Soft Currency Economics

by Warren B. Mosler

Introduction

In the midst of great abundance, our leaders promote privation. We are told that national health care is unaffordable, while hospital beds are empty. We are told that we cannot afford to hire more teachers, while many teachers are unemployed. And we are told that we cannot afford to give away school lunches, while surplus food goes to waste.

When people and physical capital are employed productively, government spending that shifts those resources to alternative use forces a trade-off. For example, if thousands of young men and women were conscripted into the armed forces the country would receive the benefit of a stronger military force. However, if the new soldiers had been home builders, the nation may suffer a shortage of new homes. This trade-off may reduce the general welfare of the nation if Americans place a greater value on new homes than additional military protection. If, however, the new military manpower comes not from home builders but from individuals who were unemployed, there is no trade-off. The real cost of conscripting home builders for military service is high; the real cost of employing the unemployed is negligible.

The essence of the political process is coming to terms with the inherent tradeoffs we face in a world of limited resources and unlimited wants. The idea that people can improve their lives by depriving themselves of surplus goods and services contradicts both common sense and any respectable economic theory. When there are widespread unemployed resources as there are today in the United States, the trade-off costs are often minimal, yet mistakenly deemed unaffordable.

When a member of Congress reviews a list of legislative proposals, he currently determines affordability based on how much revenue the federal government wishes to raise, either through taxes or spending cuts. Money is considered an economic resource. Budget deficits and the federal debt have been the focal point of fiscal policy, not real economic costs and benefits. The prevailing view of federal spending as reckless, disastrous and irresponsible, simply because it increases the deficit, prevails.

Interest groups from both ends of the political spectrum have rallied around various plans designed to reduce the deficit. Popular opinion takes for granted that a balanced budget yields net economic benefits only to be exceeded by paying off the debt. The Clinton administration claims a lower 1994 deficit as one of its highest achievements. All new programs must be paid for with either tax revenue or spending cuts. Revenue neutral has become synonymous with fiscal responsibility.

The deficit doves and deficit hawks who debate the consequences of fiscal policy both accept traditional perceptions of federal borrowing. Both sides of the argument accept the premise that the federal government borrows money to fund expenditures. They differ only in their analysis of the deficit's effects. For example, doves may argue that since the budget does not discern between capital investment and consumption expenditures, the deficit is overstated. Or, that since we are primarily borrowing from ourselves, the burden is overstated. But even if policy makers are convinced that the current deficit is a relatively minor problem, the possibility that a certain fiscal policy initiative might inadvertently result in a high deficit, or that we may owe the money to foreigners, imposes a high risk. It is believed that federal deficits undermine the financial integrity of the nation.

Policy makers have been grossly misled by an obsolete and non-applicable fiscal and monetary understanding. Consequently, we face continued economic under-performance.

Statement of Purpose

The purpose of this work is to clearly demonstrate, through pure force of logic, that much of the public debate on many of today's economic issues is invalid, often going so far as to confuse costs with benefits. This is not an effort to change the financial system. It is an effort to provide insight into the fiat monetary system, a very effective system that is currently in place.

The validity of the current thinking about the federal budget deficit and the federal debt will be challenged in a way that supersedes both the hawks and the doves. Once we realize that the deficit can present no financial risk, it will be evident that spending programs should be evaluated on their real economic benefits, and weighed against their real economic costs. Similarly, a meaningful analysis of tax changes evaluates their impact on the economy, not the impact on the deficit. It will also be shown that taxed advantaged savings incentives are creating a need for deficit spending.

The discussion will begin with an explanation of fiat money, and outline key elements of the operation of the banking system. The following points will be brought into focus:

- ➢ Monetary policy sets the price of money, which only indirectly determines the quantity. It will be shown that the overnight interest rate is the primary tool of monetary policy. The Federal Reserve sets the overnight interest rate, the price of money, by adding and draining reserves. Government spending, taxation, and borrowing can also add and drain reserves from the banking system and, therefore, are part of that process.

- ➢ The money multiplier concept is backwards. Changes in what is casually called the money supply cause changes in bank reserves and the monetary base, not vice versa.

- ➢ Debt monetization cannot and does not take place.

- ➢ The imperative behind federal borrowing is to drain excess reserves from the banking system, to support the overnight interest rate. It is not to fund untaxed spending. Untaxed government spending (deficit spending) as a matter of course creates an equal amount of excess reserves in the banking system. Government borrowing is a reserve drain, which functions to support the fed funds rate mandated by The Federal Reserve Board of Governors. The federal debt is actually an interest rate maintenance account (IRMA).

- ➢ Fiscal policy determines the amount of new money -bank balances- directly created by the federal government. Briefly, deficit spending is the direct creation of new money. When the federal government spends and borrows, what is functionally a deposit at The Federal Reserve Bank in the form of a treasury security is created. The national debt is therefore equal to all of the new money directly created by fiscal policy.

- ➢ Options over spending, taxation, and borrowing are not limited by the process itself but by the desirability of the economic outcomes. The amount and nature of federal spending as well as the structure of the tax code and interest rate maintenance (borrowing) have major economic ramifications. The decision of how much money to borrow and how much to tax can be based on the economic effect of varying the mix, and need not focus solely on the mix itself (such as balancing the budget).

