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Austrian Definitions of the Supply of Money

The Definition of the Supply of Money

The concept of the supply of money plays a vitally important role, in differing ways, in both the Austrian and the Chicago Schools of economics. Yet, neither school has defined the concept in a full or satisfactory manner; as a result, we are never sure to which of the numerous alternative definitions of the money supply either school is referring.

The Chicago School definition is hopeless from the start. For, in a question-begging attempt to reach the conclusion that the money supply is the major determinant of national income, and to reach it by statistical rather than theoretical means, the Chicago School *defines* the money supply as that entity which correlates most closely with national income. This is one of the most flagrant examples of the Chicagoite desire to avoid essentialist concepts, and to "test" theory by statistical correlation; with the result that the supply of money is not really defined at all. Furthermore, the approach overlooks the fact that statistical correlation cannot establish causal connections; this can only be done by a genuine theory that works with definable and defined concepts.[1]

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[1]In a critique of the Chicago approach, Leland Yeager writes:

> But it would be awkward if the definition of money accordingly had to change from time to time and country to country. Furthermore, even if money defined to include certain near-moneys does correlate somewhat more closely with income than money

In Austrian economics, Ludwig von Mises set forth the essentials of the concept of the money supply in his *Theory of Money and Credit*, but no Austrian has developed the concept since then, and unsettled questions remain (e.g., are savings deposits properly to be included in the money supply?).[2] And since the concept of the supply of money is vital both for the theory and for applied historical analysis of such consequences as inflation and business cycles, it becomes vitally important to try to settle these questions, and to demarcate the supply of money in the modern world. In *The Theory of Money and Credit*, Mises set down the correct guidelines: money is the general medium of exchange, the thing that all other goods and services are traded for, the final payment for such goods on the market.

In contemporary economics, definitions of the money supply range widely from cash + demand deposits (M1) up to the inclusion of virtually all liquid assets (a stratospherically high M). No contemporary economist excludes demand deposits from his definition of money. But it is useful to consider exactly why this should be so. When Mises wrote *The Theory of Money and Credit* in 1912, the inclusion of demand deposits in the money supply was not yet a settled question in economic thought. Indeed, a controversy over the

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> narrowly defined, that fact does not necessarily impose the broad definition. Perhaps the amount of these near-moneys depends on the level of money-income and in turn on the amount of medium of exchange. . . . More generally, it is not obvious why the magnitude with which some other magnitude correlates most closely deserves overriding attention. . . . The number of bathers at a beach may correlate more closely with the number of cars parked there than with either the temperature or the price of admission, yet the former correlation may be less interesting or useful than either of the latter. (Leland B. Yeager, "Essential Properties of the Medium of Exchange," *Kyklos* [1968], reprinted in *Monetary Theory*, ed. R.W. Glower [London: Penguin Books, 1969], p. 38)

Also see, Murray N. Rothbard, "The Austrian Theory of Money," in Edwin Dolan, ed., *The Foundations of Modern Austrian Economics* (Kansas City, Kansas: Sheed and Ward, 1976), pp. 179–82; included in this volume as chapter 37, see pp. 704–06.

[2]Ludwig von Mises, *The Theory of Money and Credit*, 3rd ed. (New Haven, Conn.: Yale University Press, 1953).

precise role of demand deposits had raged throughout the nineteenth century. And when Irving Fisher wrote his *Purchasing Power of Money* in 1913, he still felt it necessary to distinguish between M (the supply of standard cash) and M1, the total of demand deposits.[3] Why then did Mises, the developer of the Austrian theory of money, argue for including demand deposits as part of the money supply "in the broader sense"? Because, as he pointed out, bank demand deposits were *not* other goods and services, other assets exchangeable for cash; they were, instead, redeemable for cash at par on demand. Since they were so redeemable, they functioned, not as a good or service exchanging for cash, but rather as a warehouse receipt for cash, redeemable on demand at par as in the case of any other warehouse. Demand deposits were therefore "money-substitutes" and functioned as equivalent to money in the market. Instead of exchanging cash for a good, the owner of a demand deposit and the seller of the good would both treat the deposit *as if* it were cash, a surrogate for money. Hence, receipt of the demand deposit was accepted by the seller as final payment for his product. And *so long* as demand deposits *are* accepted as equivalent to standard money, they will function as part of the money supply.

It is important to recognize that demand deposits are not automatically part of the money supply by virtue of their very existence; they continue as equivalent to money only so long as the subjective estimates of the sellers of goods on the market *think* that they are so equivalent and accept them as such in exchange. Let us hark back, for example, to the good old days before federal deposit insurance, when banks were liable to bank runs at any time. Suppose that the Jonesville Bank has outstanding demand deposits of $l million; that million dollars is then its contribution to the aggregate money supply of the country. But suppose that suddenly the soundness of the Jonesville Bank is severely called into question; and Jonesville demand deposits are accepted only at a discount, or even not at all. In that case, as a run on the bank develops, its demand deposits no longer function as part of the money supply, certainly not at par. So

[3]Irving Fisher, *The Purchasing Power of Money* (New York: Macmillan, 1913).

that a bank's demand deposit only functions as part of the money supply so long as it is treated as an equivalent substitute for cash.[4]

It might well be objected that since, in the era of fractional reserve banking, demand deposits are not *really* redeemable at par on demand, that then only standard cash (whether gold or fiat paper, depending upon the standard) can be considered part of the money supply. This contrasts with 100 percent reserve banking, when demand deposits are *genuinely* redeemable in cash, and function as genuine, rather than pseudo, warehouse receipts to money. Such an objection would be plausible, but would overlook the Austrian emphasis on the central importance in the market of *subjective* estimates of importance and value. Deposits are not *in fact* all redeemable in cash in a system of fractional reserve banking; but so long as individuals on the market *think* that they are so redeemable, they continue to function as part of the money supply. Indeed, it is precisely the expansion of bank demand deposits beyond their reserves that accounts for the phenomena of inflation and business cycles. As noted above, demand deposits must be included in the concept of the money supply so long as the market *treats* them as equivalent; that is, so long as individuals *think* that they are redeemable in cash. In the current era of federal deposit insurance, added to the existence of a central bank that prints standard money and functions as a lender of last resort, it is doubtful that this confidence in redeemability can ever be shaken.

All economists, of course, include standard money in their concept of the money supply. The justification for including demand deposits, as we have seen, is that people believe that these deposits are redeemable in standard money on demand, and therefore treat them as equivalent, accepting the payment of demand deposits as a surrogate for the payment of cash. But if demand deposits are to be included in the money supply for this reason, then it follows that any other entities that follow the same rules must also be included in the supply of money.

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[4]Even now, in the golden days of federal deposit insurance, a demand deposit is not always equivalent to cash, as anyone who is told that it will take 15 banking days to clear a check from California to New York can attest.

Let us consider the case of savings deposits. There are several common arguments for *not* including savings deposits in the money supply: (1) they are not redeemable on demand, the bank being legally able to force the depositors to wait a certain amount of time (usually 30 days) before paying cash; (2) they cannot be used directly for payment. Checks can be drawn on demand deposits, but savings deposits must first be redeemed in cash upon presentation of a passbook; (3) demand deposits are pyramided upon a base of total reserves as a multiple of reserves, whereas savings deposits (at least in savings banks and savings and loan associations) can only pyramid on a one-to-one basis on top of demand deposits (since such deposits will rapidly "leak out" of savings and into demand deposits).

Objection (1), however, fails from focusing on the legalities rather than on the economic realities of the situation; in particular, the objection fails to focus on the *subjective* estimates of the situation on the part of the depositors. In reality, the power to enforce a thirty-day notice on savings depositors is never enforced; hence, the depositor invariably thinks of his savings account as redeemable in cash on demand. Indeed, when, in the 1929 depression, banks tried to enforce this forgotten provision in their savings deposits, bank runs promptly ensued.[5]

Objection (2) fails as well, when we consider that, even within the stock of standard money, some part of one's cash will be traded more actively or directly than others. Thus, suppose someone holds part of his supply of cash in his wallet, and another part buried under the floorboards. The cash in the wallet will be exchanged and turned over rapidly; the floorboard money might not be used for decades. But surely no one would deny that the person's floorboard hoard is just as much part of his money stock as the cash in his wallet. So that mere lack of activity of part of the money stock in no way negates its inclusion as part of his supply of money. Similarly, the fact that passbooks must be presented before a savings deposit can be used in

[5]On the equivalence of demand and savings deposits during the Great Depression, and on the bank runs resulting from attempts to enforce the 30-day wait for redemption, see Murray N. Rothbard, *America's Great Depression*, 3rd ed. (Kansas City, Kansas: Sheed and Ward, 1975), pp. 84, 316. Also see Lin Lin, "Are Time Deposits Money?" *American Economic Review* (March 1937): 76–86.

exchange should not negate its inclusion in the money supply. As I have written elsewhere, suppose that for some cultural quirk—say widespread revulsion against the number "5"—no seller will accept a five-dollar bill in exchange, but only ones or tens. In order to use five-dollar bills, then, their owner would first have to go to a bank to exchange them for ones or tens, and then use those ones or tens in exchange. But surely, such a necessity would not mean that someone's stock of five-dollar bills was not part of his money supply.[6]

Neither is Objection (3) persuasive. For while it is true that demand deposits are a multiple pyramid on reserves, whereas savings bank deposits are only a one-to-one pyramid on demand deposits, this distinguishes the sources or volatility of different forms of money, but should not exclude savings deposits from the supply of money. For demand deposits, in turn, pyramid on top of cash, and yet, while each of these forms of money is generated quite differently, so long as they exist each forms part of the total supply of money in the country. The same should then be true of savings deposits, whether they be deposits in commercial or in savings banks.

A fourth objection, based on the third, holds that savings deposits should not be considered as part of the money supply because they are efficiently if indirectly controllable by the Federal Reserve through its control of commercial bank total reserves and reserve requirements for demand deposits. Such control is indeed a fact, but the argument proves far too much; for, after all, demand deposits are themselves and in turn indirectly but efficiently controllable by the Fed through its control of total reserves and reserve requirements. In fact, control of savings deposits is not nearly as efficient as of demand deposits; if, for example, savings depositors would keep their money and active payments in the savings banks, instead of invariably "leaking" back to checking accounts, savings banks *would* be able to pyramid new savings deposits on top of commercial bank demand deposits by a large multiple.[7]

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[6]Rothbard, "The Austrian Theory of Money," p. 181; see p. 707 in this volume.

[7]In the United States, the latter is beginning to be the case, as savings banks are increasingly being allowed to issue checks on their savings deposits. If that became the rule, moreover, Objection (2) would then fall on this ground alone.

Not only, then, should savings deposits be included as part of the money supply, but our argument leads to the conclusion that no valid distinction can be made between savings deposits in commercial banks (included in M_2) and in savings banks or savings and loan associations (also included in M_3).[8] Once savings deposits are conceded to be part of the money supply, there is no sound reason for balking at the inclusion of deposits of the latter banks.

On the other hand, a *genuine* time deposit—a bank deposit that would indeed only be redeemable at a certain point of time in the future, would merit very different treatment. Such a time deposit, not being redeemable on demand, would instead be a credit instrument rather than a form of warehouse receipt. It would be the result of a credit transaction rather than a warehouse claim on cash; it would therefore not function in the market as a surrogate for cash.

Ludwig von Mises distinguished carefully between a *credit* and a *claim* transaction: a credit transaction is an exchange of a present good (e.g., money which can be used in exchange at any present moment) for a future good (e.g., an IOU for money that will only be available in the future). In this sense, a demand deposit, while legally designated as credit, is actually a present good—a warehouse claim to a present good that is similar to a bailment transaction, in which the warehouse pledges to redeem the ticket at any time on demand.

Thus, Mises wrote:

> It is usual to reckon the acceptance of a deposit which can be drawn upon at any time by means of notes or cheques as a type of credit transaction and juristically this view is, of course, justified; but economically, the case is not one of a credit transaction. If *credit* in the economic sense means the exchange of a present good or a present service against a future good or a future service, then it is hardly possible to include the transactions in question under the conception of credit. A depositor of a sum of money who acquires in exchange for it a claim convertible into money at any time which will perform exactly the same service for him as the

[8]Regardless of the legal form, the "shares" of formal ownership in savings and loan associations are economically precisely equivalent to the new deposits in savings banks, an equivalence that is universally acknowledged by economists.

> sum it refers to has exchanged no present good for a future good. The claim that he has acquired by his deposit is also a present good for him. The depositing of the money in no way means that he has renounced immediate disposal over the utility it commands.[9]

It might be, and has been, objected that credit instruments, such as bills of exchange or Treasury bills, can often be sold easily on credit markets—either by the rediscounting of bills or in selling old bonds on the bond market; and that therefore they should be considered as money. But many assets are "liquid," i.e., can easily be sold for money. Blue-chip stocks, for example, can be easily sold for money, yet no one would include such stocks as part of the money supply. The operative difference, then, is not whether an asset is liquid or not (since stocks are no more part of the money supply than, say, real estate) but whether the asset is redeemable at a fixed rate, at par, in money. Credit instruments, similarly to the case of shares of stock, are sold for money on the market at fluctuating rates. The current tendency of some economists to include assets as money purely because of their liquidity must be rejected; after all, in some cases, inventories of retail goods might be as liquid as stocks or bonds, and yet surely no one would list these inventories as part of the money supply. They are *other* goods sold for money on the market.[10]

One of the most noninflationary developments in recent American banking has been the emergence of *certificates of deposit* (CDs), which are genuine time and credit transactions. The purchaser of the CD, or at least the large-denomination CD, knows that he has loaned money to the bank which the bank is only bound to repay at a specific date in the future; hence, large-scale CDs are properly not included in the M2 and M3 definitions of the supply of money. The same might be said to be true of various programs of time deposits which savings banks and commercial banks have been developing in recent years: in which the depositor agrees to retain his money in the bank for a specified period of years in exchange for a higher interest return.

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[9]Mises, *Theory of Money and Credit*, p. 268.

[10]For Mises's critique of the view that endorsed bills of exchange in early nineteenth-century Europe were really part of the money supply, see ibid., pp. 284–86.

There are worrisome problems, however, that are attached to the latter programs, as well as to *small-denomination* CDs; for in these cases, the deposits *are* redeemable before the date of redemption at fixed rates, but at penalty discounts rather than at par. Let us assume a hypothetical time deposit, due in five years' time at $10,000, but redeemable at present at a penalty discount of $9,000. We have seen that such a time deposit should certainly *not* be included in the money supply in the amount of $10,000. But should it be included at the fixed, though penalty rate of $9,000, or not be included at all? Unfortunately, there is no guidance on this problem in the Austrian literature. Our inclination is to include these instruments in the money supply at the penalty level (e.g., $9,000), since the operative distinction, in our view, is not so much the par redemption as the ever-ready possibility of redemption at some fixed rate. If this is true, then we must also include in the concept of the money supply federal savings bonds, which are redeemable at fixed, though penalty rates, until the date of official maturation.

Another entity which should be included in the total money supply on our definition is *cash surrender values* of life insurance policies; these values represent the investment rather than the insurance part of life insurance and are redeemable in cash (or rather in bank demand deposits) at any time on demand. (There are, of course, no possibilities of cash surrender in other forms of insurance, such as term life, fire, accident, or medical.) Statistically, cash surrender values may be gauged by the total of policy reserves less policy loans outstanding, since policies on which money has been borrowed from the insurance company by the policyholder are not subject to immediate withdrawal. Again, the objection that policyholders are reluctant to cash in their surrender values does not negate their inclusion in the supply of money; such reluctance simply means that this part of an individual's money stock is relatively inactive.[11]

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[11]For hints on the possible inclusion of life insurance cash surrender values in the supply of money, see Gordon W. McKinley, "Effects of Federal Reserve Policy on Nonmonetary Financial Institutions," in Herbert V. Prochnow, ed., *The Federal Reserve System* (New York: Harper and Bros., 1960), p. 217*n*; and Arthur F. Burns, *Prosperity without Inflation* (Buffalo: Economica Books, 1958), p. 50.

One caveat on the inclusion of noncommercial bank deposits and other fixed liabilities into the money supply: just as the cash and other reserves of the commercial banks are not included in the money supply, since that would be double counting once demand deposits are included; in the same way, the demand deposits owned by these noncommercial bank creators of the money supply (savings banks, savings and loan companies, life insurance companies, etc.) should be deducted from the total demand deposits that are included in the supply of money. In short, if a commercial bank has demand deposit liabilities of $l million, of which $100,000 are owned by a savings bank as a reserve for its outstanding savings deposits of $2 million, then the total money supply to be attributed to these two banks would be $2.9 million, deducting the savings bank reserve that is the base for its own liabilities.

One anomaly in American monetary statistics should also be cleared up: for a reason that remains obscure, demand deposits in commercial banks or in the Federal Reserve Banks owned by the Treasury are excluded from the total money supply. If, for example, the Treasury taxes citizens by $1 billion, and their demand deposits are shifted from public accounts to the Treasury account, the total supply of money is considered to have fallen by $1 billion, when what has really happened is that $1 billion worth of money has (temporarily) shifted from private to governmental hands. Clearly, Treasury deposits should be included in the national total of the money supply.

