

Wray, L. Randall

Working Paper

Banking, finance, and money: A socioeconomics approach

Working Paper, No. 459

Provided in Cooperation with:

Levy Economics Institute of Bard College

Suggested Citation: Wray, L. Randall (2006) : Banking, finance, and money: A socioeconomics approach, Working Paper, No. 459, Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

This Version is available at:

<https://hdl.handle.net/10419/31476>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Working Paper No. 459

Banking, Finance, and Money: A Socioeconomics Approach

by

L. Randall Wray
The Levy Economics Institute of Bard College
University of Missouri—Kansas City

July 2006

The Levy Economics Institute Working Paper Collection presents research in progress by Levy Institute scholars and conference participants. The purpose of the series is to disseminate ideas to and elicit comments from academics and professionals.

The Levy Economics Institute of Bard College, founded in 1986, is a nonprofit, nonpartisan, independently funded research organization devoted to public service. Through scholarship and economic research it generates viable, effective public policy responses to important economic problems that profoundly affect the quality of life in the United States and abroad.

The Levy Economics Institute
P.O. Box 5000
Annandale-on-Hudson, NY 12504-5000
<http://www.levy.org>

Copyright © The Levy Economics Institute 2006 All rights reserved.

ABSTRACT

This paper briefly summarizes the orthodox approach to banking, finance, and money, and then points the way toward an alternative based on socioeconomics. It argues that the alternative approach is better fitted to not only the historical record, but also sheds more light on the nature of money in modern economies. In orthodoxy, money is something that reduces transaction costs, simplifying “economic life” by lubricating the market mechanism. Indeed, this is the unifying theme in virtually all orthodox approaches to banking, finance, and money: banks, financial instruments, and even money itself originate to improve market efficiency. However, the orthodox story of money’s origins is rejected by most serious scholars outside the field of economics as historically inaccurate. Further, the orthodox sequence of “commodity (gold) money” to credit and fiat money does not square with the historical record. Finally, historians and anthropologists have long disputed the notion that markets originated spontaneously from some primeval propensity, rather emphasizing the important role played by authorities in creating and organizing markets.

By contrast, this paper locates the origin of money in credit and debt relations, with the money of account emphasized as the numeraire in which credits and debts are measured. Importantly, the money of account is chosen by the state, and is enforced through denominating tax liabilities in the state’s own currency. What is the significance of this? It means that the state can take advantage of its role in the monetary system to mobilize resources in the public interest, without worrying about “availability of finance.” The alternative view of money leads to quite different conclusions regarding monetary and fiscal policy, and it rejects even long-run neutrality of money. It also generates interesting insights on exchange rate regimes and international payments systems.

JEL Classifications: E12, E42, E52, E62, H6

Keywords: money, origins of money, credit, fiat money, exchange rate regimes, fiscal policy

This paper will briefly summarize the orthodox approach to banking, finance, and money, and then will point the way toward an alternative based on socio-economics. It will be argued that the alternative approach not only fits the historical record better, but also sheds more light on the nature of money in modern economies.

THE STATE OF ORTHODOX THINKING ON THE SUBJECT

For decades, economics students were introduced to the topic of money and banking through a story about the evolution of money from the supposed earliest origins in barter and on to our present “fiat” money. For example, Paul Samuelson presents the “historical states of money” as follows:

Inconvenient as barter obviously is, it represents a great step forward from a state of self-sufficiency in which every man had to be a jack-of-all-trades and master of none.... Nevertheless, simple barter operates under grave disadvantages.... In all but the most primitive cultures, men do not directly exchange one good for another. Instead they sell one good for money, and then use money to buy the goods they wish.... Money does simplify economic life. If we were to reconstruct history along hypothetical, logical lines, we should naturally follow the age of barter by the age of commodity money. Historically, a great variety of commodities has served at one time or another as a medium of exchange: cattle, tobacco, leather and hides, furs, olive oil, beer or spirits, slaves or wives, copper iron, gold, silver, rings, diamonds, wampum beads or shells, huge rocks and landmarks, and cigarette butts. The age of commodity money gives way to the age of paper money.... Finally, along with the age of paper money, there is the age of bank money, or bank checking deposits. (Samuelson 1973: 274-6)

It is more important to recognize the underlying view on the nature of money represented in this quote than to take the history seriously (even Samuelson offers the caveat that the is history “hypothetical, logical”). Money is something that reduces transaction costs, simplifying “economic life” by lubricating the market mechanism (Friedman 1969). Indeed, this is the unifying theme in virtually all orthodox approaches to banking, finance, and money: banks, financial instruments, and even money itself originate to improve market efficiency (Klein and Selgin 2000).