Finally, the conclusion will incorporate five additional discussions:

- ➢ What if no one buys the debt?
- ➢ How the government manages to spend as much as it does and not cause hyper-inflation
- ➢ Full employment AND price stability
- ➢ Taxation
- ➢ A discussion of foreign trade

Fiat Money

Historically, there have been three categories of money: commodity, credit, and fiat. Commodity money consists of some durable material of intrinsic value, typically gold or silver coin, which has some value other than as a medium of exchange. Gold and silver have industrial uses as well as an aesthetic value as jewelry. Credit money refers to the liability of some individual or firm, usually a checkable bank deposit. Fiat money is a tax credit not backed by any tangible asset.

In 1971 the Nixon administration abandoned the gold standard and adopted a fiat monetary system, substantially altering what looked like the same currency. Under a fiat monetary system, money is an accepted medium of exchange because the government requires it for tax payments, and the government, through its agents, is the single supplier of that which it

demands in payment of taxes. That is the government is the source of the funds used to pay taxes and to buy government securities.

Government fiat money necessarily means that federal spending is not constrained by revenue. In fact, spending necessarily precedes revenue as a point of logic. Therefore the federal government has no more money at its disposal when the federal budget is in surplus, than when the budget is in deficit. Total federal expense is whatever the federal government chooses it to be. There is no inherent financial limit, but instead is limited by whatever is offered for sale in exchange for that currency.

The amount of federal spending, taxing and borrowing influence inflation, interest rates, capital formation, and other real economic phenomena, but the amount of money available to the federal government is independent of tax revenues and independent of federal debt. Consequently, for example, the concept of a federal trust fund under a fiat monetary system is an anachronism. The government is no more able to spend money when there is a trust fund than when no such fund exists. The only financial constraints, under a fiat monetary system, are self-imposed.

The concept of fiat money can be illuminated by a simple model:

Assume a world of a parent and several children. One day the parent announces that the children may earn Mom or Dad’s business cards by completing various household chores. At this point the children won't care a bit about accumulating their parent's business cards because the cards are virtually worthless. But when the parent also announces that any child who wants to eat and live in the house must pay a tax to the parents of, say, 200 business cards each month, the cards are instantly given value and chores begin to get done. Value has been given to the business cards by requiring them to be used to fulfill a tax obligation. The tax created unemployment- in this case children looking for paid work. Taxes function to create the demand for federal expenditures of fiat money, not to raise revenue per se. In fact, a tax will create a demand for at least that amount of federal spending. A balanced budget is, from inception, the minimum that can be spent, without creating a default condition and a continuous deflation. Furthermore, The children will likely desire to earn a few more cards than they need for the immediate tax bill, so the parent can expect to spend more cards than the children pay in taxes -run a deficit- as a matter of course.

To illustrate the nature of federal debt under a fiat monetary system, the model of family currency can be taken a step further. Suppose the parent offers to pay overnight interest on the outstanding business cards (payable in more business cards). The children might want to hold on to some cards to use among themselves for convenience. Extra cards not needed overnight for intersibling transactions would probably be deposited with the parent. That is, the parent would have borrowed back some of the business cards from the children. The business card deposits are the national debt that the parent owes. The reason for the borrowing is to support a minimum overnight lending rate by giving the holders of the business cards a place to earn

interest. The parent might decide to pay (support) a high rate of interest to encourage saving. Conversely, a low rate may discourage saving. In any case, the amount of cards lent to the parent each night will generally equal the number of cards the parent has spent, but not taxed -the parents' deficit.

Notice that the parent is not borrowing to fund expenditures, and that offering to pay interest (funding the deficit) does not reduce the wealth (measured by the number of cards) of each child. And also note that earning interest would also allow the children to earn the cards they need to pay their taxes without doing their chores. When I did this with my children, I saw no reason to ever pay interest on the cards, and likewise, with an understanding of monetary operations, I see no reason for a government not to have a permanent 0% interest rate policy.

In the U. S., the 12 members of The Federal Open Market Committee decide on the overnight interest rate. That, along with what Congress decides to spend, tax, and borrow (that is, pay interest on the untaxed spending), determines the value of the currency and, in general, regulates the economy.

Federal borrowing and taxation were once part of the process of managing the Treasury's gold reserves. Unfortunately, discussions about monetary economics and the U. S. banking system still rely on many of the relationships observed and understood during the time when the U. S. monetary regime operated under a gold standard, a system in which arguably the government was required to tax or borrow sufficient revenue to fund government spending. Some of the old models are still useful in accurately explaining the mechanics of the banking system. Others have outlived their usefulness and have led to misleading constructs. Two such vestiges of the gold standard are the role of bank reserves (including the money multiplier) and the concept of monetization. An examination of the workings of the market for bank reserves reveals the essential concepts. (Additional monetary history and a more detailed explanation is provided in the appendix.)

