An Austrian Taxonomy of Deflation

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1. INTRODUCTION

Deflation is suddenly all over the news these days. Financial journalists, market pundits, business forecasters, economic columnists, Fed governors and even mainstream macroeconomists are all spooked by the sudden and unforeseen "whiff" of price deflation in the U.S. On the basis of puny and isolated declines of the Consumer Price Index (CPI) and much more significant decreases in the Producer Price Index (PPI) in July and October of 2001, we are inundated with dire warnings of the looming prospect of a possibly catastrophic deflation in the U.S. Articles bearing such grizzly and creepy titles as "The Deflation Monster Still Lives," "The Specter of Deflation," "The Greatest Threat Facing the U. S. Economy: Deflation," "Why We Should Fear Deflation," "Defeating Deflation," and The Deflation Dilemma: To Be Concerned Or Not to Be?" suddenly abound in the financial press and among the publications of such august and stodgy economic think tanks as the American Enterprise Institute and the Brookings Institution.[1]

As their titles suggest, these articles delineate chilling scenarios for the American economy. Not only do these and other articles contend that deflation is close at hand but many of them assert or imply two additional propositions: first, that the effects of deflation are an unmitigated disaster for economic activity and welfare; and, second, that the Federal Reserve System needs to take prompt action to head off such impending devastation to the economy. In particular, their authors argue that the Fed must dexterously shift gears and become a deflation-fighter rather than the (supposedly) staunch and valiant inflation-fighter it has been for the last two decades. A few authors even despair of whether the Fed is now constitutionally capable of making such a shift—

as if any central bank would be unwilling or unable to create massive quantities of new money for even the lamest excuses.

Most of the growing host of deflation-phobes prudently leave the precise details of the impending deflationary debacle to our imagination with vague and foreboding references to the Great Depression in the U.S. in the early 1930's or to the experience of Japan since 1998. However, others, such as market pundit, Donald L. Luskin, a self-proclaimed "unreconstructed supply-sider," delight in conjuring up lurid deflationary scenarios. According to Luskin, deflation is:

> . . . going to be a world of hurt. If you thought inflation was a nightmare, wait till you live with a deflation. Prices of everything eventually go down—stocks, real estate, wages . . . the whole thing. You're a little poorer every day.
>
> And if you're in debt then you're really in trouble. You'll have to make those same mortgage payments even though the value of your house is going down every month.
>
> But that doesn't mean that deflation is any bed of roses for lenders either. Sure, it's nice to have locked in a stream of payments in money that will buy you more and more apples and paper clips and houses as prices collapse. But you'll never get the money, because the borrowers will all default.[2]

Regardless of whether they indulge in such rhetorical excesses or whether they dispassionately state their case in formal academic jargon, however, contemporary deflation-phobes fail to analytically distinguish between the mélange of different

phenomena that are commonly jumbled together under the current rubric of "deflation." Indeed, academic macroeconomists are the most likely of all to be blind to this conceptual muddle because modern macroeconomics was born of John Maynard Keynes's obsessive deflation-phobia, especially with regard to money wage rates.[3] As a result they are not inclined or equipped to disentangle and render a coherent account of the separate economic processes designated as "deflationary"; nor are they able to ascertain which kinds of deflationary processes are "benign" and represent an improvement of economic efficiency and welfare and which kinds are "malign" and impair economic productivity and well-being by distorting monetary calculation

Fortunately, Austrian monetary theory, developed primarily by Ludwig von Mises and Murray N. Rothbard, provides us with the means to cut through the tangle of anti-deflationist fallacies that we have lately been bombarded with and to neatly sort out the different types of deflation. In what follows I first define deflation in section 2. I then employ Austrian monetary theory to identify and analyze the different kinds of deflation in section 3, distinguishing between deflations that are natural and benign tendencies of a progressing free-market economy and deflation that represents a gross and malign violation of property rights by government and its central bank and that severely cripples monetary exchange and calculation. Section 4 contains a critique of the most common fallacies perpetrated by contemporary deflation-phobes. I conclude with an analysis of the probability that the U.S. economy is or soon will be in the throes of a deflationary recession.

2. THE DEFINITION OF DEFLATION

Before World War 2, whenever the terms "inflation" and "deflation" were used in academic discourse or everyday speech, they generally referred to increases or decreases in the stock of money, respectively. A general rise in prices was viewed as one of several consequences of inflation of the money supply; likewise, a decline in overall prices was viewed as one consequence of deflation of the money supply. Under the influence of the Keynesian Revolution of the mid-1930, however, the meaning of these terms began to change radically. By the 1950's, the definition of inflation as a general rise in prices and of deflation as a general fall in prices became firmly entrenched in academic writings and popular speech. We can ignore here the question of whether or not this change in usage enhanced conceptual clarity and analytical precision in dealing with monetary problems.[4] The point is that today when professional economists and members of the lay public utter or write the term "deflation," they invariably mean a decline in the overall prices of the commodities and services purchased by the "average" consumer as expressed in a price index such as the CPI. Movements in the prices of consumer goods are relevant for identifying the existence and degree of inflation or deflation because consumer goods are the final output and, hence, the rationale of all economic activity. Moreover, as Carl Menger, the founder of Austrian economics has taught us, the prices of the myriads of intermediate and original inputs into the production process, broadly categorized as capital goods, labor and natural resources, are ultimately "imputed" via an entrepreneurial market process from the prices of consumer goods. Thus when economists, business forecasters and Alan Greenspan scrutinize indexes of input prices such as PPI or indexes of raw commodity prices, they do so because they incorrectly

believe that changes in these indexes are harbingers of future changes in general consumer prices, as if input prices determined product prices rather than the other way around.