Thus, we propose that the money supply should be defined as all entities which are redeemable on demand in standard cash at a fixed rate, and that, in the United States at the present time, this criterion translates into:

M_a (a = Austrian) = total supply of cash-cash held in the banks + total demand deposits + total savings deposits in commercial and savings banks + total shares in savings and loan associations + time deposits and small CDs at current redemption rates + total policy reserves of life insurance companies—policy loans outstanding—demand deposits owned by savings banks, saving and loan associations, and life insurance companies + savings bonds, at current rates of redemption.

M_a hews to the Austrian theory of money, and, in so doing, broadens the definition of the money supply far beyond the narrow M_1, and yet avoids the path of those who would broaden the definition to the virtual inclusion of all liquid assets, and who thus would obliterate the uniqueness of the money phenomenon as the final means of payment for all other goods and services.

The Money Supply and Credit Expansion to Business

In contrast to the Chicago School, the Austrian economist cannot rest content with arriving at the proper concept of the supply of money. For while the supply of money (M_a) is the vitally important supply side of the "money relation" (the supply of and demand for money) that determines the array of prices, and is therefore the relevant concept for analyzing price inflation, different parts of the money supply play very different roles in affecting the business cycle. For the Austrian theory of the trade cycle reveals that *only* the inflationary bank credit expansion that enters the market through new business loans (or through purchase of business bonds) generates the over-investment in higher-order capital goods that leads to the boom-bust cycle. Inflationary bank credit that enters the market through financing government deficits does *not* generate the business cycle; for, instead of causing overinvestment in higher-order capital goods, it simply reallocates resources from the private to the public sector, and also tends to drive up prices. Thus, Mises distinguished between "simple inflation," in which the banks create more deposits through purchase of government bonds, and genuine "credit expansion," which enters the business loan market and generates the business cycle. As Mises writes:

> In dealing with the [business cycle] we assumed that the total amount of additional fiduciary media enters the market system via the loan market as advances to business. . . .
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> There are, however, instances in which the legal and technical methods of credit expansion are used for a procedure catallactically utterly different from genuine credit expansion. Political and institutional convenience sometimes makes it expedient for a government to take advantage of the facilities of banking as a substitute for issuing government fiat money. The treasury borrows from the bank, and the bank provides the funds needed by issuing additional

> banknotes or crediting the government on a deposit account. Legally the bank becomes the treasury's creditor. In fact the whole transaction amounts to fiat money inflation. The additional fiduciary media enter the market by way of the treasury as payment for various items of government expenditure. . . . They affect the loan market and the gross market rate of interest, apart from the emergence of a positive price premium, only if a part of them reaches the loan market at a time at which their effects upon commodity prices and wage rates have not yet been consummated.[12]

Mises did not deal with the relatively new post-World War II phenomenon of large-scale bank loans to consumers, but these too cannot be said to generate a business cycle. Inflationary bank loans to consumers will artificially deflect social resources to consumption rather than investment, as compared to the unhampered desires and preferences of the consumers. But they will *not* generate a boom-bust cycle, because they will not result in "over" investment, which must be liquidated in a recession. Not enough investments will be made, but at least there will be no flood of investments which will later have to be liquidated. Hence, the effects of diverting consumption investment proportions away from consumer time preferences will be asymmetrical, with the overinvestment-business cycle effects only resulting from inflationary bank loans to business. Indeed, the reason why bank financing of government deficits may be called simple rather than cyclical inflation is because government demands are "consumption" uses as decided by the preferences of the ruling government officials.

In addition to M_a, then, Austrian economists should be interested in *how much* of a new supply of bank money enters the market through new loans to business. We might call the portion of new M_a that is created in the course of business lending, M_b (standing for either business loans or business cycle). If, for example, a bank creates $1 million of deposits in a given time period, and $400,000 goes into consumer loans and government bonds, while, $600,000 goes into business loans and investments, then M_b will have increased by $600,000 in that period.

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[12]Ludwig von Mises, *Human Action*, 3rd rev. ed. (Chicago: Henry Regnery, 1966), p. 570.

In examining M_b on the American financial scene, we can ignore savings banks and savings and loan associations, whose assets are almost exclusively invested in residential mortgages. Savings bonds, of course, simply help finance government activity. We are left, then, with commercial banks (as well as life insurance investments). Commercial bank assets are comprised of reserves, government bonds, consumer loans, and business loans and investments (corporate bonds). Their liabilities consist of demand deposits, time deposits (omitting large CDs), large CDs, and capital. In trying to discover movements of M_b, with any precision, we founder on the difficulty that it is impossible in practice to decide to what extent any increases of business loans and investments have been financed by an increase of deposits, thus increasing M_b, and how much they have been financed by increases of capital and large CDs. Looking at the problem another way, it is impossible to determine how much of an increase in deposits (increase in M_a) went to finance business loans and investments, and how much went into reserves or consumer loans. In trying to determine increases in M_b for any given period, then, it is impossible to be scientifically precise, and the economic historian must act as an "artist" rather than as an apodictic scientist. In practice, since bank capital is relatively small, as are bank investments in corporate bonds, the figure for commercial bank loans to business can provide a rough estimate of movements in M_b. With the development of the concepts of M_a (total supply of money) and M_b (total new money supply going into business credit), we have attempted to give more precision to the Austrian theory of money, and to the theoretical as well as historical Austrian analysis of monetary and business cycle phenomena.

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Gold vs. Fluctuating Fiat Exchange Rates

Scarcely more than a year since it was signed, the Smithsonian Agreement, the "greatest monetary agreement in the history of the world" (in the words of President Nixon) lay in shambles. And so the world vibrates, with increasing intensity, between fixed and fluctuating exchange rates, with each system providing only a different set of ills. We apparently live in a world of perpetual international monetary crises.

In this distressing situation, the last few years have seen the burgeoning of a school of economists who counsel a simple solution for the world's monetary illness. Since fixed exchange rates between currencies seem to bring only currency shortages and surpluses, black markets and exchange controls, and a chronic series of monetary crises, why not simply set all these currencies free to fluctuate with one another? This group of economists, headed by Professor Milton Friedman and the "Chicago School," claims to be speaking blunt truths in the name of the "free market." The simple and powerful case of the Friedmanites goes somewhat as follows:

Economic theory tells us the myriad evils that stem from any attempt at price controls of goods and services. Maximum price controls lead to artificially created shortages of the product; minimum controls lead to artificial unsold surpluses. There is a ready cure for these economic ills; they are caused not by processes deep within the free market economy, but by arbitrary government intervention into the market. Remove the controls, let market processes have full sway, and shortages and surpluses will disappear.

Originally appeared in *Gold is Money*, Hans F. Sennholz, ed. (Westport, Conn.: Greenwood Press, 1975), pp. 24–40.

Similarly, the monetary crises of recent years are the product of government attempts to fix exchange rates between currencies. If the government of Ruritania fixes the "rur" at a rate higher than its free market price, then there will be a surplus of rurs looking for undervalued currencies, and a shortage of these harder currencies. The "dollar shortage" of the early postwar years was the result of the dollar being undervalued in terms of other currencies; the current surplus of dollars, as compared to West German marks or Japanese yen, is a reflection of the overvaluation of the dollar compared to these other currencies. Allow all of these currencies to fluctuate freely on the market, and the currencies will find their true levels, and the various currency shortages and surpluses will disappear. Furthermore, there will be no need to worry any longer about deficits in any country's "balance of payments." Under the pre-1971 system, when dollars were at least theoretically redeemable in gold, an excess of imports over exports led to a piling up of dollar claims and an increasingly threatening outflow of gold. Eliminate gold redeemability and allow the currencies to fluctuate freely, and the deficit will automatically correct itself as the dollar suppliers bid up the prices of marks and yen, thereby making American goods less expensive and German and Japanese goods more expensive in the world market.

Such is the Friedmanite case for the freely fluctuating exchange rate solution to the world monetary crisis. Any objection is met by a variant of the usual case for a free market. Thus, if critics assert that changing exchange rates introduce unwelcome uncertainty into world markets and thereby hinder international trade, particularly investment, the Friedmanites can reply that uncertainty is always a function of a free price system, and most economists support such a system. If the critics point to the evils of currency speculation, then Friedmanites can reply by demonstrating the important economic functions of speculation on the free commodity markets of the world. All this permits the Friedmanites to scoff at the timidity and conservatism of the world's bankers, journalists, and a dwindling handful of economists. Why not try freedom? These arguments, coupled with the obvious and increasingly evident evils of such fixed exchange rate systems as Bretton Woods (1945–1971) and the Smithsonian (1971–1973), are bringing an increasing number of economists into the Friedmanite camp.

The Friedmanite program cannot be fully countered in its details; it must be considered at the level of its deepest assumptions. Namely, are currencies really fit subjects for "markets"? Can there be a truly "free market" between pounds, dollars, francs, and so on?

Let us begin by considering this problem: suppose that someone comes along and says, "The existing relationship between pounds and ounces is completely arbitrary. The *government* has decreed that 16 ounces are equal to 1 pound. But this is arbitrary government intervention; let us have a free market between ounces and pounds, and let us see what relationship the market will establish between ounces and pounds. Perhaps we will find that the market will decide that 1 pound equals 14 or 17 ounces." Of course, everyone would find such a suggestion absurd. But why is it absurd? Not from arbitrary government edict, but because the pound is universally *defined* as consisting of 16 ounces. Standards of weight and measurement are established by common definition, and it is precisely their fixity that makes them indispensable to human life. Shifting relationships of pounds to ounces or feet to inches would make a mockery of any and all attempts to measure. But it is precisely the contention of the gold standard advocates that what we know as the *names* for different national currencies are not independent entities at all. They are not, in essence, different commodities like copper or wheat. They are, or they should be, simply names for different *weights* of gold or silver, and hence should have the same status as the fixed definition for any set, of weights and measures.

Let us bring our example a bit closer to the topic of money. Suppose that someone should come along and say, "The existing relationship between nickels and dimes is purely arbitrary. It is only the government that has decreed that two nickels equal one dime. Let us have a free market between nickels and dimes. Who knows? Maybe the market will decree that a dime is worth 7 cents or 11 cents. Let us try the market and see." Again, we would feel that such a suggestion would be scarcely less absurd. But again, why? What precisely is wrong with the idea? Again the point is that cents, nickels, and dimes are defined units of currency. The dollar is defined as equal to 10 dimes and 100 cents, and it would be chaotic and absurd to start calling for day-to-day changes in such definitions. Again, fixity of definition, fixity of units of weight and measure, is vital to any sort of accounting or calculation.

To put it another way: the idea of a *market* only makes sense between *different* entities, between different goods and services, between, say, copper and wheat, or movie admissions. But the idea of a market makes no sense whatever between different units of the *same* entity: between, say, ounces of copper and pounds of copper. Units of measure must, to serve any purpose, remain as a fixed yardstick of account and reckoning.

The basic gold standard criticism of the Friedmanite position is that the Chicagoites are advocating a free market between entities that are in essence, and should be once more, different units of the *same* entity, that is, different weights of the commodity gold. For the implicit and vital assumption of the Friedmanites is that every national currency—pounds, dollars, marks, and the like—is and should be an independent entity, a commodity in its own right, and therefore should fluctuate freely with one another.

Let us consider: what *are* pounds, francs, dollars? Where do they come from? The Friedmanites take them at face value as things or entities issued at will by different central governments. The British government defines something as a "pound" and issues or controls the issue of whatever number of pounds it decides upon (or controls the supply of bank credit redeemable in these "pounds"). The United States government does the same for "dollars," the French government the same for "francs," and so on.

The first thing we can say, then, is that this is a very curious kind of "free market" that is being advocated here. For it is a free market in things, or entities, which are issued entirely by and are at the complete mercy of each respective government. Here is already a vital difference from other commodities and free markets championed by the Chicago school. Copper, steel, wheat, movies are all, in the Friedman scheme, issued by private firms and organizations, and subject to the supply and demand of private consumers and the free market. Only money, only these mysterious "dollars," "marks," and so on, are to be totally under the control and dictation of every government. What sort of "free" market is this? To be *truly* analogous with free markets in other commodities, the supply of money would have to be produced only by private firms and persons in the market, and be subject only to the demand and supply forces of private consumers and producers. It should be clear that the governmental fiat currencies of the

Friedmanite scheme cannot possibly be subject only to private and therefore to free market forces.

Is there any way by which the respective national moneys can be subject solely to private market forces? Is such a thing at all possible? Not only is the answer yes, but it is still true that the *origin* of all these currencies that the Friedmanites take at face value as independent entities, was, each and every one, as units of weight of gold in a truly private and free market for money.

To understand this truth, we must go back beyond the existing fiat names for money and see how they originated. In fact, we need go back only as far as the Western world before World War I. Even today, the "dollar" is not legally defined an independent fictive name; it is still legally defined by U.S. statute as a *unit of weight* of gold, now approximately one-forty-second of a gold ounce. Before 1914, the dollar was defined as approximately one-twentieth of a gold ounce. That's what a "dollar" *was*. Similarly the pound sterling was not an independent name; it was defined as a gold weight of slightly less than one-fourth of a gold ounce. Every other currency was also *defined* in terms of a weight of gold (or, in some cases, of silver). To see how the system worked, we assume the following definition for three of the numerous currencies:

1 dollar defined as one-twentieth of a gold ounce;
1 pound sterling defined as one-fourth of a gold ounce;
1 franc defined as one-hundredth of a gold ounce.

In this case, the different national currencies are different in name only. In actual fact, they are simply different units of weight of the same commodity, gold. In terms of *each other*, then, the various currencies are immediately set in accordance with their respective gold weights, namely,

1 dollar is defined as equal to one-fifth of a pound sterling, and to 5 francs;
1 franc is defined as equal to one-fifth of a dollar, and to one-twenty-fifth of a pound;
1 pound is defined as equal to 5 dollars, and to 25 francs.

We might say that the "exchange rates" between the various countries were thereby fixed. But these were not so much exchange

rates as they were various units of weight of gold, fixed ineluctably as soon as the respective definitions of weight were established. To say that the governments "arbitrarily fixed" the exchange rates of the various currencies is to say also that governments "arbitrarily" define 1 pound weight as equal to 16 ounces or 1 foot as equal to 12 inches, or "arbitrarily" define the dollar as composed of 10 dimes and 100 cents. Like all weights and measures, such definitions do not have to be imposed by government. They could, at least in theory, have been set by groups of scientists or by custom and commonly accepted by the general public.

This "classical gold standard" had numerous and considerable economic and social advantages. In the first place, the supply of money in the various countries was basically determined, *not* by government dictates, but—like copper, wheat, and so on—by the supply and demand forces of the free and private market. Gold was and is a metal that has to be discovered, and then mined, by private firms. Its supply was determined by market forces, by the demand for gold in relation to the demand and supply of other commodities and factors; by, for example, the relative cost and productivity of factors of production in mining gold and in producing other goods and services. At its base, the money supply of the world, then, was determined by free market forces rather than by the dictates of government. While it is true that governments were able to interfere with the process by weakening the links between the currency name and the weight of gold, the base of the system was still private, and hence it was always possible to return to a purely private and free monetary system. To the extent that the various currency names were kept as strictly equivalent to weights of gold, to that extent the classical gold standard worked well and harmoniously and without severe inflation or booms and busts.

The international gold standard had other great advantages. It meant that the entire world was on a single money, that *money*, with all its enormous advantages, had fully replaced the chaotic world of barter, where it is impossible to engage in economic calculation or to figure out prices, profits, or losses. Only when the world was on a single money did it enjoy the full advantage of money over barter, with its attendant economic calculation and the corollary advantages of freedom of trade, investment, and movement between the various countries and regions of the civilized world. One

of the main reasons for the great growth and prosperity of the United States, it is generally acknowledged, was that it consisted of a large free-trading area within the nation: we have always been free of tariffs and trading quotas between New York and Indiana, or California and Oregon. But not only that. We have also enjoyed the advantage of having one currency: one dollar area between all the regions of the country, East, West, North, and South. There have also been no currency devaluations or exchange controls between New York and Indiana.

But let us now contemplate instead what could happen were the Friedmanite scheme to be applied *within* the United States. After all, while a nation or country may be an important *political* unit, it is not really an economic unit. No nation could or should wish to be self-sufficient, cut off from the enormous advantages of international specialization and the division of labor. The Friedmanites would properly react in horror to the idea of high tariffs or quota walls between New York and New Jersey. But what of different currencies issued by every state? If, according to the Friedmanites, the ultimate in monetary desirability is for each nation to issue its own currency—for the Swiss to issue Swiss francs, the French their francs, and so on—then why not allow New York to issue its own "yorks," New Jersey its own "jersies," and then enjoy the benefits of a freely fluctuating "market" between these various currencies? But since we have one money, the dollar, within the United States, enjoying what the Friedmanites would call "fixed exchange rates" between each of the various states, we don't have any monetary crisis within the country, and we don't have to worry about the "balance of payments" between New York, New Jersey, and the other states.

Furthermore, it should be clear that what the Friedmanites take away with one hand, so to speak, they give back with the other. For while they are staunchly opposed to tariff barriers between geographical areas, their freely fluctuating fiat currencies could and undoubtedly would operate as crypto-tariff barriers between these areas. During the fiat money Greenback period in the United States after the Civil War, the Pennsylvania iron manufacturers, who had always been the leading advocates of a protective tariff to exclude more efficient and lower cost British iron, now realized that depreciating greenbacks functioned as a protective device: for a falling dollar

makes imports more expensive and exports cheaper.[1] In the same way, during the international fiat money periods of the 1930s (and now from March 1973 on), the export interests of each country scrambled for currency devaluations, backed up by inefficient domestic firms trying to keep out foreign competitors. And similarly, a Friedmanite world *within* the United States would have the disastrous effect of functioning as competing and accelerating tariff barriers between the states.

