2008.shtml

the Federal Reserve Act, which essentially created the Federal Reserve Notes that now comprise our principal currency, includes a mechanism expressly designed to prevent an uncontrolled explosion of currency issuance.[6] This mechanism serves to protect the value of Federal Reserve Notes. But to work, it requires the commitment of Congress to protect the "full faith and credit" guarantee standing behind US Treasury securities.

What Happens if there's a Government Default?

Our currency has rested especially heavily on the stability of US Treasury debt ever since we moved completely away from a commodity-based monetary system. Today, our Federal Reserve Notes are literally bank notes representing loans collateralized mostly by US Government securities. This gives the current policy debate over the future of US Treasury debt particular urgency. Allowing the public debt to grow without restriction is dangerous because such uncontrolled growth could undermine both the Treasury's finances and the currency. But some of the more draconian budget proposals currently in play seem to contemplate the possibility of actually defaulting on a portion of the Treasury debt. The exact consequences of an actual default are difficult to predict, but with Treasury securities at the base of our monetary system, it's hard to imagine how they could be less than catastrophic. US Treasuries play a central role in the routine issuance of our paper currency, and in the Fed's operations to regulate the liquidity, which is to say the supply of credit, in the banking system. A Treasury default could destroy the collateral behind our currency, undermine the Fed's open market operations, impair the functioning of Hamilton's "funded debt" notion, and hamper the operation of the banks. The resulting monetary uncertainty would disrupt transactions throughout our entire monetary system.

Conclusion — Be Careful what you Wish For

The current budget debate in Washington involves the spectacle of US Senators threatening, apparently with straight faces, to precipitate a default on US Treasury debt by

[6] Here's how it works. When a local bank wants Federal Reserve Notes (to stock an ATM, for example), it orders them from the Federal Reserve Bank in its district. The Federal Reserve Bank delivers the notes, charging the amount against the reserves the local bank holds at the Federal Reserve Bank. The Federal Reserve Bank, in turn, orders the Notes from the central Federal Reserve. Under the Federal Reserve Act, the Federal Reserve Banks have to post collateral against the Notes they issue, or hold to issue, to banks. According to the Federal Reserve Bank of New York, "The bulk of the collateral pledged is in the form of U.S. Government securities and gold certificates owned by the Federal Reserve Banks." For more detail, see Federal Reserve Bank of New York, "How Currency Gets into Circulation," at http://www.newyorkfed.org/aboutthefed/fedpoint/fed01.html

refusing to extend the statutory borrowing authority of the Treasury. This unwise line of attack poses extraordinary risks to our financial system and our economy.[7]

Under our monetary system, which represents the modern evolution of Hamilton's funded-debt plan, the soundness of US Treasury debt matters a great deal. For that reason, persistently profligate fiscal policy, running excessive deficits without end, could impair our monetary system and economy, largely by generating an inflationary monetary expansion. We need a vigorous debate over how to improve our nation's fiscal position and control our debt. But threatening to trigger a default amounts to political extremism. A Treasury default wouldn't just impair the value of US Treasury securities around the world. It could also impair the collateral standing behind the currency in your pocket and the balance in your bank account, with unpredictable effects cascading throughout the financial system. In today's global and digital economic world, a loss of confidence in the US Government and the Federal Reserve would cause widespread financial uncertainty. If that led to panic, most would not even know where to run.

Alexander Hamilton faced substantial opposition when he first proposed his funded debt plan because of the power it gave the banks. Some of those that carry the legacy of those opponents may see the current budget debate as an opportunity to reel in both the banks and Government spending. But if a Treasury default led to the collapse of Hamilton's system, it would have consequences even Jefferson would find unpalatable. Those in the Senate threatening to trigger a default may view the tactic as just another risky game of political brinksmanship. For others, the possible consequences may be too abstract to understand. But for those of us that care about the functioning of the economy and the capital markets, the stakes are just too high. We need to find a more intelligent way to improve the government's fiscal position without either side's holding the entire financial system hostage.

-Jonathan Tiemann
Menlo Park
July 1, 2011

[7] It also stands in stark contrast to Vice President Dick Cheney's 2002 comment to then-Treasury Secretary Paul O'Neill that "Reagan proved deficits don't matter." See John F. Dickerson, "Confessions of a White House Insider [Paul O'Neill]," *Time* Magazine, January 10, 2004, at http://www.time.com/time/magazine/article/0,9171,574809,00.html