Defined as a general fall in consumer prices, deflation implies an increase in the value or purchasing power of the monetary unit—in the U.S., an increase in the amount of consumer goods that can be purchased for a dollar. Now there are a number of different factors that tend to increase the value of the dollar. These deflationary factors and the processes they initiate may be benign or malign with respect to productive efficiency and consumer welfare, depending on whether they result from the voluntary choices of laborers, capitalists, entrepreneurs and consumers or the coercive intervention of a government central bank such as the Fed. As we shall see below, while the deflation-phobes have bemoaned the imaginary evils of speculative deflationary scenarios that actually produce net benefits for consumers, they have completely ignored the one kind of deflation that has actually materialized repeatedly in the last two decades and is truly a malign influence on consumer sovereignty and welfare

3. DEFLATION: GOOD AND BAD

According to Austrian theory, the value of money, which is the inverse of overall consumer prices, is determined like the individual prices of its component consumer goods by supply and demand. An increase in the value of a dollar, and a corresponding decline in overall dollar prices, may thus proceed either from an expansion of the demand for or contraction of the supply of money or a combination of both. There are four basic causes of deflation—two operating on the demand side and two on the supply side of the

"money relation."[5] The economic processes associated with these factors may be categorized as "growth deflation," "cash-building deflation," bank credit deflation," and "confiscatory deflation." I will analyze each in turn below and appraise its effect on economic efficiency and consumer welfare.

Growth Deflation

Let us begin with the demand side. One component of the demand for money is the total quantity of the various commodities and services that sellers supply to the market in exchange for money. The aggregate supplies of goods therefore constitutes what Austrian economists call the "exchange demand" for money, because by selling goods, including their own labor services, people are exercising a demand to acquire money. Hence, if supplies of certain goods in the economy increase due, for example, to increased saving and investment in additional capital goods or to technological progress, as is the usual case in the historical market economy, then, all other things equal, their producers will be induced by competition to offer more units of their product for a dollar. As we are assuming that the supply of dollars remains fixed, the exchange value of a dollar will thus be bid up. This means that on the other side of the market buyers will need to give fewer dollars than previously to obtain a given good and a deflation of prices will ensue. This is precisely what occurred in the past three decades with respect to products of the consumer electronics and high-tech industries, such as hand calculators, video game systems, personal computers, and DVD players. As a consequence of rapid technological improvement and its embodiment in additional capital investments, labor productivity increased phenomenally in these industries driving down per unit costs of production and increasing profit margins. Since the resulting expansion of the supplies of

goods forthcoming from these industries outstripped the expansion of the supply of dollars during this period, the effect was a spectacular drop in the prices of high-tech products and a corresponding rise in the dollar's purchasing power in terms of these products. Thus, for example, a mainframe computer sold for $4.7 million in 1970, while today one can purchase a PC that is 20 times faster for less than $1,000.[6] Note that the substantial price deflation in the high-tech industries did not impair and, in fact, facilitated the enormous expansion of profits, productivity and outputs in these industries. This is reflected in the fact that in 1980 computer firms shipped a total of 490,000 PC's while in 1999 their shipments exceeded 43 million units despite that fact that quality-adjusted prices had declined by over 90 percent in the meantime.[7]

The price deflation that was observed in the past three decades in selected high-growth industries, however, was not an unprecedented or even unusual occurrence. In fact, historically, the natural tendency in the industrial market economy under a commodity money such as gold has been for general prices to persistently decline as ongoing capital accumulation and advances in industrial techniques led to a continual expansion in the supplies of goods. Thus throughout the nineteenth century and up until the First World War, a mild deflationary trend prevailed in the industrialized nations as rapid growth in the supplies of goods outpaced the gradual growth in the money supply that occurred under the classical gold standard. For example, in the U.S. from 1880 to 1896, the wholesale price level fell by about 30 percent, or by 1.75 percent per year, while real income rose by about 85 percent, or around 5 percent per year.[8] This deflationary trend was only interrupted during periods of major wars, such as the

Napoleonic Wars in Europe and the American Civil War, which the belligerent governments invariably financed by printing paper fiat money.

Also, it is noteworthy that the fall in the sale prices and average production costs of consumer goods occurring during the growth process does not necessarily entail a decline in the selling price of labor. If the supply of labor is fixed, money or "nominal" wage rates will remain constant while "real" wage rates rise to reflect the increase in the marginal productivity of and employers' demand for labor as the purchasing power of every dollar earned rises with the decline of consumer prices.

Needless to say, sound economics as well as common sense tells us that the effect of growth deflation on economic activity and consumer welfare is entirely benign, because it is the result of the voluntary exchanges of property titles among resource-owners, capitalist-entrepreneurs, and consumers. These monetary transactions generate a natural increase in the value of money as a necessary complement to the growth of real wealth and income and the greater satisfaction of human wants that they yield.

Cash-Building Deflation

Although a handful of mainstream macroeconomists might be persuaded that price deflation associated with economic growth is benign, they would all scoff at the view that "hoarding," a second factor tending toward price deflation, enhances economic prosperity and well being. Hoarding occurs when an individual deliberately chooses to reduce his current spending on consumer goods and investment assets below his current income, preferring instead to add the unspent income to his cash balance held in the form of currency and checkable, or otherwise instantly accessible, bank deposits. As such, hoarding is nothing but an increase in what is called the "cash-balance" demand for

money, that is, the average amount of money that the individual desires to keep on hand over a period of time. The behavior described by hoarding may be more descriptively labeled "cash building," a term that has the additional virtue of freedom from the negative connotations that burden the word "hoarding."

Cash building usually stems from a more pessimistic or uncertain attitude toward the future caused possibly by the onset of a recession, a natural disaster or the imminent prospect of war. It may even result from speculation on the happy prospect that prices may fall in the near future as a result of economic growth or for other reasons. Under such circumstances, market participants appraise the value of the services yielded by a dollar in hand more highly than before relative to the services of the consumer goods or interest yield on investment goods that can be currently purchased for that dollar. All other things equal, including the number of dollars in existence, this increase in the demand to hold money will result in the bidding up of the market value of the dollar in terms of all goods. A pervasive price deflation will result causing shrinkage of the aggregate flow of dollars spent and received in income per period of time.