Essentially, orthodox economists turn the evolution of money into a “natural” phenomenon:

Although economists allow that money is a human invention assuming different forms in different times and places, they adopt an evolutionary perspective that de-emphasizes money's contingency and its ultimate foundation in social convention. As capitalist economies became more complex, money 'naturally' assumed increasingly efficient forms, culminating in the highly abstract, intangible money of today. (Carruthers and Babb 1996: 1558)

An innate propensity to “truck and barter” is taken for granted; this instinct leads naturally to the development of markets organized through a self-equilibrating relative price system. It is then “natural” to choose a convenient medium of exchange to facilitate impersonal market transactions. The ideal medium of exchange is a commodity whose value is natural, intrinsic—free from any hierarchical relations or social symbolism. As Hilferding put it:

In money, the social relationships among human beings have been reduced to a thing, a mysterious, glittering thing the dazzling radiance of which has blinded the vision of so many economists when they have not taken the precaution of shielding their eyes against it. (Quoted in Carruthers and Babb 1996: 1556)

Simmel put it more concisely — money supposedly transforms the world into an “arithmetic problem” (Quoted in Zelizer 1989: 344). The underlying relations are “collectively ‘forgotten about’” in order to ensure that they are not explored (Carruthers and Babb 1996: 1559).

The value of each marketed commodity is then denominated in the commodity chosen as the medium of exchange through the asocial forces of supply and demand. Regrettably, nations have abandoned the use of intrinsically valuable money in favor of “fiat” monies that cannot provide a relative price anchor. Monetary growth rules, prohibitions on treasury money creation, balanced budget requirements, and the like (not to mention currency boards and dollar standards for developing nations), are all attempts to remove discretion from monetary and fiscal authorities, to make fiat money operate as if it were a commodity, thereby restoring the “natural”, asocial, monetary order.

Money and banking textbooks also reduce discussion of the money supply to “an arithmetic problem” based on the “deposit multiplier” identity. The central bank would increase the supply of bank reserves and banks would respond by increasing loans and deposits by a fairly stable multiple (Brunner 1968). Hence, the growth of the money supply was supposed to be “exogenously controlled” by the central bank. Since money is

mostly used for transactions purposes, it can be linked to nominal GDP through the equation of exchange. If “real” GDP grows at a “natural rate” (determined by supply-side factors, such as technological advance and growth of inputs), and given stable velocity, then there will be a close relation between growth of the money supply and changes to the price level. This is, of course, the foundation to the Monetarist approach and led to the famous call by Milton Friedman for the central bank to target reserves, and thereby money growth, in order to control inflation. By the late 1970s, this view came to dominate policy-making and actually led to attempts by central bankers to target monetary aggregates.

At the same time, the rational expectations hypothesis was merged with old “classical” theory and monetarism to create what came to be called New Classical theory. The most important conclusion was that money would be neutral in the short run, as well as the long run, so long as policy was predictable. In practical terms, this meant that an announced and believable policy could bring down inflation rapidly merely by reducing money growth rates, and with no unemployment or growth trade-off. In a sense, money became irrelevant.

While we will not explore modern theories of finance in detail, developments there mirrored the evolution of mainstream economic theory in the sense that finance also became irrelevant. So long as markets are efficient, all forms of finance are equivalent. Financial institutions are seen as intermediaries that come between savers and investors, efficiently allocating savings to highest use projects. Evolution of financial practices continually reduces the “wedge” between the interest rate received by savers and that paid by investors—encouraging more saving and investment. Domestic financial market deregulation (underway since the mid 1960s in the United States), as well as globalization of international financial markets, plays a key role in enhancing these efficiencies, and hence, in promoting growth. The key conclusion is that if market impediments are removed, finance becomes “neutral”.

To be sure, a wide range of objections have been raised to these extreme conclusions, including existence of credit rationing, sticky wages and prices, and complex input-output relations—all of which could leave money non-neutral in the short run (see Gordon 1990 for a summary). These have been collected under the banner of

New Keynesianism, but it is usually conceded that they do not constitute a coherent theoretical challenge to New Classical theory. Another challenge comes from Real Business Cycle theory that makes money even less important, but it has to adopt assumptions that almost all economists regard as highly unrealistic. As Mankiw (1989) mused, mainstream economists are left with the uneasy choice of internal consistency (New Classical or Real Business Cycle approaches) or empirical relevance (New Keynesianism). The economics student faces a series of seemingly unrelated special purpose models that shed little light on money, banking, and finance.

By the end of the 1980s, orthodox policy making was also in disarray, as it appeared that central banks could not control the money supply and that money was not closely linked to nominal GDP (this can be stated alternatively as velocity had become unstable). Further, it did seem to many that money matters, in the sense that monetary policy affects unemployment and growth in fairly predictable—even if moderate—ways. Without money rules to guide them, central banks cast about for alternatives.