The Inelasticity of the Reserve Market: Lagged versus Contemporaneous Accounting

The Fed defines the method that banks are required to use in computing deposits and reserve requirements. The period in which a depository institution's average daily reserves must meet or exceed its specified required reserves is called the reserve maintenance period. The period in which the deposits on which reserves are based are measured is the reserve computation period. The reserve accounting method was amended in 1968 and again in 1984 but neither change altered The Fed's role in the market for reserves.

Before 1968 banks were required to meet reserve requirements contemporaneously: reserves for a week had to equal the required percentage for that week. Banks estimated what their average deposits would be for the week and applied the appropriate required reserve ratio to determine their reserve requirement. The reserve requirement was an obligation each bank was

legally required to meet. Bank reserves and deposits, of course, continually change as funds are deposited and withdrawn which was problematic for the bank manager's task of managing reserve balances. AS neither the average deposits for a week nor the average amount of required reserves could be known with any degree of certainty until after the close of the last day it was "like trying to hit a moving target with a shaky rifle." Therefore, in September 1968, lagged reserve accounting (LRA) replaced contemporaneous reserve accounting (CRA). Under LRA the reserve maintenance period was seven days ending each Wednesday (see Figure 1a). Required reserves for a maintenance period were based on the average daily reservable deposits in the reserve computation period ending on a Wednesday two weeks earlier. The total amount of required reserves for each bank and for the banking system as a whole was known in advance. Actual reserves could vary, but at least the target was stable.

In 1984, however, the Board of Governors of The Federal Reserve System reinstated CRA. The reserve accounting period remained two weeks (see Figure 1b). Reserves on the last day of the accounting period are one-fourteenth of the total to be averaged. For example, if a bank borrowed $7 billion for one day it would currently add 1/14 of $7 billion, or $500 million, to the average level of reserves for the maintenance period. And although this system was called contemporaneous it was, in practice, a lagged system because there was still a two day lag: reserve periods ended on Wednesday while deposit periods ended on the preceding Monday. Thus even under CRA the banking system is faced with a fixed reserve requirement as it nears the end of each accounting period.

The 1984 adoption of CRA occurred as federal officials, economists, and bankers debated whether shortening the reserve accounting lag could give The Fed control of reserve balances. The change was consciously designed to give The Fed direct control over reserves and changes in deposits. Federal Reserve Chairman Volcker favored the change to CRA in the errant belief that a shorter lag in reserve accounting would give The Fed greater control over reserves and hence the money supply. Chairman Volcker was mistaken. The shorter accounting lag did not (and could not) increase The Fed's control over the money supply because depository institution’s reserve requirements were based on total deposits from the previous accounting period. Banks for all practical purposes could not change their current reserve requirements after they were calculated.

Under both CRA and LRA The Fed necessarily provides enough reserves to meet the known requirements, either through open market operations or through the discount window, as the reserve requirement itself is, functionally, in the first instance, an overdraft.

If banks were left on their own to obtain more reserves no amount of interbank lending would be able to create the necessary reserves. Interbank lending changes the location of the reserves but the amount of reserves in the entire banking system remains the same. For example, suppose the total reserve requirement for the banking system was $60 billion at the close of business today but only $55 billion of reserves were held by the entire banking system. Unless The Fed provideD the additional $5 billion in reserves, at least one bank would fail to meet its reserve requirement.

The Federal Reserve is, and can only be, the follower, not the leader when it adjusts reserve balances in the banking system.

The role of reserves may be widely misunderstood because it is confused with the role of capital requirements. The Fed addresses the quantity and risk of loans through capital requirements, it addresses the overnight interest rate by setting the price of reserves. Capital requirements set standards for the quality and quantity of assets which banks hold on the quality of its loans. Capital requirements are designed to insure a minimum level of financial integrity. Reserve requirements, on the other hand, are a means by which The Federal Reserve controls the bank's cost of funds and thereby the price of funds when lending.

In 2008, The Fed began buying treasury securities in an initiative known as Quantitative Easing (QE). The securities were paid for by crediting appropriate bank reserve accounts. To support their policy rate, The Fed received approval to begin paying interest on reserve balances (which had long been standard procedure at other central banks) as an alternative to selling securities outright or borrowing the reserves with reverse repurchase agreements, which would have been problematic due to the magnitude of the reserve balances generated by QE. And, subsequently, to accommodate fed depositors that were prohibited from earning interest on their fed balances and thereby influencing the fed funds rate, The Fed began offering open-ended reverse repurchase accounts to help ensure fed funds would trade within The Fed's policy rate bands.

The Myth of the Money Multiplier

Everyone who has studied money and banking has been introduced to the concept of the money multiplier. The multiplier is a factor which links a change in the monetary base (reserves + currency) to a change in the money supply. The multiplier presumably tells us what multiple of the monetary base is transformed into the money supply (M = m x MB). Since George Washington's portrait first graced the one dollar bill students have listened to the same explanation of the process. No matter what the legally required reserve ratio was, the standard example always assumed 10 percent so that the math was simple enough for college professors. What joy must have spread through the entire financial community when, on April 12, 1992, The Fed, for the first time, set the required reserve ratio at the magical 10 percent. Given the simplicity and widespread understanding of the money multiplier it is a shame that the myth must be laid to rest.