Despite the reduction in total dollar income, however, the deflationary process caused by cash building is also benign and productive of greater economic welfare. It is initiated by the voluntary and utility-enhancing choices of some money holders to refrain from exchanging titles to their money assets on the market in the same quantities as they had previously. However, with the supply of dollars fixed, the only way in which this increased demand to hold money can be satisfied is for each dollar to become more valuable, so that the total purchasing power represented by the existing supply of money increases. This is precisely what price deflation accomplishes: an increase in aggregate

monetary wealth or the "real" supply of money in order to satisfy those who desire additional cash balances.

We should note here that the fall in money expenditure that accompanies this process implies a fall in nominal wage rates as well as in consumer goods' prices, although the real wage rate—the amount of goods and services the laborer can purchase with his money wages—remains roughly unchanged. Nevertheless, if there is interference with the free exchange of property titles on the labor market that renders the money price of labor downwardly inflexible, such as minimum wage laws or laws that grant unions exclusive privileges as bargaining agents in particular firms or industries, then unemployment and a decline in economic activity will result. However, the consequent recession or depression does not result from cash building deflation *per se*, but from the coercive political attempt to impede the exchanges of property titles that lead to the increase in the value of money demanded by consumers.

Bank Credit Deflation

There are also two major factors that have historically operated on the supply of money to produce deflation. The most familiar is a decline in the supply of money that results from a collapse or contraction of fractional-reserve banks that are called upon by their depositors *en masse* to redeem their notes and demand deposits in cash during financial crises. Before World War Two bank runs generally were associated with the onset of recessions and were mainly responsible for the deflation that almost always characterized these recessions. What is called "bank credit deflation" typically came about when depositors lost confidence that banks were able to continue redeeming the titles—represented by bank notes, checking and savings deposit —to the property they

had entrusted to the banks for safekeeping and which the banks were contractually obliged to redeem upon demand. This property was usually gold and silver money and the fractional-reserve banks were not in a position to discharge their contractual obligations to all its rightful owners at once because they had created multiple titles to this property in the course of their lending operations. This meant that the outstanding stock of instantaneously redeemable notes and checking and savings deposits were expanded to a large multiple of the commodity money reserves the banks kept on hand. During financial crises, bank runs caused many banks to fail completely and their notes and deposits to be revealed for what they essentially were: worthless titles to nonexistent property. In the case of other banks, the threat that their depositors would demand cash payment *en bloc* was sufficient reason to induce them to reduce their lending operations and build up their ratio of reserves to note and deposit liabilities in order to stave off failure. These two factors together resulted in a large contraction of the money supply and, given a constant demand for money, a concomitant increase in the value of money. After national central banks took legal custody of the public's gold deposits, which occurred in the U.S. during World War One, the central bank itself usually engineered bank credit deflation during financial crises provoked by its previous inflationary policy in order to protect these gold deposits and to avert the depositor's loss of faith in the overall banking system.

Once again our judgment must be that deflation, even when caused by a contraction of bank credit amidst numerous bank failures, has a salutary effect on the economy and enhances the welfare of market participants. For it is initiated by a voluntary and contractual redemption of property titles to money by bank depositors who

perceive that fractional-reserve banks are no longer functioning to safely and securely store there cash balances. When any firm that trades on its trustworthiness, be it a financial services firm, an armored car company or a law firm, loses the confidence of its customers or clients that it is operating in their best interests, it will be rapidly purged from the market by an adjustment process that reallocates resources and improves the welfare of consumers. Bank credit deflation represents just such a benign and purgative market adjustment process.

In fact in the era before the 1930's when the natural flexibility of prices and wage rates prevailed and was not impeded by legal constraints, bank credit deflations in the U.S. were swift and devoid of severe economic dislocations. Let me briefly review one such episode.

In the fall of 1839 there occurred a financial crisis in the U.S., which resulted from a massive expansion of the money supply during the 1830's that was initially stimulated by the legally privileged Second Bank of the United States. From the peak of the business cycle in 1839 to its trough in 1843, the money supply contracted by about one-third (34 percent), almost one–quarter of the nation's banks collapsed (23 percent), including the Bank of the United States, and wholesale prices fell by 42 percent. Despite—or rather because of—the massive deflation of prices, real GNP and real consumption actually increased during this period by 16 percent and 21 percent, respectively. However, real investment did decline during this period by 23 percent, which was a benign development, because the malinvestments of the previous inflationary boom needed to be liquidated.[9] Unfortunately such benign episodes of property retrieval have been forgotten in the wake of the Great Depression. Despite the

fact that the bank credit deflation that occurred from 1929 to 1933 was roughly proportional in its impact on the nominal money supply to that of 1839-1843, the rigidity of prices and wage rates induced by the "stabilization" policies of the Hoover and early Roosevelt Administrations prevented the deflationary adjustment process from operating to effect the reallocation of resources demanded by property owners. With the free exchange of property titles thus hampered, the economy contracted by roughly one-third and consumption fell by one-fifth during the years from 1929 to 1933.[10]

Confiscatory Deflation

As I mentioned above, not all types of deflation are the outcome of benign market processes. There does exist an emphatically malign form of deflation that is coercively imposed by governments and their central banks and that violates property rights, distorts monetary calculation and undermines monetary exchange. It may even catapult an economy back to a primitive state of barter, if applied long and relentlessly enough. This form of deflation involves an outright confiscation of people's cash balances by the political and bureaucratic elites. Yet confiscatory deflation has been almost completely ignored by our current deflation-phobes, despite the fact that it has occurred quite a few times in the last two decades—in Brazil, the former Soviet Union and Argentina in the 1980's, in Ecuador two years ago, and currently once again in Argentina. In fact, one of the only economists to identify and condemn confiscatory deflation as a malignant attack on economic efficiency, consumer welfare and property rights was Murray Rothbard.[11]

Confiscatory deflation is generally inflicted on the economy by the political authorities as a means of obstructing an ongoing bank credit deflation that threatens to liquidate an unsound financial system built on fractional-reserve banking. Its essence is

an abrogation of bank depositors' property titles to their cash stored in immediately redeemable checking and savings deposits.