Over the course of the 1990s, orthodox economists developed a “new monetary consensus” (NMC) to monetary theory and policy formation. There are several versions, but perhaps the best-known includes an equation for output gap (the percentage point gap between actual and potential output), a dynamic version of a Philips curve relating inflation to the gap, and a monetary policy (Taylor-like) rule. These can be set out as:

$$(a) Y^*t = aY^*t-1 + bE_t(Y^*t+1) - c[R_t - E_t(p_{t+1})] + x_t$$

$$(b) P_t = d(Y^*t) + w_1p_{t-1} + w_2E_t(p_{t+1}) + z_t \quad (\text{note } w_1 + w_2 = 1)$$

$$(c) R_t = r^* + E_t(p_{t+1}) + fY^*t-1 + g(p_{t-1} - p^*)$$

where Y^* is the output gap, R is the nominal interest rate target, r^* is the “natural” or equilibrium real interest rate, p is inflation, and p^* is the inflation target (x and z are stochastic shocks) (see Meyer 2001). Note that the nominal interest rate target is set taking into account the output gap and the difference between actual and desired inflation. This then feeds into the IS-like demand gap equation based on the presumption that the nominal rate less expected inflation (the “real rate”) influences demand.

According to the consensus, in the long run only the supply side matters, while in the short run, both supply side and demand side variables matter. Unlike the 1960s version of Keynesian economics, fiscal policy is given a small role to play on the demand side (although government can influence the supply side, for example, through its tax policy). Hence, monetary policy is given the larger role to play in impacting demand and hence, growth. In the long run, money is neutral, but a variety of transmission avenues have been posited to allow money to influence demand in the short run.

The NMC rejects a simple monetarist transmission mechanism (from monetary aggregates to spending). Rather, it is recognized that central banks operate mostly with interest rate targets, but these are supposed to affect demand directly (interest elasticity of spending) and indirectly (portfolio effects). The money supply, in turn, results from an interaction of central bank policy, portfolio preferences of market participants, and the demand for credit. There is substantial consensus that the central bank has a strong, albeit short run, impact on demand. When the economy grows too fast, threatening to set off inflation, the central bank is to dampen demand by raising interest rates; when it grows too slowly (causing unemployment and raising the specter of deflation), the central bank lowers rates to stimulate demand.

Private banks and financial markets play an accommodating role, following the central bank's lead. When the central bank announces that it will tighten, financial market participants drive interest rates up, choking off credit demand and reducing spending, cooling the economy and dissipating inflationary pressures. The NMC encourages central bank transparency because effective monetary policy requires cooperation of financial markets; this, in turn, requires consistency of expectations so that central bank intentions are quickly incorporated in expectations and thus, in market behavior. For example, when the central bank raises nominal interest rates to fight inflation, if there are consistent expectations, markets quickly lower their inflation forecasts. This makes the real interest rate (nominal rate less expected inflation) rise even more, depressing demand and spending, allowing actual inflation to fall. The shared expectations makes policy more effective. Further policy changes are implemented only gradually to avoid disruptive "surprises" that could generate instability. In this way, the central bank can slow growth and inflation through a limited series of small interest rate hikes—avoiding the problems

created in the early 1980s when the Fed raised overnight interest rates above 20% in its attempt to fight inflation.

DEVELOPMENT OF AN ALTERNATIVE TO ORTHODOXY

The orthodox story of money's origins is rejected by most serious scholars outside the field of economics as historically inaccurate. (See Cramp 1962; Davies 1994; Heinsohn and Steiger 1983 and 1989; Ingham 2005; Keynes 1914; Maddox 1969; Robert 1956; and Wray 2004.) While there is evidence of ceremonial exchange in primitive society, there is nothing approximating money-less markets based on barter (outside trivial cases such as POW camps). Further, the orthodox sequence of "commodity (gold) money" to credit and fiat money does not square with the historical record. Written records of credits and debits predate precious metal coins by thousands of years. Indeed, financial accounting was highly sophisticated and much more "efficient" for market transactions than use of coins that developed thousands of years later, indicating that it is highly unlikely that coinage developed to facilitate exchange. Finally, historians and anthropologists have long disputed the notion that markets originated spontaneously from some primeval propensity, rather emphasizing the important role played by authorities in creating and organizing markets (Polanyi 1971).

Still, orthodox economists do not insist on the historical accuracy of their story, but instead use it to shed light on what they believe to be the nature of money and the proper role for government to play. Perhaps the most interesting aspect of the orthodox story is that it completely ignores the most obvious feature of the monetary landscape — in almost every case, a money of account (or "currency") is associated with a nation state. However, again, we can set to the side historical accuracy and ponder the implications for our understanding of the "nature" of money. In the orthodox story, money is a handy medium of exchange and government enters the picture as an interloper that abandons "natural" gold money in favor of "unnatural" fiat money that is imposed on markets. The obvious danger is that money then has no backing, nothing to guarantee its value relative to marketed commodities. This is why orthodox policy is so intimately connected to inflation control. In addition, and related to this, the orthodox story downplays all social

relations—including power. The main exception to this would be reference to state legal tender laws that force market participants to accept the state’s currency, and reserve ratios that are required of banks. With a fiat money, this is said to provide seigniorage to government. Still, government has, at best, a quasi-legitimate role, but this is tempered by a strong inclination to mismanage a fiat money that in the long run is neutral, but in the short run can distort market signals.

IS THERE AN ALTERNATIVE, SOCIO-ECONOMIC, VIEW?