The truth is the opposite of the textbook model. In the real world banks make loans independent of reserve positions, then during the next accounting period borrow any needed reserves. The imperatives of the accounting system, as previously discussed, require The Fed to lend the banks whatever needed.

Bank managers generally neither know nor care about the aggregate level of reserves in the banking system. Bank lending decisions are affected by the price of reserves, not by reserve positions. If the spread between the rate of return on an asset and the fed funds rate is wide

enough, even a bank deficient in reserves will purchase the asset and cover the cash needed by purchasing (borrowing) money in the funds market. This fact clearly demonstrated by many large banks, before QE, when they consistently purchaseD more money in the fed funds market than their entire level of required reserves. These banks would actually have negative reserve levels if not for fed funds purchases i.e. borrowing money to be held as reserves.

If The Fed should want to increase the money supply, devotees of the money multiplier model (including numerous Nobel Prize winners) would have The Fed purchase securities. When The Fed buys securities reserves are added to the system. However, before 2008 when The Fed began to pay interest on reserves, the money multiplier model failed to recognize that the added reserves in excess of required reserves drove the funds rate to zero, since reserve requirements dId not change until the following accounting period. That forced The Fed to sell securities, i.e., 'drain' the excess reserves just added, to maintain the funds rate above zero.

If, on the other hand, The Fed wants to decrease money supply, taking reserves out of the system when there are no excess reserves places some banks at risk of not meeting their reserve requirements. The Fed has no choice but to add reserves back into the banking system, to keep the funds rate from going, theoretically, to infinity. In either case, the money supply remains unchanged by The Fed's action. The multiplier is properly thought of as simply the ratio of the money supply to the monetary base (m = M/MB). Changes in the money supply cause changes in the monetary base, not vice versa. The money multiplier is more accurately thought of as a divisor (MB = M/m). Failure to recognize the fallacy of the money-multiplier model has led even some of the most well- respected experts astray. The following points should be obvious, but are rarely understood: 1. The inelastic nature of the demand for bank reserves leaves The Fed no control over the quantity of money. The Fed controls only the price. 2. The market participants who have a direct and immediate effect on the money supply include everyone except The Fed.

After The Fed was paying interest on reserves, The Fed could indeed buy treasury securities and add reserves without altering the fed funds rate. Reserve balances that pay interest, however, are functionally identical to treasury securities that are also balances at The Fed that pay interest. The only difference is maturity, which is of no material difference to the macroeconomy. Therefore buying securities merely shifts balances at The Fed from securities accounts to reserve accounts. That said, buying securities does increase narrow monetary aggregates that do not include treasury securities, and so for those who define "money" as not including treasury securities, The Fed buying treasury securities does add to their narrowly defined "money supply" while broad aggregates that include treasury securities remain unchanged, as do the net financial assets in the macroeconomy.

The Myth of Debt Monetization

The subject of debt monetization frequently enters discussions of monetary policy. Debt monetization is usually referred to as a process whereby the Fed buys government bonds directly from the Treasury. In other words, the federal government borrows money from the

Central Bank rather than the public. Debt monetization is the process usually implied when a government is said to be printing money. Debt monetization, all else equal, is said to increase the money supply and can lead to severe inflation.

However, before interest on reserves was permitted, fear of debt monetization was unfounded, since the Federal Reserve did not even have the option to monetize any of the outstanding federal debt or newly issued federal debt.

As long as The Fed had a mandate to maintain a target fed funds rate, the size of its purchases and sales of government debt were not discretionary. Once the Federal Reserve Board of Governors set a fed funds rate, the Fed's portfolio of government securities changed only because of the transactions required to support the funds rate. The Fed's lack of control over the quantity of reserves underscored the impossibility of debt monetization. The Fed was unable to monetize the federal debt by purchasing government securities at will because, unable to pay interest on reserves, to do so would have caused the funds rate to fall to zero. If the Fed purchased securities directly from the Treasury and the Treasury then spent the money, the expenditures would be excess reserves in the banking system and The Fed would be forced to sell an equal amount of securities to support the fed funds target rate. The Fed would act only as an intermediary. The Fed would be buying securities from the Treasury and selling them to the public. No monetization would occur.

To monetize means to convert to money. Gold used to be monetized when the government issued new gold certificates to purchase gold. In a broad sense, federal debt is money, and deficit spending is the process of monetizing whatever the government purchases. Monetizing does occur when the Fed buys foreign currency. Purchasing foreign currency converts, or monetizes, that currency to dollars. Before interest on reserves, The Fed then offered U.S. Government securities for sale to offer the new dollars just added to the banking system a place to earn interest. This often misunderstood process is referred to as sterilization.

With The Fed able to pay interest on reserves, it can simply buy treasury securities and allow reserve balances to accumulate. And for those who do not include treasury securities in their definition of “money”, The Fed buying securities, also known as quantitative easing when done as a policy, does increase the quantity of “money” as narrowly defined without putting downward pressure on the fed funds rate. Furthermore, the economy’s net financial assets are unchanged by this shifting of balances from securities accounts at The Fed to reserve accounts at The Fed. And further note that the large fluctuations in the narrow monetary aggregates caused by QE have no detectable macroeconomic consequences.