A glaring example of confiscatory deflation is the current situation in Argentina. In 1992, after yet another bout of hyperinflation, Argentina pegged its new currency, the peso, to the U.S. dollar at the rate of 1 to 1. In order to maintain this fixed peso/dollar peg, the Argentine central bank pledged to freely exchange dollars for pesos on demand and to back its own liabilities, consisting of peso notes and commercial bank reserve deposits denominated in pesos, almost 100 percent by dollars. Unfortunately this arrangement—which inspired confidence in international lenders because it was approved by the IMF and therefore carried its implicit bailout guarantee—did not prevent a massive and inflationary bank credit expansion. As investment dollars flooded into the country, they found their way into the central bank enabling it to expand the amount of reserves available to the commercial banks. As fractional reserve institutions, the latter in turn were able to inflate bank credit in concert by multiplying bank deposits on top of each new dollar or peso of reserves. As a result, Argentina's money supply (M1) increased at an average rate of 60 percent per year from 1991 through 1994.[12] After declining to less than 5 percent for 1995, the growth rate of the money supply shot up to over 15 percent in 1996 and nearly 20 percent in 1997. With the peso overvalued as a result of inflated domestic product prices and foreign investors rapidly losing confidence that the peso would not be devalued, the influx of dollars ceased and the inflationary boom came to a screeching halt in 1998 as the money supply increased by about 1 percent and the economy went into recession. In 1999, money growth turned slightly negative, while in 2000 the money supply contracted by almost 20 percent.

The money supply continued to contract at a double-digit annual rate through June of 2001. In 2001, domestic depositors began to lose confidence in the banking system and a bank credit deflation began in earnest as the system lost 17 percent or $14.5 billion worth of deposits. On Friday, November 30 alone, between $700 million and $2 billion of deposits—reports vary—were withdrawn from Argentine banks. Even before the Friday bank run, the central bank only possessed $5.5 billion of reserves ultimately backing $70 billion worth of dollar and convertible peso deposits. President Fernando de la Rua and his economy minister, Domingo Cavallo, responded to this situation on Saturday, December 1, announcing a policy that amounted to confiscatory deflation to protect the financial system and maintain the fixed peg to the dollar. Specifically, cash withdrawals from banks were to be limited to $250 per depositor per week for the next ninety days and all overseas cash transfers exceeding $1,000 were to be strictly regulated. Anyone attempting to carry cash out of the country by ship or by plane was to be interdicted. Finally, banks were no longer permitted to issue loans in pesos, only in dollars, which were exceedingly scarce. Depositors were still able to access their bank deposits by check or debit card in order to make payments. Still, this policy was a crushing blow to poorer Argentines, who do not possess debit or credit cards and who mainly hold bank deposits not accessible by check.

Predictably, Cavallo's cruel and malign confiscatory deflation dealt a severe blow to cash businesses and, according to one report, "brought retail trade to a standstill."[13] This worsened the recession, and riots and looting soon broke out that ultimately cost 27 lives and millions of dollars of damage to private businesses. These events caused a state

of siege to be declared and eventually forced President de la Rua to resign from his position two years early.

By January 6, the Argentine government, now under President Eduardo Duhalde and Economy Minister Jorge Remes Lenicov conceded that it could no longer keep the inflated and overvalued peso pegged to the dollar at the rate of 1 to 1 and it devalued the peso by 30 percent to a rate of 1.40 pesos per dollar. Even at this official rate of exchange, however, it appeared the peso was still overvalued because pesos were trading for dollars on the black market at far higher rates. The Argentine government recognized this and instead of permitting the exchange rate to depreciate to a realistic level reflecting the past inflation and current lack of confidence in the peso, it intensified the confiscatory deflation imposed on the economy earlier. It froze all savings accounts above $3,000 for a year, a measure that affected at least one-third of the $67 billion of deposits remaining in the banking system, $43.5 billion in dollars and the remainder in pesos. Depositors who hold dollar accounts not exceeding $5,000 would be able to withdraw their cash in twelve monthly installments starting one year from now, while those maintaining larger dollar deposits would not be able to begin cashing out until September 2003 and then only in installments spread over two years. Peso deposits, which had already lost one-third of their dollar value since the first freeze had been mandated and faced possible further devaluation, would be treated more liberally. They would be paid out to their owners starting in two months but this repayment would also proceed in installments. In the meantime, as one observer put it, "bank transactions as simple as cashing a paycheck or paying a credit card bill remained out of reach of ordinary Argentines."[14]

Mr. Lenicov openly admitted that this latest round of confiscatory deflation was a device for protecting the inherently bankrupt fractional reserve system, declaring, "If the banks go bust nobody gets their deposits back. The money on hand is not enough to pay back all depositors."[15] Unlike the bank credit deflation that Lenicov is so eager to prevent, which permits monetary exchange to proceed with a smaller number of more valuable pesos, confiscatory deflation tends to abolish monetary exchange and propels the economy back to grossly inefficient and primitive conditions of barter and self-sufficient production that undermine the social division of labor. Meanwhile, unlike the deflation-phobes in academia, the media, and supranational bureaucracies who have turned a blind eye to confiscatory deflation or hailed it as a responsible "austerity measure" many of its unfortunate Argentine victims have recognized it for what it essentially is: bank robbery by the political elites. Ramona Ruiz, a retired textile worker, railed at an empty ATM machine, "That is my money inside that bank, mine!"[16] Another, unidentified woman yelled at a government spokesman: "How dare you take my savings." Jose Valenzuela, an Argentine salesman, stated, "It's as if while I am talking to you I'm swiping the change from your pocket."[17] More poignantly, an Argentine businessman lamented, "It is trampling on our liberties. . . . I feel my civic rights, my private rights, have been violated."[18] Finally, Argentine union leaders incisively denounced the policy as "the hijacking of a nation's savings."[19]