To be sure, we will never “know” the origins of money. For one reason, it is not clear what we want to identify as money. Money is social in nature, consisting of a complex social practice that includes power and class relationships, socially constructed meaning, and abstract representations of social value. As Hudson (2004) rightly argues, ancient and even “primitive” society was not any less complex than today’s society, and economic relations were highly embedded within social structures that we little understand. At best, our story about money’s origins identifies what we believe to be important about money by singling out past, institutionalized behaviors that appear similar to those today that we wish to identify as “money”. While the alternative view *is* more consistent with the historical record, such as it exists, the essential point is that it sheds light on an alternative approach to finance, banks, and money.

To that end, we would locate the origin of money in credit and debt relations, with the money of account emphasized as the numeraire in which credits and debts are measured. The store of value function could also be important, for one stores wealth in the form of others’ debts. On the other hand, the medium of exchange function is de-emphasized; indeed, credits and debits could predate a functioning market. Some have suggested that we can locate the origins of credit and debt relations in the elaborate system of tribal wergild designed to prevent blood feuds (Goodhart 1998, 2005; Innes 1913, 1914, 1932; Wray 1998, 2004). Wergild fines were paid directly to victims and their families, and were socially established and levied by public assemblies. Note that fines were not levied in a unit of account, but rather in terms of a particular item that was both useful to the victim and more-or-less easily obtained by the perpetrator.

As Hudson (2004) reports, the words for debt in most languages are synonymous with sin or guilt, reflecting these early reparations for personal injury. Originally, until one paid the wergild fine, one was “liable” or “indebted” to the victim. The words for money, fines, tribute, tithes, debts, manprice, sin and, finally, taxes are so often linked in language as to eliminate the possibility of coincidence. It is almost certain that wergild fines were gradually converted to payments made to an authority. This could not occur in an egalitarian tribal society, but had to await the rise of some sort of ruling class. As Henry (2004) argues for the case of Egypt, the earliest ruling classes were probably religious officials who demanded tithes (ostensibly, to keep the gods happy). Alternatively, conquerors required payments of tribute by a subject population. Tithes and tribute thus came to replace wergild fines, and fines for “transgressions against society,” paid to the rightful ruler, could be levied for almost any conceivable activity (See Peacock 2003). Eventually, taxes would replace most fees, fines, and tribute.

A key innovation was the transformation of what had been the transgressor’s debt to the victim to a universal “debt” or tax obligation imposed by and payable to the authority. The next step was the standardization of the obligations in a unit of account. At first, the authority might have levied a variety of fines (and tributes, tithes, and taxes), in terms of goods or services to be delivered, one for each sort of transgression. Denominating payments in a unit of account would simplify matters, but as Grierson (1977, 1979) remarked, development of a unit of account would be conceptually difficult (see also Henry 2004). It is easier to come by measures of weight or length—the length of some anatomical feature of the ruler (from which comes our term for the device used to measure short lengths), or the weight of a quantity of grain. It is certainly not a coincidence that all the early money units (mina, shekel, livre, pound) were taken over from grain weights. For example, Hudson links the early monetary units developed in the temples and palaces of Sumer in the third millennium BC to the “monthly consumption unit, a ‘bushel’ of barley, the major commodity being disbursed” (Hudson 2004: 111).

Once we have the universal unit of account, credits and debts could be denominated in “money”. In a particularly insightful pair of articles, A. Mitchell Innes (1913, 1914) developed what might be called a credit theory of money (See also Gardiner 2004 and Ingham 2000, 2004a, 2004b). He mocked the view that “in modern days a

money-saving device has been introduced called *credit* and that, before this device was known all purchases were paid for in cash, in other words in coins” (Innes 1913: 389). Instead, he argued “careful investigation shows that the precise reverse is true” (Innes 1913: 389). Rather than selling in exchange for “some intermediate commodity called the ‘medium of exchange’,” a sale is really “the exchange of a commodity for a credit.” Innes called this the “primitive law of commerce”: “The constant creation of credits and debts, and their extinction by being cancelled against one another, forms the whole mechanism of commerce...” (Innes 1913). The market, then, is not viewed as the place where goods are exchanged, but rather as a clearinghouse for debts and credits. On this view, debts, credits, and their clearing are the general phenomena; trade in goods and services is subsidiary—one of the ways in which one becomes a debtor or creditor (or clears debts).

Finally, banks emerge to specialize in clearing:

Debts and credits are perpetually trying to get into touch with one another, so that they may be written off against each other, and it is the business of the banker to bring them together. This is done in two ways: either by *discounting bills*, or by *making loans*. (Innes 1913: 402)

There is thus a constant circulation of debts and credits through the medium of the banker who brings them together and clears them as the debts fall due. This is the whole science of banking as it was three thousand years before Christ, and as it is to-day. (Innes 1913: 403)

Banks are not intermediaries between “savers and investors,” but rather allow creditors and debtors to clear accounts with third person—bank-liabilities. If “A” has a debt to “B”, A does not have to find one of B’s IOUs to settle the debt, but rather can clear accounts using a bank’s liability. The debtor, A, writes a check on the bank, accepted by the creditor, B, which can use it to cancel any debt owed to the bank. The bank accepts its own IOU and clears it against B’s IOU, the bank’s asset.

