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On the Means of Payment

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1. Setting the Stage

Assume the nation's economy consists of three sectors; government, the private banking - finance sector and the private non banking-financial sector. The economy has markets for commodities and services. Individuals and firms use markets to determine the terms of employment for work in these three sectors. The government borrows from firms and individuals and taxes them. Among the markets is one where traders can buy and sell gold. Assume the government does not trade in the gold market. Hence the price of gold varies according to the activity of the traders in the gold market. There is a numeraire in which prices are quoted. My analysis begins without a monetary authority. One enters the analysis later in various forms especially as the central bank, the Fed. On the basis of these assumptions I study the means of payment

2. Economic Paradise: Gold and Free Banking

Banking is almost as mysterious a topic to everybody, even some economists as unified field theories in physics. Hence I must begin with a description of some banking mechanics. An individual considers a deposit in a bank to be an asset. A bank considers the deposit as a liability. Deposits are not the only sources of funds to a bank. A bank can sell shares of stock or bonds to the non banking sector. The proceeds may serve the bank as reserves. For now I focus on deposits as the only source of funds for a bank.

A bank could create a deposit in favor of anybody out of thin air if it wishes. This action could occur without a deposit by the individual of anything tangible such as gold owned by the individual and placed in storage in the vaults of the bank available for withdrawal at any time by the owner. The cause of this deposit could be a loan agreement between the bank and the individual. The deposit could be a check payable to the individual by another bank or even the same bank from an account owned by another individual in the same bank.

The first question that arises is the nature of the limits, if any, on the amount of deposits a bank could create. If the deposit were an amount of gold and the owner could withdraw it from the bank according to the terms agreed upon before the actual deposit, then the bank could satisfy a demand for withdrawal if the gold were on hand in its vaults. Thus a one-to-one correspondence between the amount of deposits and the amount of gold would be easily accommodated by a bank acting as a warehouse for the storage of gold. However, banks know from their experience that they can safely 'lend' warehouse receipts for gold in amounts above their actual stocks because withdrawals are not frequent. Nor is this all. Warehouse receipts can circulate among non banking firms in the course of their business. For these documents, the more common appellation is bank notes payable to the bearer in gold on demand. The size of the gold stock coupled with the promise of convertibility set limits on the size of the bank note issue. These warehouse receipts, bank notes, can be a widely accepted means of payment for all kinds of commodities and services. Note that the bank note in my tale refers to a physical quantity of gold, not to the value of this gold that depends on the market price of gold. Any enterprise could start a business storing gold on behalf of customers in the fashion I have described. These businesses could make loans in the form of bank notes, charge interest on these loans, the bank notes could circulate as a means of payment and so on. This situation describes an economy that some would call an Economic Paradise.

3. Paradise Lost: The Garden of Eden Contains a Serpent

Trouble looms as soon as the underlying asset is stated in terms of value instead of a physical quantity of gold. The price of gold is determined in a market. Hence the value of a bank note stated in terms of a physical quantity of gold varies with the price of gold. Only if the government buys and sells gold at a fixed price can the value of the gold stock held in private hands coincide with the physical quantity. Even so, whether the nominal price of gold is fixed or not, the relative value of gold is not fixed. The relative value is the quantity of commodities or services that can be exchanged for a given physical quantity of gold. This creates the first complication. We now turn to the next complication.

An individual could transfer ownership of any amount up to the total amount on deposit by writing a check in favor of some other individual who could deposit the check in his account in the same or in another bank. Now ownership of the sum written on the check is transferred from the original deposit holder to the new deposit holder but the size of the total asset or total liability represented by the original deposit does not change. The stock of money in the form of checkable deposits held in banks remains the same. However, a shift of some funds from the original deposit to an account in another bank does mean that the liability of the first bank to the depositor has become a liability to the second bank. This is because the second bank regards this deposit as an asset acquired from the first bank equal to the liability that it incurs to the owner of its checkable deposit. Although the total assets and liabilities remain the same, the movement of assets and liabilities relies on promises being kept by the various parties in this intricate sequence.

One must not fail to note that all this began with the creation out of thin air of a deposit in the first bank in favor of somebody for whatever reason. It may be a loan from a bank to an individual manifested by a number that appears in a checkable account.

This situation raises several questions. First, because a bank could issue its own bank notes and buy what it wants from anybody who would accept them in payment, why would a bank go to the trouble of actual lending? A partial answer is that no one would accept these bank notes in payment for anything unless the bank notes could be redeemed at the issuing bank for some widely esteemed commodity such as gold or silver. A bank unable to redeem its notes is bankrupt. Nor is this all. Let the bank lend its bank notes to a borrower and require repayment of the loan with interest after the passage of time. The terms of the loan could stipulate the acceptable forms of repayment including in the bank's own notes. Bank notes redeemable in gold would serve two purposes, render the notes widely acceptable and impose a limit on the amount of bank notes it could issue.

Even with the stipulation that banks must redeem their notes on demand, banks could still make loans in the shape of their own bank notes and make loans in excess of their gold inventory. Banks depend on their experience that seems to show

that few banknotes relative to the stock of gold are presented to the issuer for redemption in gold. This reasoning is mistaken. It assumes redemptions are independent events. Real trouble enters when they are not independent events – when everybody wants to withdraw their deposits because of a flight to 'safe' havens.