Unfortunately, things were to get even worse for hapless Argentine bank depositors. After solemnly pledging when he took office on January 1 that banks would be obliged to honor their contractual commitments to pay out dollars to those who held dollar-denominated deposits, President Duhalde announced in late January that the banks

would be permitted to redeem all deposits in pesos. Since the peso had already depreciated by 40 percent against the dollar on the free market in the interim, this meant that about $16 billion of purchasing power had already been transferred from dollar depositors to the banks.[20] As the confiscatory deflation continues in force and depositors are barred from redeeming their property titles, the loss of wealth endured by depositors is likely to grow as the peso depreciates further. Happily for bank depositors, Argentina's Supreme Court struck a heroic and stunning blow in favor of property rights on Friday February 1, when it ruled unanimously (5 to 0 with 3 abstentions) that the banking freeze was unconstitutional, arguing that it was "irrational" and "annihilated" constitutional rights to private property, in effect opening the door to a much-needed bank credit deflation.[21] After a shaken Duhalde went on television on Saturday, February 2 to decree that the banks would stay closed on the following Monday and Tuesday in blatant defiance of the Court's decision, the disgusted and enraged middle class took to the streets banging pots and pans and chanting "out, out, all the politicians out" and "give us our money."[22] Duhalde quickly recovered, however, and on Monday he defiantly issued an executive decree suspending for 180 days all judicial challenges of the freeze on bank deposits and also goaded his allies in Congress to accelerate the process of impeaching the recalcitrant Supreme Court justices for "alleged corruption and improprieties."[23]

The only equitable and efficient solution at this point is for the Argentine government to recognize and adjust its policy to the reality of property—and the reality is that bank deposits are no longer (and really never were) par value property titles to fixed quantities of pesos and dollars. These currencies do not exist in the fractional-reserve

banking system in anywhere near the quantities needed to pay off depositors. In economic reality, a bank's deposits are a claim on its loan and investment portfolio, including its cash reserve. Therefore, every bank should be immediately handed over to its depositors, that is, transformed into a managed mutual fund. The ownership titles or "equity shares" in each mutual fund would be prorated among the former depositors in accordance with their share of the predecessor institution's deposit balances. The result would be a bank credit deflation that would result in a one-shot, swift and sharp contraction of the money supply down to the level of the monetary base, which is equal to the amounts of peso and dollar currencies held by the public plus the peso and dollar reserves held by the banks. While nominal prices and wage rates would have to be readjusted sharply downward, the value of the peso would rise commensurately, monetary exchange and calculation would be restored, and the allocation of resources and distribution of property titles would once again be determined by market processes.

4. DEFLATION FALLACIES

While blithely ignoring coercive political expropriation of the public's bank deposits, deflation-phobes exhibit an obsessive and misplaced concern with voluntary, market-driven deflation. Although deflation-phobia ranges across the spectrum of current schools of macroeconomic thought, the most numerous and vociferous group of contemporary deflation-phobes consists of the financial journalists, economic consultants, market pundits and conservative think-tank policy wonks who are more or less closely linked with supply-side economics. Donald L. Luskin, Bruce Bartlett, Richard Rahn, and Larry Kudlow are some of the supply-siders who have weighed in

with anti-deflationist articles. The supply-side anti-deflation program can be boiled down to three basic propositions, each of which rests on fallacious assumptions.

The first proposition is that the prices of gold and other raw commodities are extremely sensitive to changes in monetary conditions and are therefore good predictors of future movements of the general consumer goods' prices, which tend to respond much more slowly to such changes. As Bruce Bartlett wrote, "When one sees a sustained fall in sensitive commodity prices—those that lead changes in the general price level—one can predict that eventually this trend will work its way through the economy as a whole."[24] Since all of the major commodity indexes have fallen by double-digit percentages during 2001 and many commodity prices have fallen well below their levels of ten years ago, a deflation, possibly as severe as Japan's, looms.[25] The declines in CPI and PPI indexes in the fourth quarter of 2001 supposedly represented the first whiff of this onrushing deflation.

The fallacious assumption underlying this proposition is that there always exists a positive relationship between movements in raw commodity prices and movements in consumer prices. However, as the Austrian theory of the business cycle teaches, consumer goods' prices and capital goods', including raw commodity, prices change relative to one another during the different phases of the cycle and may very well vary in absolutely opposite directions during a recession. Since World War 2 recessions have generally been precipitated by the Fed *reducing the rate of growth* of bank reserves and hence of the money supply, rather than absolutely contracting bank reserves and money. All other things equal, the immediate result is a reduction in the creation of bank credit, which leads directly to a higher interest rate that discourages business borrowing for

investment projects. The subsequent constriction of investment spending causes the prices of capital goods to begin to fall absolutely and relative to consumer good prices. The latter are still increasing at the start of recessions under the pressure of past injections of new money that reaches consumers only after it has been spent by business investors. As profits in the capital goods industries turn negative and profit prospects for planned and partly finished investment projects in these industries are suddenly dimmed, the demand for raw industrial commodities and other inputs specific to the production of capital goods declines precipitously and their prices plunge even further. Shaky capital goods firms also scramble to acquire cash and stave off financial default and bankruptcy by liquidating their inventories of highly marketable industrial commodities and this puts additional downward pressure on industrial commodity prices. Meanwhile, because the Fed typically continues to expand bank credit and money during postwar recessions, although at a slower pace, the prices of consumer goods never do stop rising as the persistent injections of new money work their way through the economy from "monetized" government deficits and more slowly growing bank loans and investments to consumers. This vital lesson was illustrated time and again in the series of inflationary recessions or "stagflations" that the U.S. has suffered through since 1969 during which the CPI soared and the value of the dollar plummeted without interruption right through the recession phase of the cycle despite plunging commodity prices.