And if independent currencies between each of the fifty states is a good thing, why not go still one better? Why not independent currencies to be issued by each county, city, town, block, building, person? Friedmanite monetary theorist Leland B. Yeager, who is willing to push the *reductio ad absurdum* almost all the way by advocating separate moneys for each region or even locality, draws back finally at the idea of each individual or firm printing his own money. Why not? Because, Yeager concedes, "Beyond some admittedly indefinable point, the proliferation of separate currencies for ever smaller and more narrowly defined territories would begin to negate the very concept of money."[2] That it would surely do, but the point is that the breakdown of the concept of money begins to occur not at some "indefinable point" but *as soon as* any national fiat paper enters the scene to break up the world's money. For if Rothbard, Yeager, and Jones each printed his own "Rothbards," "Yeagers," and "Joneses" and these each among billions freely fluctuating on the market were the only currencies, it is clear that the world would be back in an enormously complex and chaotic form of barter and that all trade and investment would be reduced to a virtual standstill. There would in fact be no more *money*, for money *means* a general medium for all exchanges. As a result, there would be no money of account to perform the indispensable function of economic calculation in a money

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[1]On depreciating fiat currency as a protectionist device during the Greenback period, see Murray N. Rothbard, "Money, the State, and Modern Mercantilism," in *Central Planning and Neomercantilism*, Helmut Schoeck and John W. Wiggins, eds. (Princeton, N.J.: D. Van Nostrand, 1964), pp. 149–51; included in this volume as chapter 38.

[2]Leland B. Yeager, "Exchange Rates within a Common Market," *Social Research* (Winter, 1958): 436–37. See also Yeager, "An Evaluation of Freely-Fluctuating Exchange Rates" (Ph.D. dissertation, Columbia University, 1952).

and price system. But the point is that while we can see this clearly in a world of "every man his own currency," the same disastrous principle, the same breakdown of the money function, is at work in a world of fluctuating fiat currencies such as the Friedmanites are wishing upon us. The way to return to the advantages of a world money is the opposite of the Friedmanite path: it is to return to a commodity which the entire world can and does use as a money, which means in practice the commodity gold.

One critic of fluctuating exchange rates, while himself a proponent of "regional currency areas," recognizes the classical argument for one world money. Thus, Professor Mundell writes:

> It will be recalled that the older economists of the nineteenth century were internationalists and generally favored a world currency. Thus John Stuart Mill wrote in *Principles of Political Economy*, vol. 2, p. 176:
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> . . . So much of barbarism, however, still remains in the transactions of most civilized nations, that almost all independent countries choose to assert their nationality by having, to their own inconvenience and that of their neighbors, a peculiar currency of their own.
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> . . . Mill, like Bagehot and others, was concerned with the costs of valuation and money changing, not stabilization policy, and it is readily seen that these costs tend to increase with the number of currencies. Any given money *qua numeraire*, or unit of account, fulfills this function less adequately if the prices of foreign goods are expressed in terms of foreign currency and must then be translated into domestic currency prices. Similarly, money in its role of medium of exchange is less useful if there are many currencies; although the costs of currency conversion are always present, they loom exceptionally larger under inconvertibility or flexible exchange rates. Money is a convenience and this restricts the optimum number of currencies. In terms of this argument alone, the optimum currency area is the world, regardless of the number of regions of which it is composed.[3]

[3]Robert A. Mundell, *International Economics* (New York: Macmillan, 1968), p. 183.

There is another reason for avoiding fiat paper currency issued by all governments and for returning instead to a commodity money produced on the private market (for example, gold). For once a money is established, whatever supply of money exists does the full amount of the "monetary work" needed in the economy. Other things being equal, an increase in the supply of steel, or copper, or TV sets is a net benefit to society: it increases the production of goods and services to the consumers. But an increase in the supply of money does no such thing. Since the usefulness of money comes from exchanging it rather than consuming it or using it up in production, an increased supply will simply lower its purchasing power; it will dilute the effectiveness of any one unit of money. An increase in the supply of dollars will merely reduce the purchasing power of each dollar, that is, will cause what is now called "inflation." If money is a scarce market commodity, such as gold, increasing its supply is a costly process and therefore the world will not be subjected to sudden inflationary additions to its supply. But fiat paper money is virtually costless: it costs nothing for the government to turn on the printing press and to add rapidly to the money supply and hence to ruinous inflation. Give government, as the Friedmanites would do, the total and absolute power over the supply of fiat paper and of bank deposits—the supply of money—and we put into the hands of government a standing and mighty temptation to use this power and inflate money and prices.

Given the inherent tendency of government to inflate the money supply when it has the chance, the absence of a gold standard and "fixed exchange rates" also means the loss of balance-of-payments discipline, one of the few checks that governments have faced in their eternal propensity to inflate the money supply. In such a system, the outflow of gold abroad puts the monetary authorities on increased warning that they must stop inflating so as not to keep losing gold. Abandon a world money and adopt fluctuating fiat moneys, and the balance-of-payments limitation will be gone; governments will have only the depreciating of their currencies as a limit on their inflationary actions. But since export firms and inefficient domestic firms tend actually to favor depreciating currencies, this check is apt to be a flimsy one indeed.

Thus, in his critique of the concept of fluctuating exchange rates, Professor Heilperin writes:

> The real trouble with the advocates of indefinitely flexible exchange rates is that they fail to take into sufficient consideration the *causes of balance-of-payments disequilibrium*. Now these, unlike Pallas Athene from Zeus' head, never spring "fully armed" from a particular economic situation. They have their causes, the most basic of which [are] internal inflations or major changes in world markets.
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> "Fundamental disequilibria" as they are called . . . can and do happen. Often however, they can be avoided: if and when an incipient inflation is brought under control; if and when adjustments to external change are effectively and early made. Now nothing encourages the early adoption of internal correctives more than an outflow of reserves under conditions of fixed parities, always provided, of course, that the country's monetary authorities are "internationally minded" and do their best to keep external equilibrium by all internal means at their disposal.[4]

Heilperin adds that the desire to pursue national monetary and fiscal policies without regard to the balance of payments is "one of the widespread and yet very fallacious aspirations of certain governments . . . and of altogether too many learned economists, aspirations to 'do as one pleases' without suffering any adverse consequences." He concludes that the result of a fluctuating exchange rate system can only be "chaos," a chaos that "would lead inevitably . . . to a widespread readoption of exchange controls, the worst conceivable form of monetary organization."[5]

If governments are likely to use any power to inflate fiat currency that is placed in their hands, they are indeed almost as likely to use the power to impose exchange controls. It is politically naive in the extreme to place the supply of fiat money in the hands of government and then to hope and expect it to refrain from controlling exchange rates or going on to impose more detailed exchange controls. In particular, in the totally fiat economy that the world has been plunged into since March 1973, it is highly naive to expect European countries to sit forever on their accumulation of 80-odd billions of dollars—the fruits of decades of American balance-of-payments

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[4]Michael A. Heilperin, *Aspects of the Pathology of Money* (London: Michael Joseph, 1968), p. 227.

[5]Ibid., pp. 222, 293.

deficits—and expect them to allow an indefinite accumulation of such continually depreciating dollars. It is also naive to anticipate their accepting a continually falling dollar and yet do nothing to stem the flood of imports of American products or to spur their own exports. Even in the few short months since March 1973 central banks have intervened with "dirty" instead of "clean" floats to the exchange rates. When the dollar plunged rapidly downward in early July, its fall was only checked by rumors of increased "swap" arrangements by which the Federal Reserve would borrow "hard" foreign currencies with which to buy dollars.

But it should be clear that such expedients can only stem the tide for a short while. Ever since the early 1950s, the monetary policies of the United States and the West have been short-run expedients, designed to buy time, to delay the inevitable monetary crisis that is rooted in the inflationary regime of paper money and the abandonment of the classical gold standard. The difference now is that there is far less time to buy, and the distance between monetary crises grows ever shorter. All during the 1950s and 1960s the Establishment economists continued to assure us that the international regime established at Bretton Woods was permanent and impregnable, and that if the harder money countries of Europe didn't like American inflation and deficits there was nothing they could do about it. We were also assured by the same economists that the official gold price of $35 an ounce—a price which for long has absurdly undervalued gold in terms of the depreciating dollar—was graven in stone, destined to endure until the end of time. But on August 15, 1971, President Nixon, under pressure by European central banks to redeem dollars in gold, ended the Bretton Woods arrangement and the final, if tenuous, link of the dollar to redemption in gold.

We are also told, with even greater assurance (and this time by Friedmanite as well as by Keynesian economists) that when, in March 1968, the free market gold price was cut loose from official governmental purchases and sales, that gold would at last sink to its estimated nonmonetary price of approximately $10 an ounce. Both the Keynesians and the Friedmanites, equal deprecators of gold as money, had been maintaining that, despite appearances, it had been the *dollar* which had propped up *gold* in the free—gold markets of London and Zurich before 1968. And so when the "two-tier gold market" was established in March, with governments and their central banks

pledging to keep gold at $35 an ounce, but having nothing further to do with outside purchases or sales of gold, these economists confidently predicted that gold would soon disappear as a monetary force to reckon with. And yet the reverse has happened. Not only did gold never sink below $35 an ounce on the free market, but the market's perceptive valuation of gold as compared to the shrinking and depreciating dollar has now hoisted the free market gold price to something like $125 an ounce. And even the hallowed $35 an ounce figure has been devalued twice in the official American accounts, so that now the dollar—still grossly overvalued—is pegged officially at $42.22 an ounce. Thus, the market has continued to give a thumping vote of confidence to gold, and has brought gold back into the monetary picture more strongly than ever.

Not only have the detractors of gold been caught napping by the market, but so have even its staunchest champions. Thus, even the French economist Jacques Rueff, for decades the most ardent advocate of the eminently sensible policy of going back to the gold standard at a higher gold price, even he, as late as October 1971 faltered and conceded that perhaps a doubling of the gold price to $70 might be too drastic to be viable. And yet now the market itself places gold at very nearly double *that* seemingly high price.[6]

Without gold, without an international money, the world is destined to stumble into one accelerated monetary crisis after another, and to veer back and forth between the ills and evils of fluctuating in exchange rates and of fixed exchange rates without gold. Without gold as the basic money and means of payment, fixed exchange rates make even less sense than fluctuating rates. Yet a solution to the most glaring of the world's aggravated monetary ills lies near at hand, and nearer than ever now that the free-gold market points the way. That solution would be for the nations of the world to return to a classical gold standard, with the price fixed at something like the old current free market level. With the dollar, say, at $125 an ounce, there would be far more gold to back up the dollar and all other national currencies. Exchange rates would again be fixed by the gold content of each currency. While this would scarcely solve all the

[6]Jacques Rueff, *The Monetary Sin of the West* (New York: Macmillan, 1972), pp. 210–22.

monetary problems of the world—there would still be need for drastic reforms of banking and central bank inflation, for example—a giant step would have been taken toward monetary sanity. At least the world would have a *money* again, and the spectre of a calamitous return to barter would have ended. And that would be no small accomplishment.

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The Case for a Genuine Gold Dollar

Inflationary Fiat Paper

For nearly a half-century the United States and the rest of the world have experienced an unprecedented continuous and severe inflation. It has dawned on an increasing number of economists that the fact that over the same half-century the world has been on an equally unprecedented fiat paper standard is no mere coincidence. Never have the world's moneys been so long cut off from their metallic roots. During the century of the gold standard from the end of the Napoleonic wars until World War I, on the other hand, prices generally fell year after year, except for such brief wartime interludes as the Civil War.[1] During wartime, the central governments engaged in massive expansion of the money supply to finance the war effort. In peacetime, on the other hand, monetary expansion was small compared to the outpouring of goods and services attendant upon rapid industrial and economic development. Prices, therefore, were normally allowed to fall. The enormous expenditures of World War I forced all the warring governments to go off the gold standard,[2] and unwillingness to return to a genuine

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[1]The exception was the period 1896–1914, when a mild chronic inflation (approximately 2 percent per year) resulted from unusual gold discoveries, in Alaska and South Africa.

[2]With the exception of the United States, which entered the war in the spring of 1917, two and a half years after the other belligerents. But even the United States went informally off the gold standard by prohibiting the export of gold for the duration of the war.

gold standard eventually led to a radical shift to fiat paper money during the financial crisis of 1931–33.

It is my contention that there should be no mystery about the unusual chronic inflation plaguing the world since the 1930s. The dollar is the American currency unit (and the pound sterling, the franc, the mark, and the like, are equivalent national currency units), and since 1933, there have been no effective restrictions on the issue of these currencies by the various nation-states. In effect, each nation-state, since 1933, and especially since the end of all gold redemption in 1971, has had the unlimited right and power to create paper currency which will be legal tender in its own geographic area. It is my contention that if any person or organization ever obtains the monopoly right to create money, that person or organization will tend to use this right to the hilt. The reason is simple: Anyone or any group empowered to manufacture money virtually out of thin air will tend to exercise that right, and with considerable enthusiasm. For the power to create money is a heady and profitable privilege indeed.

The essential meaning of a fiat paper standard is that the currency unit—the dollar, pound, franc, mark, or whatever—consists of paper tickets, marked as "dollars," "pound," and so on, and manufactured by the central government of the nation-state.[3] The government (or its central bank) is able to manufacture those tickets *ad libitum* and essentially costlessly. The cost of the paper and the printing is invariably negligible compared to the value of the currency printed. And if, for some reason, such cost is not negligible, the government can always simply increase the denominations of the bills!

It should be clear that the point of the government's having the power to print money is to monopolize that power. It would simply not do to allow every man, woman, and organization the right to print dollars, and so the government invariably guards its monopoly jealously. It should be noted that government is never so zealous in

[3]In olden days, the paper tickets were issued by the central government's Treasury (e.g., Continentals in the American Revolutionary war, *Assignats* during the French Revolution, greenbacks during the American Civil War). Nowadays, in a more complex variant of the system, the tickets constituting the monetary "standard" are issued by the government's central bank.

suppressing crime as when that crime consists of direct injury to its own sources of revenue, as in tax evasion and counterfeiting of its currency. If counterfeiting of currency were not illegal, the nation's supply of dollars or francs would rise toward infinity very rapidly, and the purchasing power of the currency unit itself would be effectively destroyed.[4]

In recent years an increasing number of economists have understandably become disillusioned by the inflationary record of fiat currencies. They have therefore concluded that leaving the government and its central bank power to fine tune the money supply, but abjuring them to use that power wisely in accordance with various rules, is simply leaving the fox in charge of the proverbial henhouse. They have come to the conclusion that only radical measures can remedy the problem, in essence the problem of the inherent tendency of government to inflate a money supply that it monopolizes and creates. That remedy is no less than the strict separation of money and its supply from the state.

Hayek's "Denationalization" of Money

The best known proposal to separate money from the state is that of F.A. Hayek and his followers.[5] Hayek's "denationalization of money" would eliminate legal tender laws, and allow every individual and organization to issue its own currency, as paper tickets with its own names and marks attached. The central government would retain its monopoly over the dollar, or franc, but other institutions would be allowed to compete in the money creation business by offering their own brand name currencies. Thus, Hayek would be able to print Hayeks, the present author to issue Rothbards, and so on. Mixed in with Hayek's suggested legal change is an entrepreneurial scheme by which a Hayek-inspired bank would issue

[4]Note that we are assuming that standard paper is legal tender, as indeed all government money now is. (That is, all creditors are compelled to accept the paper tickets in payment for money debt.) In our hypothetical scenario, all individual tickets marked "dollars" or "francs" would similarly possess legal tender power.

[5]See, in particular, F.A. Hayek, *The Denationalisation of Money* (London: Institute of Economic Affairs, 1976).

"ducats," which would be issued in such a way as to keep prices in terms of ducats constant. Hayek is confident that his ducat would easily out- compete the inflated dollar, pound, mark, or whatever.

Hayek's plan would have merit if the thing—the commodity—we call "money" were similar to all other goods and services. One way, for example, to get rid of the inefficient, backward, and sometimes despotic U.S. Postal Service is simply to abolish it; but other free market advocates propose the less radical plan of keeping the post office intact but allowing any and all organizations to compete with it. These economists are confident that private firms would soon be able to outcompete the post office. In the past decade, economists have become more sympathetic to deregulation and free competition, so that superficially denationalizing or allowing free competition in currencies would seem viable in analogy with postal services or fire-fighting or private schools.

There is a crucial difference, however, between money and all other goods and services. All other goods, whether they be postal service or candy bars or personal computers, are desired for their own sake, for the utility and value that they yield to consumers. Consumers are therefore able to weigh these utilities against one another on their own personal scales of value. Money, however, is desired not for its own sake, but precisely because it *already* functions as money, so that everyone is confident that the money commodity will be readily accepted by any and all in exchange. People eagerly accept paper tickets marked "dollars" not for their aesthetic value, but because they are sure that they will be able to sell those tickets for the goods and services they desire. They can only be sure in that way when the particular name, "dollar," is *already* in use as money.