Another important activity of banks is to operate clearing facilities between the state and its taxpayers: the taxpayer does not have to get hold of a government liability to pay taxes because the treasury accepts bank liabilities in payment. This then leads to a deduction of bank reserves. In this way, bank reserves are not viewed as the “raw material” from which banks are able to make loans (as in the orthodox deposit multiplier story), but rather as the government liability held by banks to facilitate clearing with the

government for their customers. In addition, reserves are used by banks for net clearing with one another, for example, when debtor “A” and creditor “B” use different banks. Rather than seeing government currency and reserves (“high powered money”, HPM, or monetary base) as a “fiat money” with no backing, the alternative approach insists that even government money can be viewed as a set of credits and debts. On the government’s balance sheet, HPM is a liability; on the holder’s balance sheet, HPM is an asset.

What backs the government liability? Orthodoxy responds “nothing” and insists that is the fundamental problem with “fiat” money. For a more satisfying answer, we need to explore the “very nature of credit throughout the world,” which is “the right of the holder of the credit (the creditor) to hand back to the issuer of the debt (the debtor) the latter’s acknowledgment or obligation” (Innes 1914: 161). Any issuer of a debt must accept her own debt back in payment, and Innes explains quite clearly that the government is no exception:

The holder of a coin or certificate has the absolute right to pay any debt due to the government by tendering that coin or certificate, and it is this right and nothing else which gives them their value. It is immaterial whether or not the right is conveyed by statute, or even whether there may be a statute law defining the nature of a coin or certificate otherwise. (Innes 1914: 161)

Government money—like any liability—must “reflux” back to the issuer. Still, money *is* different, because it is “redeemable by the mechanism of taxation” (Innes 1914: 15): “[I]t is the tax which imparts to the obligation its ‘value’.... A dollar of money is a dollar, not because of the material of which it is made, but because of the dollar of tax which is imposed to redeem it” (Innes 1914: 152). In other words, what “stands behind” the state’s currency is the tax system, and the state’s obligation to accept its own currency in payment of taxes. There is sovereign power behind state money—the power to impose fees, fines, tithes, or ultimately, taxes (Lerner 1943, 1947; Parguez 2002; Wray 1998).

Of course, saying that dollars have value because the government imposes a dollar tax does not mean that only those with tax liabilities will accept dollars, nor does it even mean that anyone accepting a dollar in payment is consciously thinking of the tax liability that can be removed by paying dollars. People also accept bank liabilities (checks drawn on banks) without realizing that the issuing bank must accept its own check to pay

down a loan it has made—the person accepting the check probably uses another bank and may not have any outstanding bank loans at all. However, if a bank began to refuse to accept its own liabilities in payment, these would very quickly lose all value (and the bank’s officers would just as quickly be taken to court). Similarly, so long as a government imposes a dollar tax on at least some of its citizens, and so long as it requires payment in the form of its dollar liabilities (even where banks play an intermediating role), this will be sufficient to ensure that the dollar will be desired—by someone. (We do not need to make the stronger case than the tax liability is a *necessary* condition for acceptance of dollar currency, but only that it is a *sufficient condition*.) And just as a bank’s liabilities will be accepted even by those who are not bank debtors, a government’s currency will be accepted by those with no current tax liabilities—and even by those with no conscious thought of tax liabilities.

NEW DIRECTIONS AND POLICY IMPLICATIONS OF THE ALTERNATIVE APPROACH

The alternative view of money leads to quite different conclusions regarding monetary and fiscal policy. It rejects even long run neutrality of money, although it might downplay the short run effectiveness of monetary policy. It also generates interesting insights on exchange rate regimes and international payments systems. In this section we will only briefly outline directions for alternative thinking about policy, focusing on the government budget constraint, on central bank control of money and inflation, and on international financial flows and exchange rate regimes.

It is commonly believed that fiscal policy faces a budget constraint according to which its spending must be “financed” by taxes, borrowing (bond sales), or “money creation.” Since many nations prohibit direct “money creation” by the government’s treasury, it is supposed that the last option is possible only through complicity of the central bank—which could buy the government’s bonds, and hence finance deficit spending by “printing money”. Actually, a government that issues its own currency spends exclusively by crediting bank accounts—using banks as “agents” of government, as discussed above—while tax payments result in debits to bank accounts. Deficit

spending by government takes the form of net credits to bank accounts. Those receiving net payments from government usually hold banking system liabilities, while banks hold reserves in the form of central bank liabilities (we can ignore leakages from deposits—and reserves—into cash held by the non-bank public as a simple complication). While there are fairly complex coordinating procedures followed by the central bank and treasury, the logical point is that deficit spending by the treasury results in net credits to banking system reserves (See Bell 2000, Bell and Wray 2003, and Wray 1998 for detailed analyses).