Unfortunately the supply-siders have never learned this lesson taught by theory and history, although they might have had they paid more attention to Murray Rothbard. Writing in an earlier era of deflation-phobia, the mid-1980, Murray Rothbard gave a

definitive response to those, including supply-siders, who claimed then that a fall in a handful of industrial commodity prices presaged a general deflation:

> The fact that industrial commodity prices have fallen sharply means precisely nothing for the reality or the prospect of inflation or deflation. Industrial commodity prices *always* fall in recessions. They fell in the steep 1973-74 recession and they fell very sharply throughout [the recessions of] 1980 and 1981.... What was the impact of commodity prices on inflation or deflation? Precisely zero. The point is that consumer prices kept rising anyway, throughout these recessions and through the generally depressed period from 1980 to 1983.... Most laymen and economists think of industrial commodity or wholesale prices as harbingers of the move of consumer prices, which are supposed to be 'sticky' but moving in the same direction. But they are wrong. One of the most important and neglected truths of business cycle analysis is that consumer prices and capital goods or producer prices move in *different* directions. Specifically, in boom periods capital goods or producer prices rise relative to consumer prices, while in recessions, consumer prices rise relative to producer prices. As a result, the fact that industrial commodity prices have been falling in no sense presages a later fall in consumer prices. Quite the contrary.[26]

The second proposal of the supply-side program relates to the proper role of the Fed in averting this deflation. As Donald Luskin colorfully described this role, "The job of the Fed is to play a monetary **Goldilocks**—to provide just the right amount of money

in the economy. The right amount isn't some arbitrary level of M1 or M2 or some other so-called measure of the money supply. In fact the supply of money is like any other supply—the supply of apples or the supply of paper clips—the 'right' amount is the amount that satisfies demand. . . . So as the demand for money fluctuates, and as the economy's need to use it for transactions fluctuates, the job of the Goldilocks Fed is to supply just the right amount of money to keep the price of money constant."[27]

Now, first of all Luskin has—quite inadvertently to be sure—hit on a perfect analogy for the Fed. In fact Goldilocks surreptitiously redistributed property from a hapless and unsuspecting family of bears to herself, offering no property in exchange for the food and shelter she wantonly expropriated. This is precisely what occurs when the Fed creates new fiat money for whatever reason: the first recipients of this newly-created money, whether they be the government and its subsidized constituencies or banks lending newly-created dollars at interest and their client firms borrowing at artificially low interest rates, are able to acquire titles to real property without the necessity of having first produced and exchanged property on the market. The result is a concealed and arbitrary redistribution of real income and wealth in favor of those who receive and spend the new money before prices have risen at the expense of firms and laborers whose selling prices and wage rates rise only after a lapse of time during which most of the prices of the things they purchase have already risen. Even if the Fed were to create just enough additional money to offset a growth deflation and maintain consumer prices roughly unchanged, it would still be distorting the market's distribution of property in favor of those who were immediate recipients of the monetary injection and were able to take advantage of the falling prices. Belated recipients of the new money and, especially,

people living on fixed money incomes would have to purchase at unchanged prices and would thereby be deprived of the share of extra real income that would have accrued to them had consumer prices been permitted to fall in line with increased productivity.

Another fallacy embedded in the Fed-as-Goldilocks analogy relates to Luskin's misconception of the role of the pricing process in ensuring that the optimal quantities of goods are produced. It is incorrect to assert, as Luskin does, that the "right" amount of any good, such as paper clips or apples, is the amount that satisfies demand at the previously existing price. In fact, as we saw above with respect to the computer industry, the optimal quantity of PC's is determined by the profit maximizing decisions of competing firms in the industry. When productivity is growing rapidly and per unit costs declining rapidly, the attempt to maximize prospective profit results in an excess supply of the good at the previous market price. The free market ensures that the price then falls to once again precisely adjust the quantity supplied to the quantity demanded. In other words, from moment to moment, it is *the continual variation of prices* that ensures that the "right" quantity of any good is always supplied; the market economy does not operate to assure that the supply will always vary to perfectly satisfy demand at a price that is previously fixed once and for all. And it is just so for the money supply: if an excess demand for money emerges as a result of economic growth, the market phenomenon of growth deflation will ensure that the purchasing power of money rises producing an increase in aggregate monetary wealth that exactly satisfies the extra demand. A Goldilocks Fed continually varying the money supply to maintain the purchasing power of money forever constant—even if it could be trusted to do so—is just as non-optimal as

computer firms supplying only the number of PC's that pegs their price at, let us say, the 1980 level.

Finally, it should be pointed out that Friedrich A. Hayek brilliantly demolished the argument in favor of a Goldilocks central bank, put forth by a much earlier and more distinguished generation of deflation-phobes, in the late 1920's.[28] Although Hayek never used the term "deflation-phobes," he did refer to "the victims of that uncritical fear of any kind of fall in prices which is so widespread to-day, and which lends a cloak to all the more refined forms of inflationism"—a perfect characterization of contemporary deflation-phobes.[29] In his critique, which based on Austrian business cycle theory, Hayek pointed out that any attempt by the central bank to stabilize the price level of consumer goods by increasing the quantity of money during a period of rapid technological progress and capital investment inevitably drives the interest rate down below the level that equates the supply of voluntary savings with the business demand for investment funds. This gap is filled by the evanescent "forced savings" embodied in the newly created money that the central bank injects into credit markets. Once the bank credit expansion ceases or slows down, however, the forced savings vanish and the interest rate re-attains the higher level consistent with the intertemporal consumption preferences of consumers. In the meantime the artificial reduction of the interest rate falsifies the profit calculations of entrepreneurs and distorts their investment decisions, generating an unsustainable investment boom followed inevitably by a recession when the interest rate rises again. It is during the recession that the cluster of malinvestments are revealed and liquidated and the production of capital and consumer goods are readjusted to the quantity of voluntary savings. Hayek concluded with the warning that

any attempt to obstruct the benign deflationary process that accompanies economic growth by manipulating the quantity of money paradoxically leads to the very economic collapse that deflation-phobes of every era are so desperate to avoid: "So long as the volume of money in circulation is continually changing, we can not get rid of industrial fluctuations. In particular, every monetary policy which aims at stabilizing the value of money and involves, therefore, an increase of its supply with every increase of production, must bring about those very fluctuations which it is trying to prevent." [30]