Hayek is surely correct that a free market economy and a devotion to the right of private property requires that everyone be permitted to issue whatever proposed currency names and tickets they wish. Hayek should be free to issue Hayeks or ducats, and I to issue Rothbards or whatever. But issuance and *acceptance* are two very different matters. No one will accept new currency tickets, as they well might new postal organizations or new computers. These names will not be chosen as currencies precisely because they have not been used as money, or for any other purpose, before.

Hayek and his followers have failed completely to absorb the lesson of Ludwig von Mises's "regression theorem," one of the most

important theorems in monetary economics.[6] Mises showed, as far back as 1912, that since no one will accept any entity as money unless it had been demanded and exchanged earlier, we must therefore logically go back (regress) to the first day when a commodity became used as money, a medium of exchange. Since by definition the commodity could not have been used as money before that first day, it could only be demanded because it had been used as a nonmonetary commodity, and therefore had a preexisting price, even in the era before it began to be used as a medium. In other words, for any commodity to become used as money, it must have originated as a commodity valued for some nonmonetary purpose, so that it had a stable demand and price before it began to be used as a medium of exchange. In short, money cannot be created out of thin air, by social contract, or by issuing paper tickets with new names on them. Money has to originate as a valuable nonmonetary commodity. In practice, precious metals such as gold or silver, metals in stable and high demand per unit weight, have won out over all other commodities as moneys. Hence, Mises's regression theorem demonstrates that money must originate as a useful nonmonetary commodity on the free market.

But one crucial problem with the Hayekian ducat is that no one will take it. New names on tickets cannot hope to compete with dollars or pounds which originated as units of weight of gold or silver and have now been used for centuries on the market as the currency unit, the medium of exchange, and the instrument of monetary calculation and reckoning.[7]

Hayek's plan for the denationalization of money is Utopian in the worst sense: not because it is radical, but because it would not

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[6]For his regression theorem, see Ludwig von Mises, *The Theory of Money and Credit*, 2nd ed. (New Haven, Conn.: Yale University Press, 1953), pp. 170–86. Also see Murray N. Rothbard, *The Case for a 100 Percent Gold Dollar* (1962; Washington, D.C.: Libertarian Review Press, 1974), pp. 10–11.

[7]We might apply to Hayek's scheme the sardonic words of the nineteenth-century French economist Henri Cernuschi, which Mises approvingly cited in a slightly different context: "I want to give everybody the right to issue banknotes so that nobody should take banknotes any longer." Ludwig von Mises, *Human Action* (New Haven, Conn.: Yale University Press, 1949), p. 443.

and could not work. Print different names on paper all one wishes, and these new tickets still would not be accepted or function as money; the dollar (or pound or mark) would still reign unchecked. Even the removal of the legal tender privilege would not work, for the new names would not have emerged out of useful commodities on the free market, as the regression theorem demonstrates they must. And since the government's own currency, the dollar and the like, would continue to reign unchallenged as money, money would not have been denationalized at all. Money would still be nationalized and a creature of the state; there would still be no separation of money and the state. In short, even though hopelessly Utopian, the Hayek plan would scarcely be radical enough, since the current inflationary and state-run system would be left intact.

Even the variant on Hayek whereby private citizens or firms issue gold coins denominated in grams or ounces would not work, and this is true even though the dollar and other fiat currencies originated centuries ago as names of units of weight of gold or silver.[8] Americans have been used to using and reckoning in "dollars" for two centuries, and they will cling to the dollar for the foreseeable future. They will simply not shift away from the dollar to the gold ounce or gram as a currency unit. People will cling doggedly to their customary names for currency; even during runaway inflation and virtual destruction of the currency, the German people clung to the "mark" in 1923 and the Chinese to the "yen" in the 1940s. Even drastic revaluations of the runaway currencies which helped end the inflation kept the original "mark" or other currency name.

Hayek brings up historical examples where more than one currency circulated in the same geographic area at the same time, but none of the examples is relevant to his "ducat" plan. Border regions may accept two *governmental* currencies,[9] but each has legal tender power, and each had been in lengthy use within its own nation.

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[8]Thus, the pound sterling originated, *pace* its name, as a definition of one pound weight of silver, and the dollar originated as an ounce coin of silver in Bohemia. Much later, the "dollar" became defined as approximately 1/20 of an ounce of gold.

[9]In Luxemburg, *three* government currencies—those of France, West Germany, and Luxemburg itself—circulate side by side.

Multicurrency circulation, then, is not relevant to the idea of one or more new private paper currencies. In addition, Hayek might have mentioned the fact that in the United States, until the practice was outlawed in 1857, foreign gold and silver coins as well as private gold coins, circulated as money side by side with official coins. The fact that the Spanish silver dollar had long circulated in America along with Austrian and English specie coins, permitted the new United States to change over easily from pound to dollar reckoning. But again, this situation is not relevant, because all these coins were different weights of gold and silver, and none was fiat government money. It was easy, then, for people to refer the various values of the coins back to their gold or silver weights. Gold and silver had of course long circulated as money, and the pound sterling or dollar were simply different weights of one or the other metals. Hayek's plan is a very different one: the issue of private paper tickets marked by new names and in the hope that they are accepted as money.

If people love and will cling to their dollars or francs, then there is only one way to separate money from the state, to truly denationalize a nation's money. And that is to denationalize the *dollar* (or the mark or franc) itself. Only privatization of the dollar can end the government's inflationary dominance of the nation's money supply.

How, then, can the dollar be privatized or denationalized? Obviously not by making counterfeiting legal. There is only one way: to link the dollar once again to a useful market commodity. Only by changing the definition of the dollar from fiat paper tickets issued by the government to a unit of weight of some market commodity, can the function of issuing money be permanently and totally shifted from government to private hands.

The "Commodity Dollar": A Critique

If it is imperative that the dollar be defined once again as a weight of a market commodity, then what commodity (or commodities) should it be defined as, and what should be the particular weight in which it is set?

In reply, I propose that the dollar be defined as a weight of a single commodity, and that that commodity be gold. Many economists, beginning with Irving Fisher at the turn of the twentieth century, and including Benjamin Graham and an earlier F.A. Hayek, have

hankered after some form of "commodity dollar," in which the dollar is defined, not as a weight of a single commodity, but in terms of a "market basket" of two or many more commodities.[10] There are many deep-seated flaws in this approach. In the first place, such a market-basket currency has never emerged spontaneously from the workings of the market. It would have to be imposed (to use a derogatory term from Hayek himself) as a "constructivist" scheme from the top, from government to be inflicted upon the market. Second, and as a corollary, the government would be obviously in charge, since a market-basket currency does not, unlike the use of units of weight in exchange, arise from the free market itself. The government could and would, then, alter the ratios of weights, adjust the various fixed terms, and so forth. Third, the hankering for a fixed market basket is an outgrowth of a strong desire for the government to regulate the economy so as to keep the "price level" constant. As we have seen, the natural tendency of the free market is to lower prices over time, in accordance with growing productivity and increased supplies of goods. There is no good reason for the government to interfere. Indeed, if it does so, it can only create a boom-and-bust business cycle by expanding credit to keep prices artificially higher than they would be on the free market.

Furthermore, there are other grave problems with the commodity-basket approach. There is, for one thing, no such unitary entity as "the price level" which would be kept constant. The entire concept of price level is an artificial construction masking the fact that it can only consist of individual prices, each varying continually in relation to each other.

Irving Fisher's intense desire for a constant price level stemmed from his own fallacious philosophic notion that, just as science is based upon measurable standards (such as a yard comprising 36 inches), so money is supposed to be a measure of values and prices. But since there is no single price level, his very idea, far from being scientific, is a hopeless chimera. The only scientific measurement that properly applies is the currency unit as a true measure of *weight*

[10]In fact, even Hayek's current "ducat" scheme incorporates a commodity-basket plan. His proposed bank would fine tune the supply of ducats so as to keep the "price level" in terms of ducats always constant.

of the money commodity. Furthermore, the only scientific measure is a definition which, once selected, remains eternally the same: "the pound," or "the yard." Juggling definitions of weight within a market basket violates any proper concept of definition or of measure.[11]

A final and vital flaw in a market-basket dollar is that Gresham's law would result in perpetual shortages and surpluses of different commodities within the market basket. Gresham's law states that any money overvalued by the government (in relation to its market value) will drive out of circulation money undervalued by the government. In short, control of exchange rates has consequences like any other price control: A maximum rate below the free market causes a shortage; a minimum rate set above the market will cause a surplus. From the origin of the United States, the currency was in continuing trouble because the United States was on a bimetallic rather than a gold standard, in short a market basket of two commodities, gold

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[11]For an outstanding philosophical critique of Fisher's commodity dollar, see the totally neglected work of the libertarian political theorist Isabel Paterson. Thus, Paterson writes:

> As all units of measure are determined arbitrarily in the first place, though not fixed by law, obviously they can be altered by law. The same length of cotton would be designated an inch one day, a foot the next, and a yard the next; the same quantity of precious metal could be denominated ten cents today and a dollar tomorrow. But the net result would be that figures used on different days would not mean the same thing; and somebody must take a heavy loss. The alleged argument for a "commodity dollar" was that a real dollar, of fixed quantity, will not always buy the same quantity of goods. Of course it will not. If there is no medium of value, no money, neither would a yard of cotton or a pound of cheese always exchange for an unvarying fixed quantity of any other goods. It was argued that a dollar ought always to buy the same quantity of and description of goods. It will not and cannot. That could occur only if the same number of dollars and the same quantities of goods of all kinds and in every kind were always in existence and in exchange and always in exactly proportionate demand; while if production and consumption were admitted, both must proceed constantly at an equal rate to offset one another. (Isabel Paterson, *The God of the Machine* [New York: Putnam, 1943], p. 203*n*)

and silver. As is well known, the system never worked, because at one time or another, one or the other precious metal was above or below its world market valuations, and hence one or the other coin or bullion was flowing into the country while the other would disappear. In 1873 partisans of the monometallic gold standard, seeing that silver was soon to be overvalued and hence on the point of driving out gold, put the United States on a virtual single gold standard, a system that was ratified officially in 1900.[12]

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[12]Specifically, the Coinage Act of 1792 defined the "dollar" as *both* a weight of 371.25 grains of pure silver and a weight of 24.75 grains of pure gold—a fixed ratio of 15 grains of silver to 1 grain of gold. This 15:1 ratio was indeed the world market ratio during the early 1790s, but of course the market ratio was bound to keep changing over time, and thus bring about the effects of Gresham's law. Soon an increased silver production led to a steady decline of silver, the market ratio falling to 15.75:1. As a result, silver coins flooded into the United States, and gold coins flooded out. Silver remained the sole circulating coinage, until the Jacksonians in 1834 successfully brought back gold by debasing the gold weight of the dollar to 23.2 grains, lowering the weight by 6.26 percent. At this new ratio of 16:1, gold and silver circulated side by side for two decades, when the discovery of new gold mines in California, Russia, and Australia, greatly increased gold production, and sent the market ratio down to 15.3:1. As a result, gold coin poured in and silver flowed out of the country. The United States continued on a *de facto* gold monometallic standard, but a de jure bimetallic standard from the 1850s, with the market ratio holding at about 15.5:1 while the official mint ratio was 16:1.

By 1872, however, a few knowledgeable officials at the U.S. Treasury realized that silver was about to suffer a huge decline in value, since the European nations were shifting from a silver to a gold standard, thereby decreasing their demand for silver and increasing their demand for gold, and because of the discovery of the new silver mines in Nevada and other Mountain states. To keep the *de facto* gold standard, the Treasury slipped bills through Congress in 1873 and 1874, discontinuing the minting of any further silver dollars, and ending the legal tender quality of silver dollars above the sum of $5. This demonetization of silver meant that, when, in 1874, silver began a rapid market ratio decline above 16:1 and finally to 32:1 in the 1890s, silver coins would not flow into the country and gold would not flow out. Finally, in 1900, the dollar was defined *de jure* solely in terms of gold, at 23.22 grains.

See Ron Paul and Lewis Lehrman, *The Case for Gold* (Washington, D.C.: Cato Institute, 1982), pp. 17–19, 30–32, 60–66, 100–02.

One argument used by Fisher, James M. Buchanan, and others holds that the U.S. Constitution mandates the government's using its powers to stabilize the price level. This argument rests on Article I, Section 8 of the Constitution, which gives Congress the power "to coin money, regulate the value thereof." The argument, absurd at best, disingenuous at worst, and certainly anachronistic treats the framers of the Constitution as if they were modern price-stabilizationist economists, as if they meant by "the value thereof" the purchasing power of the money unit, or its inverse, the price level. From this dubious assumption, these writers derive the alleged constitutional duty of the federal government to intervene in monetary matters so as to stabilize the level of prices. But what the framers meant by "value" was simply the weight and the fineness of coins. It is, after all, the responsibility of every firm to regulate the nature of its own product, and to the extent that the federal government mints coins, it must see to it that the weight and fineness of these coins are what the government says they are.

The Case for a Gold Dollar

We conclude, then, that the dollar must be redefined in terms of a single commodity, rather than in terms of an artificial market basket of two or more commodities. Which commodity, then, should be chosen? In the first place, precious metals, gold and silver, have always been preferred to all other commodities as mediums of exchange where they have been available. It is no accident that this has been the invariable success story of precious metals, which can be partly explained by their superior stable nonmonetary demand, their high value per unit weight, durability, divisibility, cognizability, and the other virtues described at length in the first chapter of all money and banking textbooks published before the U.S. government abandoned the gold standard in 1933. Which metal should be the standard, then, silver or gold? There is, indeed, a case for silver, but the weight of argument holds with a return to gold. Silver's increasing relative abundance of supply has depreciated its value badly in terms of gold, and it has not been used as a general monetary metal since the nineteenth century. Gold was the monetary standard in most countries until 1914, or even until the 1930s. Furthermore, gold was the standard when the U.S. government in 1933 confiscated the gold of all American citizens and abandoned gold

redeemability of the dollar, supposedly only for the duration of the depression emergency. Still further, gold and not silver is still considered a monetary metal everywhere, and governments and their central banks have managed to amass an enormous amount of gold not now in use, but which again could be used as a standard for the dollar, pound, or mark.

This brings up an important corollary. The United States, and other governments, have in effect nationalized gold. Even now, when private citizens are allowed to own gold, the great bulk of that metal continues to be sequestered in the vaults of the central banks.[13] If the dollar is redefined in terms of gold, gold as well as the dollar can be jointly denationalized. But if the dollar is *not* defined as a weight of gold, then how can a denationalization of gold ever take place? Selling the gold stock would be unsatisfactory, since this (1) would imply that the government is entitled to the receipts from the sale and (2) would leave the dollar under the absolute fiat control of the government.

It is important to realize what a definition of the dollar in terms of gold would entail. The definition must be *real* and effective rather than nominal. Thus, the U.S. statutes define the dollar as 1/42.22 gold ounce, but this definition is a mere formalistic accounting device. To be real, the definition of the dollar as a unit of weight of gold must imply that the dollar is interchangeable and therefore redeemable by its issuer in that weight, that the dollar is a demand claim for that weight in gold.

Furthermore, once selected, the definition, whatever it is, must be fixed permanently. Once chosen, there is no more excuse for changing definitions than there is for altering the length of a standard yard or the weight of a standard pound.

Before proceeding to investigate what the new definition or weight of the dollar should be, let us consider some objections to the very idea of the government setting a new definition. One criticism holds it to be fundamentally statist and a violation of the free market for the government, rather than the market, to be responsible for fixing a new definition of the dollar in terms of gold. The problem, however, is that

[13]In the United States, the Treasury holds the gold in trust for the Federal Reserve Banks at its depositories at Fort Knox and elsewhere.

we are now tackling the problem in midstream, *after* the government has taken the dollar off gold, virtually nationalized the stock of gold, and issued dollars for decades as arbitrary and fiat money. Since government has monopolized issue of the dollar, and confiscated the public's gold, only government can solve the problem by jointly denationalizing gold and the dollar. Objection to government's redefining and privatizing gold is equivalent to complaining about the government's repealing its own price controls because repeal would constitute a governmental rather than private action. A similar charge could be leveled at government's denationalizing any product or operation. It is not advocating statism to call for the government's repeal of its own interventions.

A corollary criticism, and a favorite of monetarists, asks why gold standard advocates would have the government "fix the (dollar) price of gold" when they are generally opposed to fixing any other prices. Why leave the market free to determine all prices *except* the price of gold?

But this criticism totally misconceives the meaning of the concept of price. A "price" is the quantity exchanged of one commodity on the market in terms of another. Thus, in barter, if a package of six light bulbs is exchanged on the market for one pound of butter, then the price per light bulb is one-sixth of a pound of butter. Or, if there is monetary exchange, the price of each light bulb will be a certain weight of gold, or, these days, numbers of cents or dollars. The important point is that price is the ratio of quantities of *two commodities* being exchanged. But if money is on a gold standard, the dollar and gold will no longer be two independent commodities, whose price should be free to fluctuate on the market. They will be one commodity, one a unit of weight of the other. To call for a "free market" in the "price of gold" is as ludicrous as calling for a free market of ounces in terms of pounds, or inches in terms of yards. How many inches equal a yard is not something subject to daily fluctuations on the free or any other market. The answer is fixed eternally by definition, and what a gold standard entails is a fixed, absolute, unchanging definition as in the case of any other measure or unit of weight. The market necessarily exchanges two different commodities rather than one commodity for itself. To call for a free market in the price of gold would, in short, be as absurd as calling for a fluctuating market price for dollars in terms of cents. How many cents constitute a

dollar is no more subject to daily fluctuation and uncertainty than inches in terms of yards. On the contrary, a truly free market in money will exist only when the dollar is once again strictly defined and therefore redeemable in terms of weights of gold. After that, gold will be exchangeable, at freely fluctuating prices, for the weights of all other goods and services on the market.