If these net credits lead to excess reserve positions, overnight interest rates will be bid down by banks offering the excess in the overnight interbank lending market. Unless the central bank is operating with a zero interest rate target, declining overnight rates trigger automatic open market bond sales to drain excess reserves. Hence, on a day-to-day basis, the central bank intervenes to offset undesired impacts of fiscal policy on reserves when they cause the overnight rate to move away from target. The process operates in reverse if the treasury runs a surplus, which results in net debits of reserves from the banking system. This puts upward pressure on overnight rates that is relieved by open market purchases. When fiscal policy is biased to run deficits (or surpluses) on a sustained basis, the central bank would run out of bonds to sell (or would accumulate too many bonds, offset on its balance sheet by a treasury deposit exceeding operating limits). Hence, policy is coordinated between the central bank and the treasury to ensure that the treasury will begin to issue new securities as it runs deficits (or retire old issues in the case of a budget surplus). Again, these coordinating activities can be varied and complicated, but they are not important to our analysis. When all is said and done, a budget deficit that creates excess reserves leads to bond sales by the central bank (open market) and the treasury (new issues) to drain all excess reserves; a budget surplus causes the reverse to take place when the banking system is short of reserves.

Bond sales (or purchases) by the treasury and central bank are, then, ultimately triggered by deviation of reserves from the position desired by (or required of) the banking system, which causes the overnight rate to move away from target (if the target is above zero). Bond sales, by either the central bank or the treasury, are properly seen as part of monetary policy designed to allow the central bank to hit its target, rather than as a

government “borrowing” operation. The interest rate target is exogenously “administered” by the central bank. Obviously, the central bank sets its target as a result of its belief about the impact of this rate on a range of economic variables that are included in its policy objectives. In other words, setting of this rate “exogenously” does not imply that the central bank is oblivious to economic and political constraints it believes to reign.

In sum, the notion of a “government budget constraint” only applies ex post, as a statement of an identity that has no significance as an economic constraint. When all is said and done, it is certainly true that any increase of government spending will be matched by an increase of taxes, an increase of high powered money (reserves and cash), and/or an increase of sovereign debt held. But this does not mean that taxes or bonds actually “financed” the government spending. Government might well enact provisions that dictate relations between changes to spending and changes to taxes revenues (a balanced budget, for example); it might require that bonds are issued before deficit spending actually takes place; it might require that the treasury have “money in the bank” (deposits at the central bank) before it can cut a check; and so on. These provisions might constrain government’s ability to spend at the desired level. However, economic analysis shows that they are self-imposed and are not economically necessary—although they may well be politically necessary.

What is the significance of this? It means that the state can take advantage of its role in the monetary system to mobilize resources in the public interest, without worrying about “availability of finance.” It still must worry about “availability” real resources — are resources underutilized? If not, increased government use of resources means that other activities will have to be curtailed—a trade-off that should be carefully evaluated. But in the normal situation in which significant portions of social resources are underutilized, the government can use the monetary system to put them to work, simply through its spending that is “financed” by crediting bank accounts. If this results in a budget deficit, that is no cause for alarm.

Turning to conventional views on money, as discussed above, there is a long-held belief that the central bank can and should control the money supply. Innes (like Tooke and others before him — see Wray 1990) made a very strong case that attempts to control

the issue of bank notes (or, today, the quantity of deposits issued by banks) is fundamentally misguided:

To attempt the regulation of banking by limiting the note issue is to entirely misunderstand the whole banking problem, and to start at the wrong end. The danger lies not in the bank note but in imprudent or dishonest banking. Once insured that banking shall be carried on by honest people under a proper understanding of the principles of credit and debt, and the note issue may be left to take care of itself. (Innes 1913: 407)

This argument can be carried through to the “money supply” as a whole: the rate of growth of any monetary aggregate provides no information of use to policymakers—whether we are talking of HPM, M1, M2, or any broader monetary measure (see Moore 1988). The quantity of an outstanding “money stock” is simply an aggregation of some portion of the quantity of credits (and equally, debts) outstanding at some point in time. It can grow through time, either because the rate of creation of new credits (and debts) has risen, or because the rate of “retirement” of credits (that is, matching credits and debts to clear them) has fallen. Either of these can result from a variety of circumstances, and correlation with some measure of the “value” of money (as measured by an index of prices of a selected basket of marketed commodities) could be entirely coincidental.

Further, even if the link between “money growth” and “inflation” were more than coincidence, which policy might constrain “money growth” is far from unambiguous. Direct “credit controls” that constrained lending for, say, real estate purchases, could be effective in cooling overheated housing construction markets, which *could* reduce the growth of a price index that included housing prices, and could *perhaps* reduce the growth of some monetary aggregate. However, it is hard to see why the usual tool used by modern central banks—rate hikes—would generally result in generally lower money growth and inflation (however defined). Interest rate changes have multifarious effects on spending, income distribution, solvency, and hence, financial stability and costs. For example, rate hikes will shift the distribution of income from debtors to creditors, which has complex—perhaps offsetting—effects on spending (consumption, investment, government, and foreign sector). While it is generally believed that rate hikes reduce borrowing and spending, lowering aggregate demand and thus, price pressures, this could be offset if not overwhelmed by the effects of higher interest costs on businesses that

have to finance wages, inventories, and capital projects. Finally, government is a net payer of interest in most nations, and as rates rise, its spending rises—increasing interest income and, presumably, spending of the nongovernment sector. It is no wonder that empirical studies have not been able to find consistent evidence in favor of the conventional views of interest rate-spending-inflation relations.