Banks also offer their customers checking accounts backed by the promise to redeem checks in bank notes redeemable in gold. Ultimately, a huge stock of means of payment can form as a multiple of the stock of gold held in bank vaults. The relation between the stock of gold and the means of payment is variable. Everything depends on everybody being able and willing to keep their financial promises.

In this regime any asset matched by a liability of equal size is not immune from default. Every asset in the private sector of this economy is attached to an equal liability. An object regarded as an asset by one person is regarded as a liability by another. Borrowing and lending among private parties necessarily constructs this link.

In the actual economy not only are promises broken even by trustworthy people but, even worse, things can happen that affect almost everybody. Consequently, it may be that almost everybody becomes unable to fulfill their commitments. As long as the asset of one person is the liability of another, a long chain connects them that is only as strong as its weakest link. Free banking and a bank notes payable on demand in gold even when the government tries to fix the nominal price of gold does not lead to economic paradise.

4. Fiat Money and the Monetary Authority

Fiat money is non interest bearing government debt with a fixed nominal value. Fiat money circulates as a means of payment. Interest bearing government debt is default free but does not typically circulate as a means of payment. Government debt linked to a suitable price index approximates a constant real value asset. It has a useful place in financial portfolios because it offers a safe harbor in real terms.

Although the monetary authority can determine the size of the stock of certain governmental securities such as fiat money, it cannot control their rate of use. Experience in the U.S. shows two occasions, in the 1930's and now after 2008, such

that injecting large amounts of safe Federal securities with very low nominal interest rates had little effect on output, prices or employment. These injections tumble into the Keynesian liquidity trap.

As long as credit is the lion's share of the means of payment and there is a long chain of assets and liabilities, failures at any link in the chain can propagate. This has the potential to collapse the whole system.

Henry Simons writing during the trough of the Great Depression wanted commercial banks to be required to hold 100% reserves. This would remove them from the credit business altogether. It would confine them solely to check clearing and housekeeping of checking accounts. He sought a divorce between credit and the means of payment hoping this would induce a more stable monetary system.

To require commercial banks to hold reserves of any amount is not to enhance their safety. The purpose is different. It is to enable Fed control over commercial bank credit by means of its control over bank reserves.

A major source of credit since Simons made his proposals, is the credit card. We can be sure he would have pointed out its potential dangers. The user of a credit card incurs a liability to the issuer. This liability is a loan from the issuer of the credit card to the user. Merchants who accept charges to credit cards obtain an asset equal to the liability of the firm that issues the credit card. A merchant is willing to accept a charge to a credit card as a means of payment apart from the credit standing of the user, because of the credit standing of the issuer. Credit cards now form an important means of payment. The financial safety of the economy is held in ransom by the financial standing of all firms that issue credit cards. Therefore, the capability of the credit card issuer to satisfy its financial obligations must become a concern of the monetary authority.

5. The Actual Economy

Credit and debt are pervasive in the actual economy. They are promises by borrowers to make payments to lenders according to the terms of their agreements. Some loans fix the size, duration and schedule of interest and repayments. Mortgages and auto loans are leading examples. Some loans are lines of credit that

place an upper limit on the total amount that can be borrowed. Credit cards are familiar examples. The timing and size of these loans are at the discretion of the borrower. More complicated financial arrangements include shares of common stock in corporations, repurchase agreements, rental and leasing arrangements and more.

David Hume reminds us that the means of payment are the lubricants of the actual economy. Ordinary commerce requires credit. The various forms of this credit are a large portion of the means of payment. Commercial banks are the main source of commercial credit. The public knows this. Their confidence in banks is diminished to the extent that banks engage in risky financial ventures by using other peoples' money.

Competition in the banking sector has special features unlike competition in the non banking sector. Loans by a bank incur liabilities to other banks as I have shown. A bank can survive only if its liabilities to other banks is offset by credits due from them. When a bank makes a loan to somebody, it counts this loan as an asset. This loan can become a deposit in another bank and thereby become a liability of the first bank. To stay afloat, each bank must match its inflows to outflows to and from other banks. The clearing mechanism in banking is the mechanism that moves these flows among banks. It facilitates common movement of bank credit up or down from all banks.

Restoring required reserves on all bank deposits, including time deposits, could close a loop hole that allows commercial banks to escape control of their credit by the Fed. This could restore a stabilizing element on the means of payment from banks that had been removed in 1992.

From these premises follow two conclusions. First, the Fed cannot control all the credit in the economy. Second, the Fed's real job is to prevent collapse of the financial system by acting as the lender of last resort.

Government is a major part of the actual economy. It borrows and lends so it affects interest rates. It is a large employer so it affects wages and salaries. Every market has two sides, supply and demand. When the government forces interest rates down, presumably to help borrowers, it harms lenders, notably those who rely on their interest income during their retirement. When the government sets a floor on

wage rates, it raises wages of some and reduces employment of others. Intervention by government in any market is always a two edged sword.