In short, the very description of a gold standard as "fixing the price of gold" is a grave misinterpretation. In a gold standard, the "price of gold" is not unaccountably fixed by government intervention. Rather, the "dollar," for the past half-century a mere paper ticket issued by the government, will become defined once again as a unit of weight of gold.

Defining the Dollar

If, then, the dollar should once again be defined as a unit of weight of gold, what should the new definition be? It is curious that the growing number of economists and writers who call for a return to the gold standard seem to display little or no interest in what precisely the new weight of the dollar should be. The question is admittedly a controversial one, but even more controversial is the very question of having a gold standard at all. Moreover, it should be realized that there is no hope of ever returning to a gold standard unless the proper weight of the dollar is first decided upon.

From the 1940s to the 1960s, the small body of advocates of a return to gold were grouped in two kindred organizations: the Economists' National Committee for Monetary Policy, and the Gold Standard League. Both were guided by Walter E. Spahr, professor of economics at New York University. In this era, and indeed from 1933 until 1971, the United States was on a fiat standard domestically, but on a curious and highly restricted form of gold standard internationally, in which the United States agreed to redeem dollars held by foreign governments and their central banks in gold at the legally defined rate of $35 per ounce. Foreign individuals or private firms could not redeem their dollar balances in gold, and neither individuals nor governments could redeem their dollars in gold coin, since such coin was no longer being issued. Instead, dollars could only be redeemed in large gold bars. However, until 1968 the U.S. Treasury stood ready to maintain the official dollar/gold rate in the free gold market of London and Zurich by purchasing dollars with gold should

the gold price threaten to rise above $35. In that way the United States informally maintained a redeemable dollar at $35 an ounce for foreign individuals and firms as well as officially for governments and central banks. As European pressure for redemption assaulted the inflated dollar, however, the United States, in 1968, sealed off the dollar from the free gold market, establishing the short-lived "two-tier" gold market. In 1971 the last vestige of international gold redemption was ended by President Nixon, and the dollar became totally fiat.

The Spahr organizations advocated a return to the classic, pre-1933, gold coin standard, with gold coin circulating as the standard money. But they sidestepped the problem of considering the proper dollar weight by simply urging the definition of the gold dollar at 1/35 a gold ounce. Their major argument was that 35 dollars to the ounce was the existing legal definition, and that this definition was effectively the redemption rate for foreign governments and central banks. (They might have added, as we have seen, that $35 was also the effective redemption rate for foreign individuals.)

The sole basis of the Spahr call for $35 was that definitions, once selected, must stand forevermore. But this stance was a weak one, considering that there was no gold standard domestically, and no gold coin redemption at all. Why stand courageously for cleaving to a gold standard at $35 an ounce, when nothing like a genuine gold standard has existed since 1933? Indeed, if the Spahr group had been consistent in wanting to maintain the old definition of the dollar, it would have urged a return to the last definition under a true gold standard, the pre-Rooseveltian $20 to the ounce.

The fact that none of the Spahr group so much as contemplated a return to $20 hinted at a growing realization that $35 and, *a fortiori*, $20, was no longer a viable weight, considering the inflation of money and prices that had proceeded steadily since the advent of World War II. The "classic" gold standard before 1933 was marked by a pyramiding of dollar claims upon a much smaller gold stock (specifically bank deposits upon bank notes and in turn upon gold). During and after World War II, the inflationary pyramiding directed by the Federal Reserve became ever more top-heavy, and a return to a $35-an-ounce dollar would have risked a massive deflationary contraction of money. For that reason, such dissident members of the Economists' National Committee as Henry Hazlitt, and other economists such as Michael

Angelo Heilperin, Jacques Rueff, and Ludwig von Mises, began calling for return to gold at a "price" much higher than $35.[14]

At any rate, at the present time, even the weak argument for a definition of the dollar at $35 no longer exists. There is no gold standard left in any sense, and the existing "definition" of the value of gold as being $42.22 an ounce is clearly only an accounting fiction, and at radical variance from its value on the gold market. In a return to the gold standard, we would begin *de novo*, and with a clear slate. In that case, we must realize that there is no moral obligation involved in framing an *initial* definition, and that a new definition of the dollar should therefore be set at whatever figure is pragmatically the most useful. What definition we choose for the new gold dollar is then dependent on what sort of monetary system we would like to achieve, as well as on what definition would assure the easiest transition to that desired system.

Which Gold Standard?

Which definition we choose, then, depends on what kind of gold standard we would like to attain. At the very least, it must be a genuine gold standard, that is, the dollar must be tied to gold permanently at a fixed weight, and must be redeemable in gold coin at that weight. That rules out all forms of pseudo gold standards such as the 1933–1971 monetary system of the United States, or its subset, the Bretton Woods system of 1945–1971. It rules out, similarly, the pseudo gold standard advocated by the supply-side economists, who would go back to something like Bretton Woods. There would then be no gold coin redemption, and, even worse than Bretton Woods, which at least kept a fixed dollar weight in gold, the Federal Reserve

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[14]These dissidents were virtually all in the Austrian tradition, and the three names in the text were all either students or followers of Ludwig von Mises.

In the light of later developments in the gold market, it is amusing to note that the Rueff-Hazlitt proposals for a gold dollar at $70 were scorned by virtually all economists as absurdly high, and that before 1968, monetarists and Keynesians alike were unanimous in predicting that if ever the dollar were cut loose from gold, the gold price would fall precipitately to its nonmonetary level, then estimated at approximately $9 per ounce. It is equally amusing to consider that most of these economists would still subscribe to the motto that "science is prediction."

would be able to manipulate the dollar definition at will, in attempting to fine tune the economy to achieve such macroeconomic goals as full employment or price level stability.

We could in fact return to the classical gold standard such as all major nations were on before World War I and the United States from the 1850s to 1933. The major advantages would be a return to fixity of weight and to genuine redeemability in gold coin. A classical gold standard would be infinitely superior to either the current or the Bretton Woods system. In this case the particular definition chosen would not matter very much, except that it should be much higher than $35 so as not to tempt an unnecessary and massive deflationary contraction that would, at the very least, turn public opinion away from the gold standard for decades to come. More important, the classical gold standard would return to the very same system that created boom-and-bust cycles and brought us 1929 and at least the first four years of the Great Depression. It would, in short, retain the Federal Reserve System, and its system of cartelized banking, special privilege, and virtually inevitable generation of inflation and contraction. Finally, while the ultimate monetary commodity, gold, would be supplied by the free market, the dollar would not be truly denationalized, and it would still be a creature of the federal government.

We can do much better, and there seems little point in going to the trouble of advocating and working for fundamental reform while neglecting to hold up the standard of the best we can achieve. If in our disillusionment with central banking, we call for abolition of the Federal Reserve and a return to some form of free banking, what route could we then take toward that goal? The closest approximation to a free banking-and-gold standard was the American economy from the 1840s to the Civil War, in which there was no form of central banking, and each bank had to redeem its notes and deposits promptly in gold. But in working toward such a system, we must realize that we now have a gold supply nationalized in the coffers of the Federal Reserve. Abolition of the Federal Reserve would mean that its gold supply now kept in Treasury depositories would have to be disgorged and returned to private hands. But this gives us the clue to the proper definition of a gold dollar. For in order to liquidate the Federal Reserve and remove the gold from its vaults, and at the same time tie gold to the dollar, the Federal Reserve's gold must be revalued and redefined so as to be able to exchange it, one for one, for dollar claims

on gold. The Federal Reserve's gold must be valued at *some* level, and it is surely absurd to cleave to the fictitious $42.22 when another definition at a much lower weight would enable the one-for-one liquidation of the Federal Reserve's liabilities as well as transferring its gold from governmental to private hands.

Let us take a specific example. At the end of December 1981, Federal Reserve liabilities totaled approximately $179 billion ($132 billion in Federal Reserve notes plus $47 billion in deposits due to the commercial banks). The Federal Reserve owned a gold stock of 265.3 million ounces. Valued at the artificial $42.22 an ounce, this yielded a dollar value to the Federal Reserve's gold stock of $11.2 billion. But what if the dollar were defined so that the Federal Reserve's gold stock equaled, dollar for dollar, its total liabilities—that is, $179 billion? In that case, gold would be defined as equal to $676 an ounce, or, more accurately, the dollar would be newly defined as equal to, and redeemable in 1/676 gold ounce. At that new weight, Federal Reserve notes would then be promptly redeemed, one for one, in gold coin, and Federal Reserve demand deposits would be redeemed in gold to the various commercial banks. The gold would then constitute those banks' reserves for their demand deposits. The abolition of Federal Reserve notes need not, of course, mean the end of all paper currency; for banks, as before the Civil War, could then be allowed to print bank notes as well as issue demand deposits.

This plan, essentially the one advocated by Congressman Ron Paul (R.-Tx), would return us speedily to something akin to the best monetary system in U.S. history, the system from the abolition of the Second Bank of the United States and the pet banks, to the advent of the Civil War. Inflation and business cycles would be greatly muted, if not eliminated altogether. Add the abolition of the Federal Deposit Insurance Corporation, the requirement of instant payment of demand liabilities on pain of insolvency, and the long overdue legalization of interstate branch banking, and we would have a system of free banking such as advocated by many writers and economists.

We could, however, go even one step further. If we were interested in going on to 100 percent reserve banking, eliminating virtually all inflation and all bank contraction forevermore, we might require 100 percent banking as part of a general legal prohibition against fraud. The substantial 100 percent gold reserve tradition (held by writers and economists ranging from David Hume, Thomas

Jefferson, and John Adams, and partly to Ludwig von Mises), considers the issuing of demand liabilities greater than reserves as equivalent to a warehouse issuing and speculating in warehouse receipts for nonexisting deposits. In short, a fraudulent violation of bailment.

How might the United States go over to a 100 percent gold system? At the end of December 1981, total demand liabilities issued by the entire commercial banking system (that is, M-1), equaled $445 billion (including Federal Reserve notes and demand, or rather checkable, deposits). To go over immediately to 100 percent gold, the dollar would be newly defined at 1/1,696 gold ounce. Total gold stock at the Federal Reserve would then be valued at $445 billion, and the gold could be transferred to the individual holders of Federal Reserve notes as well as to the banks, the banks' assets now equaling and balancing their total demand deposits outstanding. They would then be automatically on a 100 percent gold system.

From the standpoint of the free market, there is admittedly a problem with this transition to 100 percent gold. For the Federal Reserve's gold would be transferred to the commercial banks up to the value of their demand deposits by the Federal Reserve's granting a free gift of capital to the banks by that amount. Thus, overall, commercial banks, at the end of December 1981, had demand deposits of $317 billion, offset by reserves of $47 billion. A return to gold at $1,696 an ounce would have meant that gold transferred to the banks in exchange for their reserve at the Federal Reserve would also have increased their reserves from $47 to $317 billion, via a writing up of bank capital by $270 billion. The criticism would be that the banks scarcely deserve such a free gift, deserving instead to take their chances like all other firms on the free market. The rebuttal argument, however, would stress that, if a 100 percent gold requirement were now imposed on the banks, their free gift would do no more than insure the banking system against a potential holocaust of deflation, contraction, and bankruptcies.[15]

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[15]On the paths to a genuine gold standard, see Murray N. Rothbard, *The Mystery of Banking* (New York: Richardson and Snyder, 1983), pp. 254–69. On the 100 percent gold tradition, see Rothbard, *Case for a 100 Percent Gold Dollar* (from *In Search of a Monetary Constitution*, Leland B. Yeager, ed. [Cambridge, Mass.: Harvard University Press, 1962], reprinted 1991 as a monograph by the Ludwig von Mises Institute) and the neglected

At any rate, whichever of the last two paths is chosen, money and banking would at last be separated from the state, and new currencies, whether "Hayeks" or "ducats," would be free to compete on the market with the gold dollar. I would not advise anyone, however, to bet their life savings on any of these proposed new currencies getting anywhere in this competitive race.

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work by Mark Skousen, *The 100 Percent Gold Standard: Economics of a Pure Money Commodity* (Washington, D.C.: University Press of America, 1977). Also see Rothbard, "Gold vs. Fluctuating Fiat Exchange Rates," in Hans Sennholz, ed., *Gold Is Money* (Westport, Conn.: Greenwood Press, 1975), pp. 24–40; included in this volume as chapter 40.

42

Inflation and the Business Cycle: The Collapse of the Keynesian Paradigm

Until the years 1973–1974, the Keynesians who had formed the ruling economic orthodoxy since the late 1930s had been riding high, wide, and handsome.[1] Virtually everyone had accepted the Keynesian view that there is something in the free-market economy that makes it subject to swings of under- and overspending (in practice, the Keynesian concern is almost exclusively with alleged *underspending*), and that hence it is the function of the government to compensate for this market defect. The government was to compensate for this alleged imbalance by manipulating its spending and deficits (in practice, to increase them). Guiding this vital "macroeconomic" function of government, of course, was to be a board of Keynesian economists (the "Council of Economic Advisors"), who would be able to "fine-tune" the economy so as to prevent either inflation or recession, and to regulate the proper amount of total spending so as to insure continuing full employment without inflation.

It was in 1973–1974 that even the Keynesians finally realized that something was very, very wrong with this confident scenario, that it was time to go back in confusion to their drawing boards. For not only had forty-odd years of Keynesian fine-tuning *not* eliminated

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[1]Keynesians are creators of "macroeconomics" and disciples of Lord Keynes, the wealthy and charismatic Cambridge University economist whose *General Theory of Employment, Interest, and Money* (New York: Harcourt Brace, 1936) is the cornerstone of Keynesian economics.

a chronic inflation that had set in with World War II, but it was in those years that inflation escalated temporarily into double-digit figures (to about 13 percent per annum). Not only that, it was also in 1973–1974 that the United States plunged into its deepest and longest recession since the 1930s (it would have been called a "depression" if the term hadn't long since been abandoned as impolitic by economists). This curious phenomenon of a vaunting inflation occurring *at the same time* as a steep recession was simply *not supposed to happen* in the Keynesian view of the world. Economists had always known that either the economy is in a boom period, in which case prices are rising, *or else* the economy is in a recession or depression marked by high unemployment, in which case prices are falling. In the boom, the Keynesian government was supposed to "sop up excess purchasing power" by increasing taxes, according to the Keynesian prescription—that is, it was supposed to take spending out of the economy; in the recession, on the other hand, the government was supposed to increase its spending and its deficits, in order to pump spending into the economy. But if the economy should be in an inflation *and* a recession with heavy unemployment *at the same time*, what in the world was government supposed to do? How could it step on the economic accelerator *and* brake at the same time?

As early as the recession of 1958, things had started to work peculiarly; for the first time, in the midst of a recession, consumer goods prices rose, if only slightly. It was a cloud no bigger than a man's hand, and it seemed to give Keynesians little to worry about.

Consumer prices, again, rose in the recession of 1966, but this was such a mild recession that no one worried about that either. The sharp inflation of the recession of 1969–1971, however, was a considerable jolt. But it took the steep recession that began in the midst of the double-digit inflation of 1973–1974 to throw the Keynesian economic establishment into permanent disarray. It made them realize that not only had fine-tuning failed, not only was the supposedly dead and buried cycle still with us, but now the economy was in a state of chronic inflation and getting worse—and it was also subject to continuing bouts of recession: of inflationary recession, or "stagflation." It was not only a new phenomenon, it was one that could not be explained, that could not even exist, in the theories of economic orthodoxy.

And the inflation appeared to be getting worse: approximately 1–2 percent per annum in the Eisenhower years, up to 3–4 percent during the Kennedy era, to 5–6 percent in the Johnson administration, then up to about 13 percent in 1973–1974, and then falling "back" to about 6 percent, but only under the hammer blows of a steep and prolonged depression (approximately 1973–1976).

There are several things, then, which need almost desperately to be explained: (1) Why the chronic and accelerating inflation? (2) Why an inflation even during deep depressions? And while we are at it, it would be important to explain, if we could, (3) Why the business cycle at all? Why the seemingly unending round of boom and bust?

Fortunately, the answers to these questions are at hand, provided by the tragically neglected "Austrian School" of economics and its theory of money and the business cycle, developed in Austria by Ludwig von Mises and his follower Friedrich A. Hayek and brought to the London School of Economics by Hayek in the early 1930s. Actually, Hayek's Austrian business cycle theory swept the younger economists in Britain precisely because it alone offered a satisfactory explanation of the Great Depression of the 1930s. Such future Keynesian leaders as John R. Hicks, Abba P. Lerner, Lionel Robbins, and Nicholas Kaldor in England, as well as Alvin Hansen in the United States, had been Hayekians only a few years earlier. Then, Keynes's *General Theory* swept the boards after 1936 in a veritable "Keynesian Revolution," which arrogantly proclaimed that no one before it had presumed to offer any explanation whatever of the business cycle or of the Great Depression. It should be emphasized that the Keynesian theory did *not* win out by carefully debating and refuting the Austrian position; on the contrary, as often happens in the history of social science, Keynesianism simply became the new fashion, and the Austrian theory was not refuted but only ignored and forgotten.