Operating Procedure for the Federal Reserve: How Fed Funds Targeting Fits Into Overall Monetary Policy

The Federal Reserve is presumed to conduct monetary policy with the ultimate goal of a low inflation and a monetary and financial environment conducive to real economic growth. The Fed attempts to manage money and interest rates to achieve its goals. It selects one or more intermediate targets, because it believes they have significant effects on the money supply and the price level.

Whatever the intermediate targets of monetary policy may be, the Fed's primary instrument for implementing policy is the federal funds rate. The fed funds rate is influenced by open market operations. It is maintained or adjusted in order to guide the intermediate target variable. If the Fed is using a quantity rule (i.e., trying to determine the quantity of money), the intermediate target is a monetary aggregate such as M1 or M2. For instance, if M2 grows faster than its target rate the Fed may raise the fed funds rate in an effort to slow the growth rate of M2. If M2 grows too slowly the Fed may lower the fed funds rate. If the Fed chooses to use the value of money as its intermediate target then the fed funds target will be set based on a price level indicator such as the price of gold or the Spot Commodities Index. Under a price rule the price of gold, for example, is targeted within a narrow band. The Fed raises the fed funds rate when the price exceeds its upper limit and lowers the rate when the price falls below its lower limit in hopes that a change in the fed funds rate returns the price of gold into the target range.

Open market operations offset changes in reserves caused by the various factors which affect the monetary base, such as changes in Treasury deposits with The Fed, float, changes in currency holdings, or changes in private borrowing. Open market operations act as buffers around the target fed funds rate. The target fed funds rate may go unchanged for months. In 1993, the target rate was held at 3 percent without a single change. In other years the rate was changed several times.

Mechanics of Federal Spending

The federal government maintains a cash operating balance for the same reason individuals and businesses do; current receipts seldom match disbursements in timing and amount. The U. S. Treasury holds its working balances in the 12 Federal Reserve Banks and pays for goods and services by drawing down these accounts. Deposits are also held in thousands of commercial banks and savings institutions across the country. Government accounts at commercial banks are called Tax and Loan accounts because funds flow into them from individual and business tax payments and proceeds from the sale of government bonds. Banks often pay for their purchases of U. S. Treasury securities or purchases on behalf of their customers by crediting their Tax and Loan accounts.

The Treasury draws all of its checks from accounts at The Fed. The funds are transferred from the Tax and Loan accounts to The Fed then drawn from the Fed account to purchase goods and services or make transfer payments. Suppose the Treasury intends to pay $500 million for a B-2 stealth bomber. The Treasury transfers $500 million from its Tax and Loan accounts to its account at The Fed. The commercial banks now have $500 million less in deposits and hence $500 million less reserves. At The Fed, reserves decrease by $500 million while Treasury deposits have increased by $500 million. At this instant the increase in U. S. Treasury deposits reduces reserves and the monetary base but when the Treasury pays for the bomber the preceding process is reversed. U. S. Treasury deposits at The Fed fall by $500 million and the defense contractor deposits the check received from the Treasury in its bank, whose reserves rise by $500 million. Government spending does not change the monetary base when reserves move simultaneously in equal amounts and opposite directions.

Figure 2 compares the T-accounts of the banking system, the Treasury and the Federal Reserve for a $100 million expenditure. Figure 2a shows the net change for an expenditure offset by tax receipts. Figure 2b shows the net change when the expenditure is offset by borrowing. In either case reserve balances are left unchanged. There is no net change in the banking system when the bomber is paid for with tax receipts. When the Treasury issues securities to pay for the bomber, deposits in the banking system increase by $100 million. The Federal Reserve's use of offsetting open market operations to keep the funds rate within its prescribed range is primarily applied to changes in government deposit balances.

Federal Government Spending, Borrowing, and Debt

The Fed's desire to maintain the target fed funds rate links government spending, which adds reserves to the banking system, and government taxation and borrowing, which drain reserves from the banking system. Under a fiat monetary system, The government spends money and then borrows what it does not tax, because deficit spending, not offset by borrowing, would cause the fed funds rate to fall.

The Federal Reserve does not have exclusive control of reserve balances. Reserve balances can be affected by the Treasury itself. For example, if the Treasury sells $100 of securities, thereby increasing the balance of its checking account at The Fed by $100, reserves decline just as if The Fed had sold the securities. When either government entity sells government securities reserve balances decline. When either buys government securities (in this case the Treasury would be retiring debt) reserves in the banking system increase. The monetary constraints of a fed funds target dictate that the government cannot spend money without borrowing (or taxing), nor can the government borrow (or tax) without spending. The financial imperative is to keep the reserve market in balance, not to acquire money to spend.

The Interest Rate Maintenance Account (IRMA)

Over the course of time the total number of dollars that have been drained from the banking system to maintain the fed funds rate is called the federal debt. A more appropriate name would be the Interest Rate Maintenance Account (IRMA). The IRMA is simply an accounting of the total amount of securities issued to pay interest on untaxed money spent by the government. Consider the rationale behind adjusting the maturities of government securities. Since the purpose of government securities is to drain reserves from the banking system and support an interest rate, the length, or maturity, of the securities is irrelevant for credit and rollover purposes. In fact, the IRMA could consist entirely of overnight deposits by member banks of The Fed, and The Fed could support the fed funds rate by paying interest on all excess reserves. One reason for selling long-term securities might be to support long-term interest rates.