In conclusion, even if there is a link between “money” and “inflation” (however defined), it is not at all clear that conventional monetary policy has any predictable effect on inflation (or spending). This does not mean that money is neutral, for money is key to the production process in a capitalist economy. But it does cast serious doubt on the NMC call for fine-tuning of “demand gaps” through use of monetary policy.

There is a great deal of confusion over international “flows” of currency, reserves, and finance, much of which results from failure to distinguish between a floating versus a fixed exchange rate. For example, it is often claimed that the United States needs “foreign savings” in order to “finance” its persistent trade deficit that results from American consumers who are said to be “living beyond their means.” Such a statement makes no sense for a sovereign nation operating on a flexible exchange rate. For example, a United States trade deficit results when the rest of the world (ROW) wishes to net save in the form of dollar assets. From the perspective of the ROW, exports to the United States reflect the “cost” imposed on citizens of the ROW to obtain the “benefit” of accumulating dollar denominated assets. From the perspective of America as a whole, the “net benefit” of the trade deficit consists of the net imports that are enjoyed. In contrast to the conventional view, it is more revealing to think of the United States trade deficit as “financing” the net dollar saving of the ROW—rather than thinking of the ROW as “financing” the United States trade deficit. If and when the ROW decides it has a sufficient stock of dollar assets, the United States trade deficit will disappear.

Note that these arguments are predicated on adoption of a floating exchange rate. A country that operates on a gold standard, a currency board, or a fixed exchange rate is constrained in its ability to use the monetary system in the public interest because it must accumulate reserves of the asset(s) to which it has pegged exchange rates. This leads to significant constraints on both monetary and fiscal policy because they must be geared to ensure a trade surplus that will allow accumulation of the reserve asset. This is because

such reserves are required to maintain a credible policy of pegging the exchange rate. On a fixed exchange rate, if a country faces a current account deficit, it will need to depress domestic demand, wages, and prices in an effort to reduce imports and increase exports. In a sense, the nation loses policy independence to pursue a domestic agenda. Floating the exchange rate effectively frees policy to pursue other domestic goals, such as maintenance of full employment.

By emphasizing the importance of the link between the “fiat” (or state) unit of account and public finance, the alternative approach to money points to new directions for monetary, fiscal, and exchange rate policies that stand in stark contrast to the orthodox view of money as little more than a market lubricant. There is still much research to be undertaken to further develop a truly socio-economic approach to these issues, but a good place to start is with the nature of sovereign power and credit-debt relations.

REFERENCES

- Bell, Stephanie. 2000. "Do taxes and bonds finance government spending?" *Journal of Economic Issues* 34: 603-620.
- . 2001. "The role of the state and the hierarchy of money." *Cambridge Journal of Economics* 25(2) March: 149-163.
- Bell, Stephanie and L. Randall Wray. 2003. "Fiscal Impacts on Reserves and the Independence of the Fed." *Journal of Post Keynesian Economics* 25(2): 263-271.
- Bell, Stephanie, John F. Henry, and L. Randall Wray. 2004. "A Chartalist critique of John Locke's theory of property, accumulation, and money: Or is it moral to trade your nuts for gold?" *Review of Social Economy*, LXII(1) March: 51-65.
- Brunner, Karl. 1968. "The role of money and monetary policy." *Federal Reserve Bank of St. Louis Review* 50(July): 9.
- Carruthers, Bruce G. and Sarah Babb. 1996. "The color of money and the nature of value: Greenbacks and gold in Post-Bellum America." *American Journal of Sociology* 101(6): 1556-91.
- Cramp, A.B. 1962. "Two views on money." *Lloyds Bank Review*, July: 1.
- Davies, G. 1994. *A History of Money from Ancient Times to the Present Day*. Cardiff: University of Wales Press.
- Friedman, Milton. 1969. *The Optimal Quantity of Money and Other Essays*. Chicago: Aldine.
- Gardiner, Geoffrey W. 2004. "The primacy of trade debts in the development of money." in L.R. Wray (ed), *Credit and State Theories of Money: the contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar: 79-98.
- Goodhart, Charles A.E. 1989. *Money, Information and Uncertainty*. Cambridge, Mass.: MIT Press.
- . 1998. "Two concepts of money: Implications for the analysis of optimal currency areas." *European Journal of Political Economy* 14: 407-432.
- . 2005. "Review of Credit and State Theories of Money: The contributions of A. Mitchell Innes." *History of Political Economy* 37(4) Winter: 759-761.