For four decades, the Austrian theory was kept alive, unwept, un-honored, and unsung by most of the world of economics: only Mises (at NYU) and Hayek (at Chicago) themselves and a few followers still clung to the theory. Surely it is no accident that the current renaissance of Austrian economics has coincided with the phenomenon of stagflation and its consequent shattering of the Keynesian paradigm for all to see. In 1974 the first conference of Austrian School economists in decades was held in South Royalton,

Vermont. Later that year, the economics profession was astounded by the Nobel Prize being awarded to Hayek. Since then, there have been notable Austrian conferences at the University of Hartford, at Windsor Castle in England, and at New York University, with even Hicks and Lerner showing signs of at least partially returning to their own long-neglected position. Regional conferences have been held on the East Coast, on the West Coast, in the Middle West, and in the Southwest. Books are being published in this field, and, perhaps most important, a number of extremely able graduate students and young professors devoted to Austrian economics have emerged and will undoubtedly be contributing a great deal in the future.

Money and Inflation

What, then, does this resurgent Austrian theory have to say about our problem?[2] The first thing to point out is that inflation is not ineluctably built into the economy, nor is it a prerequisite for a growing and thriving world. During most of the nineteenth century (apart from the years of the War of 1812 and the Civil War), prices were falling, *and yet* the economy was growing and industrializing. Falling prices put no damper whatsoever on business or economic prosperity.

Thus, falling prices are apparently the *normal* functioning of a growing market economy. So how is it that the very idea of steadily falling prices is so counter to our experience that it seems a totally unrealistic dreamworld? Why, since World War II, have prices gone up continuously, and even swiftly, in the United States and throughout the world? Before that point, prices had gone up steeply during

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[2]A brief introduction to Austrian business cycle theory can be found in Murray N. Rothbard, *Depressions: Their Cause and Cure* (Lansing, Mich.: Constitutional Alliance, March 1969). The theory is set forth and then applied to the Great Depression of 1929–1933, and also used briefly to explain our current stagflation, in Rothbard, *America's Great Depression*, 3rd ed. (Kansas City, Kans.: Sheed and Ward, 1975).

The best source for the Austrian theory of money is still its original work: Ludwig von Mises, *Theory of Money and Credit*, 3rd ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1971). For an introduction, see Rothbard, *What Has Government Done to Our Money?* 2nd ed. (Los Angeles: Libertarian Publishers, 1974).

World War I and World War II; in between, they fell slightly despite the great boom of the 1920s, and then fell steeply during the Great Depression of the 1930s. In short, apart from wartime experiences, the idea of inflation as a peacetime norm really arrived after World War II.

The favorite explanation of inflation is that greedy businessmen persist in putting up prices in order to increase their profits. But surely the quotient of business "greed" has not suddenly taken a great leap forward since World War II. Weren't businesses equally "greedy" in the nineteenth century and up to 1941? So why was there no inflation trend then? Moreover, if businessmen are so avaricious as to jack up prices 10 percent per year, why do they stop there? Why do they wait; why don't they raise prices by 50 percent, or double or triple them immediately? *What holds them back?*

A similar flaw rebuts another favorite explanation of inflation: that unions insist on higher wage rates, which in turn leads businessmen to raise prices. Apart from the fact that inflation appeared as long ago as ancient Rome and long before unions arrived on the scene, and apart from the lack of evidence that union wages go up faster than nonunion or that prices of unionized products rise faster than of nonunionized, a similar question arises: Why don't businesses raise their prices *anyway*? What is it that permits them to raise prices by a certain amount, but *not* by more? If unions are that powerful, and businesses that responsive, why don't wages and prices rise by 50 percent, or 100 percent, per year? *What holds them back?*

A government-inspired TV propaganda campaign a few years ago got a bit closer to the mark: consumers were blamed for inflation by being too "piggy," by eating and spending too much. We have here at least the beginning of an explanation of what holds businesses or unions back from demanding still higher prices: consumers won't pay them. Coffee prices zoomed upward a few years ago; a year or two later they fell sharply because of consumer resistance—to some extent from a flashy consumer "boycott"—but more importantly from a shift in consumer buying habits away from coffee and toward lower-priced substitutes. So a limit on consumer demand holds them back.

But this pushes the problem one step backward. For if consumer demand, as seems logical, is limited at any given time, how come it keeps going up, year after year, and validating or permitting price and

wage increases? And if it can go up by 10 percent, what keeps it from going up by 50 percent? In short, what enables consumer demand to keep going up, year after year, and yet keeps it from going up any further?

To go any further in this detective hunt we must analyze the meaning of the term "price." What exactly is a price? The price of any given quantity of a product is the amount of money the buyer must spend on it. In short, if someone must spend seven dollars on ten loaves of bread, then the "price" of those ten loaves is seven dollars, or, since we usually express price per unit of product, the price of bread is seventy cents per loaf. So there are two sides to this exchange: the buyer with money and the seller with bread. It should be clear that the interaction of both sides brings about the ruling price in the market. In short, if more bread comes onto the market, the price of bread will be bid down (increased supply lowers the price); while, on the other hand, if the bread buyers have more money in their wallets, the price of bread will be bid higher (increased demand raises the price).

We have now found the crucial element that limits and holds back the amount of consumer demand and hence the price: the amount of money in the consumers' possession. If the money in their pockets increases by 20 percent, then the limitation on their demand is relaxed by 20 percent, and, other things remaining equal, prices will tend to rise by 20 percent as well. We have found the crucial factor: the stock or the supply of money.

If we consider prices across-the-board for the entire economy, then the crucial factor is the total stock or supply of money in the whole economy. In fact, the importance of the money supply in analyzing inflation may be seen in extending our treatment from the bread or coffee market to the overall economy. For *all* prices are determined inversely by the supply of the good and directly by the demand for it. But the supplies of goods are, in general, going up year after year in our still growing economy. So that, from the point of view of the supply side of the equation, most prices should be *falling*, and we should right now be experiencing a nineteenth-century-style steady fall in prices ("deflation"). If chronic inflation were due to the supply side—to activities by producers such as business firms or unions—then the supply of goods overall would necessarily be falling, thereby raising prices. But since the supply of goods is manifestly increasing,

the source of inflation must be the demand side—and the dominant factor on the demand side, as we have indicated, is the total supply of money.

And, indeed, if we look at the world past and present, we find that the money supply has been going up at a rapid pace. It rose in the nineteenth century, too, but at a much slower pace, far slower than the increase of goods and services; but, since World War II, the increase in the money supply—both here and abroad—has been much faster than in the supply of goods. Hence, inflation.

The crucial question then becomes who, or what, controls and determines the money supply, and keeps increasing its amount, especially in recent decades? To answer this question, we must first consider how money arises to begin with in the market economy. For money first arises on the market as individuals begin to choose one or several useful commodities to act as a money: the best money-commodities are those that are in high demand; that have a high value per unit-weight; that are durable, so they can be stored a long time, mobile, so they can be moved readily from one place to another, and easily recognizable; and that can be readily divisible into small parts without losing their value. Over the centuries, various markets and societies have chosen a large number of commodities as money: from salt to sugar to cowrie shells to cattle to tobacco down to cigarettes in POW camps during World War II. But over all these centuries, two commodities have always won out in the competitive race to become moneys when they have been available: gold and silver.

Metals always circulate by their weight—a *ton* of iron, a *pound* of copper, etc.—and their prices are reckoned in terms of these units of weight. Gold and silver are no exception. Every one of the modern currency units originated as units of weight of either gold or silver. Thus, the British unit, the "pound sterling," is so named because it originally meant simply *one pound of silver*. (To see how the pound has lost value in the centuries since, we should note that the pound sterling is now worth two-fifths of an *ounce* of silver on the market. This is the effect of British inflation—of the *debasement* of the value of the pound.) The "dollar" was originally a Bohemian coin consisting of an ounce of silver. Later on, the "dollar" came to be defined as one-twentieth of an ounce of gold.

When a society or a country comes to adopt a certain commodity as a money, and its unit of weight then becomes the unit of currency—the unit of reckoning in everyday life—then that country is said to be on that particular commodity "standard." Since markets have universally found gold or silver to be the best standards whenever they are available, the natural course of these economies is to be on the gold or silver standard. In that case, the supply of gold is determined by market forces: by the technological conditions of supply, the prices of other commodities, etc.

From the beginning of market adoption of gold and silver as money, the State has been moving in to seize control of the money-supply function, the function of determining and creating the supply of money in the society. It should be obvious why the State should want to do so: this would mean seizing control over the money supply from the market and turning it over to a group of people in charge of the State apparatus. Why they should want to do so is clear: here would be an alternative to taxation which the victims of a tax always consider onerous.

For now the rulers of the State can simply create their own money and spend it or lend it out to their favorite allies. None of this was easy until the discovery of the art of printing; after that, the State could contrive to change the definition of the "dollar," the "pound," the "mark," etc., from units of weight of gold or silver into simply the *names* for pieces of paper printed by the central government. Then that government could print them costlessly and virtually *ad lib*, and then spend or lend them out to its heart's content. It took centuries for this complex movement to be completed, but now the stock and the issuance of money is totally in the hands of every central government. The consequences are increasingly visible all around us.

Consider what would happen if the government should approach one group of people—say the Jones family—and say to them: "Here, we give you the absolute and unlimited power to print dollars, to determine the number of dollars in circulation. And you will have an absolute monopoly power: anyone else who presumes to use such power will be jailed for a long, long time as an evil and subversive counterfeiter. We hope you use this power wisely." We can pretty well predict what the Jones family will do with this newfound power. At first, it will use the power slowly and carefully, to pay off its debts,

perhaps buy itself a few particularly desired items; but then, habituated to the heady wine of being able to print their own currency, they will begin to use the power to the hilt, to buy luxuries, reward their friends, etc. The result will be continuing and even accelerated increases in the money supply, and therefore continuing and accelerated inflation.

But this is precisely what governments—all governments—*have* done. Except that instead of granting the monopoly power to counterfeit to the Jones or other families, government has "granted" the power to *itself*. Just as the State arrogates to itself a monopoly power over legalized kidnapping and calls it *conscription*; just as it has acquired a monopoly over legalized robbery and calls it *taxation*; so, too, it has acquired the monopoly power to counterfeit and calls it increasing the supply of dollars (or francs, marks, or whatever). Instead of a gold standard, instead of a money that emerges from and whose supply is determined by the free market, we are living under a fiat paper standard. That is, the dollar, franc, etc., are simply pieces of paper with such names stamped upon them, issued at will by the central government—by the State apparatus.

Furthermore, since the interest of a counterfeiter is to print as much money as he can get away with, so too will the State print as much money as *it* can get away with, just as it will employ the power to tax in the same way: to extract as much money as it can without raising too many howls of protest.

Government control of money supply is inherently inflationary, then, for the same reason that *any* system in which a group of people obtains control over the printing of money is bound to be inflationary.

The Federal Reserve and Fractional Reserve Banking

Inflating by simply printing more money, however, is now considered old-fashioned. For one thing, it is too *visible*; with a lot of high-denomination bills floating around, the public might get the troublesome idea that the cause of the unwelcome inflation is the government's printing of all the bills—and the government might be stripped of that power. Instead, governments have come up with a much more complex and sophisticated, and much less visible, means of doing the same thing: of organizing increases in the money supply

to give themselves more money to spend and to subsidize favored political groups. The idea was this: instead of stressing the printing of money, retain the paper dollars or marks or francs as the basic money (the "legal tender"), and then pyramid on top of that a mysterious and invisible, but no less potent, "checkbook money," or bank demand deposits. The result is an inflationary engine, controlled by government, which no one but bankers, economists, and government central bankers understands—and designedly so.

First, it must be realized that the entire commercial banking system, in the United States or elsewhere, is under the total control of the central government—a control that the banks welcome, for it permits them to create money. The banks are under the complete control of the central bank—a government institution—a control stemming largely from the central bank's compulsory monopoly over the printing of money. In the United States, the Federal Reserve System performs this central banking function. The Federal Reserve ("the Fed") then permits the commercial banks to pyramid bank demand deposits ("checkbook money") on top of their own "reserves" (deposits at the Fed) by a multiple of approximately 6:1. In other words, if bank reserves at the Fed increase by $1 billion, the banks can and do pyramid their deposits by $6 billion—that is, the banks create $6 billion worth of new money.

Why do bank demand deposits constitute the major part of the money supply? Officially, they are not money or legal tender in the way that Federal Reserve Notes are money. But they constitute a promise by a bank that it will redeem its demand deposits in cash (Federal Reserve Notes) anytime that the depositholder (the owner of the "checking account") may desire. The point, of course, is that the banks *don't have* the money; they cannot, since they owe six times their reserves, which are their own checking account at the Fed. The public, however, is induced to trust the banks by the penumbra of soundness and sanctity laid about them by the Federal Reserve System. For the Fed can and does bail out banks in trouble. If the public understood the process and descended in a storm upon the banks demanding their money, the Fed, in a pinch, if it wanted, could always *print* enough money to tide the banks over.

The Fed, then, controls the rate of monetary inflation by adjusting the multiple (6:1) of bank money creation, or, more importantly, by determining the total amount of bank reserves. In other words, if

the Fed wishes to increase the total money supply by $6 billion, instead of actually printing the $6 billion, it will contrive to increase bank reserves by $1 billion, and then leave it up to the banks to create $6 billion of new checkbook money. The public, meanwhile, is kept ignorant of the process or of its significance.

How do the banks create new deposits? Simply by lending them out in the process of creation. Suppose, for example, that the banks receive the $1 billion of new reserves; the banks will lend out $6 billion and create the new deposits in the course of making these new loans. In short, when the commercial banks lend money to an individual, a business firm, or the government, they are *not* relending existing money that the public laboriously had saved and deposited in their vaults—as the public usually believes. They lend out new demand deposits that they create in the course of the loan—and they are limited only by the "reserve requirements," by the required maximum multiple of deposit to reserves (e.g., 6:1). For, after all, they are not printing paper dollars or digging up pieces of gold; they are simply issuing deposit or "checkbook" claims upon themselves for cash—claims which they wouldn't have a prayer of honoring if the public as a whole should ever rise up at once and demand such a settling of their accounts.

How, then, does the Fed contrive to determine (almost always, to *increase*) the total reserves of the commercial banks? It can and does *lend* reserves to the banks, and it does so at an artificially cheap rate (the "rediscount rate"). But still, the banks do not like to be heavily in debt to the Fed, and so the total loans outstanding from the Fed to the banks is never very high. By far the most important route for the Fed's determining of total reserves is little known or understood by the public: the method of "open market purchases." What this simply means is that the Federal Reserve Bank goes out into the open market and buys an asset. Strictly, it doesn't matter what kind of an asset the Fed buys. It could, for example, be a pocket calculator for twenty dollars. Suppose that the Fed buys a pocket calculator from XYZ Electronics for twenty dollars. The Fed acquires a calculator; but the important point for our purposes is that XYZ Electronics acquires a check for twenty dollars from the Federal Reserve Bank. Now, the Fed is not open to checking accounts from private citizens, only from banks and the federal government itself. XYZ Electronics, therefore, can only do one thing with its twenty-dollar

check: deposit it at its own bank, say the Acme Bank. At this point, another transaction takes place: XYZ gets an increase of twenty dollars in its checking account, in its "demand deposits." In return, Acme Bank gets a check, made over to itself, from the Federal Reserve Bank.

Now, the first thing that has happened is that XYZ's money stock has gone up by twenty dollars—its newly increased account at the Acme Bank—and nobody else's money stock has changed at all. So, at the end of this initial phase—phase I—the money supply has increased by twenty dollars, the same amount as the Fed's purchase of an asset. If one asks, where did the Fed get the twenty dollars to buy the calculator, then the answer is: it created the twenty dollars *out of thin air* by simply writing out a check upon itself. No one, neither the Fed nor anyone else, *had* the twenty dollars before it was created in the process of the Fed's expenditure.

But this is not all. For now the Acme Bank, to its delight, finds it has a check on the Federal Reserve. It rushes to the Fed, deposits it, and acquires an increase of $20 in its reserves, that is, in its "demand deposits with the Fed." Now that the banking system has an increase in $20, it can and does expand credit, that is, create more demand deposits in the form of loans to business (or to consumers or government), until the total increase in checkbook money is $120. At the end of phase II, then, we have an increase of $20 in bank reserves generated by Fed purchase of a calculator for that amount, an increase in $120 in bank demand deposits, and an increase of $100 in bank loans to business or others. The total money supply has increased by $120, of which $100 was created by the banks in the course of lending out checkbook money to business, and $20 was created by the Fed in the course of buying the calculator.

In practice, of course, the Fed does not spend much of its time buying haphazard assets. Its purchases of assets are so huge in order to inflate the economy that it must settle on a regular, highly liquid asset. In practice, this means purchases of U.S. government bonds and other U.S. government securities. The U.S. government bond market is huge and highly liquid, and the Fed does not have to get into the political conflicts that would be involved in figuring out which private stocks or bonds to purchase. For the government, this process also has the happy consequence of helping to prop up the

government security market, and keep up the price of government bonds.

Suppose, however, that some bank, perhaps under the pressure of its depositors, might have to cash in some of its checking account reserves in order to acquire hard currency. What would happen to the Fed then, since its checks had created new bank reserves out of thin air? Wouldn't it be forced to go bankrupt or the equivalent? No, because the Fed has a monopoly on the printing of cash, and it could—and would—simply redeem its demand deposit by printing whatever Federal Reserve Notes are needed. In short, if a bank came to the Fed and demanded $20 in cash for its reserve—or, indeed, if it demanded $20 million—all the Fed would have to do is print that amount and pay it out. As we can see, being able to print its own money places the Fed in a uniquely enviable position.