Fiscal Policy Options

The act of government spending and concurrent taxation gives the illusion that the two are inextricably linked. The illusion is strengthened by the analogy of government as a business or government as a household. Businesses and households in the private sector are limited in how much they may borrow by the market's willingness to extend credit. They must borrow to fund expenditures. The federal government, on the other hand, is able to spend a virtually unlimited amount first, adding reserves to the banking system, and then borrow, if it wishes to conduct a reserve drain.

Each year Congress approves a budget outlining federal expenditures. Congress also decides how to finance those expenditures; in fiscal 1993 for example, government expenditures were $1.5 trillion. The financing was made up of $1.3 trillion in tax receipts and $0.2 trillion in borrowing. The total revenue must equal total expenditures to maintain control of the fed funds rate. The composition of the total revenue between taxes and borrowing is at the discretion of Congress. The economic impact of varying the composition of government financing between taxes and borrowing is worthy of much research, discussion and debate. Unfortunately, sober discussion of the deficit's economic implications have been dominated by apocalyptic sermons on the evils of deficit spending per se.

Since the federal budget deficit became an issue in the early eighties the warnings abound over the severe consequences of partaking in the supposedly sinister practice of borrowing money from the private sector. Enough warnings about the federal deficit have been made by Democrats, Republicans and other patriotic Americans to fill a new wing in the Smithsonian. The following is but a small sample:

"The national deficit is like cancer. The sooner we act to restrict it the healthier our fiscal body will be and the more promising our future." Senator Paul Simon (D-IL)

"...because of the manner in which our debt has been financed, we are at great risk if interest rates rise dramatically, or even moderately. The reason is that over 70 percent of the publicly-held debt is financed for less that five years. That's suicide in business, that's suicide in your personal life, and that's suicide in your government." Ross Perot

"Our nation's wealth is being drained drop by drop, because our government continues to mount record deficits...The security of our country depends on the fiscal integrity of our government, and we're throwing it away." Senator Warren Rudman

"...a blow to our children's living standards." The New York Times

"...this great nation can no longer tolerate running runaway deficits and exorbitant annual interest payments..." Senator Howell T. Heflin, (D-AL)

"The federal deficit...will continue to erode our capacity to respond to the economic and social challenges of the 21st century." "...we are broke when we have to borrow to pay interest on the debt." Senator Frank Murkowski, (RAK)

"...fiscal child abuse." Senator William H. Cohen, (R-ME)

"This problem [government debt]...will precipitate an economic nightmare that will dwarf the Great Depression." "The country's impending financial crisis is nearly upon us. The time for polite debate has passed. Our national debt crisis can and will bring the United States to its knees..." Harry E. Figgie, Bankruptcy 1995

All of this over a simple reserve drain! Real economic consequences, like inflation, are generally never even mentioned. The concerns are financial. Many of the drastic comments made about the deficit come from intelligent, competent, well-accomplished citizens. The concern for the welfare of America and for the nation's future is genuine. However, in their haste to renounce financing decisions which would, in fact, be very harmful if not impossible for a private business or a household, they overlook the important differences between private finance and public finance. If you refer back to the parent child analogy, it is the difference between spending your own business cards and spending someone else's.

ADDITIONAL DISCUSSIONS

What if No One Buys the Debt?

It is not possible to adequately address every question raised by debtphobes. One of the most common concerns, however, clearly illustrates the unfounded fear that arises from confusing private borrowing with public borrowing. The question is based on an image of Uncle Sam being turned away by lenders and being stuck without financing.

Fear the government will be unable to sell securities overlooks the mechanics of the process itself. The imperative of borrowing is interest rate support. By issuing government securities, the government offers banks an opportunity to exchange non-interest bearing reserves for interest bearing securities. If all banks would rather earn zero interest on their assets than accept interest payments from the government, the refusal to accept interest becomes a de facto tax on the banking system. From the Treasury's point of view the government's inability to attract any lenders would actually be a benefit. Imagine, the government spends money and the banking system, in a sense, lends the money at zero interest by refusing to accept interest on the new deposits which the government spending created. Instead, the banking system is content to leave the money in a non-interest bearing account at The Fed. The money is held at The Fed either way - it has no other existence. If the money is left as excess reserves it sits in an non-interest bearing account at The Fed. If the money is loaned to the government by purchasing government securities it again is held at the government's account at The Fed.