- Gordon, Robert J. 1990. "What Is New-Keynesian Economics?" *Journal of Economic Literature* 28(3) September: 1115-1171.
- Grierson, Philip. 1979. *Dark Age Numismatics*. London: Variorum Reprints.
- . 1977. *The Origins of Money*. London: Athlone Press.
- Heinsohn, Gunnar and Otto Steiger. 1983. *Private Property, Debts and Interest or: The Origin of Money and the Rise and Fall of Monetary Economics*. Naples, Italy: University of Bremen.
- . 1989. "The Veil of Barter: The Solution to the 'Task of Obtaining Representations of an Economy in Which Money is Essential.'" In J. A. Kregel (ed). *Inflation and Income Distribution in Capitalist Crises: Essays in Memory of Sydney Weintraub*. New York: New York University Press.
- Henry, John. 2004. "The social origins of money: The case of Egypt." In L.R. Wray (ed), *Credit and State Theories of Money: The contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar: 79-98.
- Hudson, Michael. 2001. "Public-Sector vs. Individualistic (and Debt vs. Barter) Theories of the Origins of Money." Manuscript.
- . 2004. "The archaeology of Money: Debt versus barter theories of money's origins." In L.R.Wray (ed), *Credit and State Theories of Money: The contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar: 99-127.
- Ingham, Geoffrey. 2000. "Babylonian Madness: On the Historical and Sociological Origins of Money." In John Smithin (ed.) *What Is Money*. London & New York: Routledge.
- . 2004a. "The emergence of capitalist credit money." In L.R. Wray (ed), *Credit and State Theories of Money: The contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar: 173-222.
- . 2004b. *The Nature of Money*, Cambridge: Polity Press Ltd.
- (editor). 2005. *Concepts of Money: Interdisciplinary perspectives from economics, sociology, and political science*, Edward Elgar: Cheltenham.
- Innes, A. M. 1913. "What is money?" *Banking Law Journal*, May: 377-408.
- . 1914. "The credit theory of money." *Banking Law Journal*, January: 151-68.
- . 1932. *Martyrdom in Our Times: Two Essays on Prisons and Punishment*. London: Williams & Norgate, Ltd.

- Keynes, J.M. 1930. *A Treatise on Money*. Vols. I and II (1976), New York: Harcourt, Brace & Co.
- . 1914. "What is Money?" review article in *Economic Journal* 24(95) September: 419-421.
- . 1982. *The Collected Writings of John Maynard Keynes, Volume XXVIII*, Donald Moggridge (ed), London and Basingstoke: MacMillan.
- . 1937. "The 'Ex Ante' Theory of the Rate of Interest." *Economic Journal*, December.
- Klein, Peter G. and George Selgin. 2000. "Menger's theory of money: Some experimental evidence." In John Smithin (ed.) *What Is Money*. London & New York: Routledge.
- Knapp, Georg Friedrich. (1924) 1973. *The State Theory of Money*. Clifton: Augustus M. Kelley.
- Lerner, Abba P. 1943. "Functional finance and the federal debt." *Social Research* 10: 38-51.
- . 1947. "Money as a creature of the state." *American Economic Review* 37: 312-317.
- Maddox, Thomas, Esq. 1969. *The History and Antiquities of the Exchequer of the Kings of England in Two Periods*. Vols. I & II, Second edition. New York: Greenwood Press.
- Mankiw, N. Gregory Mankiw. 1989. "Real Business Cycles: A New Keynesian Perspective." *The Journal of Economic Perspectives* 3(3) Summer: 79-90.
- Moore, Basil J. 1988. *Horizontalists and Verticalists: The Macroeconomics of Credit Money*, Cambridge: Cambridge University Press.
- Meyer, L. H. 2001. "Does Money Matter?" The Homer Jones Memorial Lecture, Washington University. St. Louis, Missouri: Federal Reserve Bank
- Parguez, Alain. 2002. "A monetary theory of public finance." *International Journal of Political Economy* 32(3) Fall: 80-97.
- Peacock, Mark S. 2004. "State, Money, Catallaxy: Underlaboring for a chartalist theory of money." *Journal of Post Keynesian Economics* 26(2) Winter: 205-225.

- Polanyi, Karl. 1971. "Aristotle Discovers the Economy." in Polanyi, Karl, Conrad M. Arensberg, and Harry W. Pearson (eds), *Trade and Market in the Early Empires*, Chicago: Regnery Company: 64.
- Robert, Rudolph. 1956. "A short history of tallies." in *Studies in the History of Accounting*, A.C. Littleton and B.S. Yamey (eds.), Homewood, Illinois: Richard D. Irwin, Inc.: 75-85.
- Samuelson, Paul. 1973. *Economics*, McGraw-Hill, Ninth Edition, New York.
- Wray, L. Randall. 1998. *Understanding Modern Money: The Key to Full Employment and Price Stability*. Cheltenham: Edward Elgar.
- . 1990. *Money and Credit in Capitalist Economies: The Endogenous Money Approach*, Aldershot,: Edward Elgar.
- . (Editor) 2004. *Credit and State Theories of Money: The contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar.
- Zelizer, Viviana A. 1989. "The social meaning of money: 'Special money'." *American Journal of Sociology* 95(2): 342-77.