So here we have, at long last, the key to the mystery of the modern inflationary process. It is a process of continually expanding the money supply through continuing Fed purchases of government securities on the open market. Let the Fed wish to increase the money supply by $6 billion, and it will purchase government securities on the open market to a total of $1 billion (if the money multiplier of demand deposits/reserves is 6:1), and the goal will be speedily accomplished. In fact, week after week, even as these lines are being read, the Fed goes into the open market in New York and purchases whatever amount of government bonds it has decided upon, and thereby helps decide upon the amount of monetary inflation.

The monetary history of this century has been one of repeated loosening of restraints on the State's propensity to inflate, the removal of one check after another until now the government is able to inflate the money supply, and therefore prices, at will. In 1913, the Federal Reserve System was created to enable this sophisticated pyramiding process to take place. The new system permitted a large expansion of the money supply, and of inflation to pay for war expenditures in World War I. In 1933, another fateful step was taken: the United States government took the country off the gold standard, that is, dollars, while still legally defined in terms of a weight of gold, were no longer redeemable in gold. In short, before 1933, there was an important shackle upon the Fed's ability to inflate and expand the money supply: Federal Reserve Notes themselves were payable in the equivalent weight of gold.

There is, of course, a crucial difference between gold and Federal Reserve Notes. The government cannot create new gold at will. Gold has to be dug, in a costly process, out of the ground. But Federal Reserve Notes can be issued at will, at virtually zero cost in resources. In 1933, the United States government removed the gold restraint on its inflationary potential by shifting to fiat money: to making the paper dollar itself the standard of money, with government the monopoly supplier of dollars. It was going off the gold standard that paved the way for the mighty U.S. money and price inflation during and after World War II.

But there was still one fly in the inflationary ointment, one restraint left on the U.S. government's propensity for inflation. While the United States had gone off gold domestically, it was still pledged to redeem any paper dollars (and ultimately bank dollars) held by foreign governments in gold should they desire to do so. We were, in short, still on a restricted and aborted form of gold standard *internationally*. Hence, as the United States inflated the money supply and prices in the 1950s and 1960s, the dollars and dollar claims (in paper and checkbook money) piled up in the hands of European governments. After a great deal of economic finagling and political arm-twisting to induce foreign governments not to exercise their right to redeem dollars in gold, the United States, in August 1971, declared national bankruptcy by repudiating its solemn contractual obligations and "closing the gold window." It is no coincidence that this tossing off of the last vestige of gold restraint upon the governments of the world was followed by the double-digit inflation of 1973–1974, and by similar inflation in the rest of the world.

We have now explained the chronic and worsening inflation in the contemporary world and in the United States: the unfortunate product of a continuing shift in this century from gold to government-issued paper as the standard money, and of the development of central banking and the pyramiding of checkbook money on top of inflated paper currency. Both interrelated developments amount to one thing: the seizure of control over the money supply by government.

If we have explained the problem of inflation, we have not yet examined the problem of the business cycle, of recessions, and of inflationary recession or stagflation. Why the business cycle, and why the new mysterious phenomenon of stagflation?

Bank Credit and the Business Cycle

The business cycle arrived in the Western world in the latter part of the eighteenth century. It was a curious phenomenon, because there seemed to be no reason for it, and indeed it had not existed before. The business cycle consisted of a regularly recurring (though not strictly periodical) series of booms and busts, of inflationary periods marked by increased business activity, higher employment, and higher prices followed sharply by recessions or depressions marked by declining business activity, higher unemployment, and price declines; and then, after a term of such recession, recovery takes place and the boom phase begins again.

A priori, there is no reason to expect this sort of cyclical pattern of economic activity. There will be cyclical waves in specific types of activity, of course; thus, the cycle of the seven-year locust will cause a seven-year cycle in locust-fighting activity, in the production of antilocust sprays and equipment, etc. But there is no reason to expect boom-bust cycles in the overall economy. In fact, there is reason to expect just the opposite; for usually the free market works smoothly and efficiently, and especially with no massive cluster of error such as becomes evident when boom turns suddenly to bust and severe losses are incurred. And indeed, before the late eighteenth century there were no such overall cycles. Generally, business went along smoothly and evenly until a sudden interruption occurred: a wheat famine would cause a collapse in an agricultural country; the king would seize most of the money in the hands of financiers, causing a sudden depression; a war would disrupt trading patterns. In each of these cases, there was a specific blow to trade brought about by an easily identifiable, one-shot cause, with no need to search further for explanation.

So why the new phenomenon of the business cycle? It was seen that the cycle occurred in the most economically advanced areas of each country: in the port cities, in the areas engaged in trade with the most advanced world centers of production and activity. Two different and vitally important phenomena began to emerge on a significant scale in Western Europe during this period, precisely in the most advanced centers of production and trade: industrialization and commercial banking. The commercial banking was the same sort of "fractional reserve" banking we have analyzed above, with London

the site of the world's first central bank, the Bank of England, which originated at the turn of the eighteenth century. By the nineteenth century, in the new discipline of economics and among financial writers and commentators, two types of theories began to emerge in an attempt to explain the new and unwelcome phenomenon: those focusing the blame on the existence of industry, and those centering upon the banking system. The former, in sum, saw the responsibility for the business cycle to lie deep within the free-market economy—and it was easy for such economists to call either for the abolition of the market (e.g., Karl Marx) or for its drastic control and regulation by the government in order to alleviate the cycle (e.g., Lord Keynes). On the other hand, those economists who saw the fault to lie in the fractional reserve banking system placed the blame outside the market economy and onto an area—money and banking—which even English classical liberalism had never taken away from tight government control. Even in the nineteenth century, then, blaming the banks meant essentially blaming government for the boom-bust cycle.

We cannot go into details here on the numerous fallacies of the schools of thought that blame the market economy for the cycles; suffice it to say that these theories cannot explain the rise in prices in the boom or the fall in the recession, or the massive cluster of error that emerges suddenly in the form of severe losses when the boom turns to bust.

The first economists to develop a cycle theory centering on the money and banking system were the early nineteenth-century English classical economist David Ricardo and his followers, who developed the "monetary theory" of the business cycle.[3] The Ricardian theory went somewhat as follows: the fractional-reserve banks, spurred and controlled by the government and its central bank, expand credit. As credit is expanded and pyramided on top of paper money and gold, the money supply (in the form of bank deposits or, in that historical period, bank notes) expands. The expansion of the money supply raises prices and sets the inflationary boom into motion. As the boom continues, fueled by the pyramiding of bank

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[3]For the analysis of the remainder of this chapter, see Rothbard, *Depressions: Their Cause and Cure*, pp. 13–26.

notes and deposits on top of gold, domestic prices also increase. But this means that domestic prices will be higher, and still higher, than the prices of imported goods, so that imports will increase and exports to foreign lands will decline. A deficit in the balance of payments will emerge and widen, and it will have to be paid for by gold flowing out of the inflating country and into the hard-money countries. But as gold flows out, the expanding money and banking pyramid will become increasingly top-heavy, and the banks will find themselves in increasing danger of going bankrupt. Finally, the government and banks will have to stop their expansion, and, to save themselves, the banks will have to contract their bank loans and checkbook money.

The sudden shift from bank credit expansion to contraction reverses the economic picture and bust quickly follows boom. The banks must pull in their horns, and businesses and economic activity suffer as the pressure mounts for debt repayment and contraction. The fall in the supply of money, in turn, leads to a general fall in prices ("deflation"). The recession or depression phase has arrived. However, as the money supply and prices fall, goods again become more competitive with foreign products and the balance of payments reverses itself, with a surplus replacing the deficit. Gold flows into the country, and, as bank notes and deposits contract on top of an expanding gold base, the condition of the banks becomes much sounder, and recovery gets under way.

The Ricardian theory had several notable features: It accounted for the behavior of prices by focusing on changes in the supply of bank money (which indeed always increased in booms and declined in busts). It also accounted for the behavior of the balance of payments. And, moreover, it linked the boom and the bust, so that the bust was seen to be the consequence of the preceding boom. And not only the consequence, but the salutary means of adjusting the economy to the unwise intervention that created the inflationary boom.

In short, for the first time, the bust was seen to be neither a visitation from hell nor a catastrophe generated by the inner workings of the industrialized market economy. The Ricardians realized that the major evil was the preceding inflationary boom caused by government intervention in the money and banking system, and that the recession, unwelcome though its symptoms may be, is really the necessary adjustment process by which that interventionary boom

gets washed out of the economic system. The depression is the process by which the market economy adjusts, throws off the excesses and distortions of the inflationary boom, and reestablishes a sound economic condition. The depression is the unpleasant but necessary reaction to the distortions and excesses of the previous boom.

Why, then, does the business cycle recur? Why does the next boom-and-bust cycle always begin? To answer that, we have to understand the motivations of the banks and the government. The commercial banks live and profit by expanding credit and by creating a new money supply; so they are naturally inclined to do so, "to monetize credit," if they can. The government also wishes to inflate, both to expand its own revenue (either by printing money or so that the banking system can finance government deficits) and to subsidize favored economic and political groups through a boom and cheap credit. So we know why the initial boom began. The government and the banks had to retreat when disaster threatened and the crisis point had arrived. But as gold flows into the country, the condition of the banks becomes sounder. And when the banks have pretty well recovered, they are then in the confident position to resume their natural tendency of inflating the supply of money and credit. And so the *next* boom proceeds on its way, sowing the seeds for the *next* inevitable bust.

Thus, the Ricardian theory also explained the continuing recurrence of the business cycle. But two things it did not explain. First, and most important, it did not explain the massive cluster of error that businessmen are suddenly seen to have made when the crisis hits and bust follows boom. For businessmen are trained to be successful forecasters, and it is not like them to make a sudden cluster of grave error that forces them to experience widespread and severe losses. Second, another important feature of every business cycle has been the fact that both booms and busts have been much more severe in the "capital goods industries" (the industries making machines, equipment, plant or industrial raw materials) than in consumer goods industries. And the Ricardian theory had no way of explaining this feature of the cycle.

The Austrian, or Misesian, theory of the business cycle built on the Ricardian analysis and developed its own "monetary overinvestment" or, more strictly, "monetary malinvestment" theory of the

business cycle. The Austrian theory was able to explain not only the phenomena explicated by the Ricardians, but also the cluster of error and the greater intensity of capital goods' cycles. And, as we shall see, it is the only one that can comprehend the modern phenomenon of stagflation.

Mises begins as did the Ricardians: government and its central bank stimulate bank credit expansion by purchasing assets and thereby increasing bank reserves. The banks proceed to expand credit and hence the nation's money supply in the form of checking deposits (private bank notes having virtually disappeared). As with the Ricardians, Mises sees that this expansion of bank money drives up prices and causes inflation.

But, as Mises pointed out, the Ricardians understated the unfortunate consequences of bank credit inflation. For something even more sinister is at work. Bank credit expansion not only raises prices, it also artificially lowers the rate of interest, and thereby sends misleading signals to businessmen, causing them to make unsound and uneconomic investments.

For, on the free and unhampered market, the interest rate on loans is determined solely by the "time preferences" of all the individuals that make up the market economy. For the essence of any loan is that a "present good" (money which can be used at present) is being exchanged for a "future good" (an IOU which can be used at some point in the future). Since people always prefer having money right now to the present *prospect* of getting the same amount of money at some point in the future, present goods always command a premium over future goods in the market. That premium, or "agio," is the interest rate, and its height will vary according to the degree to which people prefer the present to the future, i.e., the degree of their time preferences.

People's time preferences also determine the extent to which people will save and invest for future use, as compared to how much they will consume now. If people's time preferences should fall, i.e., if their degree of preference for present over future declines, then people will tend to consume less now and save and invest more; at the same time, and for the same reason, the rate of interest, the rate of time-discount, will also fall. Economic growth comes about largely as the result of falling rates of time preference, which bring about an

increase in the proportion of saving and investment to consumption, as well as a falling rate of interest.

But what happens when the rate of interest falls *not* because of voluntary lower time preferences and higher savings on the part of the public, but from government interference that promotes the expansion of bank credit and bank money? For the new checkbook money created in the course of bank loans to business will come onto the market as a supplier of loans, and will therefore, at least initially, lower the rate of interest. What happens, in other words, when the rate of interest falls artificially, due to intervention, rather than naturally, from changes in the valuations and preferences of the consuming public?

What happens is trouble. For businessmen, seeing the rate of interest fall, will react as they always must to such a change of market signals: they will invest more in capital goods. Investments, particularly in lengthy and time-consuming projects, which *previously* looked unprofitable, now seem profitable because of the fall in the interest charge. In short, businessmen react as they would have if savings had *genuinely* increased: they move to invest those supposed savings. They expand their investment in durable equipment, in capital goods, in industrial raw material, and in construction, as compared with their direct production of consumer goods.

Thus, businesses happily borrow the newly expanded bank money that is coming to them at cheaper rates; they use the money to invest in capital goods, and eventually this money gets paid out in higher wages to workers in the capital goods industries. The increased business demand bids up labor costs, but businesses think they will be able to pay these higher costs because they have been fooled by the government-and-bank intervention in the loan market and by its vitally important tampering with the interest-rate signal of the marketplace—the signal that determines how many resources will be devoted to the production of capital goods and how many to consumer goods.

Problems surface when the workers begin to spend the new bank money that they have received in the form of higher wages. For the time preferences of the public have not *really* gotten lower; the public doesn't *want* to save more than it has. So the workers set about to consume most of their new income, in short, to reestablish their old

consumer/saving proportions. This means that they now redirect spending in the economy back to the consumer goods industries, and that they don't save and invest enough to buy the newly produced machines, capital equipment, industrial raw materials, etc. This lack of enough saving-and-investment to buy all the new capital goods at expected and existing prices reveals itself as a sudden, sharp depression in the capital goods industries. For once the consumers reestablish their desired consumption/investment proportions, it is thus revealed that business had invested too much in capital goods (hence the term "monetary overinvestment theory"), and had also underinvested in consumer goods. Business had been seduced by the governmental tampering and artificial lowering of the rate of interest, and acted as if more savings were available to invest than were really there. As soon as the new bank money filtered through the system and the consumers reestablish their old time-preference proportions, it became clear that there were not enough savings to buy all the producers' goods, and that business had misinvested the limited savings available ("monetary malinvestment theory"). Business had overinvested in capital goods and underinvested in consumer goods.

The inflationary boom thus leads to distortions of the pricing and production system. Prices of labor, raw materials, and machines in the capital goods industries are bid up too high during the boom to be profitable once the consumers are able to reassert their old consumption/investment preferences. The "depression" is thus seen—even more than in the Ricardian theory—as the necessary and healthy period in which the market economy sloughs off and liquidates the unsound, uneconomic investments of the boom, and reestablishes those proportions between consumption and investment that are truly desired by the consumers. The depression is the painful but necessary process by which the free market rids itself of the excesses and errors of the boom and reestablishes the market economy in its function of efficient service to the mass of consumers. Since the prices of factors of production (land, labor, machines, raw materials) have been bid too high in the capital goods industries during the boom, this means that these prices must be allowed to fall in the recession until proper market proportions of prices and production are restored.

Put another way, the inflationary boom will not only increase prices in general, it will also distort relative prices, will distort relations

of one type of price to another. In brief, inflationary credit expansion will raise all prices; but prices and wages in the capital goods industries will go up faster than the prices of consumer goods industries. In short, the boom will be more intense in the capital goods than in the consumer goods industries. On the other hand, the essence of the depression adjustment period will be to lower prices and wages in the capital goods industries relative to consumer goods, in order to induce resources to move back from the swollen capital goods to the deprived consumer goods industries. All prices will fall because of the contraction of bank credit, but prices and wages in capital goods will fall more sharply than in consumer goods. In short, both the boom and the bust will be more intense in the capital than in the consumer goods industries. Hence, we have explained the greater intensity of business cycles in the former type of industry.

There seems to be a flaw in the theory, however; for, since workers receive the increased money in the form of higher wages fairly rapidly, and then begin to reassert their desired consumer/investment proportions, how is it that booms go on for years without facing retribution: without having their unsound investments revealed or their errors caused by bank tampering with market signals made evident? In short, why does it take so long for the depression adjustment process to begin its work? The answer is that the booms would indeed be very shortlived (say, a few months) *if* the bank credit expansion and the subsequent pushing of interest rates below the free-market level were just a one-shot affair. But the crucial point is that the credit expansion is *not* one shot. It proceeds on and on, never giving the consumers the chance to reestablish their preferred proportions of consumption and saving, never allowing the rise in cost in the capital goods industries to catch up to the inflationary rise in prices. Like the repeated doping of a horse, the boom is kept on its way and ahead of its inevitable comeuppance by repeated and accelerating doses of the stimulant of bank credit. It is only when bank credit expansion must finally stop or sharply slow down, either because the banks are getting shaky or because the public is getting restive at the continuing inflation, that retribution finally catches up with the boom. As soon as credit expansion stops, the piper must be paid, and the inevitable readjustments must liquidate the unsound overinvestments of the boom and redirect the economy more toward *consumer goods* production. And, of course, the longer the boom is

kept going, the greater the malinvestments that must be liquidated, and the more harrowing the readjustments that must be made.