The third and final component in the supply-siders' anti-deflation program is to formulate a rule to guide the Fed in performing its Goldilocks role. This rule is a price-level rule that focuses on—what else—sensitive commodity prices. According to Richard Rahn, "the Fed needs to say explicitly that it is adopting price-level targeting again, and that it is going to look at sensitive commodity prices as the indicator of where prices are headed rather than the CPI and other lagging indicators. The Fed should look at a market basket of commodities; if prices in the basket rise above a predetermined range, the Fed reduces the money supply and vice versa "[31] Unfortunately, this rule may at times operate to promote a massive inflation, because as we saw above industrial commodity prices and consumer prices move in opposite directions during periods of recession and financial crisis. Following this rule the Fed may very well accelerate an already high growth rate of the money supply and intensify inflation in the U.S. while reacting to a precipitous decline in industrial commodity prices caused, for example, by foreign financial crises like those that struck in Asia in 1997 and 1998. The DJ-AIG Commodity Index in early February 2002 stands 10 percent below the level of 1991, and nearly 20 percent below its level of one year ago, despite the fact that the monetary aggregate

MZM (for "money of zero maturity") grew by 19.5 percent from late January 2001 to late January 2002 and AMS (for Austrian money supply)—the monetary aggregate I believe most accurately reflects the supply of dollars in the U.S. economy—grew by 12.3 percent in 2001.[32] In these circumstances, if the supply-siders, who all purport to be unconcerned by the rate of growth of the money supply, actually persuaded the Fed to immediately ratchet up money growth from its current high rate to a rate sufficient to rapidly increase commodity prices by 10 to 20 percent, they would be setting the stage for a hyperinflation. This would all be in the name of averting a deflation whose only evidence is a small decline in the October 2001 CPI followed by an unchanged CPI the following month in the midst of a year in which the CPI rose by 1.6 percent. Does their deflation-phobia know no bounds?

As noted above the supply-siders are by no means the only current macroeconomists afflicted with deflation-phobia. Recently, the doyen of monetarism, Milton Friedman, wrote "the current rate of monetary growth of more than 10% is sustainable and perhaps even desirable as a defense against contraction and in reaction to the events of Sept. 11."[33] Also, the moderate Keynesian John H. Makin, an economist associated with the establishment Republican think tank, the American Enterprise Institute, recently referred to the current recession as a "deflationary one" on the basis of the substantial fall in the October 2001 PPI index and the decline in one-year inflation expectations from September to November 2001. He went on to argue, "the Fed has no choice but to race to cut short-term interest rates faster than inflation and inflation expectations are falling. . . . After all, combating recession, especially this deflationary one, requires a real Fed funds rate of zero, and with expected inflation of 1 percent or

below, a 1 percent nominal Fed funds rate is necessary to push real rates down to zero."[34] So fearful was Makin that even zero short-term real rates alone would be insufficient to arrest and reverse this imagined deflationary recession that he also advocated that President Bush's stimulus package—evidently now dead in the water—be increased in size and that the Democrats be invited in on the spending boondoggle. According to Makin, the President "should suggest that the package be enlarged to $200 billion, with the Democrats allowed to specify $100 billion worth of their favorite spending increases while Republicans can specify $100 worth of their favorite tax cuts."[35]

5. CONCLUSION: THE PROSPECT FOR DEFLATION

So what is the prospect for an imminent deflation in the U.S.—for an actual sustained fall in consumer prices—that so terrifies so many contemporary macroeconomic analysts and forecasters. The answer derived from our theoretical analysis of deflation above is practically none. Growth in real GDP for 2001 was a measly 0.13%, not surprising for a recession year.[36] As the recession or at least a slow recovery is widely expected to continue through 2002, this implies that the factor of growth deflation will be negligible for a long while. There does exist some evidence that a cash-building deflation process is operating. The ratio of total nominal income from current production (as quantified in the nominal GDP aggregate) to the money supply as defined by AMS, has fallen by 7.20%, from 6.53 in the 4th quarter of 2000 to 6.06 in the 4th quarter of 2001. The nominal GDP/MZM ratio fell by 15.67% during the same period. This indicates that people are devoting a greater part of their income to holding cash balances, which generally occurs as a result of the greater uncertainty and pessimism

that a recession and related financial collapses, such as the Enron debacle, introduces into their future income prospects. The higher value placed on ready cash relative to other opportunities for disposing of money places a downward pressure on the prices of consumer goods. This is a short-term phenomenon, however, and tends to reverse itself as recession nears an end and perceived income prospects brighten.

This brings us to the supply side of the money relation. During 2000, the AMS aggregate actually contracted by 1.29% after having risen by an annual average rate of 6.47% in the previous three years. After growing by an average of 12% per year in 1998 and 1999, the MZM grew by 8.00% in 2000. There is no doubt that this sudden decline in monetary growth precipitated the current recession. However, the Fed's aggressive rate cutting in 2001 resulted in explosive growth in the money supply in 2001, with AMS growing by 12.33% and MZM by more than 20%. So any deflationary tendency proceeding from monetary policy in 2000 has since been swamped by the Fed's reversion to a massively expansionary money policy. Finally there is no evidence that Americans are losing confidence in the banking system and poised to set off a much-needed purgative bank credit deflation à la Argentina. The currency/checkable deposit ratio rose very slightly in 2001 from 0.96 to 0.98, implying that there was a slight net withdrawal of currency from the banks by depositors. And even if a bank run did develop in the event that the recession deepened and additional high profile financial collapses occurred involving important U.S. banks, there is very little probability that the American ruling elite and the Fed would allow it to run its natural course. The Fed would first impose a "bank holiday," that is, an Argentine-style confiscatory deflation, to buy time in order to orchestrate a massive inflationary bailout.