Savings and Investment:

How the Government Spends and Borrows As Much As It Does Without Causing Hyperinflation

Most people are accustomed to viewing savings from their own individual point of view. It can be difficult to think of savings on the national level. Putting part of one's salary into a savings account means only that an individual has not spent all of his income. The effect of not spending as such is to reduce the demand for consumption below what would have been if the income which is saved had been spent. The act of saving will reduce effective demand for current production without necessarily bringing about any compensating increase in the demand for investment. In fact, a decrease in effective demand most likely reduces employment and income. Attempts to increase individual savings may actually cause a decrease in national income, a reduction in investment, and a decrease in total national savings. One person's savings can become another's pay cut. Savings equals investment. If investment doesn't change, one person's savings will necessarily be matched by another's dissavings. Every credit has an offsetting debit. As one firm's expenses are another person's income, spending equal to a firm's expenses is necessary to purchase its output. A shortfall of consumption results in an increase of unsold inventories. When business inventories accumulate because of poor sales: 1) businesses may lower their production and employment and 2) business may invest in less new capital. Businesses often invest in order to increase their productive capacity and meet greater demand for their goods. Chronically low demand for consumer goods and services may depress investment and leaves businesses with over capacity and reduce investment expenditures. Low spending can put the economy in the doldrums: low sales, low income, low investment, and low savings. When demand is strong and sales are high businesses normally respond by increasing output. They may also invest in additional capital equipment. Investment in new capacity is automatically an increase in savings. Savings rises because workers are paid to produce capital goods they cannot buy and consume. The only other choice left is for

individuals to "invest" in capital goods, either directly or through an intermediary. An increase in investment for whatever reason is an increase in savings; a decrease in individual spending, however, does not cause an increase in overall investment. Savings equals investment, but the act of investment must occur to have real savings.

The relationship between individual spending decisions and national income is illustrated by assuming the flow of money is through the banking system. The money businesses pay their workers may either be used to buy their output or deposited in a bank. A bank bank has two basic lending options. Money can be loaned to: 1) someone else who wishes to purchase the output (including the government), or 2) to businesses who paid the individuals in the first place for the purpose of financing the unsold output. If the general demand for goods declines the demand for loans to finance inventories rises. If, on the other hand, individuals spent money at a high rate the demand for purchase loans would rise, inventories would decline and the level of loans to finance business inventories would fall. The structural situation in the U. S. is one in which individuals are given powerful incentives not to spend. This has allowed the government, in a sense, to spend people's money for them. The reason that government deficit spending has not resulted in more inflation is that it has offset a structurally reduced rate of private spending. A large portion of personal income consists of IRA contributions, Keoghs, life insurance reserves, pension fund income, and other money that compounds continuously and is not spent. Similarly, a significant portion of business income is also low velocity; it accumulates in corporate savings accounts of various types. Dollars earned by foreign central banks are also not likely to be spent. The root of this paradox is the mistaken notion that savings is needed to provide money for investment. This is not true. In the banking system, loans, including those for business investments, create equal deposits, obviating the need for savings as a source of money. Investment creates its own money. Once we recognize that savings does not cause investment it follows that the solution to high unemployment and low capacity utilization is not necessarily to encourage more savings. In fact, taxed advantaged savings has probably caused the private sector to desire to be a NET saver. This condition requires the public sector to run a deficit, or face deflation.

Full Employment AND Price Stability

There is a very interesting fiscal policy option that is not under consideration, because it may result in a larger budget deficit. The Federal government could offer a job to anyone who applies, at a fixed rate of pay, and let the deficit float. This would result in full employment, by definition. It would also eliminate the need for such legislation as unemployment compensation and a minimum wage.

This new class of government employees, which could be called supplementary, would function as an automatic stabilizer, the way unemployment currently does. A strong economy with rising labor costs would result in supplementary employees leaving their government jobs, as the private sector lures them with higher wages. (The government must allow this to happen, and not increase wages to compete.) This reduction of government expenditures is a

contractionary fiscal bias. If the economy slows, and workers are laid off from the private sector, they will immediately assume supplementary government employment. The resulting increase in government expenditures is an expansionary bias. As long as the government does not change the supplementary wage, it becomes the defining factor for the currency- the price around which free market prices in the private sector evolve.

A government using fiat money has pricing power that it may not understand. Once the government levies a tax, the private sector needs the government's money so it can pay the tax. The conventional understanding that the government must tax so it can get money to spend does not apply to a fiat currency. Because the private sector needs the government's money to meet its tax obligations, the government can literally name its price for the money it spends. In a market economy it is only necessary to define one price and let the market establish the rest. For this example I am proposing to set the price of the supplementary government workers.

This is not meant to be a complete analysis. It is meant to illustrate the point that there are fiscal options that are not under consideration because of the fear of deficits.

Taxation

Taxation is part of the process of obtaining the resources needed by the government. The government has an infinite amount of its fiat currency to spend. Taxes are needed to get the private sector to trade real goods and services in return for the fiat money it needs to pay taxes. From the government's point of view, it is a matter of price times quantity equals revenue.

Given this, the secondary effects of taxes can now be considered before deciding on the tax structure. A sales tax will inhibit transactions, as will an income tax. This tendency to restrict trade and transactions is generally considered a detriment. It reduces the tendency to realize the benefits of specialization of labor and comparative advantage. Furthermore, transaction taxes offer large rewards for successful evasion, and therefore require powerful enforcement agencies and severe penalties. They also result in massive legal efforts to transact without being subject to the taxes as defined by the law. Add the this the cost of all of the record keeping necessary to be in compliance. All of these are real economic costs of transactions taxes.