Thus, the Austrian theory accounts for the massive cluster of error (overinvestments in capital goods industries suddenly revealed as such by the stopping of the artificial stimulant of credit expansion) and for the greater intensity of boom and bust in the capital goods than in the consumer goods industries. Its explanation for the recurrence, for the inauguration of the next boom, is similar to the Ricardian; once the liquidations and bankruptcies are undergone, and the price and production adjustments completed, the economy and the banks begin to recover, and the banks can set themselves to return to their natural and desired course of credit expansion.

What of the Austrian explanation—the only preferred explanation—of stagflation? How is it that, in recent recessions, prices continue to go up? We must amend this first by pointing out that it is particularly consumer goods prices that continue to rise during recessions, and that confound the public by giving them the worst of both worlds at the same time: high unemployment and increases in the cost of living. Thus, during the most recent 1974–1976 depression, consumer goods prices rose rapidly, but wholesale prices remained level, while industrial raw material prices fell rapidly and substantially. So how is it that the cost of living continues to rise in current recessions?

Let us go back and examine what happened to prices in the "classic," or old-fashioned boom-bust cycle (pre-World War II vintage). In the booms the money supply went up, prices in general therefore went up, but the prices of capital goods rose by *more* than consumer goods, drawing resources out of consumer and into capital goods industries. In short, abstracting from general price increases, *relative to each other*, capital goods prices rose and consumer prices *fell* in the boom. What happened in the bust? The opposite situation: the money supply went down, prices in general therefore fell, but the prices of capital goods fell by *more* than consumer goods, drawing resources back out of capital goods into consumer goods industries. In short, abstracting from general price declines, *relative to each other*, capital goods prices *fell* and consumer prices *rose* during the bust.

The Austrian point is that this scenario in relative prices in boom and bust is *still* taking place unchanged. During the booms, capital goods prices still rise and consumer goods prices still fall relative to

each other, and vice versa during the recession. The difference is that a new monetary world has arrived, as we have indicated earlier in this chapter. For now that the gold standard has been eliminated, the Fed can and does increase the money supply *all the time*, whether it be boom or recession. There hasn't been a contraction of the money supply since the early 1930s, and there is not likely to be another in the foreseeable future. So now that the money supply *always* increases, prices in general are *always* going up, sometimes more slowly, sometimes more rapidly.

In short, in the classic recession, consumer goods prices were always going up relative to capital goods. Thus, if consumer goods prices fell by 10 percent in a particular recession, and capital goods prices fell by 30 percent, consumer prices were *rising* substantially in relative terms. But, from the point of view of the consumer, the fall in the cost of living was highly welcome, and indeed was the blessed sugarcoating on the pill of recession or depression. Even in the Great Depression of the 1930s, with very high rates of unemployment, the 75–80 percent of the labor force still employed enjoyed bargain prices for their consumer goods.

But now, with Keynesian fine-tuning at work, the sugarcoating has been removed from the pill. Now that the supply of money—and hence general prices—is *never* allowed to fall, the rise in relative consumer goods prices during a recession will hit the consumer as a visible rise in nominal prices as well. His cost of living now goes up in a depression, and so he reaps the worst of both worlds; in the classical business cycle, before the rule of Keynes and the Council of Economic Advisors, he at least had to suffer only one calamity at a time.

What then are the policy conclusions that arise rapidly and easily from the Austrian analysis of the business cycle? They are the precise opposite from those of the Keynesian establishment. For, since the virus of distortion of production and prices stems from inflationary bank credit expansion, the Austrian prescription for the business cycle will be: First, if we are in a boom period, the government and its banks must cease inflating immediately. It is true that this cessation of artificial stimulant will inevitably bring the inflationary boom to an end, and will inaugurate the inevitable recession or depression. But the longer the government delays this process, the harsher the necessary readjustments will have to be. For the sooner the depression readjustment is gotten over with, the better. This also means

that the government must never try to delay the depression process; the depression must be allowed to work itself out as quickly as possible, so that real recovery can begin. This means, too, that the government must particularly avoid any of the interventions so dear to Keynesian hearts. It must never try to prop up unsound business situations; it must never bail out or lend money to business firms in trouble. For doing so will simply prolong the agony and convert a sharp and quick depression phase into a lingering and chronic disease. The government must never try to prop up wage rates or prices, especially in the capital goods industries; doing so will prolong and delay indefinitely the completion of the depression adjustment process. It will also cause indefinite and prolonged depression and mass unemployment in the vital capital goods industries. The government must not try to inflate again in order to get out of the depression. For even if this reinflation succeeds (which is by no means assured), it will only sow greater trouble and more prolonged and renewed depression later on. The government must do nothing to encourage consumption, and it must not increase its own expenditures, for this will further increase the social consumption/investment ratio—when the only thing that could speed up the adjustment process is to lower the consumption/savings ratio so that more of the currently unsound investments will become validated and become economic. The only way the government can aid in this process is to lower its own budget, which will increase the ratio of investment to consumption in the economy (since government spending may be regarded as consumption spending for bureaucrats and politicians).

Thus, what the government should do, according to the Austrian analysis of the depression and the business cycle, is absolutely nothing. It should stop its *own* inflating, and then it should maintain a strict hands-off, *laissez-faire* policy. Anything it does will delay and obstruct the adjustment processes of the market; the less it does, the more rapidly will the market adjustment process do its work and sound economic recovery ensue.

The Austrian prescription for a depression is thus the diametric opposite of the Keynesian: it is for the government to keep absolute hands off the economy, and to confine itself to stopping its own inflation, and to cutting its own budget.

It should be clear that the Austrian analysis of the business cycle meshes handsomely with the libertarian outlook toward government

and a free economy. Since the State would always like to inflate and to interfere in the economy, a libertarian prescription would stress the importance of absolute separation of money and banking from the State. This would involve, at the very least, the abolition of the Federal Reserve System and the return to a commodity money (e.g., gold or silver) so that the money-unit would once again be a unit of weight of a market-produced commodity rather than the name of a piece of paper printed by the State's counterfeiting apparatus.

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Lange, Mises, and Praxeology: The Retreat from Marxism

Most economists are familiar with the controversy on the possibility of economic calculation under socialism and with the fact that Ludwig von Mises and Oskar Lange were the two major protagonists of that debate.[1] Many are also familiar with Lange's ironic gibe that, for having posed the problem which Lange believed that socialism could readily solve, "a statue of Professor Mises ought to occupy an honorable place in the great hall of the Ministry of Socialization or of the Central Planning Board of the socialist state."[2] In the light of the rapid retreat from socialist central planning and toward a free market in the Eastern Europe of recent years, it seems that Lange's irony might well have boomeranged.

Far less known, however, is a parallel retreat from Marxist economic theory in Oskar Lange's last years, a retreat, furthermore, made in long strides toward the economic theory and the methodology of none other than his old opponent. Mises's most distinctive contribution to economics was his concept and elaboration of economic theory as *praxeology*, the formal, general logic of human

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[1]See Ludwig von Mises, *Socialism* (New Haven, Conn.: Yale University Press, 1951); F.A. Hayek, ed., *Collectivist Economic Planning* (London: George Routledge and Sons, 1935); and Oskar Lange and Fred M. Taylor, *On the Economic Theory of Socialism* (New York: McGraw-Hill, 1964). For a summary and critique of the controversy, see Trygve J.B. Hoff, *Economic Calculation in the Socialist Society* (London: William Hodge, 1949).

[2]Lange and Taylor, *On the Economic Theory of Socialism*, pp. 57–58.

action, of human purposive activity using scarce means to achieve the most preferred ends.[3] As a leading Polish economist, Lange was very familiar with the praxeological theories of the distinguished contemporary Polish philosopher, Tadeusz Kotarbinski. While Kotarbinski's specific conception of praxeology differs considerably from Mises's, stressing analysis of efficient as well as hostile action, they unite in emphasizing the essence of praxeology as a general theory of rational action.[4] In his final, posthumous work, designed as the first of a multi-volume treatise on economics, Oskar Lange devoted a great deal of time to the painful acknowledgement that economics must encompass praxeology as well as Marxism. The particular irony is that Lange devoted a great amount of attention to an economic theory of his old anti-socialist rival which still remains almost unknown in conventional Western economic thought.

Lange entitled chapter 5 of his posthumous *Political Economy*, "The Principle of Economic Rationality: Political Economy and Praxeology."[5] He begins the chapter with the decidedly un-Marxist but praxeological statement that "Human economic activity is conscious and purposive activity," that "consists in the realization of given ends by the use of certain means."[6] He proceeds to point out that the capitalist market economy had not only developed gainful activity, but that this gainful activity was a rational one, quantifying ends and means through a calculation in terms of money. Here Lange is implicitly harking back to the old calculation controversy. The economic calculation made possible by money and the invention of double-entry bookkeeping in the capitalist market, enabled action

[3]See particularly Ludwig von Mises, *Human Action* (New Haven, Conn.: Yale University Press, 1949). For a discussion of Mises's praxeology and its relation to previous economic methodologies, see Israel M. Kirzner, *The Economic Point of View* (Princeton, N.J.: D. Van Nostrand, 1960).

[4]For Mises on Kotarbinski, see Ludwig von Mises, *The Ultimate Foundation of Economic Science* (Princeton, N.J.: D. Van Nostrand, 1962), pp. 42, 135. Most accessible of Kotarbinski's writings is his "Idée de la methodologie générale praxeologic," *Travaux du IXe Congres Internationale de Philosophie* (Paris, 1937), vol. 4, pp. 190–94.

[5]Oskar Lange, *Political Economy* (New York: Macmillan, 1963).

[6]Ibid., p. 148.

toward the maximizing of money profit and income, and thereby toward the most efficient realization of man's ends. In this way, maximization of profit under capitalism is accomplished by following the *economic principle* or principle of economic rationality, a principle enabling the maximum degree of realization of one's ends per given outlay, as well as the minimal outlay of means for a given degree of realization of one's ends. The former variant is the "principle of greatest efficiency," the latter, the "principle of minimum outlay, or economy, of means," or minimum cost.[7] The rational use of means, according to these criteria, is their *optimum* use; any other use of means Lange agrees to consider a waste. In support of these economic principles, Lange cites Kotarbinski's general praxeological concept: "The more valuable the product of a given experience the more productive is behavior; on the other hand, the less the outlay in the achievement of a given aim, the more economical is behavior."

Lange proceeds to pay tribute to the great achievement of the capitalist market economy in arriving at this rational economic principle. Despite the prevailing private rather than "social" rationality, and despite such problems as the business cycle, Lange declares that

> the rationalization of economic activity within the capitalist enterprise, the practice of proceeding according to the principle of economic rationality, and especially the consciousness of this principle in human thought, all constitute an achievement of historic significance . . . on a par with the imposing advance in material technique made within the capitalist mode of production . . . itself closely connected with the application of the principle of economic rationality in enterprise.[8]

After rather perfunctorily asserting that socialism will proceed to expand this rationality to social planning and to such areas of action as input-output analysis, technology, and military strategy and tactics,[9] Lange goes on to identify this study of the rational principles of

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[7]Lange here explicitly accepts the modern concept that the ultimate end is not cardinal or quantifiable, but rather an ordered, ordinal set of preferences. Ibid., pp. 167–68.

[8]Ibid., p. 176.

[9]Kotarbinski's early work was on praxeology as applied to the theory of hostile action. See Mises, *Ultimate Foundation*, pp. 42, 135.

action as praxeology, the logic of rational activity, and details the history of this concept. From Mises, Lange had discovered that the term "praxeology" was first used by the French historian Alfred Espinas in 1890.[10] The first work explicitly on praxeology was an article in 1926 by the eminent Russian economist Eugen Slutsky.[11]

Proceeding to the more developed praxeological work of Kotarbinski, Lange criticizes the Polish philosopher's narrow and technological treatment of the concept as the science of effective or efficient activity; instead, notes Lange, praxeology is really a broader "methodological rationality," a doing of one's best according to one's knowledge, so that it is better to define praxeology as the *science of rational activity*. In opting for this broader, more formal, and more general concept, Lange goes a long way from the Kotarbinski and toward the Misesian formulation of the theory. Praxeology, adds Lange, encompasses under this rubric of rational activity such categories as: ends and means, method, action, plan, efficiency, and economy. Praxeological principles of behavior comprise the relations between the praxeological categories, and the principle of economic rationality (or the "economic principle") is one of these praxeological principles of behavior. In this way, Lange agrees with Mises that the economic principle is itself embedded in the wider praxeological principles of general human action. Furthermore, he agrees that the praxeological principles had until now been elaborated only in the field of economics, as Mises affirms, and in ethics as well.

Lange, however, now found himself at the brink of a precarious position: the Mises thesis that praxeology had so far been elaborated only in economic theory, and that therefore economics and praxeology, while conceivably of different scope in the future, are now virtually identical. To take such a position would mean, for Lange, being close to becoming a Misesian and an Austrian School economist.

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[10]In Espinas's article, "Les Origines de la technologie," *Revue philosophique*, 15th year (July-December 1890): 114–15, and in his book with the same title, published in Paris in 1897. See Mises, *Human Action*, p. 3*n*.

[11]Eugen Slutsky, "Ein Beitrag zur formal-praxeologischen Grundlegung der Ökonomik," in *Annales de la classe des sciences sociales-economiques* (Kiev: Académie Oukranienne des Sciences, 1926), vol. 4.

Drawing back from this precipice, Lange hastens to add that praxeology includes, not only Mises-type economic theory, but also the general theory of statistical decisions, operations research, programming input—output analysis, and cybernetics. Lange did not seem to realize that by rushing to include these disciplines, along with economic theory, in the rubric of praxeology, he was returning to the very different technological concept—the technological manipulation of means to reach a given end—that Lange had already rejected in Kotarbinski.[12] Remembering suddenly to pay his respects to Marxism, Lange adds as an afterthought that dialectical materialism partly bases its cognition on the "praxeological principle" of proceeding according to the "criterion of practice."[13]

From the praxeological principles of behavior, and especially the economic principles adds Lange, a considerable edifice of economic laws can be deduced: such as a general attempt to maximize profit and investing capital at the highest rate of profit, thereby leading to a tendency toward a uniform rate of profit throughout the economy. In this way, Lange accepts the essential deductive Misesian methodology for economic theory: beginning with broadly general praxeological principles as axioms and from these elaborating necessary laws by logical deduction. While Lange attempts to qualify this agreement by stating that empirical testing is needed to see whether various economic actions are "rational" or "customary-traditional," his basic alignment with Misesian methodology still remains.

Later in the book, Lange returns to grapple with praxeology through a critique of subjective utility theory, itself a topic that usually rates little or no space in Marxian works.[14] He begins with a history of value theory and of the basis of economics in the nineteenth century that is perfectly acceptable to any modern economist: from

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[12]On the economic vs. the technological principles, see Lionel Robbins, *The Nature and Significance of Economic Science* (London: Macmillan, 1935), a work heavily under the influence of Mises, Richard Strigl and others of the Austrian School; and Kirzner, *The Economic Point of View*, pp. 108–45. Also see Rutledge Vining, *Economics in the United States of America* (Paris: UNESCO, 1956), pp. 1–37.

[13]Lange, *Political Economy*, p. 190*n*.

[14]Ibid., pp. 229ff.

the classical "economic man" to Benthamite utilitarianism and hedonism to Bastiat's exchange of services and on to the subjective, marginal utility school. The latter began with Jevonian hedonism and then developed into the Austrian, praxeological interpretation of utility not as "pleasure," but as the realization of one's aim of economic activity, *regardless* of the nature of that aim. The aim may be pleasure, money, power, health, or whatever; the Austrian view simply states that economic activity has *some* aim, or *preference*, that forms the goal of action. As Lange correctly concludes: "In this praxeological interpretation, the subjectivist trend leaves aside all psychological considerations and transforms itself into a logic of 'rational choice' aimed at the maximization of preference."[15]

Lange then proceeds to a history of the development of this general, formal theory of utility as ordinal preference. He sees that the Austrian School (Menger, Wieser, Böhm-Bawerk) was far more thoroughgoing in its application of subjective marginal utility theory than the currently far more influential Lausanne School (Walras, Pareto) or than Alfred Marshall. For the Austrians applied marginal utility theory to all gainful activity, whereas the latter applied it only to consumers. In the Austrian and praxeological view, both the consumers' aim of maximizing utility and the producers' aim of maximizing money income or profit fall under the single rubric of maximizing preferences and of marginal utility. Lange's history here is deficient in identifying Pareto partially with the Austrian approach while totally neglecting the praxeological role of Pareto's Italian opponent Benedetto Croce. Moreover, he also neglects the adoption of a general and purely ordinal concept of marginal utility by the Czech Austrian School economist Franz Cuhel, and following Cuhel by Ludwig von Mises in 1912, long before the famous Hicks and Allen article of 1934.[16]

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[15]Ibid., p. 236.

[16]Croce's decidedly praxeological contribution to economics may be found in his fascinating debate with the positivist Pareto on economic methodology, written in 1900 and 1901. See Benedetto Croce, "On the Economic Principle," in *International Economic Papers* 3 (1953): 172–79, 197–202. For an appreciation of Croce's work, see Giorgio Tagliacozzo, "Croce and the Nature of Economic Science," *Quarterly Journal of Economics* (May 1945), and Kirzner, *Economic Point of View*, pp. 155ff.