Whether our current inflationary recession will continue for another six months to a year, which appears to be the prevailing consensus, or whether unforeseen events in the financial arena prolong and deepen it, we will see a hefty rise in consumer prices before it ends. In other words, an existing or imminent deflation in the U.S. is a chimera conjured up by those unfamiliar with sound, Austrian monetary theory.

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[3] John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt, Brace & World, Inc., 1964), p. 269.
[4] For a discussion of how the meaning of the words inflation and deflation was progressively transformed, see Joseph T. Salerno, "Money and Gold in the 1920s and 1930s: An Austrian View," *The Freeman: Ideas on Liberty* 49 (October 1999): 31-33.
[5] This term was coined by Ludwig von Mises as a shorthand expression for the relation between the supply of money and the demand for money. See Ludwig von Mises, *Human Action: A Treatise on Economics*, The Scholar's Edition (Auburn, AL: Ludwig von Mises Institute, 1998), p. 408.
[6] W. Michael Cox and Richard Alm, *Myths of Rich and Poor: Why We're Better Off Than We Think* (New York: Basic Books, 1999), p. 45.
[7] W. Michael Cox and Richard Alm, "The New Paradigm," in the Federal Reserve Bank of Dallas *1999 Annual Report*, p. 22.
[8] Milton Friedman and Anna Jacobsen Schwartz, *A Monetary History of the United States: 1867-1960* (Princeton, NJ: Princeton University Press, 1960), pp. 94-95.
[9] The data in this paragraph can be found in Peter Temin, *The Jacksonian Economy* (New York: W.W. Norton & Company, Inc., 1969), pp. 155-165
[10] For a description of the policies of the Hoover administration that impeded the bank credit deflation and the recession-adjustment process in general, see Murray N. Rothbard, *America's Great Depression*, 5th ed. (Auburn, AL: Ludwig von Mises Institute, 2000), pp. 209-337.
[11] Murray N. Rothbard, "Deflation: Free or Compulsory," *Making Economic Sense* (Auburn, AL: Ludwig von Mises Institute, 1995), pp. 237-40.
[12] Data on Argentina's money supply is provided by Frank Shostak, Ord Minnett Jardine Fleming Futures *Daily Report* (July 20, 2001).
[13] Reuters, "Riots and Looting in Argentina as Austerity Plan Bites," *The New York Times on the Web*, (December 19, 2001).
[14] Larry Rohter, "Argentina Is Still Shaky Despite Currency Measures," *The New York Times on the Web*, (January 11, 2002).
[15] Quoted in ibid.
[16] Quoted in Anthony Faiola, "Argentina Restricts Bank Withdrawals," *washingtonpost.com* (December 2, 2001), p. A30.
[17] The last two individuals were quoted in David Luhnow, "Argentina Intensifies Defense of Peso-Dollar Link," *The Wall Street Journal* (December 3, 2001), p. A15.
[18] Quoted in Knight Ridder Newspapers, "Argentina in Cash Chaos: Government Orders Use of Debit Cards over Currency," *arizonarepublic.com* (December 6, 2001).

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[19] Quoted in Faiola, "Argentina Restricts Bank Withdrawals."
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[21] Mayra Pertossi, "Argentine Bank Freeze Deemed Illegal," *Associated Press* (February 1, 2001), dailynews.yahoo.com.
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[23] Michelle Wallin and Jonathan Karp, "In Argentina, It's Duhalde against Judges," *The Wall Street Journal* (February 5, 2002), p. A12.
[24] Bartlett, "The Deflation Dilemma."
[25] Rahn, "Defeating Deflation," p. A20.
[26] Murray N. Rothbard, "What's Ahead: Resurging Inflation or Sudden Deflation," *Jerome Smith's Investment Perspectives* (November 1984), p. 2.
[27] Luskin, "The Greatest Threat Facing the U.S. Economy: Deflation."
[28] Friedrich A. Hayek, "The Paradox of Saving," in idem *Profits, Interest, and Investment and Other Essays on the Theory of Industrial Fluctuations* (New York: Augustus M. Kelley Publishers, [1939] 1969]), pp. 199-263. This seminal article was originally published in German in 1929 and first appeared in English in 1931.
[29] Ibid., pp. 253-54.
[30] Ibid., pp. 262-63.
[31] Rahn, "Defeating Deflation," p. A20.
[32] The DJ-AIG Commodity Index can be found in "Markets Diary 2/4/02," *The Wall Street Journal* (February 5, 2002), p. C1. The MZM figures are published by the Research Division, The Federal Reserve Bank of St. Louis *U.S. Financial Data* (January 31, 2002), p. 3. The AMS aggregate is computed by Frank Shostak of Man Financial Australia Ltd, fshostak@manfinacial.com.au. For a description and justification of the AMS aggregate see Joseph T. Salerno, "The 'True' Money Supply: A Measure of the Supply of the Medium of Exchange in the U.S. Economy," *Austrian Economics Newsletter* 6 (Spring 1987): 1-6 (This article can be downloaded from www.mises.org).
[33] Milton Friedman, "The 1990s Boom Went Bust. What's Next?" *wsj.com* (January 22, 2002). To be fair, Friedman did add the caveat, "continuation of anything like that rate of monetary growth will ensure that inflation rears its ugly head once again."
[34] Makin, "The Deflation Monster Still Lives."
[35] Ibid.
[36]All statistics cited in this section have been computed from data available in the Federal Reserve Economic Data (FRED) database on the Internet at www.stls.frb.org/fred except for the AMS statistics, which were computed from data provided by Frank Shostak of Man Financial Australia Ltd, fshostak@manfinacial.com.au.