A real estate tax is an interesting alternative. It is much easier to enforce, provides a more stable demand for government spending, and does not discourage transactions. It can be made progressive, if the democracy desires.

How much money one has may be less important than how much one spends. This not a common consideration. But having money does not consume real resources. Nor does one person's accumulation of nominal wealth preclude another's, since the quantity of money available is infinite. Fiat money is only a tax credit.

Perhaps those in favor of a progressive tax system should instead be concerned over the disproportionate consumption of real resources. Rather than attempting to tax away one's money at source, luxury taxes could be levied to prevent excess consumption (not to raise revenue). The success of the luxury tax should be measured by how little money it raises.

Foreign Trade

By the tenor of recent trade discussions it is apparent that the modern world has forgotten that exports are the cost of imports. Under a gold standard, each transaction was more clearly defined. If one imported cars, and paid in currency, the cars had been exchanged for gold. Cars were imported and gold was exported. Fiat money changed this. If a nation imports cars, and pays in its own fiat currency, cars are still imported but no commodity is exported. The holder of that money has a very loosely defined currency. In fact, the holder of currency is only guaranteed to be able to buy something from a willing seller at the seller's offered price. Any country running a trade surplus is taking risk inherent in accumulating fiat foreign currency. Real goods and services are leaving the country running a surplus, in return for an uncertain ability to import in the future. The importing country is getting real goods and services, and agreeing only to later export at whatever price it pleases to other countries holding its currency. That means that if the United States suddenly put a tax on exports, Japan's purchasing power would be reduced.

Inflation vs. Price Increases

Little or no consideration has been given to the possibility that higher prices may simply be the market allocating resources and not inflation.

Prices reflect the indifference levels where buyers and sellers meet. The market mechanism allows the participants to make their purchases and sales at any price on which they mutually agree. Market prices tend to change continuously. If, for example, there is a freeze in Brazil, the price of coffee may go up. The higher price accommodates the transfer of the remaining supply of coffee from the sellers to the buyers.

Prices going up and down can be the market allocating resources, not a problem of inflation. The textbook definition of inflation is the process whereby the government causes higher prices by creating more money either directly through deficit spending, or indirectly by lowering interest rates or otherwise encouraging borrowing. For example, when a shortage of goods and services causes higher prices, a government may attempt to help its constituents to buy more by giving them more money. Of course, a shortage means that the desired products don't exist. More money just raises the price. When that, in turn, causes the government to further increase the money available, an inflationary spiral has been created. The institutionalization of this process is called indexing.

Left alone, the price of coffee, gold, or just about anything may go up, down, or sideways. Goods and services go through cycles. One year, there may be a record harvest, and the next a disaster. Oil can be in shortage one decade, and then in surplus the next. There could, conceivably, be years, or even decades when the CPI grows at, say, 5% without any real inflation. There may be fewer things to go around, with the market allocating them to the highest bidder.

As the economy expands and the population increases, some items in relatively fixed supply are bound to gain value relative to items in general supply. Specifically, gold, waterfront property, and movie star retainers will likely increase relative to computers, watches, and other electronics.

If The Fed should decide to manage the economy by targeting the price of gold, they would respond to an increase in the price of gold with higher interest rates. The purpose would be to discourage lending, thereby reducing money creation. In effect, The Fed would try to reduce the amount of money we all have in order to keep the price of gold down. That may then depress the demand for all other goods and services, even though they may be in surplus. By raising rates, The Fed is saying that there is too much money in the economy, and it is causing a problem.

Presumably there is some advantage to targeting gold, the CPI, or any other index, rather than leaving the money alone and letting the market adjust prices. Interest rates can be too low and lead to excess money creation relative to the goods and services available for sale. On the other hand, higher commodity prices may represent the normal ebbs and flows in the markets for these items.

If there are indeed price increases due to changing supply dynamics, Fed policy of restricting money may result in a slowdown of serious proportions which would not have occurred if they had left interest rates alone.

Conclusion

The supposed technical and financial limits imposed by the federal budget deficit and federal debt are a vestige of commodity money. Today's fiat currency system has no such restrictions. The concept of a financial limit to the level of untaxed federal spending (money creation/deficit spending) is erroneous. The former constraints imposed by the gold standard have been gone since 1971. This is not to say that deficit spending does not have economic consequences. It is to say that the full range of fiscal policy options should be considered and evaluated based on their economic impacts rather than imaginary financial restraints. Current macroeconomic policy can center around how to more fully utilize the nation's productive resources. True overcapacity is an easy problem to solve. We can afford to employ idle resources.

Obsolete economic models have hindered our ability to properly address real issues. Our attention has been directed away from issues which have real economic effects to meaningless issues of accounting. Discussions of income, inflation, and unemployment have been overshadowed by the national debt and deficit. The range of possible policy actions has been needlessly restricted. Errant thinking about the federal deficit has left policy makers unwilling to discuss any measures which might risk an increase in the amount of federal borrowing. At the same time they are increasing savings incentives, which create further need for those unwanted deficits.

The major economic problems facing the United States today are not extreme. Only a misunderstanding of money and accounting prevents Americans from achieving a higher quality of life that is readily available.